

Annual Report

Indian Institute of Technology Madras | 2017-18

Annual Report 2017-2018



Indian Institute of Technology Madras
Chennai – 600 036

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Contents

1.	Director's Report	1
2.	Administration	20
3.	Academic Programmes and Award of Degrees	33

Departments

4.1	Department of Aerospace Engineering	50
4.2	Department of Applied Mechanics	61
4.3	Department of Biotechnology	77
4.4	Department of Chemical Engineering	99
4.5	Department of Chemistry	119
4.6	Department of Civil Engineering	136
4.7	Department of Computer Science and Engineering	171
4.8	Department of Electrical Engineering	189
4.9	Department of Engineering Design	197
4.10	Department of Humanities and Social Sciences	209
4.11	Department of Management Studies	222
4.12	Department of Mathematics	233
4.13	Department of Mechanical Engineering	250
4.14	Department of Metallurgical and Materials Engineering	270
4.15	Department of Ocean Engineering	289
4.16	Department of Physics	309

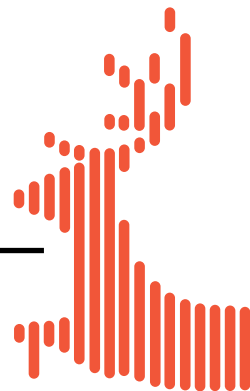
5.	Sophisticated Analytical Instrument Facility	332
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6.	Centres of Special Facilities	334
6.1	Centre for Continuing Education	334
6.2	Centre for Industrial Consultancy and Sponsored Research	355
6.3	Central Electronics Centre	370
6.4	PG Senapathy Centre for Computing Resources	373
6.5	Central Facilities	380
6.5.1	Central Workshop Facilities	380
6.5.2	Central Glass Blowing Section	381
7.	International and Alumni Relations	382
8.	Central Library	416

9.	Student Amenities and Activities	421
9.1	Hostels	421
9.2	Medical Facilities	422
9.3	Institute Gymkhana	422
9.4	Advisor, Weaker Section	427
9.5	Mentoring for Individual Transformation (MITr)	429
9.6	National Cadet Corps	430
9.7	National Service Scheme	430

10	Students Placement	433
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11.	Financial Assistance to Students	435
11.1	Assistance to BTech/Dual Degree Students	435
11.2	M.Tech.	436
11.3	M.Sc.	437
11.4	M.A.	437
11.5	M.S.	437
11.6	Ph.D.	438
11.7	Financial Assistance to Research Scholars/Students for Presentation of Papers Abroad	438
11.8	National/ International Conferences in India	438



12	Weaker Section and Foreign National Students	439
12.1	B. Tech. Programme	439
12.2	Preparatory Course for Admission to BTech Programme	439
12.3	M. Tech. Programme	440
12.4	M. Sc. Programme	440
12.5	Admission of Foreign National Students and Indian Nationals Residing Abroad	440

14.	Finance and Accounts	451
15	Publications	453

Appendices

1.	The Senate	584
2.	Board of Academic Courses	587
3.	Board of Academic Research	588
4.	Board of Students	585
5.	Board of Industrial Consultancy and Sponsored Research	590
6.	Library Advisory Committee	591
7.	Finance Committee	592
8.	Building and Works Committee	593

13.	Campus Amenities	441
13.1	Engineering Unit	441
13.2	Housing Facilities	442
13.3	Horticulture	442
13.4	Public Health	442
13.5	Telephone Facilities	442
13.6	Local Body Approval	442
13.7	Hospital	442
13.8	Guest Houses	444
13.9	Bank	445
13.10	Post Office and Telecom Centre	445
13.11	Schools	445
13.12	Open Air Theatre	445
13.13	Student Activities Centre	445
13.14	Creche	445
13.15	Transport Services	445
13.16	Security Section	445
13.17	Campus News	445
13.18	Cafeteria	445



1

Director's Report

Presented at the 55th Convocation of IIT Madras on 20 July 2018

Chief Guest Dr. Rajiv Kumar, Chairman, Board of Governors, IIT Madras, Dr. Pawan Goenka, members of the Board of Governors, members of the Senate, graduands, distinguished invitees, colleagues and students, it gives me immense pleasure to welcome all of you to the 55th Convocation of IIT Madras being held at the start of our Diamond Jubilee year. It is our privilege to have Dr. Rajiv Kumar, the Vice Chairman of NITI Aayog, to address our graduands today and award the prizes.

IIT Madras has not only sustained the number-one ranking among Engineering Institutes in the NIRF for the third year in a row since inception, but also retained its second position for overall performance among all universities in India. I congratulate the students, faculty and staff of our institute for maintaining high standards and raising the bar ever higher each year.

This year, we will be awarding 29 B.Tech. degrees with Honours, 403 B.Tech., 342 M.Tech., 18 Dual Degree (B.Tech. Honours and M.Tech.), one Dual Degree (B.S. Honours and M.S.), 329 Dual Degree B.Tech.-M.Tech., 26 Dual Degree B.S.-M.S., 31 Dual Degree M.S.-PhD, six Dual Degree M.Tech.-PhD, 140 M.Sc., 51 M.B.A., 35 M.A., 182 M.S., 244 PhD degrees and three Joint PhD degrees – one each with Universities of Swinburne (Australia), Aalto (Finland) and Passau (Germany). Fifteen PG Diplomas in Metro Rail Technology and Management will also be awarded today.

In 2017-18, the institute added 24 new faculty members, of whom three are women, and 51 staff members, of whom nine are women. We bade farewell to six faculty members and 22 staff members, who retired after a lifetime of dedicated service to the institute.

From recruiting world-class faculty members to teach and carry out cutting-edge research, often in collaboration with industry and foreign universities, to an ever-growing engagement with alumni and well-wishers, we are diligently implementing our Strategic Plan 2014-2020 to achieve or exceed our objectives. One of India's leading environs for innovation and entrepreneurship has been established at our Research Park, which is India's first, and a centre from where top Indian and global companies recruit students and conduct collaborative research.

I now share with you some snapshots of our achievements during the academic year 2017-18.

1. Degree Programmes

IIT Madras has always stayed ahead of the curve in upgrading and introducing new courses and programmes in emerging areas. In a move to permit our undergraduates to diversify into new areas of choice, six new upgrade paths to an M.Tech. degree in Advanced Materials and Nanotechnology, Biomedical Engineering, Computational Engineering, Data Science, Energy Systems and Robotics have been launched beginning July 2018. Any student from any branch with a good academic record in the first three years is eligible to upgrade. An M.Tech. in Bioprocess Engineering has also been launched. A two-credit winter course on Machine Intelligence and Brain Research has been initiated to expose students to an exciting emerging field. A unique MS-by-Research Program in Analog/Mixed Signal VLSI offered by IIT Madras with support from Texas Instruments continues to reinforce the benefits flowing from a strong industry-academia collaboration.

The tailor-made User-Oriented M.Tech. programmes and the Web-Based Live Interactive (WLI) M.Tech. programmes are very useful for industry personnel to equip themselves with the latest knowledge in emerging areas. The WLI M.Tech. programmes, that enable learning from the workplace without losing any of the benefits of face-to-face interaction, are a major hit, and we have seven such programmes running already.

The VAJRA (Visiting Advanced Joint Research) Faculty scheme launched by the Honorable Prime Minister under the flagship of the Department of Science and Technology, enables leading scientists from abroad to participate and contribute to research and development in India. IIT Madras has 12 visiting faculty members from top universities under this scheme from this year. GIAN is another Ministry of Human Resource Development (MHRD) scheme that enables participation of academicians from abroad. This year, 24 GIAN courses have been conducted at IIT Madras with 918 participants.

IIT Madras continues to attract top students to its research programmes. In 2017-18, a total of 83 high-performing Masters' students upgraded to the PhD programme, while 54 toppers were admitted to it directly after their Bachelors' degrees. A further 33 industry professionals also enrolled for their PhDs, indicating a healthy growth in our industry interaction. Eighteen scholars have joined the PhD programme under Prime Minister's Research Fellowship (PMRF), a scheme launched by the MHRD for attracting the best talent to doctoral programmes in national institutes.

Our intensifying collaborations with international universities have resulted in the formalisation of four new Joint Doctorate Programmes (JDP) with National Chiao Tung University in Taiwan, École centrale de Nantes in France, Heidelberg University in Germany, and Nanyang Technological University (NTU) in Singapore. The JDP with Nanyang Technological University was inked in the presence of the Honorable Prime Minister of India during his visit to NTU in early June.

2. Academic Research

In 2017-18, our faculty and research scholars published 1,696 papers in reputed international journals (a 16% increase from last year) and 54 in national journals. They also presented 479 research papers in international and 181 papers in national conferences.

2.1. Snapshots of Research

Next, I present a few glimpses of the research output of our M.S. and Ph.D scholars graduating today from various departments, which will give you a feel for the high-quality research being carried out by our scholars under the supervision of the faculty members.

Studying the aeroacoustics of free and impinging jets, **Jopaul K. Ignatius** of the Department of **Aerospace Engineering** has come up with an innovative approach to its suppression in the launch vehicle lift-off ambience, which has significant implications towards cost saving in launch vehicle operations.

Ashwiji Mayya of the Department of **Applied Mechanics** investigated the role of bone microstructure in compressive fracture of cortical bone and demonstrated an experimentally supported model for prediction of fracture susceptibility.

Mohona Mukhopadhyaya of the Department of **Biotechnology** studied estrogen- and hydrogen sulfide-mediated regulation of acid-sensing ion channels, thereby contributing meaningfully towards intervention of ischemic stroke.

Prabhakar Rao Tharra of the Department of **Chemistry** developed a novel approach for the unconventional functionalisation of propargylic alcohols involving the z-enoate assisted Meyer-Schuster rearrangement.

Sanjay Kumar of the Department of **Chemical Engineering** studied the flow-field electrode interaction in an all-vanadium redox flow battery and suggested an important optimal configuration amenable to scaling up.

Performing yield line analysis on beam-slab systems, **Bijily B.** of the Department of **Civil Engineering** has come up with some elegant and economic ways of designing such slabs.

Vinu E. V. of the Department of **Computer Science Engineering** describes Ontology-based multiple-choice question (MCQ) generation that considers the learner's educational needs and his/her proficiency level by formalising a question's difficulty level.

A nanosecond laser scribing technique has been developed by **Srinagalakshmi Nammi** of the Department of **Engineering Design** to fabricate micro channels on copper-coated polyimide thin films.

Thamballa Sreekanth of the Department of **Electrical Engineering** came up with the design and control of single-stage converters for low-voltage PV applications for household purposes.

The thesis of **Manoranjan Sahoo** of the Department of **Humanities and Social Sciences** provides important insights into specific issues pertaining to India's current account imbalance and examines its long-run sustainability.

Working on a sub-category of linear algebra that lies at the intersection of combinatorial matrix theory and analytic matrix theory, **Projesh Nath Choudhury** of the Department of **Mathematics** has made some important contributions to positivity classes of matrices.

P. Suresh of the Department of **Mechanical Engineering** designed and developed ultrasonic wave-guide sensors for high-temperature applications, which can have significant industrial applications.

Sonia Sharma of the Department of **Metallurgical and Materials Engineering** has developed pure and doped novel zinc oxide inks for printing applications.

Varun Praveen Kumar Jain of the Department of **Management Studies** has developed a scalable and computationally efficient mathematical model to capture the dynamics of sequential decision making in patient scheduling for health check-ups.

Following a bottom-up approach to bio-mimicry, **Naga Praveen Babu Mannam** of the Department of **Ocean Engineering** has developed a biomimetic marine propulsion system, capable of mimicking the way fish and penguins harness unsteady fluid effects to increase propulsive performance.

Raghu S. of the Department of **Physics** has developed novel carbon nano-composites for high power density and long cycle-life negative electrodes for lithium and sodium batteries.

2.2. Research Centres of Excellence

Taking advantage of the world-class expertise available to carry out path-breaking research in critical areas, IIT Madras has established several multi-disciplinary Centres of Excellence. Every year, we set up two or three new centres in emerging fields of importance to the country. The past academic year was no different.

The Honorable Union Minister for Road, Transport, Highways and Shipping announced the setting up of a **National Technology Centre for Ports, Waterways and Coasts (NTCPWC)** with an initial funding of Rs.70 crore at our Discovery campus in Thaiyur. The centre will serve as the technology arm and provide effective innovative solutions

to the Indian port and maritime sector. This centre, jointly supported by the Ministry of Shipping, Indian Waterways Authority of India (IWA) and big ports of the country, will have the most advanced facilities for research on port infrastructure, ship navigation, and coastlines. The centre is expected to become self-sustaining beyond three years.

The **Robert Bosch Center for Data Science and Artificial Intelligence** with generous funding from Robert Bosch Engineering and Business Solutions is being formally inaugurated in August. It will train a large number of students in this critical emerging discipline, and conduct research to discover new ways of harnessing data to address long-standing challenges in the industrial and societal domains, thus ably supporting the Digital India initiative.

The **Centre of Excellence on Dam Safety & Dam Rehabilitation** was established last year with support from the Central Water Commission to advise the Commission and the dam authorities in Tamil Nadu on key technical aspects pertaining to dams.

IIT Madras has signed a path-breaking MoU with Deakin University for the establishment of India's first bilateral **Centre of Excellence (CoE) in Advanced Materials and Manufacturing**. This centre will further the existing collaborations, establish a world-class additive manufacturing facility at IIT Madras that complements the facilities at Deakin University, and focus on translating the collaborative research to industrial applications.

The **Center for Urbanization, Buildings and the Environment (CUBE)** completed its first full year. Set up to translate the latest research in the natural and built environment domains into practice, CUBE is working with several governmental organisations such as Tamil Nadu Housing and Urban Development Department and the Planning Department to take innovative technologies in areas such as housing, restoration of heritage structures, and project management of new technologies from the lab to the field.

The **Centre of Excellence in Wireless Technology (CeWIT)** is playing a pivotal role in a multi-institutional national project for building India's own 5G Wireless Technology Test Bed bottom up. This Rs.240-crore project, announced in this year's national budget by the Finance Minister, will lead to several spin-offs that are expected to herald a revolution in the so-called Internet of Things and in extending broadband services to every nook and corner of India.

The **Centre for Battery Engineering and Electric Vehicles**, supported by Department of Heavy Industry and several companies from the automotive and battery industries, is carrying our cutting-edge research and developing swappable Lithium-ion batteries for two-, three-, and four-wheelers as well as buses, and the associated charging and management systems. Electric three-wheelers with swappable batteries are currently undergoing trials on our campus. The centre is also at the forefront of national efforts to establish cell manufacturing and battery life-cycle management industries.

The Solar DC technology developed by the **Centre for Decentralised Power Systems**, that won the global IEEE Spectrum Award last year for the technology with the greatest impact on society, has been widely deployed under the Saubhagya scheme launched by the Honorable Prime Minister to power homes hitherto unreachable through the electricity grid, in remote habitations in the deserts, mountains and forests of India.

The **Center for Computational Brain Research (CCBR)**, an interdisciplinary centre focused on a two-way interchange between neuroscience and engineering and supported generously by our distinguished alumnus Kris Gopalakrishnan, continues to expand its horizons under the able leadership of Distinguished Chair Professors Partha Mitra, Mriganka Sur and Anand Raghunathan. Research is being carried out on brain mapping, neuromorphic computing, neural models and several related topics.

Expanding from the original intent of becoming a national R&D hub, the **National Centre for the Safety of Heritage Structures (NCSHS)** is transforming into a regional player in the Asian region. It is providing the technical and research assistance to Government of Tamil Nadu in conservation of temples, the most recent being its scientific assessment of the fire damage to the famous Veera Vasantharayar Mandapam in the Meenakshi Sundareswarar Temple at Madurai. NCSHS is also developing post-earthquake assessment and stabilisation guidelines for, and designing and executing pilot structural retrofit of the earthquake-affected Ananda-Ok-Kyaung Monastery at Bagan, Myanmar in conjunction with UNESCO.

The **Indo-German Center for Sustainability (IGCS)** continues its core research in sustainable management of energy, waste, water and land, thanks to the MoU signed by the Governments of India and Germany extending the support to the Centre for the next five years starting 2018. Department of Science and Technology (DST), GoI has recently sanctioned an amount of Rs.8.60 crore to IGCS for conducting research on climate change impacts on coastal infrastructure and adaptation strategies thereof. Several faculty members from IIT Madras and Germany will work jointly on more than ten sub-projects. IGCS and Maschinenfabrik Reinhausen, Germany are working on sustainable management of power grids with renewable energy sources in them.

The **Advanced Manufacturing Technology Development Centre (AMTDC)** supported by the Department of Heavy Industries, GoI, has developed in collaboration with Indian machine tool manufacturers five-axis CNC multi-tasking machine, direct drive and orbital abrasive cutting machine, hydrostatic flow controller and hydrostatic test rig. These machines, which have been exhibited at various national and international machine tool exhibitions and expos, are housed in a 9000 sq.ft. state-of-the-art laboratory at the IIT Madras Research Park.

The **Healthcare Technology Innovation Centre (HTIC)**, a Centre of Excellence to develop technologies that create impact and drive innovation in healthcare, expanded its

R&D activities last year to develop indigenous technology in robotic surgery and diagnostic instrumentation, in partnership with Indian industry. Its Mobile Eye Surgical unit technology successfully completed over 10,000 cataract surgeries in India's rural areas in collaboration with Sankara Nethralaya. With support from BIRAC, HTIC now houses a med-tech incubator for entrepreneurs, and is currently incubating 10 start-ups, thus becoming an integrated med-tech centre with research, technology development and incubation.

The **National Centre for Combustion Research and Development (NCCRD)**, a joint Centre of IITM and IISc, established with support from Science and Engineering Research Board (SERB), DST housed in its own building with a total floor space of 35000 sq.ft. and a dozen labs focusing on different aspects of combustion research and applications, such as spray and laser diagnostics, fuel characterisation, automotive test cells, gasifiers, and with the world's fifth tallest microgravity drop tower, is the largest such centre for combustion research in an academic setting globally.

The **Centre of Propulsion Technology (CoPT)**, a joint centre of IIT Madras and IIT Bombay, supported by the Defence Research and Development Organisation (DRDO), is currently focusing on small gas turbine engines, solid propellant combustion modelling, and morphing wing aircraft technology. The centre is undertaking 33 product-oriented research projects in the above three verticals.

The **Centre for NEMS and Nanophotonics (CNNP)**, set up in a 5000 sq.ft. of Clean Room space and with state-of-the-art nanofabrication and characterisation equipment carrying out research in areas of silicon photonics, biosensors, RF and optical MEMS, GaN HEMT, organic electronics, diffractive optics, ultrasonic nanoscopy, and microfluidics, has joined IISc and the IITs at Bombay, Delhi and Kharagpur to form the Nanoelectronics Network for Research and Applications (NNetRA) funded by MeitY and DST.

The **Center for Excellence in Steel Technology (CoExiST)** supported by the Ministry of Steel, GoI has been functioning since May 2017. The mandate of the centre is to work on advanced high-strength steels for automotive applications. Several state-of-the-art facilities for casting, rolling, sheet metal forming, surface engineering, welding, fatigue testing, and computational modelling are being established to support the functioning of the centre.

The technologies developed at the **TTK Centre for Rehabilitation Research and Device Development (R2D2)**, supported by a generous grant from our distinguished alumnus T.T. Jagannathan, have been translated into products through their start-up NeoMotion. The pilot trials of two products, Neofly, a fully customisable wheel-chair, and NeoBolt, a motorised add-on for it, are underway. A Polycentric Knee developed by R2D2 has been fitted on 20 transfemoral (above-knee) prosthesis users at Mobility India, Bengaluru for trials. While Neofly and NeoBolt are the result of an IMPRINT-funded project, Polycentric Knee

is funded by the Society for Biomedical Technology under DRDO.

The arsenic and iron removal technology, AMRIT, developed by the **Thematic Unit of Excellence (TUE) on Water Purification using Nanotechnology**, is now giving clean water to 700,000 people each day. In Punjab, the community units are delivering over 10 million litres of clean water daily, as part of the 70-litres-per-capita-per-day model. The capacitive deionisation (CDI) technology-based water purification units are just about to roll out in the Indian market through the nation's largest domestic water purifier manufacturer. Several installations in railway stations and villages have come up already. This will be a green alternative to reverse osmosis for brackish water desalination, with only 20% water wastage, retention of useful minerals and reduced power requirements. The TUE has incubated two more companies last year to focus on atmospheric water harvesting and simpler water transportation solutions. To take our technologies forward and expand into newer areas of clean water starting from bench-scale science to technology and incubation, the IITM Board has approved the setting up of the International Centre for Clean Water, which will be inaugurated early 2019. The centre has received a generous grant of Rs.7.5 crore from H. T. Parekh Foundation.

An **Indian Solar Energy Harnessing Centre (ISEHC)**, a nodal centre supported by the DST at a cost of Rs.40 crore, will leverage the expertise available at IIT Madras in the areas of materials science and engineering aspects of photovoltaics and its entrepreneurship culture, to develop/deploy novel materials/devices, carry out energy and sustainability analyses, and develop indigenously processable single hetero-junction (SHJ) solar cells.

The Tamil Nadu government has sanctioned a **State Health System Resource Centre** at IIT Madras to devise ways to strengthen the public health system, find innovative solutions to systemic bottlenecks and help in their implementation. This centre will build on the pioneering studies of Tamil Nadu's public health system undertaken by the faculty and students of our Humanities and Social Sciences department.

2.3. Research Innovations

Our faculty, students and scholars across all departments continue to maintain their inventive and innovative flair. Some notable examples of their work in the past academic year are:

- a **new patch** to heal scratch wounds completely in 24 hours by embedding silver oxide nanoparticles on silk fibre.
- a **surgical robot** for training surgeons at medical colleges that has seven degrees of freedom and costs around Rs.60 lakh as against the commercial alternatives that cost Rs.12 crore.
- a patented **technology to predict and diagnose diseases** such as cancer, diabetes, and neurological disorders

through genomic data will be taken to market through start-up Orbuculum.

- a **technique to convert bagasse into methanol**, an alternative fuel to run tractors and other farm equipment.
- a **solar-powered mobile unit to convert non-recyclable plastic waste into fuel oil**, that is cheaper than diesel, by using the plastic pyrolysis technology.
- **Reactionminer**, a software learning tool that can fish out new ways of synthesising novel molecules by mining the biochemical reactions available in public databases maintained by research groups across the world.
- a **rolling water carrier cum purifier** that uses novel nano-materials without any power requirement.
- a **re-inforcement learning algorithm** that can help factories spot performance dragging/enhancing parameters and help improve productivity and quality.
- a new cement material, **Lime-stone Calcined Clay Cement (LC3)**, that reduces carbon dioxide emissions during its manufacturing process.
- a **speed monitoring system** that calculate a vehicle's speed as it passes by and displays it, triggering an alarm if the motorist does not reduce the speed below 40 kmph.
- **FINAL**, a low-cost Financial Analytics stack on an Open Source Software platform that serves as a cost-effective alternative to proprietary products for banks and insurance companies.
- a path-breaking **High-Resolution Imaging System** that demonstrates imaging in the range of 1/25th of the incident wavelength for ultrasonic inspection and characterisation of defects in metallic materials, that will impact biomedical and industrial imaging for non-invasive diagnostics.
- a **synthetic clay** for use by the Bidri craftsman.
- a **two-layer submerged artificial reef breakwater system** to restore the Vaan Island, off the coast of Tuticorin in Tamil Nadu.
- a **nano-lubricant** that will help minimise the wear and tear of components of machines considerably.
- a **sensor** that will send out an alarm on picking up animal movement and drive the animals away. The prototype was tested on the campus before being implemented in the farm-lands at Nerkundram in Tamil Nadu.
- **Artemis**, a 1.5-foot-long light-weight robot with six wheels that can move on the railtracks at a speed of about 1 m/s and equipped with ultrasonic and infrared sensors to detect cracks as small as 2 cm, sends out real-time data to a micro-controller about the location and time alert when a crack is identified. Artemis was the National Runners Up in the James Dyson Innovation Award.

- **iLighting** ensures that street-lights are at their maximum brightness only on detecting vehicular movement and are otherwise dimmed by around 30%. This innovation bagged the award for Technical Excellence at the Carbon Zero Challenge.
- **Decanter**, a mini water treatment plant of the size of an air conditioner for processing domestic effluents like water drained from kitchen and bathroom using centrifugation and electro-coagulation and recycling it into the flush tanks.
- **Dynamove**, an integrated intelligent traffic solutions product that will use a hardware platform to make transportation simpler, safer and smoother.
- a **procedure for removal of ash** as chunks from the reactor bed and reduce the formation of CO₂ in coal-fired power plants.

2.4. New Research and Fabrication Facilities

IIT Madras continues to provide a world-class research environment by constantly upgrading and enhancing its research facilities and infrastructure. Some major additions in the various departments during 2017-18 are enumerated below.

An **Autonomous Aerial Systems Laboratory** has been established in the Department of Aerospace Engineering with the objective of developing and testing algorithms to make aerial vehicles autonomous at low cost. Facilities in the lab include thrust measurement stands, one and three degree-of-freedom test stands to study response of aerial vehicles while arresting translations, and all the inventory (hardware, electronics, and tools) to build, automate, and fly aerial vehicles.

The Department of Biotechnology has set up a DST-funded **National Facility to identify potential drug targets through cellular dynamics**. A **Nanostring nCounter SPRINT Profiler** for RNA, DNA, and protein profiling applications and for the highly multiplexed analysis of basic cancer biology and pathway deregulation activity has also been added at a cost of Rs.1.35 crore.

A **Structural Glass Research & Testing Facility**, an **Emulsion Lab**, a **Concrete Materials Research Laboratory** and a **Geosynthetics Lab** are the major additions in the Department of Civil Engineering.

A **Bio-μ-Nano Laboratory** has been established in the Department of Engineering Design to fabricate biomedical/micro/nano devices for single cell drug delivery, which will help us to understand cellular membrane dynamics. This is probably India's first laboratory for single cell therapy and diagnostics using electro-, photo- and mechano-processes.

The Department of Mechanical Engineering has not only installed and commissioned a **laser micro machining** set-up at a cost of Rs.1.4 crore but has also added a **Zwick 100 kN UTM** at a cost of Rs.5.2 crore. Researchers at the Department have designed and developed a Variational

Non-equilibrium Oscillator model, an active brazing set-up for CBN and diamond with specially formulated filler, a software to understand electro kinetic transport in Nano channels using open foam, a high precision metal forming unit and a Compression Testing unit.

The Department of Chemistry has procured a **High Resolution Mass Spectrometer (HRMS)** to strengthen its analytical capabilities and augment research in various disciplines of Chemistry.

The **Helios Focused Ion Beam (FIB)** Facility has been established as a part of the **National Facility for Atom Probe Tomography (NFAPT)** to prepare samples for the Local Electrode Atom Probe (LEAP), which is also a part of NFAPT. This FIB is the most advanced FIB in the country and can prepare exclusive site-specific samples in the form of sharp needles with the tip diameter less than 50 nm, that are suitable for characterisation by LEAP. This first remotely operable LEAP facility in the world was inaugurated by Prof. Ashutosh Sharma, Secretary, DST recently.

The Wave Energy and Fluid Laboratory (WEFEL), Department of Ocean Engineering, has procured a **Wave Energy System** for bidirectional impulse turbine for wave energy conversion. A 25w prototype of a **Mechanical-based Wave Energy Absorption System** to convert the bi-directional wave motion into unidirectional rotation of a generator has been designed by researchers in the department.

A dedicated **Silicon Detector Research & Development and Application Centre** is being established that will aid in upgrading the Compact Muon Solenoid (CMS) Detector at a cost of Rs.6 crore with funding by CERN and DST, Government of India. The centre will house advanced machine tools such as a six-axis micro-abrasive waterjet machine tool, the first-of-its-kind in India, to do advanced research. IIT Madras is the only IIT that is a full member of CMS at CERN since 2014.

3. Academic Distinctions Secured by our Faculty Members and Students

In recognition of their academic achievements, our faculty, staff and students have been bestowed several academic distinctions, honours and awards, fellowships of academies and professional societies, and memberships on editorial boards of journals. Notable among the awardees are:

- **Prof. Ashok Jhunjhunwala**, elected as a foreign Member to the National Academy of Engineering (NAE), USA, one of the 13 members from India to be ever bestowed this honour
- **Drs. Jitendra Sangwai** and **Ramesh Gardas**, recognised as one among the 25 Emerging Investigators by the prestigious American Chemical Society's Journal of Chemical and Engineering Data

- **Prof. M. Kamaraj**, elected as Fellow of ASM International
- **Prof. T. Pradeep**, awarded the TWAS Prize in Chemistry
- **Prof. Shanthi Pavan** elected as a Fellow of IEEE
- **Dr. Aritra Hazra**, bestowed the INAE Young Investigator Award
- **Prof. Krishnan Balasubramanian**, awarded the first INAE Abdul Kalam Technology Innovation National Fellowship
- **Dr. Md. Mahiuddin Baidya**, bestowed the NASI Young Scientist Platinum Jubilee Award
- **Prof. Raghunathan Rengasamy**, Ligy Philip, Hema A. Murthy, Mahesh Kumar and R. Gnanamoorthy, elected as Fellows of INAE
- **Prof. Satya Chakravarthy**, bestowed DRDO Academy Excellence Award
- **Prof. Sundargopal Ghosh**, elected as Fellow of NASI
- **Dr. R. Vinu**, awarded the INSA Medal for Young Scientists

Six of our young faculty, **Drs. Shaikh Faruque Ali, U. Saravanan, Kalpana Mahalingam, Ashis Kumar Sen, G. Aravind and Dillip Kumar Satapathy**, have won the Young Faculty Recognition Award of the Institute for the year 2017, while **Prof. M. N. Jayalal Sarma** won the Srimathi Marti Annapurna Gurunath Award for Excellence in Teaching for the year 2017-18. **Prof. Krishnan Balasubramanian** was awarded the Lifetime Achievement R&D Award of our institute, **Prof. V. Srinivasa Chakravarthy** and **K. Srinivas Reddy** have been awarded the Mid-Career R&D Award, while **Drs. Shaikh Faruque Ali, R. Vinu, Md. Mahiuddin Baidya** and **Dillip Kumar Satapathy** have been awarded the Junior-Level R&D Award.

As per the recommendations of the Peer Review Committee, 15 more senior professors have been recognised as Institute Chair Professors this year for their outstanding achievements, taking the total number to 37.

An exhaustive list of laurels won by our faculty and students is given as an annexure to this report. IIT Madras has been publicising these achievements widely on social media platforms.

4. Industrial Consultancy and Sponsored Research

In 2017-18, 220 ministry-sponsored projects for a total value of Rs.366 crore and 528 industrial research and consultancy assignments amounting to Rs.117 crore have been sanctioned. This represents an all-time high in extra-mural research funding for the institute. This year, 49 agreements were signed with various global and national companies, such as Chennai Petroleum Corporation Limited, Tamil Nadu Water Supply and Drainage Board (TWAD), Tata Steel Limited, Dr. Reddy's Laboratories Limited and FL Smidth Private Limited.

Apart from the funding from industry mentioned above, the institute has earned Rs.2.6 crore from technology transfer fees and royalties during the year 2017-18. The Intellectual Property Management Cell has enabled filing of 132 patents during the year, of which 18 are international patents, representing an increase of 10% over last year. Eleven patents have been granted, including an international patent.

Our internal Research Fund continues to boost the R&D activities at the institute by funding the research activities of the Institute R&D Awardees, exploratory research projects with a 'break-through' idea, and seed-funding of research by new faculty.

Projects under the IMPRINT and Ucchar Avishkar Yojana (UAY) schemes have further boosted our collaborations with industry. IIT Madras has been sanctioned 20 Imprint projects for a total cost of Rs.45.6 crore, and 25 projects at a cost of Rs.53.9 crore under UAY Phase-II. These projects will enable our faculty translate research to meet industry needs.

5. Research Park and Our Deep-Tech Start-Up Incubation System

The IIT Madras Research Park (IITMRP), the first-of-its-kind research park in India established in 2010, has not only set new benchmarks for industry-academia collaborations, but has also shared its experience and helped set up similar university-based research parks in India. While phase-I of the park has been fully occupied with more than 70 companies for many years now, 40% of the phase-II with 0.8 million sq.ft. of built-up area is already operational. An Industry-Academia Bridge connecting the IIT Madras campus to the research park over the adjoining road was inaugurated on 29 June 2018.

IITMRP houses R&D and innovation wings of industry majors engaged in collaborative research with the institute's faculty and students. The institute's incubators and the associated start-up companies are also hosted in IITMRP. Today, IIT Madras is home to one of India's leading technology start-up hubs with innovation and impact as key differentiators/drivers. Spearheaded by its nodal incubator, the institute is empowering entrepreneurs to address national challenges through successful, self-sustaining companies.

Moreover, IITM Incubation Cell (IITMIC) links and synergises sector-specific incubators (IITM's Rural Technology & Business Incubator, Bio- and Med-Tech incubators), student pre-venture initiatives (Centre for Innovation & E-Cell) and translational research at the institute.

IITMIC's constant endeavour has resulted in incubation of 154 deep-tech start-ups, raising over Rs.800 crore in angel/VC investments, generation of Rs.135 crore cumulative revenue in the last financial year, creation of over 2,500 direct jobs and filing of over 60 patents. IITMIC was ranked the top incubator by the Entrepreneur India magazine and as

the country's top emerging Technology Business Incubator by Government of India last year.

An IIT Madras start-up Uniphore Software System clinched global status with John Chambers, Chairman and Former CEO of Cisco investing in a 10% stake. IITM-incubated start-ups won several awards last year. The most notable are:

- **Detect Technologies** won the Economic Times Start-up Awards 2017 under Best on Campus category
- **Aibono (Airwood Technologies)** won the same award under the Best Social Enterprise category.
- Tanuj Jhunjhunwala, CEO, **Planys Technologies** won the INAE Young Entrepreneur Award 2017.
- **Stellapps Technologies** was adjudged at #2 of the Financial Express IT Awards under 'cloud solutions' category, and is a pioneer in transforming India's dairy farmers by empowering them using digital technology.

Among key visitors to the IITMRP and IITMIC this year were the Honorable German President, Dr. Frank-Walter Steinmeier, the Honorable Minister of State for Civil Aviation, Shri Jayant Sinha, and the Honorable Minister for HRD, Shri Prakash Javadekar.

6. Continuing Education and Our Contributions To The National Educational System

IIT Madras through its Centre for Continuing Education (CCE) offers extensive outreach programmes that cater to the needs of teachers, practicing engineers, and researchers. In 2017-18, CCE organised 19 short-term training programmes for engineering college faculty and 70 continuing education programmes for industrial and R&D establishments. These programmes benefitted about 60,000 participants and resulted in a revenue of around Rs.9.2 crore.

The institute is assisting and mentoring other engineering institutions in the country with their curriculum, laboratory upgradation, faculty career development and implementation of TEQIP programmes. Under the quality improvement programme (QIP), we have a total of 38 QIP scholars – 46 pursuing PhD and eight M.Tech, of which 11 PhD and one M.Tech scholar(s) are women.

The Teaching Learning Centre (TLC) at IIT Madras is focused towards promoting effective and efficient teaching practices in class-rooms. The TLC designs and conducts training modules for faculty of higher learning institutes, as well as for final-year PhD and M.Tech scholars who aspire to a career in teaching. In the year under review, 577 faculty have been benefitted through the training programme, of which 37 faculty are from IIT Madras.

IIT Madras is the co-ordinator of the National Programme on Technology Enhanced Learning (NPTEL) that provides

the world's largest free-to-access repository with more than 1500 web- and video-courses in engineering, science and technology. NPTEL has been offering massive open online courses (MOOCs) since 2014. In the year under review, of the 2 million learners enrolled for the 385 courses offered, 1.57 lakh registered for the proctored exams and more than 1 lakh learners were certified. These courses can be taken for credit transfer by students as per AICTE/UGC norms and to earn career progression points by faculty in engineering colleges. NPTEL is also negotiating with industry bodies for recognising the certificates in the recruitment process, and is working with industry professionals to co-offer courses. In conjunction with IBM, NPTEL will offer in the upcoming semester the first-of-its-kind 12-week online course on Blockchain Architecture, Design and Uses, covering both the concept and application aspects of technology. NPTEL has joined hands with the National Institute of Research in Tuberculosis (NIRT) to offer Manage Tuberculosis – an eight-week long online certification course for doctors that is expected to impart a major boost to the End TB Strategy and TB Free Chennai initiative.

IIT Madras contributed to the National Skill Development programme by offering a two-month course on essential skills to enhance employability of Mechanical Engineering graduates of Nagaland state at the Central Workshop, and a one-week training programme for motivating ITI graduates for incubation and entrepreneurship in Industrial Automation and Automotive Engineering, both at the MoSDE-IITM Incubation Centre on Automation, Instrumentation and Automotive Engineering in the Department of Engineering Design.

The IITM Summer Fellowship Scheme, which provides a unique opportunity for summer research internship on our campus to top-ranking engineering and science students across the country, supported 223 students this year.

7. International Collaborations

During 2017-2018, IIT Madras organised several collaborative research workshops both in India and abroad. This has enabled the signing of 36 MoUs with eminent international universities world-wide to facilitate student exchanges and faculty collaborations, taking the total number of active MoUs to 243, joint doctoral programmes (JDPs) to 18 and joint supervision programmes to 50.

IIT Madras is an active participant in consortia such as AOTULE (Asia-Oceania Top Universities League in Engineering) and WTUC (World Technology Universities Congress), and in Erasmus projects such as Heritage. Under the Erasmus Plus programme, an International Credit Mobility for Staff and Faculty was introduced, and IIT Madras has hosted more than 20 teaching and non-teaching staff from Europe so far.

While more than 50 IIT Madras students and five foreign students of our partner universities are enrolled in the JDPs, a further 65 IITM faculty members are engaged in joint supervision of scholars with their counterparts

abroad. Under the exchange programmes, IITM saw 141 inbound and 150 outbound students. Summer internship opportunities are available for IIT Madras students with Purdue University, USA, Nanyang Technological University, Singapore and National Chiao Tung University, Taiwan.

8. Human Resources

IIT Madras provides a variety of learning experiences to both its technical and administrative workforce to aid them acquire new knowledge, upgrade their skills and professional competency. In the year under review, about 139 staff members benefitted from four in-service and 14 offsite training programmes. Apart from this, as many as 57 officers/staff have been provided Hindi training.

The institute has, since 2014, been honouring staff who have excelled in their performance with the Non-Academic Staff Recognition Awards. The winners of the awards in 2017-18 are **Ms. J. Tamilarasi**, **Ms. S. T. Sarasavalli** and **Ms. Hemalatha Hariharan** under the Administrative category, and **Shri N. T. Sasikumar** and **Shri A. Sagaya Rajesh** under the Technical category.

9. Quality and Process Improvement Initiatives

IIT Madras has been emphasising quality in all its activities and has been ISO certified for its academic support processes as early as 1999 and for administrative support processes since 2001. The ISO certification for all the units have been upgraded as per the ISO 9001:2015 standard in 2017. In addition to the ISO certification, the Central Electronic Centre has also been NABL-accredited for its Testing and Calibration Laboratories since 2004.

Workflow, the campus ERP system, has brought most of the academic, administrative, purchase and financial processes under its wing.

10. Infrastructure Development

The Government of Tamil Nadu had handed over 163 acres of land in Thaiyur village, Kancheepuram district for establishing our satellite campus. This Discovery Campus will be a research-focused campus for establishing new Centres of Excellence. The master plan is being developed with about 25,000 sq.m. in the initial phase and more than 3 lakh sq.m when fully built. One of the immediate facilities to come up on this campus is the National Technology Centre for Ports, Waterways and Coasts (NTCPWC) as informed earlier in the report, along with some administrative and residential facilities.

The **second block of the Bhupat and Jyoti Mehta School of Biosciences**, was inaugurated by Smt. Jyoti Mehta of the Mehta Foundation in the presence of Dr. Soumya Swaminathan, then Director General, Indian Council of Medical Research, on 9 October 2017. The building houses facilities such as an Animal House and the National Cancer

Tissue BioBank (NCTB). The building also houses the Indo-German Centre for Sustainability (IGCS) and the Robert Bosch Centre for Data Science and AI.

Two major projects completed in 2017-18 that augment the green initiatives of the institute are the installation of 2 MW solar rooftop capacity in hostels and academic buildings using the CSR contribution of M/s. RECL of Rs.10 crore, and the laying of a second pipeline for recycled grey water supply in hostel, academic and residential zones from the 4MLD sewage treatment plant that was commissioned last year. While the former will reduce the electricity bills of the institute by Rs.2 crore a year, the latter will reduce the dependency of the institute on external water sources by 40%.

The much-awaited **96 B-Type apartments** – in three buildings named Chola, Chera, and Pandya - were handed over for occupation by senior faculty members. The **New Academic Complex** with G+6 floors that will house the Departments of Metallurgical and Materials Engineering, Chemical Engineering, Physics and Mathematics, along with Centres of Excellence such as CoEXIST is nearing completion.

IIT Madras has moved to restore the green cover lost due to the cyclonic storm Vardah by transplanting nearly 600 saplings of native species, with partial financial support flowing in from alumni.

11. Student Co-Curricular and Extra-Curricular Activities

SAARANG, the annual cultural festival of IIT Madras, the largest of its kind in South India, dazzled the city again this January with star-studded nights and a plethora of competitions, attracting students from all over the country. The festival witnessed professional shows by renowned artistes - Carnatic vocalist Unnikrishnan, the Russian dance ensemble Diamant and fusion band Mix the City Chennai, and Farhan Akhtar. Several well-known personalities from the world of art and culture gave the Spotlight lectures.

Saarang witnessed more than 100 competitive events under several categories like Choreo, Comedy, Design, Music, Media, etc. It ventured into new avenues such as a masterclass on progressive Indian Cuisine by Gautam Mehrishi, an Anime Fest and Silent Disco. This year, a social campaign Boondh on water conservation was also run as a part of Saarang.

SHAASTRA, the annual technical festival with a highest ever budget of close to 1.3 crore and footfall of over 50,000 participants was a grand one. With the theme SHAASTRA 3018 - The Future World, it focused on cutting-edge areas such as artificial intelligence, green energy and data analytics.

The key highlights for the year were shows by world-ranked #84 DJ, Mariana Bo; one of India's finest tech-magicians, Suhani Shah; and our very own Envisage 6.0 – India's only

completely student-run technical entertainment show. The Green Energy Summit, another important event on creating technical prototypes to solve rural energy problems, was conducted in collaboration with the IIT Madras alumni batch of 1978. The new additions this year being Institute Open House and Shaastra's first-ever National Level Research Conference. Focus on Deep Learning was achieved through one of the biggest workshops conducted in the country, in collaboration with Amazon Web Services.

Shaastra's social contribution this year was achieved through the Bubbles campaign. Discarded soaps from various sources such as hotels and restaurants were collected and processed by students themselves, in the labs of IIT Madras, in a certified manner to manufacture hand wash. These were then distributed to schools in and around Chennai reaching over 1,500 students who were educated about the importance of hygiene. The online and offline reach had almost doubled than the previous year.

Shaastra, in association with the Industrial Waste Management Association (IWMA), US Consulate and Virtusa Polaris, held a pan-south-India prototype building competition, **Carbon Zero Challenge (CZC)**, with the main objective of finding innovative and indigenous technological solutions to India's unique sustainable energy problems and nurture them to reach a stage of market scalability. The top 25 teams from among 500 were shortlisted and provided funding support of Rs.5 lakh each to build prototypes and were mentored by experts from India and the US. Five teams were finally chosen as winners and will be provided business incubation opportunities, two among them being from IIT Madras. The CZC is slated to go pan-India in 2019.

The **EXTRA MURAL LECTURE (EML)** series, a long-standing student initiative was vibrant as ever. After a flagship lecture by Dr H. C. Verma, EML featured distinguished speakers from varied fields such as the Indian Civil services, entrepreneurship, economics, politics, social activism, journalism, paleontology, music and poetry this year.

In the **52nd INTER IIT SPORTS MEET** which was hosted by us in 2017-18, IIT Madras clinched the second position in the overall championship. Our women's team won the first place for the second time in a row, with golds in badminton, silver in tennis, and bronze in table tennis and athletics. The men's team secured the third position with golds in badminton, silver medals in hockey and table tennis, and a bronze in football. While Dharavath Naresh Naik created a new meet record in pole-vault, Roshni Shetty was adjudged the Best Women Badminton player.

In the **33rd INTER IIT AQUATIC MEET**, also hosted by us, both IIT Madras Men's and Women's teams won the championship and secured the third place in the Men's Water Polo Championship. C. K. Ananda Krishnan and L. R. Kamala Devi were adjudged the Best Swimmers in the Men and Women categories, respectively. All records in the Aquatic competition are now held by the IIT Madras' Men's Swimming Team.

In the **3rd INTER IIT CHESS MEET**, IIT Madras secured the third position.

In the **INTER IIT TECH MEET**, IIT Madras won the third position with four silver medals for a safety device for small fishing vessels, technologies for soldier support, automated toilet cleaning robot and Engineer's Conclave, and a bronze medal in optimal bidding.

The **CENTRE FOR INNOVATION (CFI)** has not only been growing in the number of clubs and their membership, but also in the number of technological innovations emerging from its portals. Some of the innovations that have made social impact have already been covered in the report earlier. Under the Vistara programme, CFI has been mentoring other institutions in the country for setting up similar centres. The success of CFI can be assessed by accolades that its projects and teams won at various events this year. While a few of them are listed below, an exhaustive list is available in the annexure to the report.

The International Competition teams have been steadily improving their performance over the past years. **Team Raftar**, won the 15th place overall and first among Asian Teams at the Formula Student Italy 2017, and secured third place at the Formula Student Bharat 2018. Team Raftar is the only team from India that has qualified for FS Germany 2018. **Team Abhiyaan** was placed 13th of the 35 teams at the Intelligent Ground Vehicle Competition (IGVC) 2017 held in Michigan, USA. They were one of the two teams qualified from India. **Team Anveshak** was placed 29th at the University Rover Challenge (URC) 2017 held at Utah Desert, USA. **Team Avishkar Hyperloop** was qualified for the Final Design round of the SpaceX Hyperloop Pod Competition 2018 and placed among the top 47 teams across the world. They were one of the two teams qualified from India.

Around 270 Students from CFI, using 45 custom-designed robots that manipulated a fast rotating jhadu or scrubber, cleaned an area the size of badminton court and created a new Asian record for deploying the largest number of robots for sweeping an area.

A **Research Scholars Portal** (<https://scholars.iitm.ac.in>) was launched on the occasion of Research Scholars' Day, which will serve as a window to provide a glimpse of the rich and diverse skill sets and knowledge of the scholars who are about to complete their theses.

IITMSAT is the student-led nano-satellite initiative to launch a Space based Proton and Electron Energy Detector (SPEED). During 2017, IITMSAT has successfully completed the extensive and rigorous vibration testing and thermo-vac testing at ISRO Satellite Centre. The team is working with ISRO experts to finalise the Flight Model which will be built in the fourth quarter of 2018. The launch date will be fixed by ISRO in early 2019.

12. Student Welfare

IIT Madras has put in place a well-planned and dynamic wellness network to address one of its key concerns – the wellness of its students. MITr and SAATHI continue to serve as the guidance and counseling unit; while the former works as a reactive agent, the latter provides a proactive front. The two units together provide 24x7 emotional support to students through professional counselors and experts and continuously handhold students who have had stressful and anxious moments.

Several programmes/workshops on relaxation, meditation, yoga, leadership, gender sensitization, and others are organised regularly to nurture the holistic wellness in our students.

13. Placement

Of the 1991 companies invited, 256 companies visited the campus and 832 students, including 95 with PPOs got placed, with nearly 45% being in core engineering and R&D companies; 28% in analytics, consulting and finance; and 22% in Information Technology (IT). The placement season also saw a 56% increase in pre-placement offers (PPO) with 114 PPOs made in 2017-18 against 73 in 2016-17. This year, our placement team made a conscious effort to increase post-graduate placements, and this resulted in an excellent performance, with more than 70% of the PG students getting placed through the Placement Office. This is in addition to the placement of PGs through the departments and guides.

A total of 107 companies visited the campus for internships, resulting in 359 students getting internship offers through the Internship Cell.

14. Alumni Matters

The intense bonding our alumni have with their alma mater is evident from their active participation in all its activities - research, academic and development. Outreach is impossible without the support of alumni.

IIT Madras has been honouring select alumni with Distinguished Alumnus Awards since 1997 in recognition of their outstanding achievements in the areas of entrepreneurship, leadership and management, academia and research, social and technological innovation, and service to humanity at large. The awardees for this year are:

- **Dr. Kianthra Mani Chandy**, Simon Ramo Prof. Comp Science, Emeritus, California Institute of Technology, USA (1965/BT/EE)
- **Dr. D. V. Satyanarayana Gupta**, Technology Fellow, Baker Hughes, a GE company, Texas, USA (1974/BT/CH)
- **Shri Lazar T. Chitilapilly**, Project Director, Air Breathing Propulsion Project, VSSC, ISRO, Thiruvananthapuram, Kerala, India (1983/BT/AE)

- **Dr. Sridhar R. Tayur**, Ford Distinguished Research Chair Professor of Operations Management, Carnegie-Mellon University, Pittsburgh, Pennsylvania, USA (1986/BT/ME)
- **Shri V. M. Thomas**, Joint Managing Director, Johnson Lifts Private Limited, Chennai, India (1973/BT/ME)
- **Dr. M. A. Subramanian**, Milton Harris Professor in Materials Science, Oregon State University, Oregon, USA (1982/PhD/CY)
- **Dr. Noshir S. Contractor**, Jane S. & William J. White Prof of Behavioral Sciences, Director of SONIC Research Group, Northwestern University, Illinois, USA (1983/BT/EE)
- **Shri Rajesh Jha**, Executive Vice President, Office Product Group, Microsoft Corporation, Redmond, Washington, USA (1988/BT/CS)
- **Dr. Seeram Ramakrishna**, Director, Center for Nano fibers & Nanotechnology, Professor of Mechanical Engineering, National University of Singapore, Singapore (1989/MT/ME)
- **Dr. Giridhar Madras**, Professor of Chemical Engineering, Indian Institute of Science, Bangalore, India (1990/MT/CH)
- **Dr. Nagabhushana Sindhushayana**, VP Technology, Qualcomm Inc, San Diego, California, USA (1989/BT/EE)
- **Dr. Sudhir Kumar Mishra**, CEO and MD, BrahMos Aerospace Distinguished Scientist and Director General (BrahMos), DRDO, Ministry of Defence, GoI, New Delhi, India (1996/MT/ME)

In 2017-18, our Development Office and the U.S. Foundation raised a record Rs.73 crore, exceeding our previous highest tally by nearly Rs.20 crore. While one-third of the contributions were from industry towards Corporate Social Responsibility (CSR) initiatives, the rest were from alumni and other well-wishers. The number of donors also reached a new high of 900-plus in 2017-18, increasing by nearly 50% over 2016-17. Cumulatively, over the past nine years, 40% of the funds raised were through endowments, with Chair Professorships and student scholarships attracting the most funding. A total of five Institute Chairs and 19 student scholarships were fully endowed this year. Crowd-funding, where short-term projects with limited funding requirements are presented for rapid closing, saw alumni pitch in with Rs.1 crore last year.

The Centre for Innovation (CFI) is being renovated and expanded through alumni funding. An annexe to the CSE Department is also on the anvil thanks to alumnus support. A first-ever stock contribution worth \$1 million by a donor has created an endowment to support the Initiative for Biological Systems Engineering (IBSE).

Several centres and laboratories conducted world-class events during the year with support from alumni: the 3rd Annual Workshop & Winter School on Computational Brain Research, the first Deshpande - Gopalakrishnan Symposium on Innovation and Entrepreneurship, and the 2nd PAN IIT Biotech Workshop sponsored by the Mehta Family Foundation.

During the last year, alumni funding has been utilised for funding the travel grants of 267 students at Rs.1 crore and 22 faculty members at Rs.12 lakh, and merit-cum-means scholarships of 101 students. The Ram Shriram Merit Scholarship (RSMS) was instituted in September 2017 to support economically-backward students, and 67 students are currently receiving this scholarship.

15. Acknowledgements

An endeavour on the scale of this institute and its entire gamut of activities takes place with the whole-hearted participation and support of all stakeholders - our faculty, students and staff; agencies and industries sponsoring R&D and consultancy projects; professionals from other organisations who assist us in various capacities; and our alumni with their generous support to our various activities. In particular, I would like to thank office-bearers such as Heads of Departments, Deans, Chairpersons, Wardens, Advisors, and Professors-in-charge of various Cells and Centres for the selfless work they put in to keep the institute ticking. The institute is grateful to the Ministry of Human Resources Development, Government of India, for its continued and sustained encouragement and support. I also wish to thank the Government of Tamil Nadu for all the support it continues to extend in multiple ways.

I wish to thank Dr. Pawan Goenka, our Chairman, Board of Governors, and all Board members for their wise counsel, support and guidance, enabling us to scale new heights. Our Chairman is constantly holding us to a goal-oriented approach aimed at exceeding our Strategic Plan objectives. I take this opportunity to thank the outgoing Board members Shri Rajendra Ratnoo, Shri R. Palaniswamy and Dr. Tariq Thomas, and welcome Shri K. Vivekanand and Shri Vijendra Singh Rawat who have been nominated in their place.

I would like to express my gratitude to our Chief Guest, Dr. Rajiv Kumar, for gracing this Convocation. He is a renowned economist who has been helming the NITI Aayog with a zeal to transform India rapidly. We are eager to hear from him how our faculty, students and alumni can contribute to this great national effort.

Before I end, I would like to congratulate the prize-winners today and wish all our graduands happiness, professional success, and fulfillment from a life of service to their profession, family and country. God bless you all.

ANNEXURE

Faculty Awards/Honours

Dr. Satya Chakravarthy (AE)	• Academy Excellence Award, Defence Research and Development Organisation
Dr. Shaikh Faruque Ali (AM)	• Young Faculty Recognition Award, IIT Madras • Junior-Level R&D Award, IIT Madras
Dr. Karunakaran D (BT)	• Shri R. J. Kinarivala Research Award, Gujarat Cancer and Research Institute
Dr. Nitish R. Mahapatra (BT)	• Torrent Research Award, International Society for Heart Research (Indian Section)
Dr. Rama S. Verma (BT)	• Lifetime Achievement Award, Nature Science Foundation, Coimbatore
Dr. Srinivasa Chakravarthy V (BT)	• Mid-Career R&D Award, IIT Madras
Dr. Suraishkumar GK (BT)	• Sartorius India Chemcon Distinguished Speaker Award, Indian Institute of Chemical Engineers
Dr. Indumathi M. Nambi (CE)	• Magudam Award under S&T category, News18
Dr. Saravanan U. (CE)	• Young Faculty Recognition Award, IIT Madras
Dr. Pushpavanam S (CH)	• Prof. Dr. Y. B. G. Varma Award, IIT Madras
Dr. Vinu R. (CH)	• Amar Dye Chem Award, Indian Institute of Chemical Engineers • INSA Medal for Young Scientists, Indian National Science Academy • Junior-Level R&D Award, IIT Madras
Dr. Aritra Hazra (CS)	• INAE Young Investigator Award, Indian National Academy of Engineering
Dr. Jayalal M. N. (CS)	• Srimathi Marti Annapurna Gurunath Award for Excellence in Teaching, IIT Madras
Dr. Mitesh M. Khapra (CS)	• Google Faculty Research Award
Dr. Rupesh Nasre (CS)	• Dr. A. P. J. Abdul Kalam HPC Award, CRAY
Dr. Sangaranarayanan M. V. (CY)	• NR Rao National Prize in Chemical Sciences, CNR Rao Education Foundation for Promotion of Chemical Research
Dr. Pradeep T. (CY)	• TWAS Prize in Chemistry, The World Academy of Sciences
Dr. Md. Mahiuddin Baidya (CY)	• Young Scientist Platinum Jubilee Award, The National Academy of Sciences, India • Associate, Indian Academy of Sciences, Bengaluru • Junior-Level R&D Award, IIT Madras
Dr. Ramesh Gardas (CY)	• Dr. H. C. Gaur Memorial Lecture Award, University of Delhi and the Royal Society of Chemistry
Dr. Selvam P. (CY)	• Visiting Professor, The University of Manchester, UK
Dr. Tuhin Subhra Santra (ED)	• Bharat Bikas Award, Institute of Self Reliance, Bhubaneswar
Dr. Ashok Jhunjhunwala (EE)	• Foreign Member, U.S. National Academy of Engineering
Dr. Gaurav Raina (EE)	• Chairman, Mobile Payment Forum of India (MPFI)
Dr. Kalpana Mahalingam (MA)	• Young Scientist Award, Academy of Sciences, Chennai • Young Faculty Recognition Award, IIT Madras
Dr. Sundar S. (MA)	• DAAD Research Ambassador, German Academic Exchange Service
Dr. Ashis Kumar Sen (ME)	• Young Faculty Recognition Award, IIT Madras
Dr. Krishnan Balasubramanian (ME)	• Lifetime Achievement R&D Award, IIT Madras
Dr. Narayanan S. (ME)*	• INAE Outstanding Teacher Award, Indian National Academy of Engineering
Dr. Srinivas Reddy K (ME)	• Mid-Career R&D Award, IIT Madras
Dr. Vishal Nandigana (ME)	• Bharat Gaurav Award, India International Friendship Society
Dr. Arshinder Kaur (MS)	• 2017 Emerald/INDAM Indian Management Research Fund Award
Dr. Rajendran C. (MS)	• Doctor rerum politicarum honoris causa, University of Passau, Germany
Dr. Rupashree Baral (MS)	• Outstanding Woman in Management, Venus International Women Awards
Dr. Thillairajan A. (MS)	• Associate, Mossavar-Rahmani Center for Business and Government (M-RCBG), Harvard Kennedy School
Dr. Jitendra Sangwai (OE)	• Regional Distinguished Achievement Award for Petroleum Engineering Faculty, Society of Petroleum Engineers

Dr. Shanmugam MS (OE)	<ul style="list-style-type: none"> National Geospatial Chair Professorship, Department of Science and Technology (DST), Government of India
Dr. Aravind G. (PH)	<ul style="list-style-type: none"> Young Faculty Recognition Award, IIT Madras
Dr. Dilip Kumar Satapathy (PH)	<ul style="list-style-type: none"> Young Scientist Award, Academy of Sciences, Chennai Young Faculty Recognition Award, IIT Madras Junior-Level R&D Award, IIT Madras

*Retired Faculty

Fellowships

Dr. Manivannan M. (AM)	<ul style="list-style-type: none"> Fellowship of the International Medical Sciences Academy (IMSA)
Dr. Amal Kanti Bera (BT)	<ul style="list-style-type: none"> Fulbright-Nehru Academic and Professional Excellence Fellowship
Dr. Ligy Philip (CE)	<ul style="list-style-type: none"> Fellow, Indian National Academy of Engineering (INAE)
Dr. Hema A Murthy (CS)	<ul style="list-style-type: none"> Fellow, Indian National Academy of Engineering (INAE)
Dr. Raghunathan Rengasamy (CH)	<ul style="list-style-type: none"> Fellow, Indian National Academy of Engineering (INAE)
Dr. Ramesh L. Gardas (CY)	<ul style="list-style-type: none"> Associate Fellow, Telangana Academy of Sciences. Associate Fellow, Andhra Pradesh Akademi of Sciences
Dr. Sundargopal Ghosh (CY)	<ul style="list-style-type: none"> Fellow, National Academy of Sciences India (NASI)
Dr. Tuhin Subhra Santra (ED)	<ul style="list-style-type: none"> Wellcome Trust India Alliance Early Career Fellowship Honorary Research Fellow, National Tsing Hua University
Dr. Mahesh Kumar (EE)	<ul style="list-style-type: none"> Fellow, Indian National Academy of Engineering (INAE)
Dr. Saurabh Saxena (EE)	<ul style="list-style-type: none"> Young Faculty Research Fellowship, MeitY
Dr. Shanthi Pavan (EE)	<ul style="list-style-type: none"> Fellow, Institute of Electrical and Electronics Engineers (IEEE)
Dr. Gnanamoorthy R. (ME)	<ul style="list-style-type: none"> Fellow, Indian National Academy of Engineering (INAE)
Dr. Krishnan Balasubramanian (ME)	<ul style="list-style-type: none"> Abdul Kalam Technology Innovation National Fellowship
Dr. Kamaraj M. (MM)	<ul style="list-style-type: none"> Fellow, ASM International
Dr. Ayan Mukhopadhyay (PH)	<ul style="list-style-type: none"> Ramanujan Fellowship, SERB, DST

Books Published

Dr. Nandan Kumar Sinha (AE)	<ul style="list-style-type: none"> <i>Elementary Flight Dynamics with an Introduction to Bifurcation and Continuation Methods</i>, CRC Press, Florida
Dr. Srinivasa Chakravarthy V. (BT)	<ul style="list-style-type: none"> <i>Computational Neuroscience Models of the Basal Ganglia</i>, Springer
Dr. Niket Kaisare (CH)	<ul style="list-style-type: none"> <i>Computational Techniques for Process Simulation and Analysis using MATLAB</i>, CRC Press
Dr. Preeti Aghalayam (CH)	<ul style="list-style-type: none"> <i>Mathematical Modeling for Underground Coal Gasification</i>, Momentum Press
Dr. Sreenivas Jayanti (CH)	<ul style="list-style-type: none"> <i>Computational Fluid Dynamics for Engineers and Scientists</i>, Springer
Dr. Satya Sundar Sethy (HS)	<ul style="list-style-type: none"> <i>Higher Education and Professional Ethics: Roles and Responsibilities of Teachers</i>, Routledge
Dr. Swarnalatha (HS)	<ul style="list-style-type: none"> <i>Ecocriticism: Big Ideas and Practical Strategies</i>, Orient BlackSwan Private Limited
Dr. Arindama Singh (MA)	<ul style="list-style-type: none"> <i>Logics for Computer Science</i>, PHI Learning
Dr. Raghu Prakash (ME)	<ul style="list-style-type: none"> <i>Advances in Structural Integrity</i>, Proceedings of SICE, Springer
Dr. Parasuraman Swaminathan (MM)	<ul style="list-style-type: none"> <i>Semiconductor Materials, Device, and Fabrication</i>, Wiley
Dr. Ranjit Bauri (MM)	<ul style="list-style-type: none"> <i>Metal Matrix Composites by Friction Stir Processing</i>, Butterworth-Heinemann
Dr. Thillai Rajan (MS)	<ul style="list-style-type: none"> <i>Fuel for Start-ups: Perspectives on the Indian Venture Capital Industry</i>, Studera Press
Dr. Srinivasan Chandrasekaran (OE)	<ul style="list-style-type: none"> <i>Dynamic Analysis and Design of Offshore Structures</i>, Springer, Singapore <i>Design Aids of Offshore Structures under Special Environmental Loads including Fire Resistance</i>, Springer

Editorial Board Memberships

Dr. Michael Gromiha M. (BT)	• Member, Editorial Board, Genes
Dr. Rama S. Verma (BT)	• Editor, Botanics: Targets and Therapy
	• Editor, Cytotherapy
Dr. Rajagopal K. (CE)	• Associate Editor, Geotextiles and Geomembranes Journal, Elsevier
Dr. Veeraragavan A. (CE)	• Editorial Board, Infrastructure Asset Management, Institution of Civil Engineers, UK
Dr. Arun Tangirala (CH)	• Editor-in-Chief, Journal of the Institution of Engineers (India): Series E
Dr. Rajagopalan Srinivasan (CH)	• Academic Editor, PLOS One Journal • Member, Editorial Board, Process Safety and Environmental Protection, Elsevier
Dr. Rajnish Kumar (CH)	• Member, 2017 Class of Influential Researchers, Industrial & Engineering Chemistry Research
Dr. Vinu R. (CH)	• Member, Editorial Board, Advanced Powder Technology, Elsevier
Dr. Anurag Mittal (CS)	• Associate Editor, Computer Vision and Image Understanding, Elsevier
Dr. Janakiram D. (CS)	• Associate Editor, Sadhana, Springer
Dr. Madhu Mutyam (CS)	• Member, Editorial Board of IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (IEEE TCAD)
Dr. Archita Patnaik (CY)	• Member, Editorial Board, Journal of Chemical Sciences, Indian Academy of Sciences • Member, Editorial Board, Journal of Chemical Thermodynamics, Elsevier
Dr. Pradeep T. (CY)	• Member, Editorial Advisory Board, Chemistry of Materials, American Chemical Society • Member, Editorial Advisory Board, ACS Nano, American Chemical Society
Dr. Rajakumar (CY)	• Member, Editorial Advisory Board, International Journal of Chemical Kinetics
Dr. Ranga Rao (CY)	• Member, Editorial Board, Polyhedron, International Journal for Research in Inorganic Chemistry, Elsevier
Dr. Sangaranarayanan M. V. (CY)	• Member, Research Council of the CSIR-Central Electrochemical Research Institute, Karaikudi • Associate Editor, Bulletin of Materials Science, Indian Academy of Sciences, Bengaluru
Dr. Sundargopal Ghosh (CY)	• Member, Editorial Advisory Board, Organometallics
Dr. Tuhin Subhra Santra (ED)	• Guest Editor, Special Issue of IJMS
Dr. Krishna Jagannathan (EE)	• Editor, IEEE ACM Transactions on Networking
Dr. Swarnalatha Rangarajan (HS)	• Commissioning Editor, Routledge Studies in World Literatures and the Environment
Dr. Raghu Prakash (ME)	• Regional Editorial Board Member, Frattura ed Integrità Strutturale, Italian Group of Fracture (IGF)
Dr. Reddy K. S. (ME)	• Editorial Member, Future Cities and Environment, Ubiquity Press
Dr. Murty B. S. (MM)	• Chief Editor, Transactions of The Indian Institute of Metals, Springer
Dr. Murugaiyan A. (MM)	• Editor, Transactions of The Indian Institute of Metals, Springer
Dr. Amit R. K. (MS)	• Guest Editor, Special Issue: Sustainable Operations in Manufacturing Enterprise, Annals of Operations Research
Dr. Sundarraj R. P. (MS)	• Associate Editor, IEEE-Engineering Management Review (EMR)
Dr. Abdus Samad (OE)	• Guest Editor, Special Issue of Mathematical Problems in Engineering, Hindawi
Dr. Anantha Subramanian V. (OE)	• Member, Editorial Board, IIRE Journal of Maritime Research and Development
Dr. Jitendra Sangwai (OE)	• Member, Editorial Board, The Open Petroleum Engineering Journal • Member, Editorial Advisory Board, Journal of Chemical and Engineering Data, American Chemical Society
Dr. Nilanjan Saha (OE)	• Associate Editor, ASME Journal of Offshore Mechanics and Arctic Engineering
Dr. Ramachandra Rao M. S. (PH)	• Section Editor, INTERMAT Section of Journal of Physics D: Applied Physics
Dr. Ramaprabhu S. (PH)	• Member, Editorial Board, Nano Digest

Student Scholarships/Fellowships

Sriraghav Srinivasan (BT)	• Blockchain Research Accelerator Fellowship, Berlin
Preksha Nema (CS)	• Google India PhD Fellowship, Google
Punit Khanna (CS), Arnab Roy	• Richard Newton Young Student Fellowship, Design Automation Conference
Jilt Sebastian (CS)	• Swiss Government Excellence Scholarship, Swiss Confederation
Renganathan (EE), Dhinesh Payal Mohapatra, Sharath	• University Design Fellowship Program, Analog Devices
Justin Joseph (HS)	• Chinese Government Scholarship
Shashank Bansal (MS)	• Erasmus+, International Credit Mobility Fellowship, European Union
Manikandan (OE)	• IGTI Student Scholarship, International Gas Turbine Institute, The American Society of Mechanical Engineers
Vishnu Uppalakkal (OE)	• 'Erasmus+' International Credit Mobility Fellowship, European Union
Hisay Lama (PH)	• Raman-Charpak Fellowship, Indo-French Center for the Promotion of Advanced Research

Best Paper/Poster/Presentation Awards

Sahil Gupta (AE), Kishal Saxena (ED), Dr. A. Ramesh	• Best Paper Award, 13 th International Conference on Heat Transfer Fluid Mechanics and Thermodynamics, Slovenia
Krishna Prasath (AE), Geetha Chakaravarthi Dr. R. Velmurugan, Dr. R. Jayaganthan, Dr. Kavitha Arunachalam	• First Prize for Best Poster, Conference and Exhibition on Non-Destructive Evaluation, Chennai
Vinoth P. (AE), Dr. G. Rajesh Raghav (AE), Dr. Senthil Murugan	• Best Poster Award, 5 th National Symposium on Shockwaves (NSSW), Chandigarh • Best Oral Presentation Award, 7 th International Conference on Theoretical, Applied, Computation and Environmental Mechanics (ICTACEM), IIT Kharagpur
Kirithi Priya (AM), Dr. M. Ramasubba Reddy	• Best Paper Award, International Conference on Translational Medicine and Imaging, Chennai
Sazid Zamal Haque (AM) and Dr. Prasad Patnaik	• Dr. M. G. Deshpande Award for Best Paper, 44 th National Conference on Fluid Mechanics and Fluid Power, Kerala
Diptasree Maitra Ghosh (AM), Dr. S. Ramakrishnan	• Best Oral Presentation Award, International Conference on Computational Biology and Bioinformatics (ICCB), Newark, USA
Gowri A. (AM), Dr. V. V. Raghavendra Sai	• Best Oral Presentation Award, 2 nd International Conference on Recent Trends in Analytical Chemistry (ICORTAC), Chennai
Sagaya Prasanna Kumar (AM), Dr. Prasad Patnaik	• Best Oral Presentation Award, 5 th National Symposium on Shock Wave, Chandigarh
Dhanya (BT), Dr. Nitish R. Mahapatra	• Best Poster Award, 15 th Annual Meeting of the International Society of Heart Research (Indian Section), Chandigarh
Infant Sagayaraj Ravhe (BT), Dr. N. Manoj	• Best Poster Award, 4 th IITM-Tokyo Tech Joint Symposium on Bioinformatics, Chennai
Piyush Kumar Gupta (BT), Dr. Rama S. Verma	• Best Poster Award, International Conference on Advances in Polymer Science and Technology, Delhi • First Prize for Poster Presentation and Oral Presentation, International Conference on Biological Application of Nanoparticle
Samar Ballabha Mohapatra (BT), Chellam Gayathri Subash Dr. N. Manoj	• Best Poster Award, British Crystallographic Association Spring Meeting, UK
Sansrity Sinha (BT), Dr. A. Gopala Krishna	• Best Poster Award, Mitochondria, Israel
Sneha Munshi (BT), Dr. Athi N. Naganathan	• Best Poster Award, International Conference on Intrinsically Disordered Proteins: Forms, Functions and Diseases (IDP), Mohali
Lakshmi Subramanian (BT), Dr. Nitish R. Mahapatra	• Best Oral Presentation Award, 2 nd MMM Genetics Meeting, Chennai
Ajay Simha (CE), Dr. Rupen Goswami	• Best Paper Award, Advances and Trends in Civil Engineering, Bengaluru
Atmakuri Priyanka (CE), Dr. R. Sivanandan Dr. Karthik K. Srinivasan	• Best Paper Award, 4 th Conference of the Transportation Research Group of India (CTRG), Mumbai

Rushikesh Desai (CE) Dr. Lelitha Devi Vanajakshi	• Best Research Paper Award, 10 th Urban Mobility India and CODATU XVII Conference, Hyderabad
Prabha Mohandoss (CE) Dr. Radhakrishna G. Pillai	• Outstanding Poster Award, Spring ACI Convention and Exposition, USA
Sripriya Rengaraju (CE) Dr. Radhakrishna G. Pillai	• RILEM Best Student Poster Award
Sundar Rathnaraj (CE) Dr. Radhakrishna G. Pillai	• Best Poster Award, CORCON 2017, Mumbai
Akshaya (CH) Dr. Kannan A.	• Best Paper Award, International Conference on Chemical and Environmental Sciences, Tokyo
Bincy George Abraham (CH) Dr. Raghuram Chetty	• Best Oral Presentation, International Corrosion Prevention Symposium for Research Scholars, Chennai
Saranya Sriram (CH) Dr. Indumathi M. Nambi	• Best Oral Presentation, International Corrosion Prevention Symposium for Research Scholars, Chennai
Vinisha (CH) Dr. Raghuram Chetty Dr. Mathava Kumar S.	• Best Oral Presentation Award, International Conference on Desalination, Trichy
Sudarsun (CS) Jeshuren Chelladurai Dr. Ravindran B.	• Best Paper Award, Conference on Data Science and Management of Data (CoDS-COMAD), Goa
Arnab Dey (CY) Dr. Chandrakumar N.	• Best Student Poster Prize, 24 th Conference of the National Magnetic Resonance Society of India, Mohali
Anangsha De (CY) Dr. Sundaragopal Ghosh	• Best Poster Award, 16 th International Meeting on Boron Chemistry Conference, Hong Kong
Ayan Bhattacharyya (CY) Dr. Edamana Prasad	• Best Poster Award, Trombay Symposium on Radiation and Photochemistry, Mumbai
Ramavath Naik (CY) Dr. Kothandaraman R.	• ChemComm Poster Prize, Conference on Electrochemistry in Advanced Materials, Corrosion and Radiopharmaceuticals, Mumbai
Swayam Prakash (CY) Dr. Ashok Mishra	• Best Poster Award, International Conference on Sophisticated Instruments in Modern Research, Guwahati
Anusha (CY) Dr. Ramesh L. Gardas	• Best Oral Presentation Award, International Conference on Recent Trends in Analytical Chemistry, Chennai • Best Oral Presentation Award, International Conference on Green Methods for Separation, Purification and Nanomaterial Synthesis, Bengaluru
Chinmaya (CY) Dr. Kothandaraman R.	• Best Poster Presentation Award, Conference on Electrochemistry in Advanced Materials, Corrosion and Radiopharmaceuticals, Mumbai
Sanjeev Gupta (CY) Dr. Selvam P.	• Hindustan Platinum Best Oral Presentation Award, National Symposium on Catalysis, Bengaluru
Anirban Nag (ED) Dr. Sandipan Bandyopadhyay	• Best Student Paper Award, 18 th National Conference on Machines and Mechanisms, Mumbai
Esther Blesso Vidhya (ED) Dr. Nilesh Jayantilal Vasa	• Best Innovative Paper Award, International Conference on Precision, Meso, Micro and Nano Engineering, Chennai
Swagata Borthaku (ED) Dr. Shankar Ram C.	• Best Student Paper award, 3 rd IFAC International Conference on Advances in Control and Optimization of Dynamical Systems, Hyderabad
Aparna (ED) Dr. Nilesh J. Vasa Dr. Sarath R.	• Best Poster Award, Second National Power Engineering Research Scholar's Conference, Chennai
Pawan Poojary (EE) Dr. Krishna Jagannathan	• Best Poster Award, 10 th International Conference on COMMunication Systems and NETWORKS, Bengaluru
Shekar Bhawal (EE), Sandeep V. Nair, Jose Titus, Vamshi Krishna, Dr. Kamalesh Hatua	• Best Poster Paper Award, ELROMA-2017, Mumbai
Vishal Tiwari (EE) Dr. Deleep R. Nair	• Best Oral Paper Award, 3 rd International Conference on Emerging Electronics, Mumbai
Dhanasekaran (ME), Dr. Kumaraswamy S., Dr. Krishnakumar R.	• Best Paper and Excellent Presentation Award, 14 th Asian International Conference on Fluid Machinery 2017, China
Kiran Amireddy (ME), Dr. Krishnan Balasubramanian	• Best Paper Award, 22 nd National Symposium on Advances in Ultrasonics and Materials Research, Himachal Pradesh

Manish Prajapat (ME), Vishwajeet Sikchi, Dr. Sujatha Srinivasan	• Best Paper Award, 3 rd Indian Conference on Applied Mechanics, Allahabad
Monalisha Maharana (ME), Dr. Raghu Prakash V.	• Best Student Paper Honourable Mention Award, International Mechanical Engineering Conference and Exhibition, Florida
Om Prakash Saw (ME), Dr. Mallikarjuna	• Best Paper Award, International Conference on Computational Fluid Mechanics in Research and Industry, Thailand
Vyankatesh Astekar (ME) Dr. Sourav Rakshit	• Best Poster Award, 3 rd International and National Conference on Machines and Mechanisms, Mumbai
Avinash Kumar (ME) Ramineni Ajayraj Dr. Prabhu Rajagopal Dr. Krishnan Balasubramanian	• Best Paper Oral Presentation Award, National Seminar on NDE (2017), Chennai
Ezhilmaran (ME) Dr. Vijayaraghavan L. Dr. Nilesh J. Vasa	• Best Poster Presentation Award, International Conference on Manufacturing Technology and Simulation, Chennai
Khavieya (ME) Dr. L. Vijayaraghavan Dr. S. Soundarapandian	• Second Prize for Best Paper Presentation, International Conference on Manufacturing Technology and Simulation, Chennai
Saurabh Kumar Gupta (ME) Dr. Anand Krishnasamy	• Best Oral Presentation Award, International Conference on Sustainable Energy and Environmental Challenges, Bengaluru
Khadambari (MM) Dr. Ramachandra Rao MS	• Best Session Paper Award, 3 rd International Conference on Innovative Design, Analysis and Development Practices in Aerospace and Automotive Engineering, Chennai
Sonia Sharma (MM) Dr. Parasuraman Swaminathan	• Best Poster Award, E-MRS Spring Meeting (2017), France
Ayush Chaudhary (MS) Dr. Varisha Rehman	• Second Prize for Best Paper, 9 th Conference on Research and Excellence, Indore
Akanksha Jaiswal (MS) Dr. Lata Dyaram	• President ISDSI Award for Best Paper, 11 th ISDSI Conference, Tiruchirappalli
Anuja Sethiya (MS) Dr. Thenmozhi	• Best Paper Award, International Conference on Financial Markets and Corporate Finance, IIT Kharagpur
Aravind Ganesh (MS) Dr. Arshinder Kaur	• Best Paper Award, International Conference on Research and Business Sustainability, Noida
Rahul Lexman (MS) Dr. Rupashree Baral	• Best Research Paper Award, Berchmans National Conference, Kochi
Shashank Bansal (MS) Dr. Thenmozhi M	• Best Paper Award, 18 th World Business Research Conference, San Francisco, USA • Best Doctoral Research Paper Award, 5 th PAN IIM Conference, Lucknow
Sriji (MS) Dr. Lata Dyaram	• Best Paper Award, 17 th Consortium of Students in Management Research, Bengaluru • Best Paper Award, 9 th Annual American Business Research, New York, USA
Sriram (MS) Dr. Arun Kumar G.	• Emerald Best Paper Award, International Conference on Financial Markets and Corporate Finance, Kharagpur
Suraj Kumar (MS) Dr. Krishna Prasanna	• Best Paper Award, 4 th Management Doctoral Colloquium, Kharagpur
Kiran (OE) Dr. Srinivasan Chandrasekaran	• Best Paper Award, 19 th International Conference on Coastal and Ocean Engineering, Paris
Ravindar R. (OE) Dr. Idichandy V. G.*	• Springer Outstanding Student Paper Award (2 nd Prize), ICOE 2018, Chennai
Madhan Kumar (OE) Dr. Abdus Samad	• Best Poster Award, 3 rd International Conference on Design, Analysis, Manufacturing & Simulation, Chennai
Pius Augustin (PH) Dr. M. S. Ramachandra Rao	• Best Poster Award, 9 th International Conference on Materials for Advanced Technologies, Singapore
Shibnath Samanta (PH) Dr. Sethupathi K. Dr. Sankaranarayanan V.	• Best Oral Presentation Award, 6 th International Symposium on Integrated Functionalities, New Delhi

Student Thesis/Project Awards

Aparup Biswal (CE) Dr. A. Meher Prasad Dr. Amlan K. Sengupta	• UltraTech Cement Award, Outstanding MS Thesis in the field of Concrete in Tamil Nadu
Sooraj Kumar (CE) Dr. Radhakrishna G. Pillai	• Best Master's Thesis Award, NACE International – Gateway India Section
Dr. Dharmendra Singh (CH) Dr. Ramesh L. Gardas	• Best Thesis Award in Chemical Sciences, The Indian Society of Chemists and Biologists (ISCB)
Dr. Vishnu Unni (AE) Dr. R. I. Sujith	• Best PhD Award, Second International Conference on Sustainable Energy and Environmental Challenges, Bengaluru

Student Prizes/Awards

Abhishek Narayan (BT) Dr. Athi N. Narayanan	• BIRAC Gandhian Young Technology Innovation Award
Arijita Ghosh (BT) Dr. Amal Kanti	• GRC Carl Storm - International Diversity Award, Gordon Research Conference, Vermont, USA
Chellam Gayathri Subash (BT) Dr. N. Manoj	• Best Young Investigator Talk award, International Center for Genetic Engineering and Biotechnology, New Delhi
Lakshmi Subramanian (BT) Dr. Nitish R. Mahapatra	• Dr. Devendra K. Agrawal Young Investigator Award, 10th International Conference of Academy of Cardiovascular Sciences, Mumbai
Anu Rachel Thomas (CE) Arya, Kaviyarasan, Praveen Rosario, Dr. Ligy Philip	• Gandhian Young Technology Innovation Appreciation Award
Pallab Basuri (CY) Depanjan Sarkar, Dr. T. Pradeep	• Gandhian Young Technology Innovation Appreciation Award
Dr. Velmurugan (CY) Dr. T. Pradeep	• Young Scientist Award, Association for Microbiologists in India
Prasanna Karthik (CS) Dr. V. Kamakoti	• Second Prize, IDRBT Doctoral Consortium 2017 Institute for Development and Research in Banking Technology, Hyderabad
Jobin Daniel John (ED) Dr. G. Saravana Kumar	• Young Researcher Award, International Research Council on Biomechanics of Injury (IRCOBI) Asia Conference 2018, Lonavala
Theodosia Lourdes (ED) Dr. T. Asokan	• Pratibha: the Eaton Excellence Award Young Researcher Award, International Research Council on Biomechanics of Injury (IRCOBI) Asia Conference 2018, Lonavala
Saranya (EE) Dr. K. Shanti Swarup	• Pratibha: the Eaton Excellence Award
Tushar Sakorikar (EE) Dr. V. Pramitha Dr. Manu Jaiswal	• GRC Carl Storm International Diversity Award, Gordon Research Conference on Multifunctional Materials and Structures, Ventura, CA, USA
Supriya Subramani (HS) Dr. Sreekumar N.	• Bursary Award, ICCEC
Amireddy Kiran Kumar (ME) Dr. Krishnan Balasubramanim and Dr. Prabhu Rajagopal	• BIRAC Gandhian Young Technology Innovation Award
Khadambari (MM) Dr. S. S. Bhattacharya	• Student Travel Award, 5th Nano Today Conference, Hawaii, USA
Ramesh Kumar (MM) Dr. T. Pradeep	• BIRAC Gandhian Young Technology Innovation Award
Jyotsna (MS) Dr. Upendra Kumar Maurya	• 2 nd Runner-Up position, Research Grant Proposal Competition, NASMEI
Kotyada Bhargava Chandramouli (MS)	• Star Reporter of the Month, Business Standard
Nilanjan Dutta (MS) Dr. Arshinder Kaur	• 2017 Emerald/INDAM Indian Management Research Fund Award, IIM Trichy
Prakash Attili (MS) Dr. Saji K. Mathew	• Doctoral Student Award, Workshop on Information Security and Privacy, Seoul

Aishwarya (OE) Dr. V. Anantha Subramanian	• Pratibha: the Eaton Excellence Award
Tapas K. Das (OE) Khalde Chirag Madhusudhan, Dr. Abdus Samad	• World IP Day competition held at ICSR

Prizes in Competitions

Gobiha (AE) Dr. Nandan Kumar Sinha	• Consolation Prize in the National level Open Challenge Competition, DEFEXPO 2018, Ministry of Defence
Team from CE Y. V. R. Sashi Sekhar, V Vamsi Krishna, Cicily Kurian, Archana Nori, T. Vishwas Reddy, Dr. K. P. Sudheer	• Second Place, Ethics Video Challenge, Annual International Meeting 2017 of the American Society of Agricultural and Biological Engineers, Washington, USA
Team from CE Gobinath, Shreeram, Santhosh, Akhilesh	• First Prize, National Level Social Enterprise Idea Challenge, Azim Premji University
Team from CS Sareena, Gargi, Indrani, Himanshi, Dr. Chester Rebeiro	• First Prize, Embedded Security Competition (ESC)
Team from CS Arjun Menon, Subadra Murugan, Neel Gala, Dr. Chester Rebeiro, Dr. Kamakoti V.	• Second Prize, Applied Security Research Competition
Anupam Chandra, Lockheed Martin C-130 Team	• Best Student Innovator of the Year award, Indian Automotive Technology and Innovation Awards, Auto Tech Review
Foldable Houses Team	• First Place, Azim Premji University Social Entrepreneurship Challenge • National Winners, Business Model Competition conducted by Ventura and NIT Trichy
IITM iBOT Club Team	• National Runners-Up for their CFI project 'Artemis', International James Dyson Award Competition
Team Abhiyaan	• Placed 13 th (among 35 teams), Intelligent Ground Vehicle Competition (IGVC), Michigan, USA
Team Adhira	• 5 th Position, Formula Bharat Electrical Vehicle Design Challenge
Team Anveshak	• Placed 29 th , University Rover Challenge (URC), Utah Desert, USA
Team Avishkar Hyperloop	• Qualified for the Final Design round of the SpaceX Hyperloop Pod Competition and placed among the top 47 teams across the world.
Team from CFI	• National Champions (for their Hybrid Bevel Bikes), National Clean Air Crowdsourcing Competition organised by UC Berkley and IIT Delhi
Team from CVI Group	• First position, Hack2Innovate Competition
Team MagNex	• Finalists, International Conference on Robotics and Automation (ICRA) in Singapore
Team Raftar	• Overall 15 th Place, Formula Student Italy 2017
Team Supercalifragilistic	• 2 nd position, Gwalior region of the ACM International Collegiate Programming Contest (ICPC 2018), thus qualified for World Finals of the ACM International Collegiate Programming Contest (ICPC 2018), Beijing by securing 2nd position in the Gwalior region
Team W6	• Technical Excellence Award, Carbon Zero Challenge 2017-18, IIT Madras

2

Administration

2.1. General

The Indian Institute of Technology Madras (IIT Madras) is an autonomous statutory organisation functioning within the Institutes of Technologies Act 1961, as amended by the Institute of Technology Amendment Act, 1963. The IITs (at Mumbai, Kanpur, Kharagpur, Delhi, Guwahati, Roorkee, Rupnagar, Bhubaneswar, Gandhinagar, Hyderabad, Patna, Jodhpur, Mandi, Indore, Varanasi (BHU) and Chennai) are administrated centrally by the Councils of IITs, an apex body established by the Government of India (GoI) to co-ordinate the activities of these institutes. The Minister for Human Resource Development, GoI is the Chairperson of the Council. Each IIT has a Board of Governors responsible for overall administration and control.

The Senate decides the academic policies of IIT Madras. It approves and controls the curricula, courses, examinations

and declaration of results. It appoints various committees to look into specific academic matters arising from time to time. The teaching, training and research activities of various departments at the institute are constantly under review to improve facilities and standards. The Director of the institute is the Chairman of the Senate. The members of the Senate are listed in the Appendix. The Finance Committee provides financial advice. The Buildings and Works Committee advise the institute on matters relating to buildings and works activities. The compositions of these committees and boards, together with a list of other officers, are also provided in the Appendix.

2.2. Staff Position

As on 31 March 2018, 583 faculty and 86 Group A officers were in position.

2.2.1. Number of Faculty/Employees in Position

Faculty Members	Visiting Faculty	Group A Staff	Scientific Officer	Technical Staff	Administrative Staff
583	17	86	01	280	341

Number of faculty and employees appointed during 2017-2018

Professors	Associate Professors	Assistant Professors	Visiting Faculty	Administrative and Technical Staff (including Group A)
19	24	19	17	72

2.2.2. Faculty/Employees Appointed Between 1 April 2017 and 31 March 2018

Sl. No.	ID. No.	Name	Designation	Department/Section	Date of Joining
Assistant Professor					
1.	8847	Basudev Roy	Assistant Professor	Physics	3 April 2017
2.	8848	Vishal V. R. Nandigana	Assistant Professor	Mechanical Engineering	21 April 2017
3.	8868	Suresh Rajendran	Assistant Professor	Ocean Engineering	19 June 2017
4.	8874	Yasir Iqbal	Assistant Professor	Physics	17 July 2017
5.	8876	Lakshmi Priya P. S.	Assistant Professor	Civil Engineering	24 July 2017
6.	8877	Anindita Sahoo	Assistant Professor	Humanities and Social Sciences	3 August 2017
7.	8879	Divya A.	Assistant Professor	Humanities and Social Sciences	8 August 2017
8.	8880	Sivaram A.	Assistant Professor	Mathematics	31 August 2017
9.	8881	Santosh Kumar Sahu	Assistant Professor	Humanities and Social Sciences	1 September 2017
10.	8883	Avhishek Chatterjee	Assistant Professor	Electrical Engineering	4 October 2017

Sl. No.	ID. No.	Name	Designation	Department/Section	Date of Joining
11.	8884	Harish Guruprasad Ramaswamy	Assistant Professor	Computer Science	11 October 2017
12.	8885	Yadu Vasudev	Assistant Professor	Computer Science	16 October 2017
13.	8886	Avishek Parui	Assistant Professor	Humanities and Social Sciences	7 November 2017
14.	8887	Satadal Ghosh	Assistant Professor	Aerospace Engineering	15 November 2017
15.	8888	Ilaksh Adlakha	Assistant Professor	Applied Mechanics	4 December 2017
16.	8891	Ayan Mukhopadhyay	Assistant Professor	Physics	29 December 2017
17.	8894	Sriram R.	Assistant Professor	Aerospace Engineering	4 January 2018
18.	8893	Alagappan P.	Assistant Professor	Civil Engineering	4 January 2018
19.	8913	Abhishek Misra	Assistant Professor	Physics	6 February 2018
Associate Professors					
1.	8493	Raghavendra Sai V. V.	Associate Professor	Applied Mechanics	21 July 2017
2.	8513	Shaikh Faruque Ali	Associate Professor	Applied Mechanics	21 July 2017
3.	8321	Rupen Goswami	Associate Professor	Civil Engineering	21 July 2017
4.	8432	Gitakrishnan Ramadurai	Associate Professor	Civil Engineering	21 July 2017
5.	8405	Arun Menon	Associate Professor	Civil Engineering	21 July 2017
6.	8459	Radhakrishna G. Pillai	Associate Professor	Civil Engineering	21 July 2017
7.	8551	Vinu R.	Associate Professor	Chemical Engineering	21 July 2017
8.	8504	Ethayaraja Mani	Associate Professor	Chemical Engineering	21 July 2017
9.	8332	Balakrishna C. Rao	Associate Professor	Engineering Design	21 July 2017
10.	8397	Palaniappan Ramu	Associate Professor	Engineering Design	21 July 2017
11.	5024	Venkatesh T. G.	Associate Professor	Electrical Engineering	21 July 2017
12.	8439	Ananth Krishnan	Associate Professor	Electrical Engineering	21 July 2017
13.	8495	Gaurav Raina	Associate Professor	Electrical Engineering	21 July 2017
14.	8507	Deleep R. Nair	Associate Professor	Electrical Engineering	21 July 2017
15.	8514	Ramakrishna Pasumarthy	Associate Professor	Electrical Engineering	21 July 2017
16.	8443	Arijit Dey	Associate Professor	Mathematics	21 July 2017
16.	8467	Balaji R.	Associate Professor	Mathematics	21 July 2017
17.	758	Manivannan P. V.	Associate Professor	Mechanical Engineering	21 July 2017
18.	8418	Abhijit Sarkar	Associate Professor	Mechanical Engineering	21 July 2017
19.	8517	Sushanta Kumar Panigrahi	Associate Professor	Mechanical Engineering	21 July 2017
20.	8519	Narssimhan Swaminathan	Associate Professor	Mechanical Engineering	21 July 2017
21.	8516	Lakshman Neelakantan	Associate Professor	Metallurgical and Materials Engineering	21 July 2017
22.	8499	Lata Dyaram	Associate Professor	Management Studies	21 July 2017
23.	8508	Manu Jaiswal	Associate Professor	Physics	21 July 2017
24.	8892	Manikandan N.	Associate Professor	Computer Science	1 January 2018
Professor					
1.	8313	Arockiarajan A.	Professor	Applied Mechanics	15 March 2018
2.	8357	Rayala Suresh Kumar	Professor	Biotechnology	15 March 2018
3.	8104	Chandraraj K.	Professor	Biotechnology	15 March 2018
4.	8473	Michael Gromiha M.	Professor	Biotechnology	15 March 2018
5.	8204	Indumathi Manivannan Nambi	Professor	Civil Engineering	15 March 2018
6.	8919	Rajagopalan Srinivasan	Professor	Chemical Engineering	15 March 2018
7.	8156	Ravindran B.	Professor	Computer Science	15 March 2018
8.	8229	Anurag Mittal	Professor	Computer Science	15 March 2018

Sl. No.	ID. No.	Name	Designation	Department/Section	Date of Joining
9.	8224	Sundargopal Ghosh	Professor	Chemistry	15 March 2018
10.	8244	Rajakumar B	Professor	Chemistry	15 March 2018
11.	8252	Edamana Prasad	Professor	Chemistry	15 March 2018
12.	8249	Muraleedharan K. M.	Professor	Chemistry	15 March 2018
13.	8200	Debashis Chakraborty	Professor	Chemistry	15 March 2018
14.	8921	Rengaswamy Jayaganthan	Professor	Engineering Design	15 March 2018
15.	8260	Bijoy Krishna Das	Professor	Electrical Engineering	15 March 2018
16.	8274	Anjan Chakravorty	Professor	Electrical Engineering	15 March 2018
17.	8250	Ganesan A. R.	Professor	Physics	15 March 2018
18.	8356	James Frederick Libby	Professor	Physics	15 March 2018
19.	8920	Jatindra Kumar Rath	Professor	Physics	15 March 2018
Group A Officers					
1.	1967	H. Anandaram	Executive Engineer	Engineering Unit	21 April 2017
2.	8003	G. Amutha	Technical Officer	Electrical Engineering	27 April 2017
3.	8137	P. Hariharan	Technical Officer	CWS	27 April 2017
4.	627	M. Karupiah	Technical Officer	Aerospace Engineering	27 April 2017
5.	225	A. Anand	Technical Officer	Electrical Engineering	27 April 2017
6.	8010	G. J. Senthilnathan	Technical Officer	Civil Engineering	27 April 2017
7.	217	K. C. Selvam	Technical Officer	Electrical Engineering	2 May 2017
8.	589	S. P. Shanmugam	Assistant Registrar	Admn.III	8 May 2017
9.	8057	D. Rajavel	AEE (Civil)	Engineering Unit	11 May 2017
10.	8066	K. Narayanaperumal	AEE (Civil)	Engineering Unit	11 May 2017
11.	8059	Ajay Krishnan	AEE (Civil)	Engineering Unit	11 May 2017
12.	8858	Rashmi Uday Kumar	Assistant Registrar	Communication & PR	11 May 2017
13.	8865	Anandamurugan M.	Deputy Librarian	Central Library	5 June 2017
14.	8867	Vijay Shankar B.	Assistant Registrar	Admn. I & III	16 June 2017
15.	8873	Karunakaran P. V. (on deputation)	Deputy Registrar	Finance & Accounts	30 June 2017
Visiting Faculty					
1.	VF-159	Kai Yun	Visiting Faculty	Humanities and Social Sciences	10 June 2017
2.	VF-150	Rajagopalan Srinivasan	Visiting Professor	Chemical Engineering	18 July 2017
3.	VF-158	Rainer Lohmann	Visiting Faculty	Chemical Engineering	1 September 2017
4.	CP-1401	Feroz Ali Khader	IPR Chair Professor	Management Studies	18 July 2017
5.	POP-05	Rajini Krishnan	Professor of Practice	Engineering Design	1 March 2017
6.	INSP-F-009	Deepika Janakiraman	INSPIRE Hosted Faculty	Chemistry	10-Aug-2017
7.	DST RF - 02	Pramoda Kumar Nayak	Ramanujan Fellowship	Physics	18 September 2017
8.	POP-06	Harit Santhanam	Professor of Practice	Mechanical Engineering	9 November 2017
9.	POP-07	V. K. Sundararaman	Professor of Practice	Applied Mechanics	13 November 2017
10.	VF-159	T. Jayachandran	Visiting Faculty	Aerospace Engineering	16 October 2017
11.	VF-160	Monika Gosner	Visiting Faculty	Humanities and Social Sciences	15 January 2018
12.	VF-161	Vidya Praveen Bhallamudi	Visiting Faculty	Physics	15 February 2018
13.		Srinivasan Parthasarathy	VAJRA Visiting Faculty	Computer Science	28 March 2018
14.		Narayanan Neithalath	VAJRA Visiting Faculty	Civil Engineering	28 March 2018

Sl. No.	ID. No.	Name	Designation	Department/Section	Date of Joining
15.		Raghavan Srinivasan	VAJRA Visiting Faculty	Civil Engineering	28 March 2018
16.		Gopal Pandurangan	VAJRA Visiting Faculty	Computer Science	29 March 2018
17.		Pulickel M Ajayan	VAJRA Visiting Faculty	Chemistry	29 March 2018
Employees					
1.	8642	Kumar G.	Junior Superintendent	Finance and Accounts	8 May 2017
2.	8652	Sathiya B.	Junior Superintendent	Finance and Accounts	8 May 2017
3.	8849	Santhosh S.	Security Guard	Security Section	8 May 2017
4.	8850	Muthukumar R.	Security Guard	Security Section	8 May 2017
5.	8851	Selvakumar C.	Security Guard	Security Section	8 May 2017
6.	8852	Srisandhosh C.	Security Guard	Security Section	8 May 2017
7.	8853	Deepan R.	Security Guard	Security Section	8 May 2017
8.	8854	Subathra K.	Security Guard	Security Section	8 May 2017
9.	8855	Thamarai Kannan S.	Security Guard	Security Section	8 May 2017
10.	8856	Shiv Balak Kumar	Security Guard	Security Section	8 May 2017
11.	8857	Poornima	Security Guard	Security Section	8 May 2017
12.	0836	Saradhambal V.	Junior Technical Superintendent (Lib)	Central Library	8 May 2017
13.	8859	Jothimurugan S.	Junior Technician	Chemistry	17 May 2017
14.	8860	Varalakshmi A.	Junior Technician	Sophisticated Analytical Instrument Facility	17 May 2017
15.	8861	Veerabalaji P.	Junior Technician	Electrical Engineering	17 May 2017
16.	8862	Jegan J.	Junior Technician	Electrical Engineering	17 May 2017
17.	8863	Sankar Ganesh M.	Junior Technician	Mechanical Engineering	17 May 2017
18.	8864	Princy Golda J.	Junior Technician	Physics	17 May 2017
19.	8866	Scariya K. C.	Assistant Security Officer	Security Section	12 June 2017
20.	8376	Dhananchezhiyan P.	Junior Technical Superintendent	Mechanical Engineering	21 June 2017
21.	8806	Rajesh Kanna N.	Junior Technical Superintendent	Mechanical Engineering	21 June 2017
22.	8092	Anburaj R.	Junior Technical Superintendent	Metallurgical and Materials Engineering	21 June 2017
23.	8315	Arun E.	Junior Technical Superintendent	Computer Centre	21 June 2017
24.	8870	Ganesan K.	Junior Technical Superintendent	Electrical Engineering	21 June 2017
25.	8871	Arvind S. Murthy	Junior Technical Superintendent	Physics	21 June 2017
26.	8869	Manigandan L.	Junior Technical Superintendent	Electrical Engineering	21 June 2017
27.	8872	Jayalakshmi P.	Junior Technical Superintendent	Mechanical Engineering	21 June 2017
28.	8875	Ratheesh R.	Junior Technical Superintendent	Computer Science and Engineering	20 July 2017
29.	8878	Raj Kumar V. K.	Junior Technical Superintendent	Chemical Engineering	14 August 2017
30.	8882	Hariprasath P.	Security Guard	Security Section	8 September 2017
31.	8890	Vridhagiri K.	Staff Nurse	Institute Hospital	20 December 2017
32.	8889	Thulasi Raj H.	Staff Nurse	Institute Hospital	20 December 2017
33.	8895	Thamilarasi A.	Staff Nurse	Institute Hospital	8 January 2018
34.	8896	Suresh C. K.	Junior Assistant	Physics	22 January 2018
35.	8897	Kanaka Raju K.	Junior Assistant	Stores & Purchase	22 January 2018
36.	8898	Parkkavan G.	Junior Assistant	Academics	22 January 2018
37.	8899	Sughan Harrish	Junior Assistant	Aerospace Engineering	22 January 2018
38.	8900	Archana G.	Junior Assistant	Administration	22 January 2018

Sl. No.	ID. No.	Name	Designation	Department/Section	Date of Joining
39.	8901	Karan R. K.	Junior Assistant	Taramani Guest House	22 January 2018
40.	8902	Jayasree S.	Junior Assistant	Academics	22 January 2018
41.	8903	Renny Suresh	Junior Assistant	Stores & Purchase	25 January 2018
42.	8904	Gopi V.	Junior Technician	Biotechnology	1 February 2018
43.	8905	Narayanan P. V.	Junior Technician	Sophisticated Analytical Instrument Facility	1 February 2018
44.	8906	Azhagappan R.	Junior Technician	Central Work-shop	1 February 2018
45.	8907	K. S. Kishore Raj	Junior Technician	Ocean Engineering	1 February 2018
46.	8908	Vibin	Junior Technician	Metallurgical and Materials Engineering	1 February 2018
47.	8909	Vishyantsukhesh Chandra P.	Junior Technician	Central Electronics Centre	1 February 2018
48.	8910	Chithiraikumar C.	Junior Technician	Chemistry	1 February 2018
49.	8911	Nimmakayala Uma Maheswara Reddy	Junior Technician	Physics	1 February 2018
50.	8912	C. Palanivelrajan	Junior Technician	Management Studies	1 February 2018
51.	8914	Selvaganapathy S.	Junior Assistant	O/o. Dean (Admn.)	26 February 2018
52.	8915	Bharathidasan	Junior Technician	Central Electronics Centre	1 March 2018
53.	8916	Jeyachandran G.	Junior Technician	Central Glass Blowing Centre	5 March 2018
54.	8917	Silambarasan V.	Junior Technician	Central Glass Blowing Centre	5 March 2018
55.	8918	Dharmarajan N.	Junior Assistant	Engineering Unit	19 March 2018

2.2.3. Internal Faculty/Employees Appointed in Higher Grades During 2017-18

Sl. No.	Name	Designation	Department	DOJ
Associate Professors				
1.	Raghavendra Sai V. V.	Associate Professor	Applied Mechanics	21 July 2017
2.	Shaikh Faruque Ali	Associate Professor	Applied Mechanics	21 July 2017
3.	Rupen Goswami	Associate Professor	Civil Engineering	21 July 2017
4.	Gitakrishnan Ramadurai	Associate Professor	Civil Engineering	21 July 2017
5.	Arun Menon	Associate Professor	Civil Engineering	21 July 2017
6.	Radhakrishna G. Pillai	Associate Professor	Civil Engineering	21 July 2017
7.	Vinu R.	Associate Professor	Chemical Engineering	21 July 2017
8.	Ethayaraja Mani	Associate Professor	Chemical Engineering	21 July 2017
9.	Balakrishna C. Rao	Associate Professor	Engineering Design	21 July 2017
10.	Palaniappan Ramu	Associate Professor	Engineering Design	21 July 2017
11.	Venkatesh T. G.	Associate Professor	Electrical Engineering	21 July 2017
12.	Ananth Krishnan	Associate Professor	Electrical Engineering	21 July 2017
13.	Gaurav Raina	Associate Professor	Electrical Engineering	21 July 2017
14.	Deleep R. Nair	Associate Professor	Electrical Engineering	21 July 2017
15.	Ramakrishna Pasumarthy	Associate Professor	Electrical Engineering	21 July 2017
16.	Arijit Dey	Associate Professor	MA	21 July 2017
17.	Balaji R.	Associate Professor	Mathematics	21 July 2017
18.	Manivannan P. V.	Associate Professor	Mechanical Engineering	21 July 2017
19.	Abhijit Sarkar	Associate Professor	Mechanical Engineering	21 July 2017
20.	Sushanta Kumar Panigrahi	Associate Professor	Mechanical Engineering	21 July 2017
21.	Narssimhan Swaminathan	Associate Professor	Mechanical Engineering	21 July 2017
22.	Lakshman Neelakantan	Associate Professor	Metallurgical and Materials Engineering	21 July 2017
23.	Lata Dyaram	Associate Professor	Management Studies	21 July 2017
24.	Manu Jaiswal	Associate Professor	Physics	21 July 2017
Professors				
1.	Arockiarajan A.	Professor	Applied Mechanics	15 March 2018
2.	Rayala Suresh Kumar	Professor	Biotechnology	15 March 2018
3.	Chandraraj K.	Professor	Biotechnology	15 March 2018

Sl. No.	Name	Designation	Department	DOJ
4.	Michael Gromiha M.	Professor	Biotechnology	15 March 2018
5.	Indumathi Manivannan Nambi	Professor	Civil Engineering	15 March 2018
6.	Rajagopalan Srinivasan	Professor	Chemical Engineering	15 March 2018
7.	Ravindran B.	Professor	Computer Science	15 March 2018
8.	Anurag Mittal	Professor	Computer Science	15 March 2018
9.	Sundargopal Ghosh	Professor	Chemistry	15 March 2018
10.	Rajakumar B.	Professor	Chemistry	15 March 2018
11.	Edamana Prasad	Professor	Chemistry	15 March 2018
12.	Muraleedharan K. M.	Professor	Chemistry	15 March 2018
13.	Debashis Chakraborty	Professor	Chemistry	15 March 2018
14.	Bijoy Krishna Das	Professor	Electrical Engineering	15 March 2018
15.	Anjan Chakravorty	Professor	Electrical Engineering	15 March 2018
16.	Ganesan A. R.	Professor	Physics	15 March 2018
17.	James Frederick Libby	Professor	Physics	15 March 2018

2.2.4. Employees promoted during April 2017 to March 2018

S.No	Id No.	Name	Designation	Department	DOJ
1.	2137	Elumalai A.	Senior Attendant	Civil Engineering	4 May 2017
2.	616	Srithar M.	Junior Superintendent	Recruitment Section	5 May 2017
3.	1295	Sai Sudha D.	Superintendent	Stores and Purchase	12 May 2017
4.	211	Kothandaraman K.	Technical Superintendent	Electrical Engineering	12 May 2017
5.	8055	Malarvizhi A.	Technical Superintendent	Civil Engineering	12 May 2017
6.	8068	Rangan K.	Technical Superintendent	Metallurgical & Materials Engineering	12 May 2017
7.	116	Krishnan B.	Senior Technician	Civil Engineering	12 May 2017
8.	8075	Mahesh Mithreevan P.	Senior Technician	Computer Centre	12 May 2017
9.	2257	Mathaiyan K.	Senior Technician	Engineering Unit	12 May 2017
10.	8379	Soundrameena B.	Senior Technician	Metallurgical and Materials Engineering	12 May 2017
11.	8052	Sarala P.	Assistant Engineer	Engineering Unit	15 May 2017
12.	8415	Arun P.	Senior Technician	Central Workshop	15 May 2017
13.	8388	Govindasamy R.	Senior Technician	Mechanical Engineering	15 May 2017
14.	2270	Sivakumar M.	Junior Engineer	Engineering Unit	20 July 2017
15.	8531	Thiagarajan K.	Junior Technician (Lib)	Central Library	20 July 2017
16.	0324	Murasoli K. S.	Attendant (SS)	O/o. Dean Students	24 August 2017
17.	0819	Gandham James	Office/Lab Assistant	Civil Engineering	24 August 2017
18.	1707	Pushparaj A.	Office/Lab Assistant	Gymkhana	24 August 2017
19.	8005	Babu S.	Attendant (SS)	Mechanical Engineering	24 August 2017
20.	8017	Murugan D.	Attendant (SS)	Administration	24 August 2017
21.	8023	Devaraj M.	Attendant (SS)	Central Workshop	24 August 2017
22.	8080	Velmurugan P.	Senior Technician (Lib)	Central Library	24 August 2017
23.	1702	Mani M.	Office/Lab Assistant	Gymkhana	24 August 2017
24.	8001	Rajendran M.	Attendant (SS)	Central Library	24 August 2017
25.	59	Gunalan A.	Superintendent	Mechanical Engineering	6 September 2017
26.	1307	Regina P.	Superintendent	Academics	6 September 2017
27.	1871	Jayasankaran	Superintendent	Electrical Engineering	6 September 2017
28.	0066	Elangovan C. R.	Senior Attendant	Mechanical Engineering	26 October 2017
29.	0312	Melchi Sedec A.	Senior Attendant	GATE	26 October 2017
30.	0355	Abu Bucker Siddik M.	Senior Cook	Bose Einstein Guest House	26 October 2017
31.	0424	Sankar A.	Senior Attendant	Mathematics	26 October 2017
32.	0827	Nagarajan T.	Senior Attendant	Training & Placement	26 October 2017
33.	1085	Gunasekaran C.	Deputy Security Officer	Security Section	26 October 2017
34.	1571	Gopinath C.	Senior Attendant	Chemistry	26 October 2017
35.	2323	Gopal S.	Senior Attendant	Engineering Unit	26 October 2017
36.	2324	Murugesan P.	Senior Attendant	Stores & Purchase	26 October 2017

S.No	Id No.	Name	Designation	Department	DOJ
37.	2326	Narasimhalu K.	Senior Attendant	Engineering Unit	26 October 2017
38.	2985	Ramachandran N.	Senior Attendant	Civil Engineering	26 October 2017
39.	3071	Elangovan K. V.	Senior Attendant	SAIF	26 October 2017
40.	8001	Rajendran M.	Junior Assistant	Central Library	26 October 2017
41.	8138	Geetha K. P.	Junior Assistant	Applied Mechanics	26 October 2017
42.	8023	Devaraj M.	Junior Assistant	Central Workshop	26 October 2017
43.	1686	Nattar Muthu M.	Junior Superintendent	Chemistry	27 October 2017
44.	8070	Gopu P.	Assistant Engineer	Engineering Unit	3 November 2017
45.	8065	Padmanaban M.	Assistant Engineer	Engineering Unit	3 November 2017
46.	8050	Roslin Gilda A.	Assistant Engineer	Engineering Unit	3 November 2017
47.	8072	Beena M. V.	Technical Superintendent	Chemistry	3 November 2017
48.	8014	Gajendran M.	Technical Superintendent	Central Workshop	3 November 2017
49.	8089	Prakash A.	Technical Superintendent	Central Workshop	3 November 2017
50.	317	Arjunan S.	Technical Superintendent	Central Workshop	3 November 2017
51.	78	Suresh K.	Junior Technical Superintendent	Mechanical Engineering	3 November 2017
52.	8434	Om Prakash K.	Technical Superintendent	Civil Engineering	6 November 2017
53.	8081	Srinivasan K.	Junior Assistant	NCC	8 November 2017
54.	1050	Ramu D.	Assistant Security Officer	Security Section	6 December 2017
55.	1518	Santhanakrishnan E.	Assistant Security Officer	Security Section	6 December 2017
56.	1132	Nirmala S.	Superintendent	Aerospace Engineering	5 January 2018
57.	1285	Sivaraj W. B.	Senior Attendant	Security Section	7 March 2018

2.2.5. Financial Upgradation under MACPS

- Number of employees granted financial upgradation under MACPS: 8

2.2.6. Faculty/Employees who Resigned/Relieved

Sl. No.	Name	Designation	Department	DOR
1.	Rajsekar Manokaran	Assistant Professor	Computer Science	10 April 2017
2.	Aritra Hazra	Assistant Professor	Computer Science	1 August 2017
3.	Raghavan S	Junior Assistant	Finance & Accounts	9 June 2017
4.	Vinu D	Junior Technician	Physics	9 June 2017
5.	Alaguthambi M	Junior Assistant	Ocean Engineering	12 June 2017
6.	Sreedha S	Junior Superintendent	Communication Office	17 August 2017
7.	Jayakumar	Junior Technician	Ocean Engineering	12 October 2017
8.	Revathi E	Nurse	Institute Hospital	22 December 2017

2.2.7. Faculty/Employees who Superannuated Between 1 April 2017 and 31 March 2018

Sl. No.	Name	Designation	Department	DOR
1.	M. Govardhan	Professor	Mechanical Engineering	31 March 2017
2.	M. Chidambaram	Professor	Chemical Engineering	30 April 2017
3.	N. R. Panchapakesan	Associate Professor	Aerospace Engineering	30 April 2017
4.	S. P. Shanmugam	Assistant Registrar	Admn.III	30 June 2017
5.	L. Vijayaraghavan	Professor	Mechanical Engineering	31 July 2017
6.	Evangeline Manickam	Professor	Humanities and Social Sciences	31 August 2017
7.	R. Sundaram	CTEO	IC&SR	31 October 2017
8.	K. Kumarappan	Deputy Registrar	Internal Audit	30 November 2017
9.	M. Santhanam	Technical Officer	Ocean Engineering	28 February 2018
10.	V. Sundar	Professor	Ocean Engineering	31 March 2018
11.	V. Ananthasubramanian	Professor	Ocean Engineering	31 March 2018
13.	Vijaya N.	Junior Attendant	Biotechnology	30 April 2018
14.	Vedachalam S.	Senior Technician	Electrical Engineering	30 April 2018
15.	Rajendran E.	Cook	Taramani Guest House	30 June 2018
16.	Karthikeyan O.	Junior Superintendent	Mathematics	30 June 2018
17.	Rajendiran M.	Junior Superintendent	Electrical Engineering	30 June 2018
18.	Pushpalingam M. R.	Office Assistant	Academics	30 June 2018

Sl. No.	Name	Designation	Department	DOR
19.	Rajendran K.	Lab Assistant	Metallurgical and Materials Engineering	31 July 2017
20.	Mani M.	Attendant	Gymkhana	31 August 2017
21.	Ravindranath K. R.	Producer Gr I	Centre for Continuing Education	31 August 2017
22.	Prema S.	Senior Attendant	Finance & Accounts	31 October 2017
23.	Bhaskaran D.	Assistant Security Officer	Security Section	30 November 2017
24.	Chandrasekaran R.	Senior Technician	Electrical Engineering	30 November 2017
25.	Jayasankaran V.	Superintendent	Electrical Engineering	31 December 2017
26.	Rajabather N.	Senior Attendant	Library	28 February 2018
27.	Mani K.	Junior Superintendent	Computer Science & Engineering	28 February 2018
28.	Anandarajan G.	Office Assistant	Gymkhana	31 March 2018
29.	Parthasarathy R.	Senior Technician	Chemical Engineering	31 March 2018

2.2.8. Faculty/Employees who passed away while in service

S.No.	ID No.	Name	Designation	Department	Date
1	839	Shesha Nadha Sathapathi	Sr. Library Information Assistant	Central Library	29 May 2017

2.2.9. Faculty/Employees who were on Extraordinary Leave/Deputation

Sl. No.	Name	Designation	Department	From	To	Name and Venue
Faculty						
1.	Sankara J. Subramanian	Associate Professor	ED	31 July 2017	7 September 2018	Co-Founder and Chief Technology Officer, Challenge Media, USA
2.	Solomon J. Benjamin	Associate Professor	Humanities and Social Sciences	1 August 2017	31 July 2018	Head, Research and Faculty Development, Indian Institute of Human Settlements, Bengaluru
3.	S. Kasiviswanathan	Professor	Physics	11 August 2017	2 January 2018	Assignment as a Professor, IIT Palakkad
4.	Enakshi Bhattacharya	Professor	EE	19 July 2017	31 December 2017	Visiting Faculty, IIT Mandi
5.	L. S. Ganesh	Professor	Management Studies	31 October 2017	6 December 2017	-
6.	Santosh Abraham	Assistant Professor	Humanities and Social Sciences	20 December 2017	19 December 2018	Visiting Faculty, IIT Palakkad
Employees						
7.	Selva Ganapathy R.	Junior Technical Superintendent	Chemical Engineering	1 February 2017	31 May 2018	Pursue higher studies in New Zealand
8.	Chellapandian S.	Senior Technician	Central Workshop	25 September 2017	24 September 2019	EOL on personal reasons

2.2.10. Faculty Members who were on sabbatical

Sl. No.	Name	Designation	Department	From	To	Name and Venue
1.	Nitin Chandrchoodan	Associate Professor	Electrical Engineering	15 July 2017	14 July 2018	Fellowship, Purdue University, USA
2.	Sridharan K	Professor	Electrical Engineering	1 August 2017	31 July 2018	Book Writing
3.	N. Sreekumar	Professor	Humanities and Social Sciences	21 August 2017	20 May 2018	Visiting Research Scholar, Syracuse University, USA

Sl. No.	Name	Designation	Department	From	To	Name and Venue
4.	Malathy Duraisamy	Professor	Humanities and Social Sciences	2 August 2017 and 17 May 2018	16 May 2018 and 29 July 2018	Book Writing
5.	Amitava Dasgupta	Professor	Electrical Engineering	19 July 2017	6 December 2017	Book Writing
6.	Shanti Bhattacharya	Associate Professor	Electrical Engineering	25 July 2017	31 December 2017	Visiting Karlsruhe Institute of Technology, Germany
7.	Milind Brahme	Associate Professor	Humanities and Social Sciences	1 January 2018	31 December 2018	Visiting Scholar, Centre for German Studies, JNU, New Delhi
8.	S. S. Bhattacharya	Professor	Metallurgical and Materials Engineering	14 August 2017	13 December 2017	Fellowship at Institute of Nanotechnology, Karlsruhe Institute of Technology, Germany
9.	Sanjib Senapati	Professor	Biotechnology	1 September 2017	30 June 2018	Fulbright-Nehru Academic and Professional Excellence Fellowship at University of California, USA
10.	R. Dhamodharan	Professor	Chemistry	14 September 2017	31 August 2018	Visit Nutra Specialities Private Limited, Tamil Nadu and Andhra Pradesh
11.	Prem B. Bisht	Professor	Physics	16 February 2018	15 June 2018	Book Writing
12.	Hema A. Murthy	Professor	Computer Science	1 January 2018	31 December 2018	Working on test to speech synthesis and CBR activity at IIT Madras
13.	Anil Prabhakar	Professor	Electrical Engineering	15 January 2018	14 May 2018	Book Writing and Research
14.	K. Kalpana	Assistant Professor	Humanities and Social Sciences	1 January 2018	30 April 2018	Field work in various District of Tamil Nadu
15.	Kunal Krishna Mukherjee	Assistant Professor	Mathematics	5 January 2018	4 November 2018	Visiting position at Institute of Mathematical Science, Chennai
16.	Ananth Krishnan	Associate Professor	Electrical Engineering	2 January 2018	31 May 2018	Visit at IIT Madras Research Park
17.	Joe Thomas Karakattu	Assistant Professor	Humanities and Social Sciences	5 March 2018	5 July 2018	Archival Research, Project Fieldwork - Material Collection and Research Dissemination (India, China, US and Canada)
18.	C. Rajendran	Professor	Management Studies	11 April 2018	17 July 2018	Visiting Professor at Germany
19.	Shamit Bakshi	Associate Professor	Mechanical Engineering	23 April 2018	26 August 2018	Alexander von Humboldt Fellowship, Germany

2.3. Staff Welfare

2.3.1. Human Resource Development

As part of human resource development (HRD) activities, the institute plans and implements programmes for providing opportunities to technical and administrative employees to update and upgrade their knowledge and skills so that they may perform their duties effectively. The programmes are also aimed at enhancing the pride and satisfaction they feel

in their work. The overall feeling of happiness engendered by these programmes overflows to their home lives and contributes to a sense of well-being to the entire family. These activities also form a part of the training requirements under the ISO dispensation.

HRD programmes conducted

HRD activities were initiated at the institute in 1997 under the charge of a professor. In the period of reporting, three internal training programmes and one external training programmes organised by other institutions/organisations

were attended by our employees. The impact of the various programmes, as seen from the feedback at the end of each programme, appears to be advantageous to the institute. The employees were able to upgrade their knowledge through these programmes, as these were designed based on needs.

Training calendar for 2017

Internal Training

S.No.	Training Programme	Number of Employees
In-house training		
1.	Induction and Orientation for Junior Assistant, Junior Technician and Junior Technical Superintendent	39
2.	Refresher Training for Junior Assistant on Establishment Matters	88
3.	Training on S&P process	55
Outstation training		
4.	Number of employees deputed for outstation training	32

External Training

Sl. No.	No. of participants	Course Title	Duration	Section/Department	Organization
1.	10	Induction and Orientation Training for Security Guard	8-9 May 2017	Security Section	M/s. IIT Madras, Administration
2.	38	Refreshing Training Programme for Junior Assistants	15-18 May 2017	JAs from all departments	M/s. IIT Madras, Administration
3.	52	Creating a Customer-Oriented Culture	22 June 2017	JAs from all departments	M/s. IIT Madras, DoMS
4.	36	Developing Others: Direction, Supervision and Leadership	22 June 2017	JS and Supdt. from all Depts.	M/s. IIT Madras, DoMS
5.	24	Indian Labour Laws	15-16 September 2017	Supdt., JS and JAs from all Depts.	M/s. IIT Madras, IC&SR
6.	10	GST Certified Practitioner Course	9-10 December and 16-17 December 2017	F&A, Administration EU, O/o Dean (Students)	M/s. MSME – TDC, Guindy, Chennai
7.	3	Technical Advancement on Liquefier Operation and Maintenance	8-11 January 2018	Physics	M/s. UGC-DAE-CSR, Indore
8.	14	Induction and Orientation Training for Junior Assistant	23-24 January 2018	Administration	M/s. IIT Madras, Administration
9.	2	National Workshop on National Building Code of India 2016	20-21 February 2018	Engineering Unit	M/s. Vigyan Bhawan, Delhi

Ongoing Activities of Official Language, Hindi

- a) **Hindi Training:** In accordance with the directions of the Department of Official Language of the Home Ministry, GoI, Hindi Language Training was conducted regularly for both technical and administrative employees to improve their knowledge in Hindi. During 2017-18, a total number of 53 employees successfully completed Prabodh, Praveen and Pragya courses online.
- b) **Hindi Workshops and Seminars:** Four quarterly Hindi workshops were conducted for the employees of IIT Madras during 2017-18. Nearly 86 employees were given practical knowledge of day to day work in Hindi. A special conversation class was conducted for the security staff.
- c) **OLIC Meeting:** Official Language Implementation Committee has been constituted to monitor progressive

use of Official Language in the institute. This meeting is being convened regularly on quarterly basis under the Chairmanship of the Registrar.

- d) **Celebration of Hindi Day:** The Hindi Day was celebrated on 19 September 2017 and presided over by the Director. Dr. T.S.K. Kannan, a renowned Tamil, Hindi and Sanskrit writer, graced the occasion as Chief Guest. The Director distributed certificates, cash awards and personal pay to the employees, who successfully passed Hindi examination. Prizes were awarded to the winners of various competitions conducted during Hindi Fortnight. Annual cash incentive awards were distributed to those employees who participated in the scheme. As a part of cultural programme, Hindi songs were rendered by the staff.
- e) **Publication:** Campus News is being released every week bilingually (Hindi and English).

- g) **Other Activities for effective use of Official Language:** To maintain congenial atmosphere for Hindi and to create interest in Hindi among the staff, "Learn a word in Hindi" is maintained.

2.3.3. Children Education Assistance

In the financial year 2017-2018, the institute reimbursed a sum of Rs.3602503 to 260 faculty and staff members towards Children Education Assistance as per Gol norms.

2.3.4. Transport Facilities for Children of Employees

Free transport facilities have been provided from 10 February 2008 for all users within the campus.

2.3.5. Advances

During the year under report, no advances were sanctioned.

2.3.6. Insurance

Insurance schemes from 1 February 2017 to 31 January 2018

Group Mediclaim Insurance Scheme

Category/No. of person covered	Employee and Dependents	Pensioner and Spouse	Family Pensioner
Basic Coverage	4485	1871	497
Additional coverage	1460	970	90
Total Premium paid		Rs.4,21,73,457	
Total no. of claims made		813	
Total claimed amount		Rs.4,38,25,370	

Group Term Insurance Scheme

Category	No. of person covered	
Basic Coverage	1237	
Additional coverage	84	
Total Premium paid		Rs.98,33,811
Total no. of claims made		1
Total claimed amount		Rs.25,00,000

Group Fire and Burglary Insurance Scheme

Total Premium paid	Rs.12,02,665
Total no. of claims made	1
Total claimed amount	Rs.2,39,33,947

2.3.7. List of Faculty Members and Officers in the Academic and General Administration

I. Academic Admin	
Director	Prof. Bhaskar Ramamurthi
Deans	
Academic Courses	Dr. V. Jagadeesh Kumar
Academic Research	Dr. A. K. Mishra
Admin	Dr. Koshy Varghese
Industrial Consultancy and Sponsored Research	Dr. Ravindra Gettu
Students	Dr. M. S. Sivakumar

Planning	Dr. Ligy Phillip
International and Alumni Relations	Dr. R. Nagarajan
II. Heads of Departments	
Aerospace	Dr. P. Sriram
Applied Mechanics	Prof. S. Vengadesan
Biotechnology	Prof. D. Karunakaran
Chemical Engineering	Prof. A. Kannan
Chemistry	Prof. Indrapal Singh Aidhen
Civil Engineering	Prof. K. Ramamurthy
Computer Science and Engineering	Prof. Krishnamoorthy Sivalingam
Electrical Engineering	Prof. Devendra Jalihal
Engineering Design	Prof. Srikanth Vedantam
Humanities and Social Sciences	Prof. Umakant Dash
Management Studies	Prof. L. Prakash Sai
Mathematics	Prof. S. Sundar
Mechanical Engineering	Prof. N. Ramesh Babu
Metallurgical and Materials Engineering	Prof. S. Ganesh Sundara Raman
Ocean Engineering	Prof. S. A. Sannasiraj
Physics	Prof. K. Sethupathi
III. Head of Research Centre	
Sophisticated Analytical and Instrumentation Facility	Dr S. S. Bhattacharyya
IV. Head of Special facilities for interaction with other Institutions	
Centre for Industrial Consultancy and Sponsored Research	Dr Ravindra Gettu
Chairman, CCE	Dr A. Ramesh
Centre Electronics Centre	Dr V. Jagadeesh Kumar
Chairman, CC	Dr Harishankar Ramachandran
Chairman	
GATE	Dr. Shaligram Tiwari
JEE	Dr. Madhu Mutyam
V. Central Admin	
Registrar	Dr. Jane Prasad
Joint Registrar (Academic)	Shri R. Esakkimuthu
Joint Registrar (Students)	Lt. Col. Jayakumar
IA Section	Shri A. V. Sudarsanam
EU	Shri A. V. Sudarsanam
Deputy Registrars	
Academic Section	Shri D. Ravee
Admin	Shri V. Swaminathan
F&A Section	Shri P. V. Karunakaran
S&P Section	Smt. G. Chitrapavai
IC & SR	Shri S. Sundaravinayagam
Assistant Registrars	
Academic Section	Shri V. Rajendran
Administration	Shri R. Chandrakasu Shri B. Vijay Shankar
Communication and PR	Smt. Rashmi Uday Kumar
F&A Section	Shri V. Perumal Shri R. Muralidharan
Recruitment Section	Smt. K. Vijayalakshmi
Office of the Dean (Students)/T&P	Shri Y. E. L. Sudhakar Rao Pujari
IC & SR	Shri P. Sarvaharana
Chief Security Officer	Shri N. Elumalai
Central Library	
Librarian	Dr. Mahendra N. Jadhav
Deputy Librarian	Dr. M. Anandamurugan
Assistant Librarian	Dr. K. Saravanan

VI. Head of Central Services, Facilities and Section

Chief Medical Officer in-charge	Dr Mahalakshmi M. Ravi
Chairman, Council of Wardens	Dr Sathyanarayana N. Gummati
Central Gas Blowing Section	Dr Varadarajan T. K.
Professor in-charge, CWS	Dr Seshadri Sekhar A
Chairman, Library Advisory Committee	Dr K. Ramamurthy
Coordinator, NSS	Dr K. C. Sivakumar
Advisor, Sports	Dr P. N. Santhosh
Advisor, Cultural	Dr Nandita Das Gupta
Advisor (Co-Curricular)	Dr B. Arockiarajan
Advisor, Foreign Students	Dr Sudarshan Padmanabhan
Chief Vigilance Officer (Part Time)	Dr S. Sankararaman
Advisor (Placement and Training)	Dr Manu Santhanam
Advisor, Mentoring for Individual Transformation (MITr)	Dr G. Ranga Rao
Advisor (Weaker Section)	Dr G. L. Samuel
Chairperson, Women's Forum	Dr Preeti Aghalayam
Professor in-charge, Workflow	Dr Rahul R. Marathe
Head, Centre for Innovation (CFI)	Dr B. Ravindran
Professor in-charge, IIT Madras website	Dr N. S. Narayanaswamy
Professor in-charge, RUTAG	Dr Abhijit P. Deshpande

VII. EU

Chairman, EU	Dr K Murali
Superintending Engineer	Shri H Anantharaman
Executive Engineers	Shri K. Viswanath
	Shri K. Dharmaraj
	Dr M. Ramachandran
Senior Horticulture Officer	Shri V. Seenivasan
Assistant Executive Engineers	Shri M. Murali Prakash
	Shri H. Anandaram
	Shri K. Rizwan Ali
	Smt. N. R. Vineetha
	Shri K Ravichandran

VIII. IC & SR

Senior Techno Economic Officer	Shri V. Suresh
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3

Academic Programmes and Award of Degrees

The Indian Institute of Technology Madras offered Ph.D. programme in all the 16 departments, M.S. programme in 12 departments, M.Tech programme (regular and web based) in 28 streams/specialisations, M.Sc. programme in three branches, B.Tech programme in nine branches, Dual Degree (B.Tech and M.Tech) programme in 21 streams/specialisation, Dual Degree (B.S. and M.S.) in Biological Sciences and Physics, M.B.A., EMBA, M.A. Integrated programme in two streams and a preparatory course for SC/ST/PwD students during the year under report.

3.1. Admissions 2017-18

Candidates for admission to B.Tech, Dual Degree and M.Tech programmes were selected through JEE (Advanced)

and based on GATE score, respectively. Quite a few candidates were also selected for M.Tech programme under Sponsored, Q.I.P. and User Oriented Programmes through interview and/or written test. The selection for Ph.D. and M.S. programmes was done through test/interview. For M.Sc. branches of Mathematics, Physics and Chemistry, the selection was done through a common test, JAM conducted jointly by IITs. For M.B.A. programme, the selection was done through CAT, and the interview for M.A. Integrated programme was conducted through HSEE.

The number of students and scholars admitted to various programmes in July 2017 and January 2018 are given in the table:

Sl. No.	Department	B.Tech.	Dual Degree	M.Tech.	PG Diploma - VLM	PG Diploma – Metro Rail	M.Sc	M.B.A	EMBA	M.A.	M.S	Ph.D	Total
1.	Aerospace Engineering	45	13	33							10	22	123
2.	Applied Mechanics			29							27	28	84
3.	Biotechnology		67	10							4	25	106
4.	Chemical Engineering	73	18	42							8	21	162
5.	Chemistry						53					28	81
6.	Civil Engineering	63	35	122		15					16	32	283
7.	Computer Science and Engineering	42	14	65							20	5	146
8.	Electrical Engineering	66	53	165							36	46	366
9.	Engineering Design		57								8	8	73
10.	Humanities and Social Science									46		19	65
11.	Management Studies				40			68	39		12	16	175
12.	Mathematics			14			51					19	84
13.	Mechanical Engineering	75	72	110							49	43	349
14.	Metallurgical and Materials Engineering	35	13	31							13	21	113
15.	Ocean Engineering	36	18	56							14	21	145
16.	Physics	30	8	8			41					19	106
17.	ID										10	27	37
	Total	465	368	685	40	15	145	68	39	46	227	400	2498

In addition to the above, students (GE PD :2, OBC PD: 1, SC PD: 2, ST PD: 1) joined Preparatory Course.

OBC/SC/ST Students Under Fresh Admission

Sl.No.	Programme	OBC	SC	ST	PD	Female
1.	B.Tech	132	68	35	10	57
2.	Dual Degree	100	57	29	6	62
3.	M.Tech	167	62	35	13	88
4.	PG Diploma in VLM	-	-	-	-	5
5.	PG Diploma in Metro Rail	6	2	1	-	-
6.	M.B.A.	16	11	2	-	24
7.	EMBA	5	3	-	-	10
8.	M.Sc.	44	24	9	1	37
9.	M.A.	16	8	4	1	26
10.	M.S.	36	5	-	-	32
11.	Ph.D.	110	19	5	1	113
Total		632	259	120	32	454

Various Categories of Students Admitted During the Year

Foreign Nationals	2	User-oriented Programme (M.Tech)	43
OBC	632		
Scheduled Castes	259	Q.I.P.	M.Tech 3 Ph.D. -
Scheduled Tribes	120	Sponsored	M.Tech 19 M.S. 28 Ph.D. 28
Physically Handicapped	32	Project	M.S. 8 Ph.D. 22
Women Students	454	External Registration	
Defence Officers (M.Tech)	31		

3.2. Students/Scholars Enrolment

Students on roll in various programmes in the academic year 2017-18:

Sl. No.	Department	B.Tech	Dual Degree	M.Tech	PG Diploma - VLM	PG Diploma - MRTM	M.Sc	M.A	M.B.A.	EMBA	M.S	Ph.D	Total
1.	Aerospace Engineering	166	97	51	-	-	-	-	-	-	44	139	497
2.	Applied Mechanics	-	-	51	-	-	-	-	-	-	71	160	282
3.	Biotechnology	16	284	17	-	-	-	-	-	-	16	221	554
4.	Chemical Engineering	294	93	72	-	-	-	-	-	-	26	133	618
5.	Chemistry	-	-	-	-	-	109	-	-	-	-	240	349
6.	Civil Engineering	266	203	204	-	15	-	-	-	-	45	307	1040
7.	Computer Science and Engineering	201	117	118	-	-	-	-	-	-	87	88	611
8.	Electrical Engineering	313	328	210	-	-	-	-	-	-	150	289	1290
9.	Engineering Design	-	309	-	-	-	-	-	-	-	30	79	418
10.	Humanities and Social Science	-	-	-	-	-	-	233	-	-	-	101	334
11.	Management Studies	-	-	-	40	-	-	-	117	39	40	104	340
12.	Mathematics	-	-	21	-	-	120	-	-	-	-	108	249
13.	Mechanical Engineering	345	408	212	-	-	-	-	-	-	169	383	1517
14.	Metallurgical and Materials Engineering	142	66	51	-	-	-	-	-	-	30	141	430
15.	Ocean Engineering	162	83	71	-	-	-	-	-	-	44	167	527
16.	Physics	129	50	36	-	-	88	-	-	-	-	183	486
Total		2034	2038	1114	-	15	317	233	117	39	752	2843	9542

The above total includes the following

Foreign Nationals	3	QIP	M.Tech	6
			Ph.D.	54
OBC	2624	Sponsored	M.Tech.	44
			M.S.	62
Scheduled Castes	1095	Project	Ph.D.	75
			M.S.	42
Scheduled Tribes	486	External Registration	Ph.D.	197
			M.S.	29
Physically Handicapped	106	Registration Kept Alive	Ph.D.	18
			M.S.	10
Women students	1927	Part-Time Programme (Ph.D)	Ph.D.	65
Defence Officers (M.Tech)	52	User-oriented Programme (M.Tech)		89

OBC/SC/ST Students on roll

Sl.No.	Course	OBC	SC	ST	Female
1.	B.Tech	548	348	194	260
2.	Dual Degree	556	334	155	268
3.	M.Tech	290	119	64	133
4.	M.Sc.	99	51	25	76
5.	M.B.A	31	25	4	39
6.	E.M.B.A	5	3	-	10
7.	M.A.	74	37	20	131
8.	PG Diploma in VLM	-	-	-	5
9.	PG Diploma in Metro Rail	6	2	1	-
10.	M.S.	174	27	3	146
11.	Ph.D.	841	149	20	859
	Total	2624	1095	486	1927

The branch/discipline-wise and year-wise details of students enrolled in B.Tech, Dual Degree and M.Tech programmes are given below:

B.Tech. Students on roll

Sl. No.	Branch	2017	2016	2015	2014	2013 and earlier Batch	Total
1.	Aerospace Engineering	40	43	39	30	14	166
2.	Biotechnology	-	-	-	-	16	16
3.	Chemical Engineering	74	68	66	59	27	294
4.	Civil Engineering	56	63	60	54	33	266
5.	Computer Science and Engineering	47	46	46	33	29	201
6.	Electrical Engineering	73	70	73	66	31	313
7.	Engineering Physics	27	28	29	31	14	129
8.	Mechanical Engineering	83	77	82	80	23	345
9.	Metallurgical and Materials Engineering	33	30	31	29	19	142
10.	Naval Architecture	32	35	28	32	35	162
	Total	465	460	454	414	241	2034

Dual Degree (B.Tech and M.Tech) Students on roll

Sl. No.	Branch	2017	2016	2015	2014	2013	2012 earlier	Total
1.	Aerospace Engineering	12	14	10	18	19	10	83
	AE (B.Tech) and AM (M.Tech)				4	5	5	14
2.	Biotechnology							
	Biological Engineering	33	29	25	29	30	14	160
	Biological Sciences (BS and MS)	31	24	24	13	19	13	124
3.	Chemical Engineering	16	17	17	24	16	3	93
4.	Civil Engineering and Infrastructural Civil	32	35	34	39	39	13	192
	CE (B.Tech) and AM (M.Tech)				4	4	3	11
5.	Computer Science and Engineering	16	14	14	28	29	16	117
6.	Electrical Engineering	58	57	57	57	54	29	312
	EE (B.Tech) and AM (M.Tech)				5	7	4	16
7.	Engineering Design	56	56	54	54	55	34	309
8.	Mechanical Engineering	79	77	80	71	77	24	408
9.	Metallurgical and Materials Engineering	11	10	9	15	13	8	66
10.	Naval Architecture and Ocean Engineering	15	18	13	7	9	7	69
	NA (B.Tech) and AM (M.Tech)				6	8		14
11.	Physics (BS and MS)	9	11	6	10	8	6	50
	Total	368	362	343	384	392	189	2038

M.Sc. Students on roll

Sl. No.	Branch	2017	2016	Total
1.	Chemistry	53	56	109
2.	Mathematics	51	69	120
3.	Physics	41	47	88
	Total	145	172	317

M.Tech. Students on roll

Sl. No.	Department\Discipline\Batch	2017	2016	Extended students	Total
1.	Aerospace Engineering	32	16	3	51
2.	Applied Mechanics	27	18	6	51
3.	Biotechnology – Clinical Engineering	8	2	7	17
4.	Chemical Engineering	31	24	5	60
	Catalysis Technology	8	2	1	11
	Nuclear Engineering			1	1
5.	Civil Engineering:				
	CE 1 - Building Technology and Construction Management	11	8	6	25
	CE 2 - Environmental Engineering	10	4	3	17
	CE 3 – Geotechnical Engineering	7	6	4	17
	CE 4 - Hydraulic and Water Resource Engineering	13	5	2	20
	CE 5 – Structural Engineering	23	13	2	38
	CE 6 - Transportation Engineering	13	3	3	19
	CE 7 – Construction Technology and Management	33	33	2	68
6.	Computer Science and Engineering	58	45	15	118
7.	Electrical Engineering:	1			1
	EE 1 - Communication and Signal Processing	18	14	1	33
	EE 2 - Power Systems and Power Electronics	9	6	5	20
	EE 3 - Micro Electronics and VLSI Design	18	15	3	36
	EE-4 - Control and Instrumentation System	7	8	1	16
	EE-5 - Micro Electronics and Photonics	4	4	3	11
	EE 6 - Integrated Circuits and Systems	10			10
8.	Industrial Maths and Scientific Computing	14	6	1	21
9.	Mechanical Engineering:				
	ME 1 - Thermal Engineering	53	24	5	82
	ME 2 - Mechanical Design	30	19	3	52
	ME 3 - Manufacturing Engineering	20	27	1	48
	ME 4 - Automotive Technology	29			29

Sl. No.	Department\Discipline\Batch	2017	2016	Extended students	Total
10.	Metallurgical and Materials Engineering	29	20	2	51
11.	Ocean Engineering	18	13	2	33
	- Ocean Technology	9	8	2	19
	- Petroleum Engineering	15	5		20
	- Offshore Technology	10	10	1	21
12.	Physics				
	- Solid State Technology			2	2
	- Functional Materials and Nanotechnology	8	6		14
Total		576	364	91	1031

M.B.A. Students on roll

Sl. No.	Branch	2017	2016	Total
1.	Management Studies	66	51	117

M.A. Students on roll

Sl. No.	Branch	2017	2016	2015	2014	2013	Total
1.	Humanities and Social Sciences	45	45	42	42	59	233

M.S. Scholars on roll

Sl. No.	Branch	Year I	Year II	Year III	Year IV	Year V and others	Total
1.	Aerospace Engineering	10	12	15	5	2	44
2.	Applied Mechanics	28	17	17	8	1	71
3.	Biotechnology	5	4	4	-	-	16
4.	Chemical Engineering	8	6	9	3	-	26
5.	Civil Engineering	15	7	11	9	3	45
6.	Computer Science and Engineering	21	30	25	5	6	87
7.	Electrical Engineering	35	41	41	19	14	150
8.	Engineering Design	10	10	6	4	-	30
9.	Management Studies	12	11	9	1	7	40
10.	Mechanical Engineering	50	34	52	28	5	169
11.	Metallurgical and Materials Engineering	15	5	6	2	2	30
12.	Ocean Engineering	12	7	15	5	5	44
Total		221	184	210	92	45	752

Ph.D. Scholars on roll

Sl. No.	Branch	Year I	Year II	Year III	Year IV	Year V and others	Total
1.	Aerospace Engineering	21	24	21	32	41	139
2.	Applied Mechanics	28	36	34	22	40	160
3.	Biotechnology	31	33	43	26	88	221
4.	Chemical Engineering	22	17	35	31	28	133
5.	Chemistry	36	41	50	56	57	240
6.	Civil Engineering	37	46	68	58	98	307
7.	Computer Science and Engineering	7	12	19	16	34	88
8.	Electrical Engineering	50	47	60	48	84	289
9.	Engineering Design	8	14	10	25	22	79
10.	Humanities and Social Science	18	24	27	19	13	101
11.	Management Studies	15	27	28	12	26	108
12.	Mathematics	19	28	26	15	16	104
13.	Mechanical Engineering	44	53	82	98	106	383
14.	Metallurgical and Materials Engineering	21	31	32	14	43	141
15.	Ocean Engineering	23	20	41	32	51	167
16.	Physics	26	26	31	30	70	183
Total		406	479	607	534	817	2843

E.M.B.A. Students on roll

Sl. No.	Branch	2017	Total
1.	Management Studies	39	39

PG Diploma in VLM. Students on roll

Sl. No.	Branch	2017	Total
1.	Management Studies	40	40

PG Diploma in MRTM Students on roll

Sl. No.	Branch	2017	Total
1.	Civil Engineering	15	15

3.3 Courses Offered

In the academic year 2017-18, 1,752 courses were offered of which 888 courses were offered in July–November 2017 and 864 courses were offered in January–May 2018. The department-wise details of the courses offered are given below:

Sl. No.	Department	January–May 2018			No. of courses offered in		
		July–November 2017			January–May 2018		
		Core	Elect.	Total	Core	Elect.	Total
1	Aerospace Engineering	23	15	38	17	26	43
2	Applied Mechanics	19	20	39	16	24	40
3	Biotechnology	27	18	45	26	21	47
4	Civil Engineering	64	35	99	51	45	96
5	Chemical Engineering	26	27	53	27	30	57
6	Computer Science and Engineering	20	27	47	14	29	43
7	Chemistry	16	4	20	14	17	31
8	Engineering Design	27	12	39	21	15	36
9	Electrical Engineering	32	35	67	25	46	71
10	Humanities and Social Science	43	39	82	36	45	81
11	Mathematics	22	14	36	17	26	43
12	Mechanical Engineering	55	30	85	36	46	82
13	Metallurgical and Materials Engineering	26	26	52	16	32	48
14	Management Studies	28	44	72	11	27	38
15	Ocean Engineering	38	19	57	31	16	47
16	Physics	40	17	57	39	22	61
	Total	506	382	888	397	467	864

3.4 Convocation

The 54th Convocation of IIT Madras was held on 21 July 2017. Shri. Nandan Nilekani, Former Chairman, UIAI and Co-founder, Infosys delivered the Convocation address. A total of 1,894 candidates were awarded various degrees of which 1,518 candidates received degrees in person. The department-wise details of the degrees awarded are given below:

Degrees Awarded

Sl. No.	Department	Dual Degree		Ph.D.	M.S.	M.Tech	M.Sc.	M.B.A	M.A	Dual Degree		Dual Degree		B.Tech Honours	B.Tech	Total
		M.S/M. Tech	Ph.D.							B.Tech / BS	M.S/M. Tech	B.Tech /BS	M.Tech/ MS			
1.	Aerospace Engineering	1	1	6	11	22	0	0	0	1	1	10	10	01	34	98
2.	Applied Mechanics	2	2	7	16	18	0	0	0	0	0	26	26	0	0	97
3.	Biotechnology	0	0	22	03	03	0	0	0	2	2	36	36	0	6	110
4.	Chemical Engineering	2	2	19	05	21	0	0	0	2	2	18	18	02	61	152
5.	Chemistry	0	0	53	0	0	52	0	0	0	0	0	0	0	0	105
6.	Civil Engineering	2	2	30	14	72	0	0	0	0	0	31	31	0	53	235

Sl. No.	Department	Dual Degree		Ph.D.	M.S.	M.Tech	M.Sc.	M.B.A	M.A	Dual Degree		Dual Degree		B.Tech Honours	B.Tech	Total
		M.S/M. Tech	Ph.D.							B.Tech / BS	M.S/M. Tech	B.Tech /BS	M.Tech/ MS			
7.	Computer Science and Engineering	1	1	8	17	51	0	0	0	1	1	24	24	0	34	162
8.	Electrical Engineering	2	2	13	29	56	0	0	0	1	1	50	50	2	67	273
9.	Engineering Design	1	1	2	9	0	0	0	0	0	0	50	50	0	0	113
10.	Humanities and Social Sciences	0	0	4	0	0	0	0	36	0	0	0	0	0	0	40
11.	Management Studies	2	2	18	14	0	0	58	0	0	0	0	0	0	0	94
12.	Mathematics	0	0	10	0	9	45	0	0	0	0	0	0	0	0	64
13.	Mechanical Engineering	5	5	24	35	88	0	0	0	2	2	69	69	6	70	375
14.	Metallurgical and Materials Engineering	1	1	13	10	25	0	0	0	0	0	15	15	0	33	113
15.	Ocean Engineering	0	0	9	12	44	0	0	0	0	0	5	5	1	35	111
16.	Physics	0	0	19	0	13	43	0	0	0	0	7	7	3	29	121
Total		19	19	257	175	422	140	58	36	9	9	341	341	15	422	2263

With this Convocation, the total number of degrees awarded so far by the institute is 49,206, the details of which are given below:

S.No.	Programme	No.
1	Ph.D.	4637
2	Dual Degree	M.S 25 Ph.D 25
3	Dual Degree	M.Tech 2 Ph.D. 2
4	M.S.	3420
5	M.Tech	14460
6	M.Sc.	3433
7	M.B.A.	891
	M.A.	232
8	Dual Degree	B.Tech 2869
9		M.Tech 2869
10	Dual Degree	B.S. 87 M.S. 87
11	B.Tech	15655
12	B.Tech (Honours)	132
13	PGDMEM	102
14	B.Sc. (Tech)	20
15	DIIT	245
16	PGDMRT	13
Total		49206

3.5 Award of prizes to the students

3.5.1 Convocation Prizes

The following are the details of prizes awarded to the students at the 54th Convocation:

Sl.No	Common Prizes	Student
1.	President of India Prize For the highest CGPA in B.Tech and Dual Degree Bharat Ratna M. Visvesvaraya Memorial Prize For the highest CGPA in B.Tech Banco Foundation Prize For the best academic records in Mechanical Engineering (Department of Mechanical Engineering)	Chinmay Jha (ME13B019)
2.	Governor's Prize For the best all round performance in B.Tech/Dual Degree (Department of Physics)	Vishal Katariya (EP13B029)

Sl.No	Common Prizes	Student
3.	Sri V. Srinivasan Memorial Prize For the highest CGPA in Dual Degree Alumni Association Prize For the highest CGPA in Dual Degree Computer Science and Engineering (Department of Computer Science and Engineering)	Vidhya Ramaswamy (CS12B061)
4.	Dr Shankar Dayal Sharma Prize For the best all round performance in B.Tech (Department of Aerospace Engineering)	Shashwat Nitin Sinai Salgaocar (AE13B031)
B.Tech		
1.	HAL Prize For the highest CGPA in B.Tech Aerospace Engineering	Akshay Joshi (AE13B002)
2.	Reliance Heat Transfer Pvt. Ltd. Prize For the highest CGPA in B.Tech Chemical Engineering S.R.I Prize Best inter-disciplinary B.Tech project	Abhinav Parakh (CH13B002)
3.	Larsen & Toubro ECC Endowment Prize For the highest CGPA in B.Tech (Civil Engineering)	Ananth Sundararaman (CE13B004)
4.	B. Ravichandran Memorial Prize For the highest CGPA in B.Tech (Computer Science and Engineering)	Susanna Maria Baby (CS13B058)
5.	Siemens Prize For the highest CGPA in B.Tech (Electrical Engineering)	B Ramasubramanian (EE13B127)
6.	Motorola Prize For the best all round performance in B.Tech or Dual Degree (Computer Science and Engineering and Electrical Engineering)	Abhijeet Sheno (EE13B002)
7.	Sivasailam Merit Prize For the best individual project in B.Tech (Mechanical Engineering) (Joint Winners)	Manish Kumar Prajapat (ME13B044) Vishwajeet Vijay Sikchi (ME13B075)
8.	Vaidy Krishnan Memorial Prize For the best overall performance in curricular and extra-curricular activities in B.Tech (Mechanical Engineering)	Dixit Yash Raghunandan (ME13B024)
9.	Dr Dhandapani Memorial Prize For the highest CGPA in B.Tech (Metallurgical and Materials Engineering)	Rohith Pinnamaraju (MM13B029)
10.	American Bureau of Shipping Prize For the highest CGPA in B.Tech (Naval Architecture and Ocean Engineering) (Joint Winners)	Maathangi Ganesh NA13B014 Ganti Sai Sanjit NA13B009
11.	Hema Balasubramanian Excellence Award For the highest CGPA in B.Tech (Engineering Physics)	Shagesh.S (EP13B025)
12.	S.R.I Prize Best inter-disciplinary B.Tech project	Sreyas Mohan (EE13B124)
Dual Degree (B.Tech & M.Tech)		
1.	Dr V Mohan Raman Prize For the highest CGPA in Dual Degree in Aerospace Engineering	Tony John (AE12B034)
2.	Mayan Prize For the highest CGPA in Dual Degree in Aircraft Design and Project in Aerospace Engineering	Prateek Kishore (AE12B047)
3.	Kalpathi AGS Prize For the student with best academic record in Applied Mechanics	Dhruv Prakash (EE12B114)
4.	Biocon Prize For the highest CGPA in Dual Degree in Biological Engineering	Rhythm Sodhi (BE12B026)
5.	The Divashri Award For the highest CGPA in Dual Degree (BS & MS) in Biological Science	Nandakumar Rajasekaran (BS12B052)
6.	B Ravichandran Memorial Prize For the highest CGPA in Dual Degree in Chemical Engineering	Srijith Rajagopalan (CH12B091)
7.	C. A. Sastry Endowment Prize For the best overall performance in curricular and co-curricular activities	Meghana Venkata Palukuri (CH12B083)

Sl.No	Common Prizes	Student
8.	Dr N R Dave Prize For the highest CGPA in Dual Degree in Civil Engineering	Narneni Satyanarayana Rao (CE12B082)
9.	Prema & Nagaraja Setty Prize For the highest CGPA in Dual Degree in Engineering Design	Sagar Suhas Joshi (ED12B024)
10.	Philips India Prize For the highest CGPA in Dual Degree in Electrical Engineering	Santhosh Kumar Ramakrishnan (EE12B101)
11.	Prof G V N Rayudu (IIT Madras) Prize For the highest CGPA in Dual Degree in Mechanical Engineering	Sreedath Panat (ME12B165)
12.	S Anantharamakrishnan Memorial Prize For the highest CGPA in Dual Degree in Metallurgical and Materials Engineering	Asmita Jana (MM12B006)
13.	Goodearth Shipbuilding Pvt.Ltd Prize For the highest CGPA in Dual Degree in Naval Architecture and Ocean Engineering	Vinayak S (NA12B046)
14.	Prof J Sobhanadri Prize For the highest CGPA in Dual Degree (BS & MS) in Physics	Vinayak Vinod (PH12B009)
M.Tech		
1.	Air India Prize For the highest CGPA in M.Tech (Aerospace Engineering)	Jadhav Vishal Sudam AE15M008
2.	Prof B V A Rao Endowment Prize For the highest CGPA in M.Tech (Applied Mechanics) Usha Kothandaraman Memorial Prize For the highest CGPA in M.Tech-Solid Mechanics stream in Applied Mechanics	Pettiwala Mohamed Salman Saudagar Shehnaz AM15M034
3.	Indira Sivasailam Merit Prize For the highest CGPA in M.Tech-Fluid Mechanics stream in Applied Mechanics	U Mahadevan AM15M037
4.	Sushruta Award For the highest CGPA in M.Tech (Biomedical stream in Applied Mechanics)	V M Uma Maheswari AM15M016
5.	Dr. S. S. Srikanta Prize For the highest CGPA in M.Tech (Clinical Engineering in Biotechnology)	Praveen Krishna V BT14M003
6.	Dr. K. Subba Raju Memorial Prize For the highest CGPA in M.Tech (Chemical Engineering)	Anbuchelvan Anamicca CH15M005
7.	Sri S V Balakrishnan Merit Prize For the highest CGPA in M.Tech (Catalysis Stream in Chemical Engineering)	Shree Sumanas Badrinath CA15M007
8.	Prof Rama Rao Jayanti Memorial Prize For the highest CGPA in M.Tech (Nuclear Engineering)	Amritansh Arpit Frank NE15M002
9.	Valli Anantharamakrishnan Merit Prize For the highest CGPA in M.Tech (Civil Engineering)	K Gopakumar CE15M009
10.	K Devarajan Memorial Prize For the highest CGPA in M.Tech Transportation Engineering stream in Civil	Bilal T T CE15M073
11.	L & T Endowment Prize For the highest CGPA in M.Tech Construction Technology and Management	Anjana R CE15M116
12.	CMC Prize For the highest CGPA in M.Tech (Computer Science and Engineering)	Kotha Lok Prateek CS15M026
13.	Prof H N Mahabala Endowment Prize For the best M.Tech project in Computer Science and Engineering (Joint Winners)	Ajay Fuloria CS15M003 Naveen Kumar CS15M031
14.	Siemens Prize For the highest CGPA in M.Tech (Electrical Engineering)	Debpratim Adak EE15M042

Sl.No	Common Prizes	Student
15.	Prof Achim Bopp Endowment Prize For the best hardware project in M.Tech (Electrical Engineering)	Kunchala Siva Prasad EE15M027
16.	Prof Helmut Neunzert Endowment Prize For the highest CGPA in M.Tech (Industrial Mathematics & Scientific Computing)	Manish Krishan Lal MA15M007
17.	Prof B Sengupto Prize For the highest CGPA in M.Tech (Mechanical Engineering) (Joint Winners) Prof Ramamohana Rao Memorial Prize For the highest CGPA in M.Tech (Mechanical Design stream in Mechanical Engineering)	Ayyappadas P ME15M002
18.	Prof B Sengupto Prize For the highest CGPA in M.Tech (Mechanical Engineering) (Joint Winners) Dr S Vaidyanathan Memorial Prize For the highest CGPA in M.Tech (Manufacturing and Precision Engineering in Mechanical Engineering) S Anantharamakrishnan Merit Prize For the best individual project in M.Tech/Dual Degree (Mechanical Engineering)	Amith Muraleedharan ME15M102
19.	Giri Brothers Prize For the best M.Tech project in Metrology in Mechanical Engineering	Elangovan S P ME15M021
20.	Mico-Bosch Prize For the best project in Energy Conservation and Environmental Pollution Control	P Rishikesh Menon ME15M065
21.	Delphi-TVS Diesel Systems Ltd. Prize For the highest CGPA in M.Tech (Automotive Technology)	Parsa Bhargav Krishna AT15M006
22.	Sudharshan Bhat Memorial Prize For the highest CGPA in M.Tech (Metallurgical and Materials Engineering)	Rajath Alexander MM15M016
23.	American Bureau of Shipping Prize For the highest CGPA in M.Tech (Ocean Engineering) Prof K A V Pandalai Prize For the highest CGPA in M.Tech in Ocean Technology stream in Ocean Engineering	Purushotham S OE15M040
24.	Prof. T. Govindaraj Prize Offshore Structural Engineering	Archana V OE15M052
25.	Sri RRP Sinha and Vimla Dewi Prize For the highest CGPA in M.Tech (Petroleum Engineering)	Kaligi Amar PE15M018
26.	Sri Krishnamurthy Sundarambal Prize For the highest CGPA in M.Tech (Solid State Technology) Buti Foundation Gold Medal Award Woman student securing highest CGPA among Dual Degree/M.Tech/M.Sc/BS and MS programme	Anushree Tomer PH15M001
M.Sc.		
1.	Dr S R Ramadas 60th Birthday Commemoration Award For the highest CGPA in M.Sc (Chemistry) Ratna Rao Memorial Prize For the highest CGPA in M.Sc (Chemistry)	Nisha CY15C021
2.	Mira Paul Memorial Prize For the highest CGPA in M.Sc (Mathematics)	Sahiba Arora MA15C037
3.	Prof Chilukuri Ramasastry Memorial Prize For the highest CGPA in M.Sc (Physics)	Pooja Jethwani PH15C022
MBA		
1.	Coka Parthasarathy Prize For the highest CGPA in M.B.A.	Santhoshraghavan S MS15A047
2.	K V Arunkumar Memorial Prize For the best overall performance in M.B.A	Saranraj S P MS15A049

Sl.No	Common Prizes	Student
M.A.		
1.	Dr Dilip Veeraraghavan Memorial Award For the best academic record in the Five Year Integrated M.A. programme (Development Studies)	Krupa Maria Varghese HS12H024
2.	Prof A V Krishna Rao Memorial Award For the best academic record in the Five Year Integrated M.A. programme (English Studies)	Liza Tom HS12H026
Ph.D.		
1.	Prof. V. Ramamurti Award For the best PhD thesis in Applied Mechanics	Vivek Ramakrishnan AM12D025
2.	Sudharshan Bhat Memorial Prize For the best PhD thesis in Metallurgical and Materials Engineering	Manognakarthish Gangaraju MM11D021
3.	Prof C. N. Pillai Prize For the best PhD thesis in Organic and Bio-Chemistry (Joint Winners)	Sudarsan Reddy Kasireddy CY11D033 Senthilkumar S CY09D051
4.	Prof G. Sundararajan Endowment Prize For the best Ph.D thesis in Organic Chemistry	Nidhi Sharma CY11D073
5.	Prof Langmuir Prize For the best Ph.D thesis in Physical and Theoretical Chemistry (Joint Winners)	Krishnadas K R CY11D016 Avik Kumar Pati CY11D049
6.	Prof Werner Prize For the best Ph.D thesis in Inorganic and Analytical Chemistry (Joint winners)	Jinu P Y CY09D028 Pavan Kumar Mandali CY10D044
7.	Smt. Lakshmikutty Amma and Shri A Krishnankutty Nair Prize For the best PhD thesis in Mathematics	Monisha Roy MA11D012
8.	Prof A. L. Lashkar Memorial Prizes For the best PhD thesis in Physics	Madhumita Sahoo PH11D017
9.	Bhagyalakshmi and Krishna Ayengar Award For the best project/thesis in the field of Solar and Alternative energy application/Energy efficiency/Pollution abatement/Infrastructure improvement (Joint Winners)	Varanasi Rama Srinivas MM12B032 Aravindhan S ME15S004 M. Viji MM14S005 Praveena Gangadharan CE12D048
10.	Prof Achim Bopp Endowment Prize For the best hardware project in M.Tech (Electrical Engineering) Bhagyalakshmi and Krishna Ayengar Award For the best project/thesis in the field of Solar and Alternative energy application/Energy efficiency/Pollution abatement/Infrastructure improvements For the best project/thesis in the field of Solar and Alternative energy application/Energy efficiency/Pollution abatement/Infrastructure improvements	Sakthivelu K MS12S015

3.5.2 Institute Day Prizes

On the basis of performance, the following students were awarded Merit Prizes on the 59th Institute Day on 26 April 2018 at the Student Activities Centre. B. Santhanam, President and Managing Director, Saint Gobain India Private Limited, Chennai (Distinguished Alumnus of IIT Madras) was the Chief Guest.

(Silver medal and a cash award of Rs.5000)

1.1 First and Second Semester of B.Tech/DD Programme

EE16B025	Milind Kumar Vaddiraju	B.Tech	Sri. S. Subramanian Prize
CS16B021	R Raghul	B.Tech	Sri. K. Krishnamurthi Prize (Joint Winners)
EE16B033	Rajat Vadiraj Dwaraknath	B.Tech	
CS16B107	E. Santhosh Kumar	D.D	

1.2 Third and Fourth Semesters of the B.Tech/Dual Degree programme

Aerospace Engineering			
AE15B009	Aravind Shaj	B.Tech	Prof T K Varadan Prize
Biological Engineering			
BE15B028	Shreyansh Umale	D.D	Dr Anita Mehta Damani Prize
Biological Science			
BS15B010	Deepak	D.D	Institute Merit Prize
Chemical Engineering			
CH15B058	Ragini Sreenath	B.Tech	Dr Anita Mehta Damani Prize
Civil Engineering			
CE15B021	Damera Abhishek	B.Tech	Computer Age management Services Private Limited Prize
Computer Science and Engineering			
CS15B057	G Kavitha	B.Tech	Sri V Ramachandran Prize
Electrical Engineering			
EE15B122	Pradyumna V Chari	B.Tech	Sri V Rajagopalan Memorial Prize
Engineering Design			
ED15B010	Deepak Prakash K	D.D	Latha and Sampath Srinath Prize
Engineering Physics			
EP15B020	Pratyush Anand	B.Tech	Latha and Sampath Srinath Prize
Mechanical Engineering			
ME15B125	PAWAR AJINKYA Jalindar	D.D	Mrs Jayashree Ananth Prize
Metallurgical and Materials Engineering			
MM15B020	Akash Ramdas	B.Tech	Sri Satish Pai Prize
Naval Architecture and Ocean Engineering			
NA15B039	Khare Akshay Dilip	D.D	Latha and Sampath Srinath Prize
B.S & M.S Physics			
PH15B008	Saran V	D.D	N.Arunachalam Memorial Prize

1.3 Fifth and Sixth Semesters of B.Tech/Dual Degree Programme

Aerospace Engineering			
AE14B045	Purnanand Elango	D.D	Prof E G Tulapurkara Prize
Civil Engineering			
CE14B061	Yogesh	D.D	M S K Chaitanya Varma Memorial Prize
Chemical Engineering			
CH14B049	Praneeth Srivanth R	B.Tech	Dr.R.K.Viswanath Memorial Prize
Computer Science & Engineering			
CS14B023	Rahul Kejriwal	B.Tech	Computer Age Management Services Pvt. Ltd. Prize
Electrical Engineering			
EE14B122	Akshayaa Magesh	B.Tech	Sri Ramasarma V Kolluri Memorial Prize
Engineering Design			
ED14B037	Sathuluri Akhil	D.D	Dr Srikanth Sundararajan Prize
Engineering Physics			
EP14B004	Amit Vikram Anand	B.Tech	Mr. K Krishnamurthy Iyer Prize
Mechanical Engineering			
ME14B062	Somayajulu Dhulipala	B.Tech	Dr Vivekanand Kochikar Award
Metallurgical and Materials Engineering			
MM14B023	Paidi Venkatesh Kumar	B.Tech	Ratna Award

B.S and M.S Physics

PH14B009	Tanay Kibe	D.D	Electronics For You Prize
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Biological Engineering

BE14B035	Debayan Chaudhury	D.D	Dr Anita Mehta Damani Prize
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Biological Science

BS14B018	Prathamesh Suresh Jain	D.D	Akash Dube Prize
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Naval Architecture and Ocean Engineering

NA14B051	Kalkar Shivam Shrikant	D.D	Institute Merit Prize
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1.4 First Four Semesters of B.Tech (Mechanical Engineering)

ME15B076	Vivek B V	B.Tech	Sri Raghavendra Memorial Prize
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1.5 First Six Semesters of B.Tech (Mechanical Engineering)

ME14B062	Somayajulu Dhulipala	B.Tech	Dr S Chandrasekharan Memorial Prize
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1.6 First Seven Semesters of the B.Tech programme**Mechanical Engineering**

ME14B062	Somayajulu Dhulipala		Dr Dinesh Balagangadhar Prize
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1.7 Seventh and Eighth Semesters of Dual Degree**Aerospace Engineering**

AE13B049	Gottumukala Dasaradhi Sunil		Sri Kakkara Balachandran Menon Prize
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Applied Mechanics

CE13B065	Keshav Bharadwaj Ravi		Sri Raghu Ramamoorthy Prize
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Biological Engineering

BE13B033	Venigalla Siva Sai Krishna		Sri Madan Gopal Damani Prize
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Biological Science

BS13B008	Devanshu		Institute Merit Prize
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Civil Engineering

CE13B051	Sumon Das		Sri Venkataraman Ravi Prize
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Computer Science and Engineering

CS13B055	Yelamarthi Satya Surya Venkata Sasi Kiran		Computer Age Management Services Pvt. Ltd. Prize
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Mechanical Engineering-Product Design-ME22

ME13B127	Aman Agarwal		Sri Rajesh Achanta Prize
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Mechanical Engineering - Intelligent Manufacturing-ME23

ME13B113	Lazim K.		Sri Sagar Pushpala Prize
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Metallurgical and Materials Engineering

MM13B040	Gautham Muthusamy		Prof V Sundaresan Prize
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Naval Architecture and Ocean Engineering

NA13B041	Shimon Joseph		Sri Poovai TR Srinivasan & S Alamelu Award
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B.S & M.S Physics

PH13B001	Aditya Mahalanabish		Mr S. Venkitaramanan, I.A.S Retd Prize
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Engineering Design

ED13B015	Rajat Abhijit Dandekar		Sarada Bhaskara Reddy Award
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Chemical Engineering

CH13B086	Pradeep Natarajan		Dr Anita Mehta Damani Prize
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Mechanical Engineering- Thermal Engineering (Stream)

ME13B076	ADLA Amshith Reddy		Institute Merit Prize
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Electrical Engineering

EE13B106	Sukhdeep Singh Kahlon		Institute Merit Prize
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1.8 First to Ninth Semesters of Dual Degree Programme-Intelligent Manufacturing stream, Mechanical Engineering

ME13B154	Gokulesh T G		Prof. V Radhakrishnan Endowment Award
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1.9 First and Second Semesters of the M.Tech Programme

Aerospace Engineering		
AE16M006	Kavitha Sivaraman	Prof.S.Santhakumar Prize
Applied Mechanics		
AM16M006	Koutharapu Aditya	Shrimathi Parvatham Ramalingam Prize
Computer Science & Engineering		
CS16M042	Purvi Goel	Prakash Arora Prize
Industrial Mathematics and Scientific Computing		
MA16M001	Sonakshi Singh	Dr. N Seshagiri Prize
Metallurgical & Materials Engineering		
MM16M012	Vishwath Ram A	Dr M N Dhandapani Prize
Ocean Technology		
OE16M036	Saraniya	Subrat Kumar Malik Prize
Civil Engineering- CTM stream		
CE16M121	Debidutta Mishra	S Sambasivan Award
Civil Engineering		
CE16M048	Anilkumar P M	Smt. Jayalakshmi Narasimhan Memorial Prize
Chemical Engineering		
CH16M013	Rinu Chacko	M/S Chevron Products Company Prize
Electrical Engineering		
EE16M059	Kothuri S S S Naveen	Prof. M K Achuthan Prize
Mechanical Engineering		
ME16M061	Barbole Ketan Kanhayyalal	Sri Ramanan Ramamurthy Prize
Petroleum Engineering		
PE16M002	Ambati Venkatesh	Prof. M S Ananth Prize
Civil – Hydraulic and Water Resource Engineering Stream		
CE16M032	Gunturu Maniprakash Reddy	Prof. Gerhard Rouve Memorial Prize
Mechanical Engineering – Thermal Stream (Joint Winners)		
ME16M095	Paghdar Dhavaikumar Mansukhbhai	
ME16M101	Avilash Jain	Prof. N Venkatarayulu Memorial Prize
ME16M039	Naveen Chandar R	
Catalysis Technology		
CA16M001	Dasari Krishna Kant	Dr. V Mahadeva Iyer Prize
Ocean Engineering		
OE16M014	Abhishek Kumar Tewari	Prof Vallam Venkataswami Prize
Functional Materials & Nano technology		
PH16M009	Makarand Diwe	Mrs. Lakshmi Ravikumar Memorial Prize
Offshore Technology		
OE16M006	Pulkit Goel	Institute Merit Prize

1.10 First and Second Semesters of M.Sc. (Physics)

PH16C008	Arnab Pradhan	Chilukuri Ramasastry Memorial Prize
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1.11 First and Second Semesters of M.Sc (Chemistry)

CY16C029	Ruchira Basu	Mrs Kalaimani Natarajan Prize
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1.12 First and second semesters of M.Sc (Mathematics)

MA16C020	Koushik Brahma	Geetha Raghupathy Prize
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1.13 First, second and third semesters of M.Sc (Mathematics)

MA16C020	Koushik Brahma	LVKV Sarma Prize
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1.14 First and Second Semesters of Integrated MA

HS16H052	Pauline Mathew T.	Institute Merit Prize
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1.15 Third and Fourth Semesters of Integrated MA

HS15H021	Melwin James	Institute Merit Prize
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1.16 Fifth and Sixth Semesters of Integrated MA Programme (Development Studies)

HS14H008	Anwasha Pathi	Institute Merit Prize
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1.17 Fifth and Sixth Semesters of Integrated MA Programme (English Studies)

HS14H014	Divya Vijayakumar	Dr. V. Ravikumar Memorial Prize
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1.18 Seventh and Eighth Semesters of Integrated MA Programme (English Studies)

HS13H026	Pritam Majumdar	Gonsalvez Foundation Prize
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1.19 Seventh and Eighth semesters of Integrated MA Programme (Development Studies)

HS13H017	Madhura Niveditha Balasubramaniam	Dr. V. Ravikumar Memorial Prize
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1.20 First and Second Semesters of MBA programme

MS16A034	Pallavi Singh	T. N. Govindarajan Prize
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1.21 First, Second and Third Semesters of MBA programme

MS16A034	Pallavi Singh	T. S. Rajagopalan Memorial Prize
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1.22 Girl student with best academic record at the end of pre-final semester in B.Tech, M.Tech, Dual degree, M.Sc, M.B.A, M.A, M.Tech

EE14B122	Akshayaa Magesh	B.Tech	Swati/Jayalakshmi Memorial Award
CS13B059	Santhoshini Velusamy	Dual Degree	Swati/Jayalakshmi Memorial Award
EE16M080	Roshan S. Sam	M.Tech	Swati/Jayalakshmi Memorial Award
CY16C029	Ruchira Basu	M.Sc	Swati/Jayalakshmi Memorial Award
MS16A034	Pallavi Singh	M.B.A	Swati/Jayalakshmi Memorial Award
HS13H017	Madhura Niveditha Balasubramaniam	M.A	Swati/Jayalakshmi Memorial Award

1.23 Fifth, sixth and seventh semesters of B.Tech/Dual degree with best CGPA in Minor Category under English Studies

BS14B011	Cheyaden Joshua Albin	D.D	Rajalakshmi Krishnamurthy English Prize
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1.24 Up to Seventh Semester of B.Tech/Dual degree HSS category and minor in HS

AE14B045	Purnanand Elango	D.D.	Dr. Dilip Veeraraghavan Memorial Award
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1.25 Fifth, Sixth and Seventh Semesters of B.tech/DD/MA in Innovation and Entrepreneur minor

ME14B016	Bhargav Ramakrishna Reddy	B.Tech	Sri S Viswanathan Prize
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1.26 Third, Fourth, Fifth, Sixth & Seventh Semesters of B.Tech/DD under HS category

AE14B045	Purnanand Elango	D.D	K Srinivasan and Indira, Srinivasan Prize
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1.27 Lowest parental income from among those whose CGPA at the end of second semester (combined) more than 7.00 in M.Sc Chemistry branch

CY16C035	Sandeep Kumar Yadav	M.Sc	R. Padmanabhan Memorial Prize
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1.28 Highest CGPA in Marketing Specialisation in MBA

MS16A002	Aashna Vasa	MBA	Dr. V. Kumar Prize
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1.29 Up to 3rd Semester of M.Tech in Industrial Mathematics and Scientific Computing

MA16M007	Umesh Pal	M.Tech	LVKV Sharma Prize
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1.30 First six semesters and all round performance in cultural, co-curricular and organisational abilities among B.Tech final year students

ME14B050	Paul Martin P.	Sri K M Ramamurthi Prize
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Notional Prize Winners

Top 7 per cent of the general category students admitted to B.Tech/Dual Degree programme are eligible for Notional Prize of Rs.1000 (one time) and a Certificate of Merit on the basis of the rank in JEE (Advanced) and parents' income exceeding Rs.4.5 lakh. A total of 419 general category students were admitted to B.Tech/DD in July 2017 and the following 29 students (7% of 419 = 29.33) are eligible for Notional Prize.

Sl.No.	Roll No.	Students	CML Rank
1	CS17B007	Avvari Sai S. S. V. Bharadwaj	71
2	CS17B027	Sukameti Siddarth Reddy	106
3	CS17B033	A. Kaushik	112
4	CS17B021	Pachipulusu Jaitesh	127
5	CS17B003	Anirudh S.	131
6	CS17B019	M.V.S.N. Praneeth	134
7	CS17B023	Pranav Ramakrishnan	136
8	CS17B034	Abdul Mooizz	138
9	CS17B026	Samuel Jeyaseelan	152
10	CS17B031	Velavali Venkata Shanmuka Sai Mounik	152
11	CS17B042	Singhal Rajat Vikas	158
12	CS17B015	Kotagiri Venkat Nikhil	159
13	ME17B026	Naniseti Dharani Shreyan	163
14	CS17B005	Arabhi Subhash	166
15	CS17B011	Dhanekula Varun Teja	167
16	CS17B022	Pinnapu Reddy Dheeraj Reddy	177
17	CS17B108	Michael Mervin Christy	200
18	CS17B113	Mohit Singla	233
19	CS17B101	Anand George	251
20	CS17B110	Arnav Anil Mhaske	252
21	CS17B114	Naga Aneesh Mylavarapu	265
22	EE17B034	V Jyotheeswara Reddy	350
23	EE17B022	Narayana Jeevana Reddy	357
24	EE17B052	Manognya Param Koolath	375
25	EE17B047	Kommineni Aditya	417
26	EE17B036	Vemuri Pavan	431
27	EE17B042	Bandela Gagan Sreevastav Reddy	434
28	EE17B055	N. Abhinay Reddy	443
29	EE17B028	Anubralapalli S. V. Bala Gowthama Saravana	472

The following student coming within the 7 per cent is not eligible for Notional Prize since he was awarded other scholarship. However, a Certificate of Merit will be given.

Sl.No.	Roll No.	Students	CML Rank
1	CS17B006	Arjun Bharat	26

Prizes for the faculty having guided the project work of students/scholars who received the award during the 54th Convocation 2017.

Bhagalakshmi & Krishna Ayengar Award (donated by Mr. Sudhir Sitaram Krishna)

Guide Name	Department
Dr. Indumathi M. Nambi	Civil Engineering
Dr. Devendra Jalihal	Electrical Engineering
Dr. G. Arun Kumar	Management Studies
Prof. K. Srinivas Reddy	Mechanical Engineering
Dr. Sundararajan	Metallurgical and Material Engineering
Prof. B. S. Murty	Metallurgical and Material Engineering
Dr. Sudakar Chandran	Physics



4

Departments

4.1. Department of Aerospace Engineering

4.1.1. Introduction

The Department of Aerospace Engineering was established in 1969, and has been offering B.Tech., M.Tech, M.S. and Ph.D. programmes. The areas of teaching and research of the department are aerodynamics and flight mechanics, propulsion and combustion, and aerospace structures.

4.1.2. Academic Programmes

B.Tech./Dual Degree (B.Tech.+M.Tech.)/M.Tech./M.S. and Ph.D.

New Courses Introduced

Course No.	Course Title
AS 5435*	Waves in Fluids
AS5460	Finite Volume Methods for Hyperbolic PDEs
AS5540	Space Flight Dynamics
AS5710*	Overview of Defence Technologies
AS5885*	Continuum Damage Mechanics
AS6345*	Multiphase flows in Aerospace Engineering

*Subject being handled by more than one faculty member.

New Laboratories Established

Dr. Joel George M has started a new laboratory named Autonomous Aerial Systems with the objective of developing and testing algorithms to make aerial vehicles autonomous. The research performed in this laboratory is focused on developing application-oriented, low-cost solutions for aerial

autonomy of both fixed and rotary wing vehicles. Facilities in the laboratory include thrust measurement stands, one and three degree-of-freedom test stands to study response of aerial vehicles while arresting translations, and all the inventory (hardware, electronics and tools) to build, automate and fly aerial vehicles.

Students on roll as of September 2016 + M.S. and Ph.D. Admission in January 2017

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
B.Tech.	40	44	31	30	2	147
Dual Degree	12	14	17	22	25	90
M. Tech.	32	16	-	-	-	48
M.S.	10	12	14	5	2	43
Ph.D.	21	25	21	26	20	114
Total	115	101	83	83	49	431

Number of Post-Doctoral Fellow: 1

Student/Scholar who Attended conferences/workshops/seminars/symposia abroad/India

S. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/Workshops	Date and Venue	Financial Assistance from
India					
1	Gobiha D.	AE15D412	National Conference on Aerial Delivery and Airborne Surveillance Systems (ADASS) 2017	10 October 2017, ADRDE, Agra	IIT Madras

S. No.	Student/ Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
2	Nagendra Kumar	AE12D021	11 th International High Energy Materials Conference and Exhibits (HEMCE 2017)	23-25 October 2017, HEMRL, Pune	IIT Madras
3	Chaitanya V.	AE12D023	HEMCE 2017	23-25 October 2017, HEMRL, Pune	IIT Madras
4	Gautham M. G.	AE14D009	HEMCE 2017	23-25 October 2017, HEMRL, Pune	IIT Madras
5	Hamza Naseem	AE11D007	HEMCE 2017	23-25 October 2017, HEMRL, Pune	IIT Madras
6	Velari Yogeshkumar Muljibhai	AE14D211	HEMCE 2017	23-25 October 2017, HEMRL, Pune	IIT Madras
7	Rahul Dubey	AE16S009	International Conference on Advances in Materials and Processing, Challenges and Opportunities (AMPCO 2017)	23 October- 2 December 2017, IIT- Roorkee	IIT Madras
8	Deepika V.	AE15S013	Gas Turbine India Conference 2017	7-8 December 2017, Bengaluru	IIT Madras
9	Raviteja S.	AE14D017	25 th National Conference on Internal Combustion Engines and Combustion	13-18 December 2017, NIT Surathkal, Karnataka	IIT Madras
10	Zubin Matheikal	AE16M015	44 th National Conference on Fluid Mechanics and Fluid Power	13-18 December 2017, Kollam, Kerala	IIT Madras
11	Udhayaraman R.	AE14D021	International Conference on Composite Materials and Structures 2017	26-29 December 2017, Hyderabad	IIT Madras
12	Paramveer Sharma	AE15S040	International Conference on Composite Materials and Structures 2017	26-29 December 2017, Hyderabad	IIT Madras
13	Hamza Naseem	AE11D007	International Conference on Composite Materials and Structures 2017	26-29 December 2017, Hyderabad	IIT Madras
14	Venkatachalam S.	AE11D004	International Conference on Composite Materials and Structures 2017	26-29 December 2017, Hyderabad	IIT Madras
15	B. Praveen Kumar	AE14D208	24 th National and 2nd International ISHMT-ASFTE Heat and Mass Transfer Conference (IHMTTC) 2017	27-30 December 2017, Hyderabad	IIT Madras
16	Rutika Godbole	AE14D215	IHMTTC 2017	27-30 December 2017, Hyderabad	IIT Madras
17	K. Siddhardha	AE14D011	Indian Control Conference	4-6 January 2018, IIT Kanpur	IIT Madras
18	Rahul Dubey	AE16S009	Workshop on Applied Impact Mechanics	14-16 February 2018, DRDO, Hyderabad	IIT Madras
19	Gobiha D.	AE15D412	3 rd IFAC International Conference on Advances in Control & Optimisation of Dynamical Systems (ACODS 2018)	18-22 February 2018, Hyderabad	IIT Madras
20	Rohith G.	AE15D018	ACODS 2018	18-22 February 2018, Hyderabad	IIT Madras
21	Kandasamy S.	AE16D415	ACODS 2018	18-22 February 2018, Hyderabad	IIT Madras

S. No.	Student/ Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
22	K. Siddhardha	AE14D011	International conference on Advances in Control and Optimization of Dynamical Systems	18-22 February 2018, Hyderabad	IIT Madras
23	Nagendra Kumar	AE12D021	5 th PJ Paul Memorial Conference	23-24 February 2018, DRDL, Hyderabad	IIT Madras
24	Vinoth P.	AE15D018	5 th National Symposium on Shockwaves	26-28 February 2018, TBRL, Chandigarh	IIT Madras
25	Arunkumar R.	AE14D017	5 th National Symposium on Shockwaves	26-28 February 2018, TBRL, Chandigarh	IIT Madras
Abroad					
1	Chaitanya V.	AE12D023	8 th European Combustion Meeting 2017	18 -21 April 2017, Dubrovnik, Croatia	IIT Madras
2	Nikunj Rathi	AE13D207	8 th European Combustion Meeting 2017	18-21 April 2017, Dubrovnik, Croatia	IIT Madras
3	Velari Yogeshkumar	AE14D211	8 th European Combustion Meeting 2017	18-21 April 2017, Dubrovnik, Croatia	IIT Madras
4	Gautham M. G.	AE14D 009	8 th European Combustion Meeting 2017	18-21 April 2017, Dubrovnik, Croatia	IIT Madras
5	Raviteja S.	AE14D017	8 th European Combustion Meeting 2017	18-21 April 2017, Dubrovnik, Croatia	IIT Madras
6	Nagendra Kumar	AE12D021	8 th European Combustion Meeting 2017	18-21 April 2017, Dubrovnik, Croatia	IIT Madras
7	Prateek Kishore	AE12B047	International Conference on Aircraft Aerodynamics, Aerodynamics and Fluid Mechanics (ICAAAFM) 2017	28-29 June 2017, Tokyo, Japan	IIT Madras
8	Siddharth Ahuja	AE12B049	ICAAAFM 2017	28-29 June 2017, Tokyo, Japan	IIT Madras
9	Shobhan Roy	AE12S032	AIAA Aviation Forum and Exposition 2017	5-9 June 2017, Denver, Colorado, USA	IIT Madras
10	K. Ashwin	AE14S001	ASME Turbo Machinery Technical Conference and Exposition 2017	26-30 June 2017, Charlotte, North Carolina, USA	IIT Madras
11	Athira C. M.	AE15D021	31 st International Symposium on Shockwaves	9-14 July 2017, Nagoya University, Japan	IIT Madras
12	Athira C. M.	AE13D017	31 st International Symposium on Shockwaves	9-14 July 2017, Nagoya University, Japan	IIT Madras
13	Aravind I. B.	AE14D402	ASME Turbo Machinery Technical Conference and Exposition 2017	26-30 June 2017, Charlotte, North Carolina, USA	IIT Madras
14	Sriram P. Kalathoor	AE15S005	ASME Turbo Machinery Technical Conference and Exposition 2017	26-30 June 2017, Charlotte, North Carolina, USA	IIT Madras
15	Aritra Chakraborty	AE14D200	ASME Turbo machinery Technical Conference and Exposition 2017	26-30 June 2017, Charlotte, North Carolina, USA	IIT Madras
16	Dheeraj Varma	AE13D035	Summer School on Fluid Dynamics of Sustainability and the Environment (FDSE 2017)	3-14 July 2017, Paris, France	IIT Madras
17	Ankit Gupta	AE15S031	3 rd International Conference on Mechanics of Composites (MECHCOMP3)	4-7 July 2017, Bologna, Italy	IIT Madras

S. No.	Student/ Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
18	Daniel Paul	AE14D406	International Conference on Composites/Nano Engineering (ICCE-25)	16-22 July 2017, Rome, Italy	IIT Madras
19	Arun S.	AE13D018	Turbulent Mixing and Beyond: Non-Equilibrium Transport Across the Scales – 6th International Conference	14-18 August 2017, Trieste, Italy	IIT Madras
21	Shyam Kumar M.	AE13D028	16th European Turbulence Conference	21-24 August 2017, Stockholm, Sweden	IIT Madras
22	Venkatachalam S.	AE11D004	20th International Conference on Composite Structures (ICCS20 2017)	4-7 September 2017, Paris, France	IIT Madras
23	R. Udhayaraman	AE14S008	ICCS20 2017	4-7 September 2017, Paris, France	IIT Madras
24	Vellingiri Ramanujam R.	AE14D002	43rd European Rotorcraft Forum	12-15 September 2017, Milan, Italy	IIT Madras
25	Cibin Joseph	AE14D214	43rd European Rotorcraft Forum	12-15 September 2017, Milan, Italy	IIT Madras
26	Nikhil V. V.	AE14D013	The Joint Conference of the 7th International Symposium on Physical Sciences in Space (ISPS-7) and 25th European Low Gravity Research Association Biennial Symposium and General Assembly (ELGRA-25)	2-6 October 2017, Juan-les-Pins, France	IIT Madras
27	Kambam Naresh	AE13D208	ISPS-7 and ELGRA-25	2-6 October 2017, Juan-les-Pins, France	IIT Madras
28	Rohith M.	AE16S015	6th Asian/Australian Rotorcraft Forum 2017	6-9 November 2017, Kanazawa, Japan	IIT Madras
29	Salini S. Nair	AE13D215	6th Asian/Australian Rotorcraft Forum 2017	6-9 November 2017, Kanazawa, Japan	IIT Madras
30	Cibin Joseph	AE14D214	6th Asian/Australian Rotorcraft Forum 2017	6-9 November 2017, Kanazawa, Japan	IIT Madras
31	Kamal Kumar R.	AE15S009	70th Annual Meeting of the APS Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
32	Sirshendu Mondal	AE15IPDF01	70th Annual Meeting of the APS Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
33	Dheeraj Varma	AE13D035	70th Annual Meeting of the APS Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
34	Nagendra Kumar	AE12D021	11th Asia-Pacific Conference on Combustion	10-14 December 2017, Sydney, Australia	IIT Madras
35	Syed Mughees Ali	AE14D207	11th Asia-Pacific Conference on Combustion	10-14 December 2017, Sydney, Australia	IIT Madras
36	Deepika V.	AE15S013	11th Asia-Pacific Conference on Combustion	10-14 December 2017, Sydney, Australia	IIT Madras
37	Amardeep Mishra	AE15D405	AIAA conference	8-12 January 2018, Florida, USA	IIT Madras

Students/Scholars who won Outside Prizes and Awards

Sl. No.	Student/Scholar	Roll No.	Prize	Prize awarded by
1.	Dr. Vishnu R. Unni	AE13D006	ISEES Best Ph. D. Award 2018	2nd International Conference on Sustainable Energy and Environmental Challenges 2018, IISc, Bengaluru
2.	T. V. Raghav	AE13B062	Best Oral Presentation Award	7th International Conference on Theoretical, Applied, Computation and Environmental Mechanics (ICTACEM 2017), IIT Kharagpur
3	Krishna Prasad	AE16D300	Best Poster Award	Conference and Exhibition on Non-Destructive Evaluation (NDE 2017)
4	Vinoth P.	AE15D018	Best Poster Award	5th National Symposium on Shockwaves 2018

Scholar/Students who won Convocation/Institute Day Prize

Sl. No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1	Prateek Kishore	AE12B047	Mayan Prize	IIT Madras
2	Shashwat Nitin Sinai Salgaocar	AE13B031	Dr Shankar Dayal Sharma Prize	IIT Madras
3	Akshay Joshi	AE13B002	HAL Prize	IIT Madras
4	Tony John	AE12B034	Dr. V. Mohan Raman Prize	IIT Madras
5	Jadhav Vishal Sudam	AE15M008	Air India Prize	IIT Madras

4.1.3. Faculty and their Activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
P. Sriram, Ph.D. (HoD) (Georgia Institute of Technology)	Structural mechanics, fatigue and fracture, parallel computing
M. Ramakrishna, Ph.D. (University of Texas at Arlington)	Fluid mechanics, numerical methods, computer solutions
K. Bhaskar, Ph.D. (IIT Madras)	Structural mechanics, plates and shells, composite structures
R.I. Sujith, Ph.D. (Georgia Institute of Technology)	Acoustics and combustion instability, optical flow diagnostics
S. R. Chakravarthy, Ph.D. (Georgia Institute of Technology)	Propulsion, combustion and fluid mechanics
R. Velmurugan, Ph.D. (IIT Delhi)	Composite structures analysis and design, impact mechanics, 3-d composites
Luoyi Tao, Ph.D. (University of Pittsburgh)	Continuum mechanics and its applications (fluids, solids, multiphase flows, etc.)
H. S. N. Murthy, Ph.D. (Purdue University)	Fatigue and fracture, non-destructive evaluation, tribology, advanced materials, elasticity
Amit Kumar, Ph. D. (Case Western Reserve University)	Combustion, propulsion, fire research, CFD
P. A. Ramakrishna, Ph.D. (Indian Institute of Science)	Combustion, propulsion and fuel cells
Nandan Kumar Sinha, Ph.D. (IIT Bombay)	Dynamics and control of aerospace vehicles, aerial vehicle autonomy
Associate Professors	
Sunetra Sarkar, Ph.D. (Indian Institute of Science)	Insect aerodynamics, fluid structure interaction, uncertainty quantification
G. Rajesh, Ph.D. (Andong National University, S. Korea)	Shock wave dynamics, high speed flows, experimental aerodynamics
A. Sameen, Ph.D. (Indian Institute of Science)	Stability, transition and turbulence, computational fluid dynamics
T. M. Muruganandam, Ph.D. (Georgia Institute of Technology)	Combustion, blowout dynamics, optical diagnostics, spectroscopic methods, vortex breakdown, dynamics of mode shifting, high speed flows, unsteady gas dynamics
Sivasambu Mahesh, Ph.D. (Cornell University)	Structure-property modeling of aerospace materials
K.V. Nagendra Gopal, Ph.D. Ph.D. (Indian Institute of Science)	Computational mechanics and multi-scale modeling, fracture mechanics, structural dynamics and aero elasticity

Name and Qualifications	Major Areas of Specialisation
Assistant Professors	
Ranjith Mohan, Ph.D. (Florida Atlantic University)	Helicopters, Rotocraft MAVs
Santanu Ghosh, Ph.D. (North Carolina University)	Computational fluid dynamics, turbulent flows, shock/boundary-layer interaction, immersed-boundary methods
Manikandan Mathur, Ph.D. (Massachusetts Institute of Technology)	Instabilities and mixing, stratified and rotating flows, Lagrangian coherent structures
Shankar Ghosh, Ph.D. (University of Minnesota)	Hypersonic flow simulation, non-equilibrium effects, computational fluid dynamics, turbulent flows
Shyam M. Keralavarma, Ph.D. (Texas A&M University)	Plasticity, ductile fracture, computational materials modeling, multiscale modeling
Joel George, Ph.D. (Indian Institute of Science)	Navigation, guidance and control of aerospace vehicles, multi-agent systems theory as applied to multiple unmanned aerial vehicle missions
Shantanu Shashikant Mulay, Ph.D. (Nanyang Technological University)	Continuum mechanics, large deformation of materials, fracture mechanics and plasticity
M. Senthil Murugan, Ph.D. (Indian Institute of Science)	Aeromechanics, dynamics and aeroelasticity, stochastic systems
Satadal Ghosh, Ph. D. (Indian Institute of Science)	Guidance, navigation and control
Sriram Rengarajan, Ph. D. (Indian Institute of Science)	Experimental fluid dynamics, high speed flows, shockwave boundary layer interactions
Visiting Professors	
R. Pandiyan, Ph. D. (Auburn University, USA)	Astrodynamics, spacecraft attitude dynamics and control, nonlinear dynamics and control
T. Jayachandran, Ph. D.	Computational fluid dynamics, multi-phase flows
Professor of Practice	
Lt. Gen. (Retd.) P. Ravi Shankar	Defence Studies

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
1	Dr. G. Rajesh and Dr. A. Sameen	Special Topics in Fluid Dynamics	9-14 October 2017
2	Dr. G. Rajesh and Prof. Gabi Ben-Dor	GIAN course on Shockwave Reflection Phenomena	1-12 January 2018
3	Prof. P. Sriram	Different Modules on Aerospace Engineering	29 January-17 February 2018

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty Member	Title	Period and Venue
Seminar/Symposia/Conference			
1	Prof. R. I. Sujith	August-Whilhelm Scheer Visiting Professor 2017 – Honorary Fellow	1-30 June 2017, TUM Institute for Advanced Study Germany
3	Dr. Shyam Keralavarma	14 th International Conference on Fracture (ICF14)	18-23 June 2017, Rhodes, Greece
4	Dr. Shantanu Mulay	9 th International Conference on Materials for Advanced Technologies (ICMAT 2017)	18-23 June 2017, Singapore
5	Dr. S. R. Chakravarthy	ASME 2017 Power and Energy Conference	26-30 June 2017, Charlotte, North Carolina, USA
6	Dr. T. M. Muruganandam	31 st International Symposium on Shock Waves (ISSW31)	9-14 July 2017, Nagoya University, Japan
7	Dr. G. Rajesh	ISSW31	9-14 July 2017, Nagoya University, Japan
8	Dr. Amit Kumar	9 th International Seminar on Flame Structure	10-14 July 2017, Novosibirsk, Russia
9	Dr. S. R. Chakravarthy	9 th International Seminar on Flame Structure	10-14 July 2017, Novosibirsk, Russia
10	Dr. R. I. Sujith	1 st TUM Research Conference	28-29 August 2017, Singapore

Sl. No.	Faculty Member	Title	Period and Venue
11	Dr. Santanu Ghosh	6th Asian Symposium on Computational Heat Transfer (ASCHT) 2017	10-13 December 2017, IIT Madras
12	Dr. Satadal Ghosh	Indian Control Conference (ICC) 2018	4-6 January 2018, Kanpur, IITK
13	Dr. Amit Kumar	International Research Skills Program for Developing Sustainable Transportation system and Infrastructure and Symposium under MEXT Project	11-12 January 2018, Sapporo, Japan
14	Dr. Satadal Ghosh	Advances in Control and Optimisation of Dynamical Systems (ACODS) 2018	19-22 February 2018, Hyderabad
15	Dr. Shyam Keralavarma	Discussion Meeting on Mechanics/Materials Interface	17-23 February 2018, IISc and Indian Academy of Sciences, Bengaluru
16	Dr. S. R. Chakravarthy	Space Delegation to France	25 March-1 April 2018, Paris, France
Training			
17	Dr. Nandan K. Sinha	Numerical Treatment of Flight Dynamics and Control in a Nonlinear Framework, ACODS 2018	18 February 2018, Hyderabad, India

Meetings

- 1 Dr. Manikandan Mathur visited Portland, Oregon, USA for 2018 Ocean Sciences Meeting, 11-16 February 2018
- 2 Dr. Manikandan Mathur was an invited speaker at the discussion meeting on Buoyancy-Driven Flows at International Centre for Theoretical Studies, Bengaluru, 16-20 June 2017
- 3 Dr. Manikandan Mathur was an invited speaker at the discussion meeting on Turbulence from Angstroms to Light Years at International Centre for Theoretical Studies, Bengaluru, 20-25 January 2018

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic	Institution	Date
1.	Dr. G. Rajesh	High-Speed Imaging Techniques	College of Engineering Adoor, KUSAT	March 2017
2.	Dr. G. Rajesh	Time Resolved Schlieren and Shadowgraph Techniques for High-Speed Flows	Rajalekshmi Engineering College	July 2017
3.	Dr. Nandan K. Sinha	Flight Dynamics Research and Teaching: A New Paradigm	Indian Institute of Science Bengaluru	13 September 2017
4.	Dr. G. Rajesh	Shock Wave Technology: Future Prospects in Agri-Food sector, Indian Institute of Plantation Management		5 January 2018
5.	Dr. Satadal Ghosh	Basics and Applications of Guidance in Aerospace	Vellore Institute of Technology	16 March 2018
6.	Dr. G. Rajesh	Shock Reflections in Compressible Open Jets	Vellore Institute of Technology	16 March 2018

Visits Abroad by Faculty

S. No.	Faculty Name	Country Visited	Date	Purpose of Visit	Funding From
1.	Dr. R. I. Sujith	TUM, Germany	1-30 June 2017	Visiting Scientist	IIT Madras
2.	Dr. Shantanu Shashikant Mulay	Singapore	18-23 June 2017	9 th International Conference on Materials for Advanced Technologies (ICMAT 2017)	IIT Madras
3.	Dr. Shyam Mohan Keralavarma	Greece	18-23 June 2017	14 th International Conference on Fracture (ICF14) 2017	DST
4.	Dr. S. R. Chakravarthy	USA	26-30 June 2017	ASME 2017 Power and Energy Conference	USA
5.	Dr. T. M. Muruganandam	Japan	9-14 July 2017	31 st International Symposium on Shock Waves (ISSW31), 2017	Project
6.	Dr. G. Rajesh	Japan	9-14 July 2017	ISSW31, 2017	Project
7.	Dr. S. R. Chakravarthy	Russia	10-14 July 2017	9 th International Seminar on Flame Structure 2017	Project
8.	Dr. Amit Kumar	Russia	10-14 July 2017	9 th International Seminar on Flame Structure 2017	IIT Madras
9.	Dr. R. I. Sujith	Singapore	28-29 August 2017	First Research Conference	Project

S. No.	Faculty Name	Country Visited	Date	Purpose of Visit	Funding From
10.	Dr. Shyam Mohan Keralavarma	Spain	5-7 September 2017	International Conference on Computational Plasticity (COMPLAS 2017)	IIT Madras
11.	Dr. Sunetra Sarkar	Rome	10-14 September 2017	International Conference on Structural Dynamics (EURODYN) 2017	IIT Madras
12.	Dr. Sunetra Sarkar	Sofia	3-8 September 2017	International Conference on Engineering Vibration	IIT Madras
13.	Dr. R. Velmurugan	Armenia	2-7 October 2017	International Conference on Topical Problems of Continuum Mechanics (TPCM 2017)	Project
14.	Dr. Nandan Kumar Sinha	England	19-21 October 2017	11 th International Airship Convention and Regatta, Flights of Fact and Fantasy	IIT Madras
15.	Dr. Sivasambu Mahesh	USA	6-10 November 2017	18 th International Conference on Textures of Materials	IIT Madras
16.	Dr. G. Rajesh	Bangladesh	3-12 December 2017	Research Collaboration Meeting at BUET	Project
17.	Dr. S. R. Chakravarthy	Australia	10-14 December 2017	1 st Asia Pacific Conference on Combustion (ASPACC-11)	Project
18.	Dr. T. M. Muruganandam	Australia	10-14 December 2017	ASPACC-11	Project
19.	Dr. T. M. Muruganandam	Japan	10-12 January 2018	Committee meeting of International Research Skills Program for Developing Sustainable Transportation System and Infrastructure (STSI) and Symposium under MEXT Project	Project
20.	Dr. Amit Kumar	Japan	11-12 January 2018	Committee meeting of International Research Skills Program for Developing Sustainable Transportation System and Infrastructure (STSI) and Symposium under MEXT Project	Project
21.	Dr. Manikandan S. Mathur	USA	12-16 February 2018	2018 Oceans Meeting	Project
22.	Dr. S. R. Chakravarthy	France	23 March-4 April 2018	Space Delegation, Paris	Project

Honours and Awards

S. No.	Faculty Name	Award
1	Dr. Nandan K. Sinha	Centenary medal for delivering an invited lecture in the Department of Aerospace Engineering, IISc., Bangalore on Flight Dynamics Research and Teaching: A New Paradigm

4.1.4. Design and Development Activities

Patents Filed

S. No.	Faculty Name	Topic of Patent
1.	Dr. P. A. Ramakrishna	Wax-based Disposable Mandrel for Solid Propellant Grain Design
2.	Dr. R. I. Sujith	Predicting the Amplitude of Limit Cycle Oscillations in a Class of Systems that Encounter Oscillatory Instabilities
3.	Dr. R. I. Sujith	Ether Early Warning for Thermo-acoustic Instability
4.	Dr. R. Velmurugan	Reusable Passive Wireless RFID Sensor for Structural Health Monitoring
5.	Dr. R. I. Sujith	Ether-Early Warning for Thermo-acoustic Instability-Batch Processing
6.	Dr. R. I. Sujith	A System and Method for Optimizing Passive/Slow Control of Oscillatory Instabilities In Turbulent Flows

4.1.5. Research and Consultancy

Sponsored Research Projects

S. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Coordinators
1.	High Temperature Erosion and Corrosion of Combustor Components Due to Combustion of Metalized Slurry Fuels	30 May 2017-29 May 2020	DRDO	68.65	Dr. S. R. Chakravarthy

S. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Coordinators
2.	Development and Optimisation of Swirl-Venturi Lean Direct Injection Gas Turbine Combustor	30 May 2017-29 May 2020	DRDO	230.27	Dr. S. R. Chakravarthy
3.	Solid Propellant Combustion Mechanisms and Modelling	30 May 2017-29 May 2022	ISRO	2501.82	Dr. S. R. Chakravarthy
4.	Design and Development of Morphing Wing with Hinge Less Control Surface	30 May 2017-29 May 2022	DRDO	514.54	Dr. K. V. N. Gopal
5.	Development of Nano-Boron Slurry Fuel, its Characterization, and Atomization with a Co-axial Air-blast Atomizer	30 May 2017-29 May 2021	DRDO	200.43	Dr. S. R. Chakravarthy
6.	Variable Camber Morphing Wing	30 May 2017-29 May 2022	DRDO	1286.10	Dr. A. Sameen
7.	Experimental and Theoretical Investigation of Rate Dependent Bifurcation in the Context of Thermoacoustic Instability	3 August 2017-2 August 2019	DST	5.75	Dr. R. I. Sujith
8.	Development of a Back Pack Rocket Motor for a Solider	19 August 2017-18 August 2020	Impacting Research Innovation and Technology - IMPRINT	398.42	Dr. P. A. Ramakrishna
9.	Experimental Study on Starting Transients in a Vacuum Ejector-Diffuser System	25 August 2017-24 August 2019	ARDB	27.61	Dr. G. Rajesh
10.	Numerical Investigation of Boundary Layer Separation Control in Airfoils Using Surface Porosity	29 August 2017-28 August 2019	ARDB	22.71	Dr. Santanu Ghosh
11.	Studies on Improved Low Temperature Strain Capability in Advanced Energetic Solid Propellants	27 October 2017-26 October 2020	ARB	150.88	Dr. H. S. N. Murthy
12.	3D Numerical Modeling of Arcjet Thrusters	31 October 2017-30 April 2019	ISRO	11.4	Dr. Amit Kumar
13.	Development of Rotocraft UAV for Operation in Martian Atmosphere	31 October 2017-30 October 2019	ISRO	43.55	Dr. Ranjith Mohan
14.	Theoretical and Experimental Research for Composite Materials and Structures Behaviour Taking into Account their Manufacturing Processes, Intensive Deformation, and Fracture – RFBR	22 November 2017-21 November 2019	DST	21.7	Dr. R. Velmurugan
15.	Stochastic Modelling of Buffering in Fin Structures	6 November 2017-5 April 2019	ARDB	28.36	Dr. Sunetra Sarkar
16.	Development of Paraffin-Based Gas Generator System for Hot Flow Scale Model Tests Simulating Clustered Semi Cryo Engines	22 March 2018-21 March 2020	ISRO	18	Dr. P. A. Ramakrishna
17.	Thermoacoustic Instability as Pattern Formation in a System Far from Equilibrium	21 March 2018-20 March 2021	NICOSTP	144.33	Dr. R. I. Sujith
18.	Three-dimensional Stratified Flows Facility	January 2018-January 2023	DST	242	Dr. P. Sriram

Industrial Consultancy Projects (Ongoing and New)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1	Dr. Amit Kumar	Cone Calorimeter Tests: External	Common Code	5
2	Dr. R. Velmurugan	Testing and Characterization Studies of Composite Structural Components	Common Code	---
3	Dr. R. I. Sujith	Investigating the Spatio-Temporal Dynamics of Confined Turbulent Reacting Flow Close to Lean Blowout	Siemens Technology and Services Private Limited	20.78

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
4	Dr. R. Velmurugan	Design of Light Weight Integrated Energy Absorber System for Vehicle Front	Mahindra & Mahindra Limited	5.75
5	Dr. R. Velmurugan	Development of FE-based Software for Design and Analysis of Canister and Air-frame Sections	DRDL	16.96
6	Dr. P. A. Ramakrishna	Development of a Technique to Determine the Pressure Sensitivity and Temperature Sensitivity of Burn Rate of Fuel-Rich Propellant	DRDO	9.14
7	Dr. R. Velmurugan	High Strain Rate and Impact Studies of STF Impregnated Kevlar/Dyneema Fabrics	Defence Materials and Stores Research and Development Establishment (DMSRDE)	37.55
8	Dr. G. Rajesh	Simulation Study for Implosion Driven Hypervelocity Launcher	Armament R & D Establishment	9.95
9	Dr. R. Velmurugan	Crash Worthiness Study of ICF Coach Body with CBC Design	Integral Coach Factory	19.98

RBIC Projects (Ongoing and New)

Sl. No.	Faculty Name	Title	Industry	Amount (Rs. in lakh)
1.	Dr. R. I Sujith	Investigating the Spatio-Temporal Dynamics of Confined Turbulent Reacting Flow Close to Lean Blowout	Siemens Technology and Services Private Limited	20
2.	Dr. R. Velmurugan	Design of Light Weight Integrated Energy Absorber System for Vehicle Front	Mahindra & Mahindra Limited	5.75
3.	Dr. R. Velmurugan	Development of FE-based Software for Design and Analysis of Canister and Air-frame Sections	DRDL	16.96
4.	Dr. P. A. Ramakrishna	Development of a Technique to Determine the Pressure Sensitivity and Temperature Sensitivity of Burn Rate of Fuel Rich Propellant	DRDO	9.142
5.	Dr. R. Velmurugan	High Strain Rate and Impact Studies of STF Impregnated Kevlar/Dyneema Fabrics	DMSRDE	37.55
6.	Dr. G. Rajesh	Simulation Study for Implosion Driven Hypervelocity Launcher	Armament R&D Establishment	9.95
7.	Dr. R. Velmurugan	Crash Worthiness Study of ICF Coach Body with CBC Design	Integral coach Factory	19.98

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date of visit	Purpose of visit
1	Dr. Vikram Rao, Executive Director, Research Triangle Energy Consortium, USA, and Dr. Raghubir Gupta, Senior Vice President of the Energy Technology Division at RTI International, USA	19 May 2017	Guest lecture: Distributed Processing: Conversions of Stranded Gas and Biomass
2	Lt. Gen. Larry James, Deputy Director, JPL	20 June 2017	Departmental Visit
3	Dr. Marcos Diaz, University of Chile, Santiago Chile	27 June 2017	Discuss collaborations on various research activities related to airship and space technology
4	Dr. Thallada Bhaskar, Principal Scientist and Head of Biomass Thermocatalytic Processes Area (TPA), Bio-Fuels Division (BFD), CSIR	21 August 2017	Guest lecture: Biomass as a Renewable Carbon Resource for Bio-Fuels and Chemicals Through Integrated Thermochemical and Biochemical Pathways
5	Dr. Malcom Lawes, University of Leeds	19 September 2017	Guest lecture: Fundamental Experimental Studies of Laminar and Turbulent Combustion Relating to Engines and Hazards
6	Dr. Lipika Kabiraj, Assistant Professor, IIT Ropar	22 September 2017	Guest lecture: Results on Noise-Induced Dynamics in Gas Turbine Combustors

Sl. No.	Name and Designation	Date of visit	Purpose of visit
7	Dr. Freddy Bouchet, ENS de Lyon and CNRS, France	22 September 2017	Guest lecture: Large Deviation Theory Applied to Turbulent Flows and Climate Physics, A New Frontier of Statistical Physics
8	Dr. Gabi Ben-Dor, Professor, Ben-Gurion University, Israel	10 January 2018	Guest lecture: Review of the Shock/Blast Wave Research at the BGU-Protective Technologies R&D Center (PTR&D)
9	Dr. Eric D'Asaro, Professor, Applied Physics Laboratory and School of Oceanography, University of Washington Seattle, Washington, USA	16 January 2018	Guest lecture: Under Sea Unmanned Vehicles for Oceanography
10	Mr. Pavan B. Govindaraju, Stanford University, USA	30 January 2018	Guest lecture: Simulating Combustion of Multicomponent Fuels
11	Mr. Jagannath Jayachandran	6 February 2018	Guest lecture: Modeling Investigations of Fundamental Combustion Phenomena in Low-Dimensional Configurations
12	Dr. Aditya Saurabh	12 February 2018	Guest lecture: Response of a Swirl-Stabilized, Premixed Flame to Transverse Acoustics
13	Professor Osamu Fujita, Hokkaido University, Japan	20 February 2018	Guest lecture: Microgravity Combustion Research in Hokkaido University
14	V. V. Kuppaswamy, NCCRD-IIT Madras	20 March 2018	Guest lecture: Attitude in Business
15	Dr. Amit Tandon, Professor, College of Engineering and School of Marine Science and Technology, University of Massachusetts, Dartmouth, USA	26 March 2018	Guest lecture: Oceanic Mesoscale Eddies and their Signatures in the Bay of Bengal

Distinguished Visitors (Students)

1. Students of Tokyo Tech, Japan visited the Department on 31st August 2017
2. School students from Vidya Mandir School, Ariyalur visited on 24th January 2018

3. College Students from Department of Aeronautical Engineering, KCG College of Technology visited on 30th January 2018

4.1.6. Other Activities

Student Visited from Abroad

Sl. No.	Name	Purpose of Visit	Place
1	Daniel Satke	Course Work	Czech Republic
2	Tereza Grebenarova	Course Work	Czech Republic
3	Mohammed Nady Darwish	Internship	University of Science and Technology, Zewail City, Egypt
4	Catarina Goncalves Fidalgo	Course Work	Portugal
5	Antonio Luis Gomes Ramalho	Course Work	Portugal
6	Benjamin Roger Chavance	Course Work	France
7	Pertal Victor	Course Work	France
8	Mohanbeeraj Kevin	Course Work	France
9	Leo Lapouge	Course Work	France
10	Tariq Humayun Kabir	Course work	France
11	Charles Gras-Rosanvallen	Course Work	France
12	Benjamin Ferreira	Course Work	France
13	Ducrotoy Hugues	Course Work	France
14	Yusuke Konno	Internship	Japan



4.2. Department of Applied Mechanics

4.2.1. Introduction

Set up in 1962, the Department of Applied Mechanics has become a full-fledged interdisciplinary graduate research department over the years. The department focuses on academic activities in three broad areas: biomedical engineering, fluid mechanics, and solid mechanics. The department also offers minor streams for undergraduate students.

4.2.2. Academic Programmes

PhD, Direct PhD, M.S. (by Research), M. Tech (Computational and Experimental Mechanics), M. Tech (Biomedical Engineering), and Inter-Disciplinary Dual Degree in Biomedical Engineering, and Computational Engineering.

New Courses Introduced

Sl. NS No.	Course No.	Title
1.	AM6017	Geothermal Energy
2.	AM6016	Fluid Dynamics and Convective Transport Process
3.	AM5150	Biomedical Nanotechnology
4.	ID6022	Introduction to Ultrasonics
5.	AM5230	Clinical Practice Observations in Hospitals
GIAN COURSES		
1.	AM6015	GIAN171003L02: Large Eddy Simulation of Turbulence: Fundamentals and Applications
2.	AM6022	GIAN ID 171003L27: Analysis and Design of Piezoelectric Vibration Energy Harvesters

Students on roll as of September 2016+M.S. and Ph.D Admission in January 2017

Programme	Year I	Year II	Year III	Year IV	Year V and Others	Total
Dual Degree	-	-	-	20	34	54
M.Tech.	27	18	2	3	1	51
M.S.	3	28	24	7	7	69
PhD	29	28	22	13	19	111
Upgradation	-	4	6	1	7	18
DPhD	2	5	4	6		17

Student/Scholar who Attended conferences/seminars and symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
Abroad					
1.	B. Lokesh	AM14D015	IEEE-International Symposium on Biomedical Imaging	18-21 April 2017	IIT Madras
2.	Soumya Sunakraneni	AM10D023	7th International Symposium on Advances in Computational Heat Transfer	28 May-1 June 2017, Napoli, Italy	IIT Madras
3.	P. Suhail Parvaze	AM14D016	Medical Image Perception Conference (MIPS XVII)	11-15 July 2017, Houston, Texas, USA	IIT Madras
4.	N. Punitha	AM15D037	MIPS XVII	11-15 July 2017, Houston, Texas, USA	IIT Madras
5.	S. Krishnakumar	AM13D027	9th European Nonlinear Dynamics Conference 2017	25-30 July 2017, Hungary	IIT Madras
6.	Nijin	AM14D201	14th International Conference on Fracture	18-23 June 2017, Greece	IIT Madras
7.	Shravan Kumar Remma	AM14S029	14th International Conference on Fracture	18-23 June 2017, Greece	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
8.	Chandan Bose	AM14D403	47 th AIAA Fluid Dynamics Conference	5-9 June 2017, USA	IIT Madras
9.	S. Krishna Kumar	AM13D027	9 th European Nonlinear Dynamics Conference	25-30 June 2017, Hungary	IIT Madras
10.	Debojyoti Pandit	AM13D063	SES 2017 (Society of Engineering Science)	25-28 July 2017, Northeastern University USA	IIT Madras
11.	Bhakti Narayanbhai Patel	AM13D029	SES 2017	25-28 July 2017, USA	IIT Madras
12.	Satishchandra Salam	AM15S013	Progress in Motor Control 2017 (PMC 2017) Conference	19-22 July 2017, USA	IIT Madras
13.	Nijin	AM14D201	14 th International Conference on Fracture	18-23 June 2017, Rhodes, Greece	IIT Madras
14.	Shravan Kumar Remma	AM14S029	14 th International Conference on Fracture	18-23 June 2017, Rhodes, Greece	IIT Madras
15.	Chandan Bose	AM14D403	SES 2017	25-28 July 2017, USA	IIT Madras
16.	Satishchandra Salam	AM15S013	PMC 2017	19-22 July 2017, USA	IIT Madras
17.	Nijin	AM14D201	14 th International Conference on Fracture	18-23 June 2017, Rhodes, Greece	IIT Madras
18.	Shravan Kumar Remma	AM14S029	14 th International Conference on Fracture	18-23 June 2017, Rhodes, Greece	IIT Madras
19.	Chandan Bose	AM14D403	47 th AIAA Fluid Dynamics Conference	5-9 June 2017, Denver, USA	IIT Madras
20.	S. Krishna Kumar	AM13D027	9 th European Nonlinear Dynamics Conference 2017	25-30 June 2017, Hungary	IIT Madras
21.	Debojyoti Pandit	AM13D063	SES 2017	25-28 July 2017, Northeastern University, USA	IIT Madras
22.	Bhakti Narayanbhai Patel	AM13D029	SES 2017	25-28 July 2017, Northeastern University, USA	IIT Madras
23.	Satishchandra Salam	AM15S013	PMC 2017	19-22 July 2017, USA	IIT Madras
24.	S. Krishnakumar	AM13D027	9 th European Nonlinear Dynamics Conference 2017	25-30 June 2017, Hungary	IIT Madras
25.	P. Suhail Parvaze	AM14D016	MIPS XVII	11-15 July 2017, USA	IIT Madras
26.	N. Punitha	AM15D037	MIPS XVII	11-15 July 2017, USA	IIT Madras
27.	Aasifa Rounak	AM15D201	International Conference on Vibration Engineering	4-7 September 2017, Sofia, Bulgaria	IIT Madras
28.	Chandan Bose	AM14D403	International Conference on Vibration Engineering	4-7 September 2017, Sofia, Bulgaria	IIT Madras
29.	Navaneethakrishna M.	AM16D001	Drexel University	1 September-30 November 2017	IIT Madras
30.	Satyavratana G.	AM16D037	Drexel University	1 September-30 November 2017	IIT Madras
31.	Varun Durai S. I.	AM14S033	IEEE Conference on Haptic Audio Visual Environments and Games (HAVE) 2017	22-23 October 2017, New York University, Abu Dhabi Campus	IIT Madras
32.	Ravali Gouri Shetty	AM14D014	HAVE 2017	22-23 October 2017, New York University, Abu Dhabi Campus	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
33.	Satishch Salam	AM15S013	47 th Annual Meeting of the Society for Neuroscience	11-15 November 2017, Washington DC	IIT Madras
34.	Dhanush R.	AM13D021	47 th Annual Meeting of the Society for Neuroscience	11-15 November 2017, Washington DC	IIT Madras
35.	Banuvathy R.	AM15D011	47 th Annual Meeting of the Society for Neuroscience	11-15 November 2017, Washington DC	IIT Madras
36.	Kavitha	AM15S022	2 nd International Conference on Biomedical Images Signal Processing (ICBSP)	17-21 October 2017, New York, USA	IIT Madras
37.	Diptasree M. Ghosh	AM13D004	ICBSP 2017	17-21 October 2017, New York, USA	IIT Madras
38.	Aasifa Rounak	AM15D201	International Conference on Vibration Engineering	4-7 September 2017, Bulgaria	IIT Madras
39.	M. Swathika	AM13D032	International AYUSH Conference and Exhibition	9 November-11 November 2017, Dubai	IIT Madras
40.	Prashant Khandelwal	AM15S034	70 th Annual Meeting of the American Physical Society Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
41.	Koushik Chandramouli	AM13D015	70 th Annual Meeting of the American Physical Society Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
42.	Rahul Subburaj	AM15S031	70 th Annual Meeting of the American Physical Society Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
43.	Jawahar Pasupathi	AM14S020	70 th Annual Meeting of the American Physical Society Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
44.	Sazid Zamal Hoque	AM15S008	70 th Annual Meeting of the American Physical Society Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
45.	Venkat Narayanan	AM15S005	70 th Annual Meeting of the American Physical Society Division of Fluid Dynamics	19-21 November 2017, Denver, Colorado, USA	IIT Madras
46.	Divya Aiyumperumal	AM16M011	Exchange programme	23-27 January 2018, Heidelberg University, Germany	IIT Madras
47.	Kiran Kumar G. R.	AM14D405	6 th IEEE International Winter Conference on Brain-Computer Interface	15-17 January 2018, South Korea	IIT Madras
48.	A. Gowri	AM13D005	5 th Nano Today Conference	6-10 December 2017, USA	IIT Madras
49.	M. Swathika	AM13D032	International Ayush Conference	9 November-2 December 2017, Dubai	IIT Madras
50.	R. Rakesh	AM14D006	5 th European Conference on Microfluidics and 3 rd European Conference on Non-Equilibrium Gas Flows	28 March-2 April 2018	IIT Madras
51.	Nagarajan G.	AM15D007	International Brain Mind Institute Symposium	14-15 March 2018, EPFL, Switzerland	IIT Madras

International Conferences Held within India

Sl. No.	Student/Scholar	Roll No.	Conference/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
1.	P. Kirthi Priya	AM12D018	International Conference on Translational Medicine and Imaging	29-30 August 2017, Vellore	IIT Madras
2.	Aleena Alex	AM14D011	International Conference in Advances in Construction Materials and Systems	3-9 August 2017, Chennai	IIT Madras
3.	M. Rajarathinam	AM12D019	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
4.	Rahul Kumar	AM15D404	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
5.	M. Aravindan	AM16D018	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
6.	Vishnu Pradeesh	AM14D019	Asian Control Conference 2017	17-20 December 2017	IIT Madras
7.	Duppa Roopa and Venkata Sai Trinath	AM15S040	International Conference on Composite Materials and Structures (ICCMS 2017)	27-29 December 2017, Hyderabad	IIT Madras
8.	Subbajit Konar	AM15S010	3 rd International Symposium on Mechanobiology	11-14 December 2017	IIT Madras
9.	Kalvapalli Sai Karthik	AM15D010	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
10.	Vishnu Pradeesh	AM14D019	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
11.	Aravind Kumar	AM14D402	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
12.	Aravind Kumar	AM14D402	5 th International Conference on Complex Dynamical Systems and Application	3-6 December 2017, IIT Guwahati	IIT Madras

National Conferences Attended by Scholars

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposium/ Workshop	Date and Venue	Financial Assistance from
1.	Dhanush R.	AM13D021	3 rd Indian Conference on Applied Mechanics (INCAM) 2017, Motilal Nehru National Institute of Technology (MNNIT)	5-7 July 2017, Allahabad; presented three papers	IIT Madras
2.	Banuvathy R.	AM15D011	INCAM 2017, MNIT	5-7 July 2017, Allahabad	IIT Madras
3.	Sanal Mohanan	AM13S010	Summer school and discussion meeting on Buoyancy-Driven Flows	12-20 June 2017, Bengaluru	IIT Madras
4.	Sangeeth K.	AM10D026	Summer school and discussion meeting on Buoyancy-Driven Flows	12-20 June 2017, Bengaluru	IIT Madras
5.	Anurag Pant	AM11D201	Summer school and discussion meeting on Buoyancy-Driven Flows	12-20 June 2017, Bengaluru	IIT Madras
6.	Ayyappadas A. M.	AM11D202	Summer school and discussion meeting on Buoyancy-Driven Flows	12-20 June 2017, Bengaluru	IIT Madras
7.	Prafulla Shevkar	AM16D009	Summer school and discussion meeting on Buoyancy-Driven Flows	12-20 June 2017, Bengaluru	IIT Madras
8.	Prakash	AM16D009	Summer school and discussion meeting on Buoyancy-Driven Flows	12-20 June 2017, Bengaluru	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposium/ Workshop	Date and Venue	Financial Assistance from
9.	Prasoon K. K.	AM16S026	Summer school and discussion meeting on Buoyancy-Driven Flows	12-20 June 2017, Bengaluru	IIT Madras
10.	K. Sri Krishna Sudhamsu	AM15D200	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
11.	M. Swathika	AM13D032	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
12.	Namburu Sai Deepak	AM15S03	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
13.	Namburu Sai Deepak and Sandeep Jose	AM15S037	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
14.	Agesh Markose	AM14D009	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
15.	Srinivas K.	AM16S021	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
16.	Indu Chanchal Polpaya	CH14D011	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
17.	N. V. Malleswara Rao	AM15S030	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
18.	L. Harish	AM13D025	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
19.	Nagendranath Atreyapurapu	AM13D016	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
20.	Santhosh Reddy	AM15M039	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
21.	K. Sri Krishna Sudhamsu	AM15D2	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
22.	N. Sai Deepak	AM15S037	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
23.	Srinivas K.	AM16S021	INCAM 2017	5-7 July 2017, Allahabad	IIT Madras
24.	Aleena Alex	AM14D011	Nanoyantrika 2017	17-20 September 2017, Trivandrum	IIT Madras
25.	Darish Jeswin Dhas S.	AM16D022	International Centre for Theoretical Sciences, Tata Institute of Fundamental Research	7-11 August 2017, Bengaluru	IIT Madras
26.	Dhanush R.	AM13D021	4 th Annual Conference of the Association for Cognitive Science (ACCS) 2017	5-7 October 2017, Hyderabad	IIT Madras
27.	Satishchandra Salam	AM15S013	ACCS 2017	5-7 October 2017, Hyderabad	IIT Madras
28.	Banuvathy R.	AM15D011	ACCS 2017	5-7 October 2017, Hyderabad	IIT Madras
29.	Kavitha I.	AM15S022	How to Purchase the Right Medical Equipment	6 October 2017, Mumbai	IIT Madras
30.	Lakshmi M.	AM17D024	How to Purchase the Right Medical Equipment	6 October 2017, Mumbai	IIT Madras
31.	Hari Vardhini	AM!7D013	How to Purchase the Right Medical Equipment	6 October 2017, Mumbai	IIT Madras
32.	Kavitha I.	AM15S022	India's largest medical equipment exhibition, Medicall	7 October 2017, Goregaon East, Mumbai	IIT Madras
33.	Lakshmi M.	Lakshmi M.	Medicall	7 October 2017, Goregaon East, Mumbai	IIT Madras
34.	Hari Vardhini	AM!7D013	Medicall	7 October 2017, Goregaon East, Mumbai	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposium/ Workshop	Date and Venue	Financial Assistance from
35.	Shib Sunder Banerjee	AM16S025	Medicall	7 October 2017, Goregaon East, Mumbai	IIT Madras
36.	M. Rajarathinam	AM12D019	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
37.	Rahul Kumar	AM15D404	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
38.	M. Aravindan	AM16D018	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
39.	Kalvapalli Sai Karthik	AM15D010	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
40.	Vishnu Pradeesh	AM14D019	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
41.	Aravind Kumar	AM14D402	13 th International Conference on Vibration Problems 2017	29 November-2 December 2017, IIT Guwahati	IIT Madras
42.	R. Rakesh	AM14D006	44 th National Conference on Fluid Mechanics and Fluid Power	14-16 December 2017, Kerala	IIT Madras
43.	Alan Sam	AM14D010	44 th National Conference on Fluid Mechanics and Fluid Power	14-16 December 2017, Kerala	IIT Madras
44.	K. Srinivas	AM16S021	Indian Society of Theoretical and Applied Mechanics (ISTAM)	15-18 December 2017, Hyderabad	IIT Madras
45.	Kambhammettu Sri Krishna Sudhamsu	AM15D200	ISTAM 2017	15-18 December 2017, Hyderabad	IIT Madras
46.	P. Ramachandran	AM17S300	Experimental Methods in Cognitive Neuroscience (EMCN) 2017	15-16 December 2017, Goa Campus	IIT Madras
47.	Aravind Kumar	AM14D402	Indian Control Conference 2018	4-6 January 2018, IIT Kanpur	IIT Madras
48.	M. Santhosh	AM13D013	Compflu 2017	18-20 December 2017, IIT Madras, Chennai	IIT Madras
49.	Raghunandan Pratoori	AM16S024	Compflu 2017	18-20 December 2017, IIT Madras, Chennai	IIT Madras
50.	C. Koushik	AM13D015	24 th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference	27-30 December 2017, Hyderabad	IIT Madras
51.	Pothukuchi Harish	AM12D201	24 th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference	27-30 December 2017, Hyderabad	IIT Madras
52.	Sainath H.	AM15D206	Compflu 2017	18-20 December 2017, IIT Madras, Chennai	IIT Madras
53.	Sazid Zamal Hoque	AM15S008	44 th National Conference on Fluid Mechanics and Fluid Power (FMFP 2017)	14-16 December 2017, Kerala	IIT Madras
54.	Ravi Dadsena	AM15D002	EMCN	15-16 December 2017	IIT Madras
55.	Dhivya Aiyamperumal	AM16M011	IWS	25 January-29 March 2018	IIT Madras
56.	B. S. Mahima Sharma	AM16D002	ICMAP 2018	9-11 February 2018, Dhanbad	IIT Madras
57.	Vardhini	AM17D013	Teaching Assistant Training Program	1-2 December 2017, IIT Madras	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposium/ Workshop	Date and Venue	Financial Assistance from
58.	Lakshmi Kanchana	AM17D024 AM16D032	Teaching Assistant Training Program	1-2 December 2017, IIT Madras	IIT Madras
59.	Ravi Dadsena	AM15D002	Workshop: Experimental Methods in Cognitive Neuroscience	15-16 December 2017, BITS Pilani, K. K. Birla Goa Campus and CNCS, University of Hyderabad	IIT Madras
60.	Vardhini	AM17D013	Winter course on Computational Brain Research	2-7 January 2018, IIT Madras	IIT Madras
61.	Lakshmi	AM17D024	Winter course on Computational Brain Research	2-7 January 2018, IIT Madras	IIT Madras
62.	Shib Sunder Banerjee	AM16S025	Winter course on Computational Brain Research	2-7 January 2018, IIT Madras	IIT Madras
63.	Rohini	AM16D301	Winter course on Computational Brain Research	2-7 January 2018, IIT Madras	IIT Madras
64.	Punitha	AM15D037	Winter course on Computational Brain Research	2-7 January 2018, IIT Madras	IIT Madras
65.	Satyavaratan	AM16D037	Winter course on Computational Brain Research	2-7 January 2018, IIT Madras	IIT Madras
66.	Navaneeth	AM16D001	Winter course on Computational Brain Research	2-7 January 2018, IIT Madras	IIT Madras
67.	Kanchana	AM16D032	Winter course on Computational Brain Research	2-7 January 2018, IIT Madras	IIT Madras

Students/Scholars who won outside prizes and awards

Sl.No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1.	Pothukuchi Harish	AM12D201	UGC funding for the exchange programme (period of six months) under the framework of strategic partnership between RWTH Aachen University and IIT Madras	UGC
2.	P. Kirthi Priya	AM12D018	Best Paper Award for Study of polyphasic ventricular tachycardia in a 2D cardiac transmural tissue, International Conference on Translational Medicine and Imaging, 29-30 August 2017	Conference organiser
3.	Diptasree Maitra Ghosh	AM13D004	Best Oral Presentation award, International Conference on Computational Biology and Bioinformatics 2017 (ICCB-2017), Newark, USA, 18-21 October 2017	Conference organiser
4.	Sagaya Prasanna Kumar	AM12D020	Best Oral Presentation award for his paper, Blast mitigation using a combination of foam and trap gaps, 5th National Symposium on Shock Waves (NSSW 18), Chandigarh, 26-28 February 2018	Conference organiser
5.	Priyamvada Jain	National PDF (SERB)	Best Oral Presentation Award for Enhancing the RI sensitivity of U-bent plastic optical fiber probes functionalisation, 2nd International Conference on Recent Trends in Analytical Chemistry (ICORTAC 2018), University of Madras, 15-17 March 2018	Conference organiser
6.	A. Gowri	AM13D005	Best Oral Presentation Award and a cash prize for Distinct Technical Paper Presentation Award: Attomolar analyte detection using fiber optic absorbance biosensor (FAB) technology, ICORTAC 2018	Conference organiser

4.2.3. Faculty and Their Activities

Faculty

Name and Qualifications	Major areas of specialisation
Professors	
S. Vengadesan, PhD [Head]	CFD and turbulence modelling-basics, advanced topics and applications to engineering problems, FSI, biofluid flows
M. Ramasubba Reddy, PhD	Bio-signal processing, bio-instrumentation
K. Ramesh, PhD	Digital photomechanics, fracture mechanics, computer applications in experimental mechanics
C. Lakshmana Rao, PhD	Impact mechanics, fracture mechanics, modelling of smart materials, numerical approach
M. S. Sivakumar, PhD	Smart materials and structures, inelasticity/plasticity, fatigue of materials
S. Ramakrishnan, PhD	Biomedical instrumentation, signal analysis, brain image analysis
M. Manivannan, PhD	Haptics, medical simulation, biomechanics, virtual reality, computational geometry and physiology
Dr. Mahesh V Panchagnula, PhD	Spray combustion and atomisation, surface tension phenomena, multiphase flows, active particles and systems
B. S. V. Prasad Patnaik, PhD	Computational fluid dynamics, CFD tools for FSI, micro, bio-fluid flow systems
A. Arockia Rajan, PhD	Smart materials, composites, material modelling, computational mechanics and experimental mechanics
Associate Professors	
Anuradha Banerjee, PhD	Fracture and fatigue analysis in metals, composites, bio-materials, brittle materials
K. Arul Prakash, PhD	CFD and heat transfer, LES and related techniques, thermal hydraulics, cooling technologies, bio-fluid dynamics
A. Baburaj Puthanveetil, PhD	Coherent structures in turbulent convection, interfacial phenomena and transport across membranes
N. Sujatha, PhD	Biomedical imaging, speckle metrology, non-invasive tissue characterisation
Sayan Gupta, PhD	Vibrations, nonlinear dynamics, probabilistic mechanics, structural reliability
Arun Kumar Thittai, PhD	Ultrasound imaging, HIFU application in therapy, acoustic radiation force application in mechanics, photoacoustics
Sarith P. Sathian, PhD	Rarefied gas flows and nanofluidics
Vagesh D. Narasimhamurthy, PhD	CFD, DNS, turbulence, transition, bluff body flows, premixed combustion, multiphase flows
Abhijit Chaudhuri, PhD	Modelling hydrothermal systems, water waves, mass transfer in heterogeneous systems
Pijush Ghosh, PhD	Nanomechanics, biomaterials, mechanics of thin films, molecular dynamics simulation
V. V. Raghavendra Sai, PhD	Biosensor for healthcare, fibre optic sensor and instrumentation, nanotechnology
Shaikh Faruque Ali, PhD	Vibration and its controls, smart structures and energy harvesting
Assistant Professors	
Rinku Mukherjee, PhD	Applied aerodynamics-flow modelling, unsteady wake phenomenon, dynamic stall and formation flight, CFD
S. Satyanarayanan, PhD	Aerosol mechanics, air quality-sensors, control equipment, renewable thermal energy-WHR/solar
S. K. M. Varadhan, PhD	Neural control of human movement, neuro mechanics and biomechanics
Saumendra Kumar Bajpai, PhD	Cell mechanics, tissue mechanics, biophysics of tumours, vascular mechanics
Anubhab Roy, PhD	Hydrodynamic stability, microhydrodynamics, geophysical flows, living fluids
Ganesh Tamadapu, PhD	Mechanics of elastomers, encapsulated microbubbles, tensegrity structures
Ilaksh Adlakha, Ph.D.	Hydrogen embrittlement, grain boundary engineering, plasticity, stress assisted corrosion, radiation damage, nanocrystalline material, lightweight alloys, data science for mechanics of materials

Short-term courses/workshop/seminar/symposia/conference Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
1.	Dr. Raghavendra Sai V. V.	One-day workshop on Biosensors; 45 participants, mostly researchers from several institutions such as VIT University, SRM University, Bharathiar University and IIT Madras; about six speakers from academia and industry with expertise in the area of biosensors discussed basics and recent advances in the field	25 November 2017

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty Member	Title	Institution	Period
Conferences				
1.	Prof. M. Manivannan	Chief Guest of a National Conference: SILICON 17 (Smart Information Light Fidelity Internet of Things Conference)	Dr. MGR Educational and Research Institute University, Chennai	19-20 April 2017
2.	Prof. M. Manivannan	Chief Guest, National Conference on Information and Communication Engineering	Sri Sai Ram Institute of Technology, Chennai	21 April 2017
3.	Prof. K. Ramesh	Recent Advances in Digital Photoelasticity	INCAM 2017, MNIT Allahabad	5-7 July 2017
4.	Dr. S. K. M. Varadhan	Kinematics of Distal Anatomical Locations is critical for Hand Posture Reconstruction	INCAM 2017, MNIT Allahabad	5-7 July 2017
5.	Dr. A. P. Baburaj	On Separating Plumes from Boundary Layers in Turbulent Convection, Summer school and discussion meeting on Buoyancy-driven flows	ICTS, TIFR, Bengaluru	16-20 June 2017
6.	Dr. Raghavendra Sai V. V.	Fiberoptic Absorbance Biosensor (FAB) Technology for Clinical Diagnosis and Environmental Monitoring	IIT Bombay	29 June 2017
7.	Prof. C. Lakshmana Rao	Role of microstructure in the Electromechanical Response of Conducting Polyaniline Composites under Dynamic Deformation	INCAM 2017, MNIT Allahabad	5-7 July 2017
8.	N. Sujatha	Paper presentation: Non-invasive quantitative tissue biopsy using precise optical phantoms	International Conference on Transnational Medicine and Imaging, VIT, Vellore, India	28-30 August 2017
9.	Dr. S. Ramakrishnan	Attended India's largest medical equipment exhibition, Medica	Goregaon East, Mumbai	7 October 2017
10.	Dr. Sayan Gupta	Structural Reliability	National Seminar at Maharaja Vijayaram Ganapathi Raj College of Engineering, Vizianagaram	
11.	Dr. Anubhab Roy	CompFlu	IIT Madras	18 December 2017-20 December 2017
12.	Dr. Arun K. Thittai	External Expert	Third Expert Design review meeting, Indigenous Color Doppler Ultrasound Scanner with PNDT Compliance, R&D Project, NIELIT Calicut	8 February 2018
13.	Dr. Arockiarajan	Studies on Mechanical and creep behavior of piezoelectric ceramics	ICONS 2018	22-24 February 2018
14.	Dr. S. K. M. Varadhan	Neuromechanics, Motor control motor learning	National Symposium on Advances in Scientific and Industrial Instrumentation 2018 (ASCI 2018)	14-16 February 2018
15.	Dr. N. Sujatha	Role of bio photonics in theranostics: Towards the development of point of care devices	National conference on recent advancements in Biomedical Engineering, Bharat University, Chennai	22 March 2018
16.	N. Sujatha	Optical histology for in-situ tissue analysis	National conference on advances in Biomedical Engineering, PSG College of Technology, Coimbatore	24 March 2018
17.	Dr. V V Raghavendra Sai	Fiberoptic absorbance biosensor as a biomolecular interaction tool	4th BBSE Annual Research Symposium, IISc. Bengaluru,	24-25 January 2018

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Name of faculty	Topic of Lecture	Institution	Date
1.	Prof. K. Ramesh	Recent Advances in Digital Photoelasticity	INCAM 2017, MNIT Allahabad	5-7 July 2017
2.	Dr. Raghavendra Sai V V	Fiberoptic Absorbance Biosensor (FAB) Technology for clinical diagnosis and environmental monitoring	National Frontiers in Engineering (NatFoE'17), IIT Bombay	1 July 2017
3.	Dr. M. Ramasubba Reddy	Delivered guest lecture on Biomedical signal processing (Recent trends and challenges on BCI)	Hindustan University, Chennai	8 September 2017
4.	Dr. M. Ramasubba Reddy	Invited talk: Role of engineers in developing India	Engineers India (Ltd), Tirupati	15 September 2017
5.	Dr. M. Ramasubba Reddy	Invited lecture: Stiffness Imaging, ICMR-sponsored Medical Image Processing and Healthcare workshop	KCG College of Engineering, Chennai	16 September 2017
6.	Dr. Pijush Ghosh	Nanoindentation: Characterisation of polymer, polymer interface and determination of polymer degradation	Nanoyantrika, Trivandrum	17-19 September 2017
7.	Dr. N. Sujatha	Invited lecture: Optical biopsy: a new frontier in diagnostic medicine, National Seminar on Biophotonics	Rajakakshmi Engineering College, Chennai	
8.	Dr. Varadhan SKM	Invited Keynote Lecture: Use of human motion detection in entertainment and gaming - challenges and algorithms	Bengaluru	7 October 2017
9.	Dr. Sayan Gupta	The effect of noise on vibro-impact systems	IIT Guwahati	29 November 2017
10.	Dr. Sayan Gupta	The effect of noise on vibro-impact systems	IIT Guwahati	1 December 2017
11.	Dr. Sayan Gupta	Uncertainty quantification and structural reliability	Vizianagaram	
12.	Dr. S. K. M. Varadhan	Instrumentation for movement detection and tracking - applications in health, entertainment and rehabilitation	Cochin	15 February 2018
13.	Dr. S. K. M. Varadhan	Role of hand dominance and movement observation in intermanual transfer of motor learning	New Delhi	5 February 2018
14.	Dr. V V Raghavendra Sai	Raman Spectroscopy: Fundamentals to Biosensors Applications	Vellore	21 March 2018
15.	Dr. V V Raghavendra Sai	Fiberoptic absorbance biosensor as a biomolecular interaction tool. As part of DBT sponsored "Recent Trends in Thin Film Development and their Applications in Biomedical and Biosensor Devices"	Chennai	12-28 March 2018
16.	Dr. V V Raghavendra Sai	Design and Development of Optical Biosensors for Clinical Diagnosis and Environmental Monitoring	Chennai	12 February 2018
17.	Dr. M. Manivannan	VR and Haptics in Nursing Education and Training	New Delhi	17 March 2018

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
1.	Dr. Vagesh D. Narasimhamurthy	Norway	8-24 May 2017, NTNU	Oversee PhD defense of his student	IIT Madras
2.	Mr. Vivek Puliyeri (Dr. K. Arul Prakash)	Italy	26-27 May 2017	Visiting research scholar at Dipartimento di Ingegneria at the Università degli Studi di Napoli "Parthenope", Italy through MoU between IIT Madras and University of Napoli "Parthenope".	IIT Madras

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
3.	Dr. Arun K. Thittai		18-21 April 2017	IEEE-International Symposium on Biomedical Imaging	IIT Madras
4.	Dr. K. Arul Prakash	Italy	28 May-1 June 2017	To present paper on "Numerical studies on fluid flow and heat transfer characteristics for flow past two tandem elliptic cylinders" Paper No: 255	IIT Madras
5.	Prof. S. Ramakrishnan	Korea	9-15 July 2017	Attended the 39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'17) and presented a paper titled "Analysis of one repetition during biceps curl exercise among age-matched adult volunteers using endurance, curl speed and surface electromyography signals"	IIT Madras
6.	Dr. Anuradha Banerjee	Greece	19-24 June 2017	Attended and presented a paper titled "Role of porosity network in splitting fracture of bovine cortical bone" in 14th International Conference on Fracture	IIT Madras
7.	Dr. Mahesh Panchagnula	USA.	11-16 August 2017	IIT Association of greater new England alumni leadership conference	IIT Madras
8.	Dr. Sayan Gupta	Bulgaria	4-7 September 2017	Investigation of targeted energy transfer in stochastically excited system with nonlinear energy sink	IIT Madras
9.	Dr. Sayan Gupta	Italy	11-13 September 2017	Fluid structure interaction dynamics of a flexible foil in low Reynolds number flows	IIT Madras
10.	Dr. M. Manivannan	Abu Dhabi Campus.	21 October 2017	Task Force Meeting on IEEE Haptic Codec Task Group	IIT Madras
11.	Dr. M. Manivannan	Abu Dhabi	24 October 2017	Visited Cleaveland Clinic, Abu Dhabi Campus for Collaboration	IIT Madras
12.	Dr. V. V. Raghavendra Sai	Germany	14-17 November 2017	Multi- WAP Project meeting	IIT Madras
13.	Dr. Lakshmana Rao	Dubai	9 November-11 November 2017	Characterisation of mechanics associated with Shirodhara	IIT Madras
14.	Mahesh V. Panchagnula	USA	19-21 November 2017	Dynamics of flapping liquid sheets Schmidt number effects in phase separation	IIT Madras
15.	Dr. Sayan Gupta	Guwahati	28 November-3 December 2017	The effect of noise on vibro-impact systems	IIT Madras
16.	Dr.Sarith P Sathian	France	28 February-3 March 2018	Thermal gradient induced transport of nanoscale water droplets	IIT Madras

Fellowships of Academies and Professional Societies

Sl. No.	Faculty Member	Year of admission
1.	Prof. M. Manivannan is elected as Fellow of International Medical Sciences Academy (IMSA)	

4.2.4. Design and Development Activities

Patents Filed

Sl. No.	Name of Faculty	Topic of patent
1.	Ramesh K	PSCOPE - A virtual polariscope
2.	Arun K. Thittai	Method and apparatus for wirelessly powering active implants using ultrasound technology non-invasively
3.	Manivannan Muniyandi	Poroelastic sheet deformation based tactile pressure sensor
4.	Arun K Thittai	Pulse echo ultrasound imaging method and device based on the use of elliptical backprojection beamforming and diverging beam transmit
5.	Sivakumar M. S.	Suicide prevention, overload protection and fail-safe mechanism for a ceiling fan.
6.	Ramesh K.	DigiTFP-18
7.	Sujatha N.	Low cost, tissue specific, multilayer skin tissue models for calibration and performance evaluation of diffuse reflectance spectroscopy systems
8.	Manivannan Muniyandi	NIBP Module
9.	Sujatha N.	Low cost laser speckle fiberscope for immediate detection of extent of cancerous tissues during perioperative procedures and assessment of blood flow
10.	Arun K. Thittai	Method and Device for ultrasound Imaging using Compressed Sensing Approach
11.	Ramesh K.	PSCOPE - A virtual polariscope
International Patents		
1.	Arockiarajan A.	A mechanism to repair of pipes by composite wrap
2.	Arun K. Thittai	Method and Apparatus for ultrasound beamforming using limited number of active transducer elements and diverging beams

4.2.5. Research and Consultancy

Sponsored Research Projects (Ongoing and New)

Sl. No.	Title	Period		Funding Agency	Amount (Rs. in lakh)	Coordinators
		Start Date	Close Date			
1.	Technology demonstration of nano filter media for self-cleaning air filtration system (SCAFS) and performance prediction using computational fluid dynamics (CFD) modelling and simulation	31 March 2017	30 March 2020	Defence Research and Development Organisation (DRDO)	99.89	Arul Prakash K.
2.	Studies on optimised design configuration for enhanced magneto-electric effect of multiferroic composites	21 March 2017	20 March 2020	Department of Science and Technology (DST)	70.09	Arockiarajan A.
3.	Point-of-care fiber optic multiplexed biosensor targeting the biomarkers LAM and Antigen 85 for highly sensitive screening and detection of tuberculosis	11 August 2017	10 August 2019	DST	19.2	Raghavendra Sai V. V.
4.	Study of thermophysical properties of nanofluids and their flows for the design of new-generation coolants for industrial applications - RFBR	25 August 2017	24 August 2019	DST	20.86	Sarith P. Sathian
5.	Understanding thermophoretic motion of nanoscale liquid droplets of water and ionic liquids in confined and unconfined conditions	22 August 2017	21 August 2020	DST	39.72	Sarith P. Sathian
6.	Magnetic field assisted magneto-mechanical stimulation of silk-derived scaffolds to promote osteogenesis of human mesenchymal stem cells	10 October 2017	9 October 2019	DST	19.2	Saumendra K. Bajpai

Sl. No.	Title	Period		Funding Agency	Amount (Rs. in lakh)	Coordinators
		Start Date	Close Date			
7.	Thermo-molecular orientation in confined fluids and thermoelectric properties of ionic liquids	27 April 2017	31 August 2018	Indian National Science Academy	10.23	Sarith P. Sathian
8.	Micro-injector development for spray applications	27 October 2016	26 October 2019	Uchhatar Avishkar Yojana - IIT Madras	96	Mahesh V. Panchagnula
9.	An experimental and theoretical studies on creep behavior of piezoelectric materials and actuators	21 October 2016	20 October 2018	Naval Research Board	26.06	Arockiarajan A.
10.	Affordable abdomen sonography teaching and training simulator	18 July 2016	17 July 2019	Department of Biotechnology	45.09	Manivannan Muniyandi
11.	Analytical and experimental studies on PDE control of structures	19 October 2016	18 October 2019	Aeronautics Research and Development Board	34.14	Shaikh Faruque Ali
12.	Studies on electrokinetic energy conversion in nanofluidic channels	1 June 2016	31 May 2019	Council of Scientific and Industrial Research	14.46	Sarith P. Sathian
13.	Analysis and development of numerical algorithms and computational code for blast detonics	1 July 2015	30 June 2018	Armament Research Board	33.01	Patnaik B. S. V.
14.	Fatigue life characterisation of piezoelectric stack actuators and macro-fiber composites	1 October 2015	30 September 2018	Council of Scientific and Industrial Research	13	Arockiarajan A.
15.	Studies of motor learning and co-articulation in novel typing tasks	18 August 2015	17 August 2018	DST	70	Varadhan S. K. M.
16.	Polymer coating on setting cement surface: Fundamental hydration mechanism and interface design	12 November 2015	11 November 2018	DST	59.03	Pijush Ghosh
17.	Mixed mode translaminar fracture of fibre reinforced composites-experiments and simulations	23 February 2015	30 June 2018	Indian Space Research Organisation	17.64	Anuradha Banerjee
18.	Cellular mechanosensing in engineered collagen interfaces	16 November 2015	15 November 2018	DST	25	Saumendra K. Bajpai
19.	Studies on multi-frequency energy harvesting	31 March 2016	30 March 2019	DST	30.9	Shaikh Faruque Ali
20.	Computing for water: Molecular dynamics simulations of nanoscale hydrodynamics for the development of efficient water desalination technology	19 April 2016	18 April 2019	DST	36.78	Sarith P. Sathian
21.	Multiplexed label-free fiber optic biosensor array system for waterborne pathogen detection (Multi-WAP)	19 October 2016	18 October 2019	Indo-German Science and Technology Centre	116	Raghavendra Sai V. V.
22.	Infrastructure for investigation of multiple-scales in continuum systems - FIST	21 September 2016	20 September 2021	DST	380	Head of the Department
23.	Development of intelligent diagnostic system for multiple abnormalities using radiographic mediastinum images	5 January 2017	4 January 2020	DST	59.25	Ramakrishnan S.

Sl. No.	Title	Period		Funding Agency	Amount (Rs. in lakh)	Coordinators
		Start Date	Close Date			
24.	Next-generation heat exchangers design using additive manufacturing and shape optimisation	31 March 2017	30 March 2020	Impacting Research Innovation and Technology - IMPRINT	342	Arul Prakash K.
25.	Development of cardiovascular disease and diabetes risk assessment model for diverse ethnic Indian population	13 January 2017	12 January 2020	Department of Biotechnology	30.15	Ramakrishnan S.
26.	Mechanics of coated microbubbles for targeted drug delivery	12 May 2016	11 May 2021	DST	35	Ganesh Tamadapu
27.	Airblast injector development for next gen engine	30 May 2017	29 May 2021	DRDO	243.17	Mahesh V. Panchagnula
28.	Modeling and analysis of mistuned rotor blade systems	30 May 2017	29 May 2020	DRDO	86.3	Shaikh Faruque Ali
29.	Design of expander having volumetric control to have high turndown and high part load efficiency to handle variable thermal input from solar collector for power generation ranging from 5kwe to 100kwe	16 May 2017	15 May 2020	DST	49.3	Satyanarayanan Seshadri

Industrial Consultancy Projects (Ongoing and New)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	Pijush Ghosh	DIP coater (multi-vessel): 1. UTM (low load); 2. Contact angle testing	Common Code	5
2.	Pijush Ghosh	DIP coater (multi-vessel): 1. UTM testing; 2. Contact angle testing	Common Code	5
3.	Manivannan Muniyandi	Instruments for touch technologies and patient monitoring system	Common Code	0
4.	Sivakumar M. S.	Friction testing on anti-skid pattern	Common Code	0

RBIC Projects (Ongoing and New)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	Lakshmana Rao C.	Experimental and numerical investigation of fracture behaviour of dissimilar metal weld joint	Indira Gandhi Centre for Atomic Research	29.8
2.	Mahesh V. Panchagnula	Microspray performance demonstration for spray cooling applications	EATON	19.15
3.	Manivannan Muniyandi	Human patient simulator	Merkel Haptic Systems Private Limited	10
4.	Arockiarajan A.	Investigation on ferroelectric ceramics subjected to mechanical loading condition	Armament R&D Establishment	9.5
5.	Satyanarayanan Seshadri	Conversion of 1.5 m ³ /s 3-field single stage to two field two-stage ESP pilot	Bharat Heavy Electricals Limited	13.96
6.	Sivakumar M. S.	Virtual testing of high temperature materials	Siemens Technology and Services Private Limited	14.91

Retainer Consultancy (ongoing and new)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	Satyanarayanan Seshadri	Design and development of a portable dust suppression system	SAFA Engineers	9.15
2.	Arockiarajan A.	Numerical studies on automotive steering system	RANE NSK Steering Systems Private Limited	1.77

Distinguished Visitors to the Department

Sl.No.	Name and Designation	Date of Visit	Purpose of Visit
1.	Prof. Sriram Balasubramanian, Prof. Susan, Drexel University, Philadelphia, USA	15 June 2017	Visited NIID Lab and had research discussion
2.	Mr. Mayank Patel, Mr. Arun Balaji, Drexel University, Philadelphia, USA	15 June-31 July 2017	Attended the internship
3.	Prof. C. S. Manohar, IISc, Bangalore	6-7 July 2017	PhD thesis examiner; had a three-hour interaction with students, where students made presentations; Prof. Manohar also made a presentation of his ongoing research activities
4.	Prof. Subhasis Choudhury, IIT Bombay	27 November 2017	Visit the Touch Lab
5.	Venkat Venkataramanan, Director Scientific Operations, Impact Centre, University of Toronto, Canada	2-3 January 2018	Research discussion; visited IIT Madras (NIID Lab) and had research discussion
6.	Malavika Subramanyam, IIT Gandhinagar	24-26 January 2018	Research discussion on Development of cardiovascular disease and diabetes risk assessment model for diverse ethnic Indian population
7.	Dr. Ing Stephan Kelm, Head, Thermo-Fluid Dynamics and System Analysis Group, National Research Center, Julich and Laboratory of Reactor Safety and Technology, RWTH Aachen University, Germany. (Through IIT Madras – RWTH Aachen Strategic Partnership, Host: K. Arul Prakash)	31 May 2017	Deliver lecture at Newton Hall on System scale modelling of buoyant flows and application to nuclear reactor safety
8.	Dr. Arvind Santhanakrishnan, Assistant Professor, Department of Mechanical and Aerospace Engineering, Oklahoma State University, USA	22 June 2017	Deliver lecture at Newton Hall on Flight in sticky situation
9.	Prof. Sondipon Adhikari, FRAeS, Chair Professor, Swansea University, Swansea UK	30 October-3 November 2017	GIAN course: Analysis and Design of Piezoelectric Energy Harvesters
10.	Mr. George Joseph, PhD student from University of Dublin, Dublin	30 October-3 November 2017	GIAN course: Analysis and Design of Piezoelectric Energy Harvesters
11.	Prof. Steve Lavelle, UIUC	31 October 2017	Invited Talk: Advances in virtual reality
12.	Prof. Subhasis Chaudhury	27 November 2017	Invited talk: Touching in VR: teleoperation and telepresence
13.	Professor de Langre, Editor-in-Chief, Journal of Fluids and Structure	11-12 December 2017	Interact with at faculty from AM, AE and OE and to deliver a talk on Fluid-structure interactions in energy harvesting and plant biomechanics
14.	Dr. Jitendra Prasad, IIT Ropar	5 March 2018	An improved telescopic implant for patients with osteogenesis imperfecta (OI)
15.	Dr. Nitin Ram Mohan, University of Pennsylvania	5 March 2018	Illuminating intracellular dynamics with super resolution microscopy
16.	Prof. Dr. B. Jayanand Sudhir, SCTIMST, Trivandrum	21 March 2018	Fluid Mechanics aspects of aneurysmal pathogenesis

Sl.No.	Name and Designation	Date of Visit	Purpose of Visit
17.	Dr. K. Selvaraj, Brillersys, Coimbatore	19 March 2018	Research discussion on Machine learning for medical image processing
18.	Dr. Paul Brandt-Rauf, Dean and Distinguished University Professor, School of Biomedical Engineering, Science and Health Systems at Drexel University, Philadelphia, USA	20 March 2018	Research discussions
19.	Prof. Sriram Balasubramanian, Drexel University, Philadelphia, USA	23 March 2018	Visited Visited NIID Lab and had research discussions
20.	Prof. Mandayam Srinivasan, Massachusetts Institute of Technology, Cambridge MA	15 February-14 March 2018	Research discussions

4.2.6. Other Activities of the Department/Centre

Faculty Visit

Sl.No.	Faculty Member	Purpose of Visit	Venue and Date
1.	Prof. M. Manivannan	External Examiner, PhD thesis	IIT Bombay, Mumbai, 25 April 2017
2.	Prof. M. Manivannan	Staff Selection Committee Member	Sree Chitra Thirunal Institute of Medical Sciences and Technology, Thiruvananthapuram, 28 May 2017
3.	Prof. K. Arul Prakash	Research discussion and collaboration on wetting dynamics and multiphase flow for ongoing sponsored projects	Department of Chemical Engineering, BITS-Pilani, K. K. Birla Goa Campus, 15-17 May 2017
4.	Prof. M. Manivannan	Faculty Selection Committee	SRM University, Chennai, 27 June 2017
5.	Prof. M. Manivannan	Project Review Meeting	BIRAC/DBT, New Delhi, 28 June 2017
6.	Prof. M. Manivannan	Demonstrations at AIIMS	AIIMS, New Delhi, 28 June 2017
7.	Prof. M. Manivannan	Faculty Selection Committee	IIT Goa/IIT Dharwad, Mumbai, 6 July 2017
8.	Dr. Sayan Gupta	Ph.D. Thesis examiner	Department of Civil Engineering, IIT Bombay
9.	Dr. M. Ramasubba Reddy	Attended projects scrutiny meeting	DEBEL, Bengaluru, 21 September 2017
10.	Dr. M. Manivannan	M.S. Thesis Examination	CMC Vellore, 8 August 2017
11.	Dr. M. Manivannan	M.S. Thesis Examination	IISc Bangalore, 31 August 2017
12.	Dr. M. Manivannan	Ph.D. Thesis Examination	Anna University, Chennai, 21 September 2017
13.	Dr. M. Manivannan	Visit to IIT Mandi	IIT Mandi, 25-30 September 2017
14.	Dr. M. Manivannan	Invited Talk on Modern Health Parameters from Ayurveda and Siddha	IIT Mandi, 26 September 2017
15.	Dr. N. Sujatha	PhD viva examination panel	Department of Physiology, SRMC, Chennai, 11 September 2017
16.	Dr. M. Manivannan	Faculty Recruitment	IIT Hyderabad, 2 February 2018

Activities Initiated

KriyaNeuro Technologies Private Limited, a company into manufacturing of medical devices for tailored therapy for neuromotor disorders, has been incorporated. The incubation agreement has to be signed with IIT Madras Incubation cell. A seed funding of Rs.35 lakh has been sanctioned by BIRAC.

4.3. Department of Biotechnology

4.3.1. Introduction

The Department of Biotechnology at Indian Institute of Technology, Madras was founded in 2004 with a vision to be recognised as a department of international repute with a strong interdisciplinary research and teaching base in biological sciences and engineering involving an active collaboration with industries and healthcare institutions. The department is housed in the Bhupat and Jyoti Mehta School of Biosciences. The first batch of B.Tech and Dual Degree courses in Biotechnology graduated in July 2006 and 2007, respectively. The department's thrust areas of research are bioprocess engineering, computational biology, chemical biology and medical biotechnology related to cancer and cardiovascular aspects. The faculty members of the department hold several patents and are involved in active industrial consultancy. Several collaborative and technology transfer projects are currently running with many industries. The department also has collaborative research projects with hospitals. It has set up a Centre of Excellence in Bioprocess Engineering to develop knowledge and expertise in the domain, a Department of Science & Technology (DST), Ministry of Science and Technology funded National Facility to identify potential Drug targets through cellular dynamics, and a Fund for Improvement of S&T Infrastructure in Higher Educational Institutions (FIST) facility for infrastructure facilities. The Department of Biotechnology (DBT), Ministry of Science and Technology had earlier funded a programme support on cancer biology, and is now supporting a National Cancer Tissue Biobank. A Bio-informatics Centre has also been set up with funding from DBT. The IIT Madras

Bioincubator, initiated by the department and funded by BIRAC, offers lab and office space, including equipment, technical support and centralised utilities for process and product development.

4.3.2. Academic Programmes

A Dual Degree (B. Tech. and M. Tech.) in Biological Engineering (five years), Dual Degree (B.S. and M.S.) in Biological Sciences (five years), M. S. (by research) and Ph. D. are the academic programmes currently offered by the department. In addition, we offer M.Tech. (Clinical Engineering) and Ph.D. (Biomedical Devices and Technology) programmes jointly with Sree Chitra Tirunal Institute of Medical Sciences and Technology, Trivandrum and Christian Medical College, Vellore.

New discipline/branch introduced

M.Tech. (Bioprocess Engineering) has been operational from July 2018.

New Lab Established

The Mehta Family Foundation in Houston had earlier sponsored the building of Bhupat and Jyoti Mehta School of Bio-Sciences at IIT Madras. The foundation has since sponsored a second building, which was inaugurated on October 9, 2017. Dr. Soumya Swaminathan, Director General, Indian Council of Medical Research and several other dignitaries participated in the inaugural function and shared their valuable remarks.

Students on roll as of September 2017 + M.S. and Ph.D Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and Others	Total
B.Tech.					17	17
Dual Degree	63	53	49	42	62	269
M.Tech.	8	2				10
M.S.	5	4	3	2		14
Ph.D.	34	32	41	16	68	191
Total	110	91	93	60	147	501

Students/Scholars who Attended conferences/seminars/symposia abroad/India

Sl. No	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/Workshops	Date and Venue	Financial Assistance from
Abroad					
1.	M.Narayani	BT12D053	2 nd International Symposium on Phytochemicals in Medicine and Food (2-ISPMF)	7-10 April 2017, China	M.Narayani
2.	S.Ulaganathan	BT 11D022	ASBMB Annual Meeting 2017	26 April 2017, Chicago, USA	S.Ulaganathan

Sl. No	Student/Scholar	Roll No.	Conferences/Seminars/ Symposia/Workshops	Date and Venue	Financial Assistance from
3.	KarthikSoman	BT14D005	HBP Hippocamp 2017: Collaborative and Integrative Modeling of Hippo Campus	24-25 May 2017, France	KarthikSoman
4.	Dr. Sandhya Sundaram	BT14D035	International conference on Mechanics in Medicine and Biology (ICMMB 2017)	23-25 May 2017, Australia	Dr. Sandhya Sundaram
5.	Soumalya Mukherjee	BT15D303	9 th International Conference on Materials for Advanced Technologies 2017	18-19June 2017, Suntec, Singapore	Soumalya Mukherjee
6.	Kabilan C.	BT 13D026	7 th International Conference on Algal Biomass, Biofuels	18-21 June 2017, Miami, FL, USA	Kabilan C
7.	Soumalya Mukherjee	BT15D303	International Conference on Materials for Advanced Technologies	18-23June 2017, Singapore	Soumalya Mukherjee
8.	Ramswaroop Saini	BT 12D017	28 th International Conference on Arabidopsis Research (ICAR 2017)	19-23 June 2017, USA	Ramswaroop Saini
9.	Kabilan C.	BT13D026	7 th International Conference on Algal Biomass, Biofuels and Bioproducts	18-21June 2017, Miami, USA	Kabilan C.
10.	Muthusamy S	BT12D011	18 th Tetrahedron Symposium, New Developments in Organic Chemistry	27-30June 2017, Budapest, Hungary	Muthusamy S.
11.	Raj PranapArun	BT13D014	EMBO EMBL Symposium: Mechanical Forces in Biology	12-15 July 2017, EMBL Advanced Training Center, Heidelberg, Germany	IIT Madras
12.	Ankur Chauhan	BT14S200	26 th Annual Computational Neuroscience Meeting (CNS 2017)	15-20 July 2017, Antwerp, Belgium	Ankur Chauhan
13.	Vignayanandam Muddapu	BT 14D039	CNS 2017	15-20 July 2017, Belgium	Vignayanandam Muddapu
14.	Shivudu G.	BT12D045	3 rd NDSU Annual Conference on Food for Health	16-19 July 2017, North Dakota, USA	Shivudu G
15.	AarthiRavikrishnan	BT 13D031	ISMB/ECCB 2017 – European Conference on Computational Biology	21-25 July 2017, Prague	AarthiRavikrishnan
16.	Vignesh	BT13D061	Annual Symposium of Protein Society	23-27 July 2017, Montreal, Canada	Vignesh
17.	Soundhara Rajan G.	BT14D402	31 st Annual Symposium of The Protein Society	24-27 July 2017, Montreal, Canada	Soundhara Rajan G
18.	Abhishek Narayan	BT12D050	31 st Annual Symposium of The Protein Society	24-27 July 2017, Montreal, Canada	Abhishek Narayan
19.	Sneha Munshi	BT14D012	31 st Annual Symposium of The Protein Society	24-27 July 2017, Montreal, Canada	Sneha Munshi
20.	Arijita Ghosh	BT12D052	Gordon Research Conference on Organellar Channels and Transporters	30 July-4 August 2017, Vermont, USA	Arijita Ghosh

Sl. No	Student/Scholar	Roll No.	Conferences/Seminars/ Symposia/Workshops	Date and Venue	Financial Assistance from
21.	Vishnupriya Kanakaveti	BT13D208	Cell Death Meeting	15-19 August 2017, Cold Spring Harbor Laboratory, UK	VishnupriyaKanakaveti
22.	Rubaiya Y.	BT13D048	5 th EPNOE International Polysaccharide Conference 2017	20-24 August 2017, Germany	Rubaiya Y
23.	Vikas A.	BT13D056	ISN-ESN 2017 Meeting	20-24 August 2017, Paris	IIT Madras
24.	Sudip Chakraborty	BT13S011	International Conference on Biomaterials	20-24 August2017, Japan	Sudip Chakraborty
25.	Sneha Milind Dixit	BT16S002	MARTINI Coarse-Graining Workshop	20-25 August 2017, Netherlands	Sneha Milind Dixit
26.	Nasna Nassir	BT13D207	International Dictyostelium Conference	20-24 August 2017, Switzerland	Nasna Nassir
27.	BinithaEbnezer	BT13D035	29 th Annual Fanconi Anemia Research Fund Scientific Symposium	14-17September, Atlanta GA USA	FARF
28.	Saravanan K.	BT 12D043	International Conference on Functional Nanomaterials and Nano Devices 2017	24-27 September 2017, Budapest, Hungary	Saravanan K.
29.	Bhim Sen Thapa	BT 13D034	International Society for Microbial Electrochemistry Technology	3-6 October 2017, Portugal	Bhim Sen Thapa
30.	Veenakumari Vuttaradhi	BT12D025	Defence is the Best Attack: Immuno-Oncology Breakthroughs	9-11October2017, Spain	VeenakumariVuttaradhi
31.	Uma Kizhuveetil	BT11D023	Annual Conference of the Society for Redox Biology and Medicine	29 November-2 December, 2017 Baltimore, USA	Uma Kizhuveetil
32.	Aditya Rosalya	BS15B003	Artificial Intelligence and Data Science in Health Care workshop	10-24 December 2017, Taipei, Taiwan	Aditya Rosalya
33.	Neeraj Kumar Milan	BE15B021	Artificial Intelligence and Data Science in Health Careworkshop	10-24 December 2017, Taipei, Taiwan	Neeraj Kumar Milan
34.	Abhishek Narayan	BT12D050	Protein Folding Dynamics Conference	7-12 January 2018, Galveston, Texas USA	Abhishek Narayan
35.	Md.Homaidur Rahman	BT13D013	62 nd Annual Meeting of the Biophysical Society	17-21 February 2018, San Francisco, California, USA	Md.Homaidur Rahman
36.	Atmika Paul	BT15S004	Gene Control in Development and Disease - Keystone Symposia	23-28 March 2018, Whistler, Canada	I&AR, IIT Madras
37.	S.Chellam Gayathri	BT11D002	British Crystallographic Association-Spring 2018 meeting	26-29 March2018, Warwick, UK	S. Chellam Gayathri
38.	Samar BallabhaMohapatra	BT12D021	British Crystallographic Association- Spring 2018 meeting	26-29 March 2018, Warwick,UK	Samar Ballabha Mohapatra
39.	VikasArige	BT13D056	ISN-ESN 2017 Meeting	20-24August, 2017, Paris	IIT Madras

Sl. No	Student/Scholar	Roll No.	Conferences/Seminars/ Symposia/Workshops	Date and Venue	Financial Assistance from
India					
1.	Anisha A.	BT13D001	Annual Symposium of the Indian Biophysical Society 2017	20-26 March 2017, Mohali	Anisha A.
2.	Vignesh R.	BT13D061	Annual Symposium of the Indian Biophysical Society 2017	20-26 March 2017, Mohali	Vignesh R.
3.	D. Infant Sagayaraj Ravhe	BT13D025	Annual Symposium of the Indian Biophysical Society 2017	20-26 March 2017, Mohali	D. Infant Sagayaraj Ravhe
4.	S. Chellam Gayathri	BT11D002	Annual Symposium of the Indian Biophysical Society 2017	20-26 March 2017, Mohali	S. Chellam Gayathri
5.	Anisha A	BT13D001	Annual Symposium of the Indian Biophysical Society 2017	20-26 March 2017, Mohali	Anisha A.
6.	Sansrity Sinha	BT15D010	Annual Symposium of the Indian Biophysical Society 2017	20-26 March 2017, Mohali	Sansrity Sinha
7.	Sakthi Sree Maghajothi	BT15D015	Genome Engineering in Model Organisms with CRiSPR/Cas9	22-24 June 2017	IISER, Pune
8.	Dr. Ananthi S.	PI, DBT Biocare Project	2 nd International Conference on Novel Approaches in Cancer Research and Therapy	27-28 June 2017, Chennai	Dr. Ananthi S.
9.	Deepak B.	Project Officer, NCTB	2 nd International Conference on Novel Approaches in Cancer Research and Therapy	27-28 June 2017, Chennai	Deepak B.
10.	Puneet Rawat	BT15D013	Breaking Barriers through Bioinformatics and Computational Biology	31 July- 9 August 2017, New Delhi	Puneet Rawat
11.	Ramswaroop Saini	BT12D017	3 rd International Conference on Plant Genetics and Genomics 2017	20-21 July 2017, Chandigarh	Ramswaroop Saini
12.	S. Chellam Gayathri	BT11D002	Phasing and Model-building satellite workshop conducted by CCP4 and Phenix (IUCR Congress 2017)	20-21 August 2017, IICT Hyderabad	S. Chellam Gayathri
13.	Lakshmi Subramanian	BT10D008	2 nd MMM Genetics Symposium on Genetics and Genomics of Cardiovascular Diseases	8-9 September 2017, Chennai	Lakshmi Subramanian
14.	Sakthi Sree M.	BT15D015	2 nd MMM Genetics Symposium on Genetics and Genomics of Cardiovascular Diseases	8-9 September 2017, Chennai	Sakthi Sree M.
15.	Anila Gundavarapu	BT15D024	ICACCI	13-14 September 2017, Manipal	Anila Gundavarapu

Sl. No	Student/Scholar	Roll No.	Conferences/Seminars/ Symposia/Workshops	Date and Venue	Financial Assistance from
16.	Piyush Kumar Gupta	BT12D040	International Conference on Advances in Polymer Science and Technology	23-25 September, IIT Delhi	IIT Madras
17.	Deepak B.	Project Officer, NCTB	Nextgen Genomics, Biology, Bioinformatics and Technology Conference	2-4 October 2017, Bhubaneswar	Deepak B.
18.	Santhosh Kumar P.	BT15D025	Hands-on Workshop on Confocal Microscopy	5-6 October 2017, Manipal	Santhosh Kumar P.
19.	ChitraSrikantan	BT13D003	International Conference on Emerging Trends in Biotechnology for Waste Conversion (ETBWC 2017)	8-10 October 2017, Nagpur	Chitra Srikantan
20.	Bhargavi Natarajan	BT12D208	MITO-Symposium 2017 (Hands-on workshop on Mitochondrial Biochemistry, Enzyme Histochemistry and Electron Microscopy)	10-16 October 2017, Bengaluru	Bhargavi Natarajan
21.	V. Yogeshwar Chakrapani	BT11D025	6 th Asian Biomaterials Congress	25-27 October 2017, Trivandrum	V. Yogeshwar Chakrapani
22.	Ram Prasad S.	BT14D019	6 th Asian Biomaterials Congress	25-27 October 2017, Trivandrum	Ram Prasad S.
23.	Aparajitha Srinivasan	BT12D002	ETBWC 2017	8-10 October 2017, Nagpur	Aparajitha Srinivasan
24.	Siva Shanmugam N. R.	BT16D040	4 th IITM-Tokyo Tech Joint Symposium on Bioinformatics 2017	10-11 November 2017	Siva Shanmugam N. R.
25.	K.Sivamuthuraman	BT14D011	XIII Junior National Organic Symposium Trust Conference for Research Scholars	9-12 November 2017, Varanasi	K. Sivamuthuraman
26.	KanduruLokesh	BT14D004	XIII Junior National Organic Symposium Trust Conference for Research Scholars	9-12 November 2017, Varanasi	Kanduru Lokesh
27.	Abrar Ali Khan	BT12D051	Wellcome Trust/DBT Young Scientist Research Symposium	9 November 2017, IIT Madras	Abrar Ali Khan
28.	KulandaiSamy A.	BT15D045	4 th IITM-Tokyo Tech Joint Symposium on Bioinformatics 2017	10-11 November 2017, IIT Madras	Kulandai Samy A
29.	Ambuj Srivastava	BT15D029	4 th IITM-Tokyo Tech Joint Symposium on Bioinformatics 2017	10-11 November 2017, IIT Madras	Ambuj Srivastava
30.	Puneeth Rawat	BT15D013	4 th IITM-Tokyo Tech Joint Symposium on Bioinformatics 2017	10-11 November 2017, IIT Madras	Puneeth Rawat
31.	D. Infant SagayarajRavhe	BT13D025	4 th IITM-Tokyo Tech Joint Symposium on Bioinformatics 2017	10-11 November 2017, IIT Madras	D.Infant Sagayaraj Ravhe
32.	Piyush Kumar Gupta	BT12D040	International Conference on Advances in Polymer Science and Technology (CAPS 2017)	23-25 November 2017, IIT Delhi	Piyush Kumar Gupta

Sl. No	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/Workshops	Date and Venue	Financial Assistance from
33.	Ram Prasad S.	BT14D019	International Conference on Advances in Polymer Science and Technology	23-25 November 2017, IIT Delhi	Ram Prasad S.
34.	Rajani Kant Rai	BT15D022	International Conference on Advances in Polymer Science and Technology	23-25 November 2017, IIT Delhi	Rajani Kant Rai
35.	Piyush Kumar Gupta	BT12D040	International Conference on Biological Application of Nano Particles	4-5 December 2017, IIT Madras	Piyush Kumar Gupta
36.	Gayathri S.	BT14D024	International Symposium on Systems, Synthetic and Chemical Biology	5-7 December 2017, Calcutta	Gayathri S.
37.	P.Mareeswari	BT15D305	Nanobioteck 2017	6-8 December 2017	P. Mareeswari
38.	Ambuj Srivastava	BT15D029	International Conference on Intrinsically Disordered Proteins: Forms, Functions and Diseases	7-13 December 2017, IISER Mohali	Ambuj Srivastava
39.	Vignesh R.	BT13D061	International Conference on Intrinsically Disordered Proteins 2017	8-13 December 2017, IISER Mohali	Vignesh R.
40.	Sneha Munshi	BT14D012	Intrinsically Disordered Proteins: Forms, Functions and Diseases 2017	8-13 December 2017, IISER Mohali	Sneha Munshi
41.	Soundhara Rajan G.	BT14D402	Intrinsically Disordered Proteins: Forms, Functions and Diseases 2017	8-13 December 2017, IISER Mohali	Soundhara Rajan G
42.	PandeeswariJeeva	BT 13D047	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	PandeeswariJeeva
43.	Vedant Vilas Deshpande	BT16S003	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	Vedant Vilas Deshpande
44.	J. Vishnu Prasad	BT14D040	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	J. Vishnu Prasad
45.	Tridweep Kumar Sahoo	BT14D037	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	Tridweep Kumar Sahoo
46.	Richa Srivastava	BT16S004	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	Richa Srivastava
47.	Anupama K.	BT16D013	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	Anupama K.
48.	Vaishnavi S.	BT16D030	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	Vaishnavi S.
49.	Kirubhakaran P.	BT13D063	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	Kirubhakaran P.
50.	AnilaGundavarapu	BT15D024	Brain Modes 2017, Annual Symposium by NBRC	13-14 December 2017, Haryana	AnilaGundavarapu
51.	K. Tamizharasan	BT15D051	Brain Modes 2017, Annual Symposium by NBRC	13-14 December 2017, Haryana	K.Tamizharasan
52.	K. Hemalatha	BT15D030	Compflu 2017	18-20 December 2017, IIT Madras	K.Hemalatha
53.	D. Muthu	BT15D042	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	D. Muthu
54.	Kabilan C.	BT13D026	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	Kabilan C.

Sl. No	Student/Scholar	Roll No.	Conferences/Seminars/ Symposia/Workshops	Date and Venue	Financial Assistance from
55.	SnehaSudhakara	BT11D026	Bioprocessing India 2017	9-11 December 2017, IIT Guwahati	SnehaSudhakara
56.	Sowmiya M.	BT16D303	Workshop on Fundamentals of Mass Spectrometry-based Metabolomics	15-17 January 2018, Mangalore	Sowmiya M.
57.	S.Chellam Gayathri	BT11D002	National Cryo EM Facility Inauguration Meeting	24-25 January 2018, NCBSBengaluru	S.Chellam Gayathri
58.	Samar Ballabha Mohapatra	BT12D021	National Cryo EM Facility Inauguration Meeting	24-25 January 2018, NCBS Bengaluru	Samar Ballabha Mohapatra
59.	Dr. N. Revathi	Scientist	National Cryo EM Facility Inauguration Meeting	24-25 January 2018, NCBS Bengaluru	Dr. N. Revathi
60.	Atmika Paul	BT15S004	International Congress of Cell Biology 2018– Dynamic Cell (Molecules and networks to form and function)	27-31 January 2018, Hyderabad	Atmika Paul
61.	Atmika Paul	BT15S004	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	MHRD, Gol
62.	Vinodh Kumar R.	BT17D306	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	MHRD, Gol
63.	Dr. Ananthi S.	PI, DBT Biocare Project	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	DBT, Gol
64.	Kamalnath S.	Project Associate, NCTB	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	Kamalnath S.
65.	Jayaprakash M.	Project Associate, NCTB	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	Jayaprakash M.
66.	Vignesh M.	Project Associate, NCTB	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	Vignesh M.
67.	Murugaiah M.	Project Associate, NCTB	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	Murugaiah M.
68.	Deepak B.	Project Officer, NCTB	1 st International IBSE Symposium 2018	21-24 January 2018, Chennai	Deepak B.
69.	Atmika Paul	BT15S004	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	MHRD, Gol
70.	Vinodh Kumar R.	BT17D306	International Congress of Cell Biology 2018	27-31 January 2018, Hyderabad	MHRD, Gol
71.	Atmika Paul	BT15S004	Cancercon 2018: Personalized Medicine through Molecular Tumor Board	1-3 February 2018, Chennai	Atmika Paul
72.	Vinodh Kumar R	BT17D306	Cancercon 2018	1-3 February 2018, Chennai	Vinodh Kumar R.
73.	Jyoti K.	BT16D043	Cancercon 2018	1-3 February 2018, Chennai	Jyoti K.

Sl. No	Student/Scholar	Roll No.	Conferences/Seminars/ Symposia/Workshops	Date and Venue	Financial Assistance from
74.	Dr. Ananthi S.	PI, DBT Biocare Project	Cancercon 2018	1-3 February 2018, Chennai	Dr. Ananthi S.
75.	Deepak B.	Project Officer, NCTB	Cancercon 2018	1-3 February 2018, Chennai	Deepak B.
76.	S. Lakshmi	BT10D008	International Conference on Recent Advances in Cardiovascular Sciences and 10 th Annual Conference of Academy of Cardiovascular Sciences (India section)	8-10 February 2018, Madurai	S. Lakshmi
77.	Abrar Ali Khan	BT12D051	10 th International Conference on Academy of Cardiovascular Sciences	8-10 February 2018, Madurai	Abrar Ali Khan
78.	ShivamChandel	BT12D044	ISHR 2018; Theme: Heart Failure: Past, Present and Future	16-18 February 2018, Chandigarh	ShivamChandel
79.	Vikas A.	BT13D056	International Society of Heart Research – Indian Section	16-18 February 2018, Chandigarh	Vikas A.
80.	R.Dhanya	BT17D001	International Society of Heart Research – Indian Section	16-18 February 2018, Chandigarh	R. Dhanya
81.	P.Mareeswari	BT14D305	Workshop on Basics of Cell Culture Techniques	21-23 February 2018, Chennai	P.Mareeswari
82.	Lavanya Vasudevan	BT13D043	Workshop on Basics of Cell Culture Techniques	21-23 February 2018, Chennai	Lavanya Vasudevan
83.	A.Gomathi	BT16D017	The 2 nd Indian C.elegans meeting	23-26 February 2018, New Delhi	A Gomathi
84.	Dr. N.Revathi	Scientist	EMBO Practical Course CEM3DIP of Macromolecular Assemblies and Cellular Tomography	18-29 March 2018, IIT Delhi	Dr. N. Revathi
85.	Puneet Garg	BT11D205	Workshop of Practical Protein Crystallography at Indus-2 Synchrotron	27-28 March 2018, RRCAT Indore	Puneet Garg

Students/Scholars who won Outside Prizes and Awards

Sl.No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1.	Kiranmayi Malapaka	BT11D014	Young Scientist Award	KV Rao Scientific Society for Outstanding Achievement in Biology
2.	Dr. Vinayak Gupta	Alumnus	Best Thesis Award for 2015-16; Dr. Dinakar Kompala, alumnus, handed over the certificate	1979 Batch Alumni Endowment Fund
3.	Arijita Ghosh	BT12D052	GRC Carl Storm International Diversity Award, presented at Vermont, USA	Gordon Research Conference on Organellar Channels and Transporters

Sl.No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
4.	S. Kavita, CEO of FIB-SOL, G. Venkatasubramanian and P. Ponram (alumni of BT department)	Alumnus	Chinnikrishnan Innovation Awards	CavinKare Private Limited
5.	IITM iBot Club Team: Yash Patil, Anoubhav Agarwal, Kavan Savla, Shashwat Sahoo, Harsh Parekh	CE16B137, BE16B002, BE16B010, BE16B011, ME16B173	National Runners up	CFI project, Rail Road Crack Detection Bot in the International James Dyson Award Competition and qualifying for the international round
6.	Lakshmi Subramanian (research scholar); Guide: Dr. Nitish Mahapatra	BT10D008	Best Oral Presentation Award	Presentation: A Functional MMP7 Promoter Polymorphism Increases Risk for Hypertension in Indian Populations; 2nd MMM Genetics Meeting
7.	Piyush Kumar Gupta, Supervisor: Dr. Rama S. Verma	BT12D040	Best Poster Award	International Conference on Advances in Polymer Science and Technology (APA-2017), organised by IIT-Delhi, Asian Polymer Association, CIPET, SBAOI, and Indo-Italian Forum on Biomaterials and Tissue Engineering
8.	D. Infant Sagayaraj Ravhe	BT13D025	Best Poster Award	4th IITM-Tokyo Tech Joint Symposium on Bioinformatics 2017
9.	Sasirekha Narayanasamy	BT10D005	Outstanding Poster Award	International Conference on Intrinsically Disordered Proteins at the Biophysical Journal
10.	Sneha Munshi	BT14D012	Best Poster Award	IDP 2017 – International Conference on Intrinsically Disordered Proteins: Forms, Functions and Diseases
11.	Sansrity Sinha	BT15D010	Best Poster Award	Poster: A conserved novel sequence within trans membrane domain mediates mitochondrial membrane anchoring as well as mitochondrial trafficking of Mfn1; Emerging Concepts in Mitochondrial Biology conference
12.	Lakshmi Subramanian	BT10D008	Dr. Devendra K. Agrawal Young Investigator Award for Excellence in Cardiovascular Sciences	Oral presentation: Human Chromogranin A gene promoter haplotypes in an Indian population: Implications for cardiometabolic disorders; International Conference on Recent Advances in Cardiovascular Sciences and 10th Annual Conference of Academy of Cardiovascular Sciences (India section)
13.	R.Dhanya	BT17D001	Best Poster Award	15th Annual Meeting of the International Society of Heart Research (Indian section)
14.	Abhishek Narayan	BT12D050	BIRAC GYTI Award	Gandhian Young Technology Innovation (GYTI) Awards 2018
15.	Piyush Kumar Gupta	BT12D040	First prize for poster presentation and oral presentation	International Conference on Biological Application of Nanoparticle
16.	Piyush Kumar Gupta	BT12D040	First prize for poster presentation	International Conference on Advances in Polymer Science and Technology
17.	S.Chellam Gayathri	BT11D002	American Crystallographic Association Journal on Structural Dynamics Pauling Poster Prize	British Crystallographic Association-Spring 2018 meeting, 26-29 March 2018, Warwick, UK
18.	Samar Ballabha Mohapatra	BT12D021	Young Crystallographer's Group Best Poster Award	British Crystallographic Association-Spring 2018 meeting, 26-29 March 2018, Warwick, UK

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl.No.	Student/Scholar	Roll No.	Prizes	Donor
1.	Kumar Swamy Reddy N.	BT12D009	Institute Research Award 2017	IIT Madras
2.	Venkata Reddy Chirasani	BT12D026	Institute Research Award 2017	IIT Madras
3.	Abhishek Narayan	BT12D050	Institute Research Award 2017	IIT Madras
4.	Rhythm Sodhi	BT12B026	Biocon Prize	IIT Madras
5.	NandakumarRajasekaran	BS12B052	Divashri Award	IIT Madras
6.	Praveen Krishna V.	BT14M003	Dr. S S Srikanta Prize	IIT Madras

4.3.3. Faculty and their Activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
D. Karunakaran (Head)	Cancer biology, signal transduction, apoptosis
Anju Chadha	Biocatalysis, green chemistry, biosensors
T.S. Chandra	Microbiology and genetics
A. Jayakrishnan	Biomaterials science and technology
Guhan Jayaraman	Metabolic engineering, synthetic biology, downstream processing
G.K. Suraishkumar	Understanding and manipulation of biological systems, reactive species and their applications—cancer therapy, nanotoxicology, bio-oil
S. Mahalingam	Molecular virology and cell biology
Rama Shanker Verma	Stem cell biology and tissue regeneration, cancer therapeutics
V. Srinivasa Chakravarthy	Computational neuroscience
SatyanarayanaGummadi	Bioprocess engineering
K. Subramaia	Developmental biology
Amal Kanti Bera	Ion channels and signaling
Sanjib Senapati	Computational biophysics
Nitish R. Mahapatra	Cardiovascular genetics, molecular medicine
A. Gopala Krishna	Signal transduction and protein biochemistry
Michael Gromiha	Bioinformatics,computational biology, biophysics
K. Chandraraj	Biomass conversion, bio-remediation, functional foods
Rayala Suresh Kumar	Cancer biology
Associate Professors	
N. Manoj	Structural biology
V. Kesavan	Chemical biology
R. Baskar	Developmental genetics
Madhulika Dixit	Vascular biology
Himanshu Sinha	Quantitative Genetics and Systems Biology
Assistant Professors	
R. Murugan	Theoretical biology and biophysics
Karthik Raman	Computational systems biology
Vignesh Muthuvijayan	Biomaterials and tissue engineering
Smita Srivastava	Plant biotechnology and bioprocess engineering
Athi Narayanan	Experimental/computational protein folding
Hamsa Priya Mohana Sundaram	Protein solution thermodynamics
Vani Janakiraman	Infection biology/infectious diseases
Emeritus Professors	
Mukesh Doble	Biomaterials, Drug design, biochemical engineering
Chandra T. S.	Microbiology and genetics
Adjunct Faculty	
Venil N. Sumantran	Cancer biology
Dhinakar Kompala	Biochemical engineering
V. Mohan	Diabetes
INSA Senior Scientists	
K.K. Balasubramanian	Organic chemistry

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conferences			
1.	Dr. Rama Shanker Verma	2 nd PAN IIT Biotech Meet	4-7 October 2017
2.	Madgenome and Dr. Rama Shanker Verma	International Conference on Biological Application of Nanoparticle	4-5 December 2017
Symposia			
1.	Dr. M. Michael Gromiha	4 th IIT Madras–Tokyo Tech Joint Symposium on Frontiers in Bioinformatics: Large-scale Data Analysis, Resources and Drug Design	10-11 November 2017
2.	Dr. Athi N. Naganathan	The Wellcome Trust/DBT India Alliance Young Scientist Research Symposium	9 November 2017
3.	Dr. Himanshu Sinha and Dr. Karthik Raman	From Genotype to Phenotype: Computational Approaches to Understand Biological Systems	22-24 January 2018
4.	Dr. G. K. Suraishkumar	Delivered a keynote lecture in the International Symposium on Water Technologies	March 2018
Short-term Course			
1.	Prof. Mukesh Doble (BT) and Prof. T. S. Sampath Kumar (MME)	Medical Biomaterials	23-24 June 2017

Short-term Courses/Workshops/Seminars/Symposia/Conferences/Trainings Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Name	Title	Institution	Period
Seminar				
1.	Dr. Himanshu Sinha	Brainstorming meeting on Mission Genomics and Computational Biology	DBT, New Delhi	8 November 2017
Symposia				
1.	Dr. Himanshu Sinha and Dr. Karthik Raman	From Genotype to Phenotype: Computational Approaches to Understand Biological Systems	IIT Madras	22-24 January 2018
2.	Dr. D. Karunakaran	7 th International Conference on Translational Cancer Research. Theme: Cancer Prevention and Treatment : From Ancient Medicine to Modern Medicine	Hotel Westin Velachery, Chennai	8-11 February 2018
Conference				
1.	G. K. Suraishkumar	CHEMCON-2017	Indian Institute of Chemical Engineers	27-30 December 2017
Training				
1.	Dr. K. Chandraraj	DBT – Biotech Industrial Training Programme (BITP) 2017-18	DBT, New Delhi	2 November 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Name	Topic	Institution	Date
1.	Dr. Sanjib Senapati	Delivered an invited talk at the Annual Symposium of the Indian Biophysical Society	IISER, Mohali	23-25 March 2017
2.	Dr. M. Michael Gromiha	St. Petersburg Polytechnic University	Russia	10 April 2017
3.	Dr. M. Michael Gromiha	JSS College of Pharmacy	Ooty	8 July 2017
4.	Dr. M. Michael Gromiha	National University of Singapore	Singapore	19 June 2017
5.	Dr. M. Michael Gromiha	International Conference on Bioinformatics and Biomedical Sciences	Singapore	22-24 June 2017

Sl. No.	Name	Topic	Institution	Date
6.	Dr. Rama S. Verma	Animal Biodiversity Conservation Research at Science Academies Lecture Workshop on Biodiversity and its Conservation	Department of Botany, Bharathiar University, Coimbatore, Tamil Nadu	17-18 July 2017
7.	Dr. Rama S. Verma	Molecular Tools in Biodiversity Conservation, Science Academies Lecture Workshop on Biodiversity and its Conservation	Department of Botany, Bharathiar University, Coimbatore, Tamil Nadu	17-18 July 2017
8.	Dr. Srinivasa Chakravarthy	Delivered two lectures	Amrita University, Kollam	21 July 2017
9.	Dr. M. Michael Gromiha	Invited talk at National Conference on New Dimensions in Bioinformatics and Computational Biology	IIT Delhi, New Delhi	1 August 2017
10.	Dr. M. Michael Gromiha	Vellore Institute of Technology	Vellore	3 August 2017
11.	Dr. M. Michael Gromiha	International Conference on Intelligent Computing	Liverpool, UK	7-10 August 2017
12.	Dr. V. Kesavan	Delivered an invited lecture at the National Organic Symposium Trust	IISER, Bhopal	24-27 August 2017
13.	Dr. Nitish Mahapatra	2 nd MMM Genetics Symposium on Genetics and Genomics of Cardiovascular Diseases	Madras Medical Mission, Chennai	8-9 September 2017
14.	Dr. Rama S. Verma	Scaffold for Fabrication of a Bioprosthetic Heart Valve at National Conference on Nanotechnology in Medicine	Faculty of Allied Health Sciences, Chettinad Academy of Research and Education, Chennai	8-9 September 2017
15.	Dr. Karthik Raman	Delivered an invited talk	NCBS Bengaluru	12 September 2017
16.	Dr. M. Michael Gromiha	Conference on Molecular Signature – GenNext	Chennai	14 September 2017
17.	Dr. M. Michael Gromiha	University of Stockholm	Sweden	18 October 2017
18.	Dr. Nitish Mahapatra	9th RNA Meet at Banaras Hindu University, Varanasi	Varanasi	26-28 October 2017
19.	Dr. Michael Gromiha	National Conference on Bioinformatics, Birla Institute of Scientific Research	Jaipur	7 November 2017
20.	Dr. Rama S. Verma	Stem Cells - A Boon, 5th International Conference in Science Engineering and Technology (ICSET)	Vellore Institute of Technology, Vellore, Tamil Nadu	7 November 2017
21.	Dr. Rama S. Verma	Pathological Consequences of cMyBP-CΔC10 Mutation at the Single-Cell Level using hiPSC-Derived Cardiomyocytes, 86th Annual Conference of Society of Biological Chemists (SBC2017)	Organised by School of Life Sciences, Jawaharlal Nehru University, New Delhi	16-19 November 2017
22.	Dr. Madhulika Dixit	Deliver a talk at symposium, Molecular Medicines for Lifestyle Diseases: Emerging Targets and Approaches	CSIR Central Drug Research Institute, Lucknow	20-21 November 2017
23.	Dr. Nitish Mahapatra	Deliver an invited lecture, Molecular Medicines for Lifestyle Diseases: Emerging Targets and Approaches	CSIR-Central Drug Research Institute, Lucknow	20-21 November 2017
24.	Dr. Rama S. Verma	Molecular Aspects of MYBPC3 ^{ΔInt32} using Patient-Specific Human Induced Pluripotent Stem Cells (hiPSC), Molecular Medicines for Lifestyle Diseases: Emerging Targets and Approaches symposium	CSIR-Central Drug Research Institute, Lucknow	20-21 November 2017
25.	Dr. Rama S. Verma	Molecular Aspects of MYBPC3 ^{ΔInt32} using Patient-Specific Human Induced Pluripotent Stem Cells (hiPSC)	10th Foundation Day of NIPER-Kolkata	November 23, 2017

Sl. No.	Name	Topic	Institution	Date
26.	Dr. Rama S. Verma	Immunotoxicology and Heart Valve Engineering, Immunology and Regenerative Medicine Research Unit	University of Calcutta, Kolkata	November 2017
27.	Dr. Smita Srivastava	Invited speaker on Bioprocess Development to Produce Plant Cyclotides for Peptide-Based Therapeutics	Bioprocessing India 2017, IIT Guwahati	9-11 December 2017
28.	Dr. M. Michael Gromiha	Visited the Advanced Computational Drug Discovery unit (ACDD) at Tokyo Institute of Technology	Tokyo, Japan	10-23 December 2017
29.	Dr. K. Subramanian	Delivered an invited lecture at Annual Winter Workshop on the theme, Developmental Insights into Disease Mechanisms	IIT Kanpur	15-16 December 2017
30.	Dr. M. Michael Gromiha	Invited talk at workshop on Unix for Biologists	Chennai	24 January 2018
31.	Dr. Himanshu Sinha	10th Conference on Yeast Biology; paper: Gene-Gene and Gene-Environment Interactions Elucidate the Architecture of the Genotype-Phenotype Map	Gurugram	8-11 February 2018
32.	Dr. Himanshu Sinha	Participated in the brainstorming session on the Genome Initiative organised by the Principal Scientific Advisor to the Government of India	New Delhi	15 February 2018
33.	Dr. Madhulika Dixit	Delivered a guest lecture at 15th Annual Meeting of ISHR (Indian Section)	PGIMER, Chandigarh	16-18 February 2018
34.	Dr. Nitish R. Mahapatra	Delivered an invited talk entitled, Naturally-occurring common genetic variations in the chromogranin; A locus: Associations with Cardiovascular and Metabolic Diseases, 15th Annual Meeting of the International Society for Heart Research (Indian section)	PGIMER, Chandigarh	16-18 February 2018
35.	Dr. Michael Gromiha	Delivered a plenary talk, National Symposium on Recent Trends in Structural Bioinformatics and Computer-Aided Drug Design	Alagappa University, Karaikudi	20 February 2018
36.	Dr. K. Subramaniam	Delivered an invited lecture, PUF-8 Promotes Protein Degradation to Initiate Pairing of Homologous Chromosomes, 2 nd Indian C.elegans meeting	NII, New Delhi	23-26 February 2018
37.	Dr. Nitish R. Mahapatra	Delivered an invited talk, Regulation of Cardio-metabolic Pathophysiology by Human Genetic Variations in Chromogranin A Gene Locus, DST-SERB sponsored National Symposium on Trends in Biochemistry in Post-Genomic Era	Pondicherry University, Pondicherry	28 February 2018

Visits Abroad by Faculty

Sl. No.	Name	Country Visited	Date	Purpose of visit	Funding from
1.	Dr. Guhan Jayaraman	Helsinki, Finland	9-11 March 2017	INNO Indigo Call on Bio-energy Kick-off Conference	Dr. Guhan Jayaraman
2.	Mahalingam S.	Germany	5-10 April 2017	Initiation of collaborative project	Indivumed GmbH
3.	Dr. Michael Gromiha	St. Petersburg, Russia	10-13 April 2017	Project research discussion and delivered an invited talk	St. Petersburg, Russia
4.	Dr. Nitish Mahapatra	Weill Cornell Medicine, Cornell University, New York, USA	21 April 2017	Delivered a lecture and had discussions on research collaboration	Personal Contingency Fund

Sl. No.	Name	Country Visited	Date	Purpose of visit	Funding from
5.	Dr. Nitish Mahapatra	Rockefeller University, New York, USA	19 May 2017	Delivered a lecture and had discussions on research collaboration	Personal Contingency Fund
6.	Dr. Michael Gromiha	Chuo University, Tokyo	29 May-2 June 2017	Discussion on research collaboration and India-Japan joint research proposals	Chuo University, Tokyo
7.	Dr. D. Karunakaran	Heraklion, Crete, Greece	8-15 June 2017	2 nd International Conference on the Long and the Short of Non-coding RNAs	Heraklion, Crete, Greece
8.	Dr. Michael Gromiha	National University of Singapore	18-24 June 2017	Research collaboration and oral presentation at 6th International Conference on Bioinformatics and Biomedical Science (ICBBS 2017)	National University of Singapore
9.	Dr. K. Subramaniam	Minneapolis, USA	July 2017	76 th Annual meeting of the Society for Developmental Biology	Dr. K. Subramaniam
10.	Dr. Karthik Raman	Czech Republic	21-25 July 2017	25 th Intelligent Systems for Molecular Biology (ISMB)/16th European Conference on Computational Biology (ECCB)	Dr. Karthik Raman
11.	Dr. Michael Gromiha	Liverpool, UK	7-10 August 2017	2017 International Conference on Intelligent Computing	Liverpool, UK
12.	Dr. Nitish R. Mahapatra	University of Sheffield, UK	22-26 August 2017	19 th International Symposium on Chromaffin Cell Biology	University of Sheffield, UK
13.	Dr. Anju Chadha	Institute of Biomedical Chemistry, Moscow, Russia	13-15 September 2017	Presented a paper	Institute of Biomedical Chemistry, Moscow, Russia
14.	Dr. Rama Shankar Verma	Atlanta, Georgia, USA	14-17 September 2017	29 th Fanconi Anemia Scientific Symposium 2017	Atlanta, Georgia, USA
15.	Dr. Athi N. Narayanan	Kumamoto University, Japan,	19-21 September 2017	55 th Annual meeting of the Biophysical Society of Japan	Kumamoto University, Japan,
16.	Dr. Anju Chadha	St. Petersburg, Russia	18-22 September 2017	International Conference on Renewable Plant Resources: Chemistry, Technology, Medicine (RR 2017)	St. Petersburg, Russia
17.	Dr. Rama Shankar Verma	Indiana University	19-22 September 2017	Research discussion	Indiana University
18.	Dr. Michael M. Gromiha	Stockholm University, Sweden	15-21 October 2017	Visited Life Laboratory and delivered an invited lecture	Stockholm University, Sweden
19.	Dr. Smita Srivastava	Bulgaria	16-22 October 2017	3 rd International Conference on Natural Products Utilization: From Plants to Pharmacy Shelf (ICNPU-2017)	Bulgaria
20.	Dr. Michael Gromiha	Japan	10-23 December 2017	Research discussion at the Advanced Computational Drug Discovery unit (ACDD) at Tokyo Institute of Technology, Japan	Japan
21.	Dr. Anju Chadha	UK	26 February-1 March 2018	EPSRC Global Challenges Research Fund discussion at Cardiff University, Cardiff, UK	UK
22.	Dr. A. Gopalakrishna	Pune	9-11 March 2018	Chaired a session at the Annual Conference of the Biophysical Society	Pune

Sl. No.	Name	Country Visited	Date	Purpose of visit	Funding from
23.	Dr. Sanjib Senapati	New Orleans, Louisiana	18-22 March 2018	255 th ACS National Meeting	New Orleans, Louisiana
24.	Dr. R. Baskar	Japan	23-24 March 2018	Invited talk: Hybridization and Parental Age Alters the Rate of Different Types of Spontaneous Somatic Mutations in Arabidopsis	Nagaoka University of Technology, Japan
25.	Dr. Michael Gromiha	St. Petersburg, Russia	25-30 March 2018	Had project research discussion and delivered an invited talk	St. Petersburg, Russia
26.	Dr. Rama Shanker Verma	Swinburne University of Technology, Australia	27-31 March 2018	Research discussion with faculty	Swinburne University of Technology, Australia

Honours and Awards Obtained by Faculty

Sl. No.	Name	Award	Awarded by	Awarded for	Date of award
Awards:					
1	Dr. G. K. Suraishkumar	Sartorius India Chemcon Distinguished Speaker Award (for biotechnology) 2017	Indian Institute of Chemical Engineers	Contribution to the profession	November 2017; the award carries a citation, medal and honorarium of Rs.10,000
2	Dr. D. Karunakaran	Kinariwala Research Award	The Gujarat Cancer and Research Institute, Ahmedabad	Contributions to cancer research	January 2018
3	Dr. Nitish R. Mahapatra	Torrent Research Award sponsored by Torrent Pharmaceuticals	International Society for Heart Research (Indian Section)	For excellent contributions in the area of cardiovascular research	January 2018
4	Dr. Rama S. Verma	Lifetime Achievement award	Nature Science Foundation, Coimbatore	Achievements in research	January 2018

Journal Editorial Boards

Sl. No.	Faculty Name	Position (Editor/Member)	Journal Name
1.	Dr. Rama S. Verma	Editor	Bio-information (2007 onward)
2.	Dr. Rama S. Verma	Editor	Cytotherapy
3.	Dr. Rama S. Verma	Editor	Botanics: Targets and Therapy
4.	Dr. M. Michael Gromiha	Associate Editor	BMC Bioinformatics
5.	Dr. M. Michael Gromiha	Editorial Board Member	Scientific Reports
6.	Dr. M. Michael Gromiha	Editorial Board Member	Biology Direct
7.	Dr. M. Michael Gromiha	Editorial Board Member	Genes
8.	Dr. M. Michael Gromiha	Editorial Board Member	Journal of Bioinformatics and Computational Biology

4.3.4. Design and Development Activities

Major equipment procured

The department now has 3D printing technology. We have purchased the instrument and are using a software that has the design of the biological material. Through these, the mimic of the biological organs are designed with polymers for tissue engineering applications.

New Facilities Added or Major Equipment Procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1.	Nanostring nCounter SPRINT Profiler	135

Patents Filed

Sl. No.	Faculty Member	Topic of patent
1.	Smita Srivastava, G. K. Suraishkumar, Chitra Srikantan, Aparajita S.	Bioprocess Technique for the Production of Secondary Metabolites from Plant Cells using Textile Dye Effluents
2.	K. Chandraraj	Production of Cellulases and Xylanases by <i>Trichoderma gamsii</i> M501
3.	K. Chandraraj	Improved Method of Bacterial Mediated Biosynthesis of Zirconium Oxide Nano Particle
4.	Dr. S. Mahalingam	Peptide-based Inhibitor for c-MycOncogene
5.	Dr. S. Mahalingam	Biomarkers for Early Detection, Designing Treatment Strategies and Development of Novel Drugs for Oral Cancers

4.3.5. Research and Consultancy

Sponsored Research Projects (Ongoing and New)

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
1.	Entrainment of Rhythms for Improved Cancer Therapy	February 2017- January 2020	DST	38.3	G. K. Suraishkumar (PI), D. Karunakaran and Raghunathan Rengasamy, CH (co-PIs)
2.	Microfluidic Platform for Continuous Monitoring of Gasotransmitters for Early-Level Management of Systemic Inflammatory Response Syndrome (SIRS) in Trauma Patients	36 months	MHRD, IITM (IC&SR Research Fund) (IMPRINT)	4	Dr. Ashis Kumar Sen (ME-PI), Dr. Madhulika Dixit (BT- Co-PI), Dr. Anil Prabhakar (EE- Co-PI), Dr. Ananth Krishnan (EE-Co-PI)
3.	Role of Micro RNAs Targeting High Mobility Group Proteins in Human Cervical Cancer Cells	3 years	DST	52.73	Dr. D. Karunakaran
4.	Flow Cytometer Model-BD FACS Canto II	1 year	Capital Equipments Research Grant	5	Dr. Rama S. Verma
5.	Mutational Effects on Binding Affinity of Protein-Protein Complexes: Development of Database, Tools and Applications to Diseases	3 years	DST	27.86	Dr. M. Michael Gromiha
6.	The Influence of Seed Age on the Rates of Spontaneous Mutation and Meiotic Recombination in <i>Arabidopsis thaliana</i>	3 years	DST	40.88	Dr. R. Baskar
7.	Advanced Model UV-VISspectrophotometer	6 months	Maintenance of Capital Equipments Research Grant of IIT Madras	0.5	Dr. T. S. Chandra
8.	US-India Consortium for Development of Sustainable Advanced Lignocellulosic Biofuel	2012-2017	IUSSTF, New Delhi	84.51	K. Chandraraj

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
9.	Development of Smartphone Integrated Generic Microfluidic Devices for Rapid, Portable and Affordable Point-of-care Diagnostics	36 months	MHRD, IITM (IS&SR Research Fund) (IMPRINT)	101.28 (total value: 316.72)	Dr. Ashis Kumar Sen (ME-PI), Dr. T. S. Chandra (BT-Co-PI), Dr. Suman Chakraborty (IIT KGP), Dr. Soumen Das (IIT KGP), Dr. Chandan Chakraborty (IIT KGP), Dr. Sudip Nag (IIT KGP), Dr. A. Agarwal (IIT Bombay)
10.	Popularization of Bharathi Script	11 months	Cholamandalam Ms. General Insurance Co. Limited	8.34	Dr. Srinivasa Chakravarthy
11.	Deep Learning for Life Sciences	Two years	Department of Science and Technology (Indo-Sweden)	29.33	Dr. Michael Gromiha
12.	A Pilot Scale Production of Docosahexaenoic Acid from Microalgae	One year	Biotechnology Industry Research Assistant Council	42.90	Dr. Guhan Jayaraman
13.	LIGFUEL: Depolymerization of Lignin and Bioconversion of Lignin-Derived Monomers to Biofuels	Three years	Department of Biotechnology	96.08	Dr. Guhan Jayaraman (PI), Dr. Anantha Barathi Muthukrishnan (Co-PI)
14.	3D Dual Layered Nanofibrous Scaffold Impregnated with Signalling Factors for Bone and Tissue Regeneration	Two years	SERB-National Postdoctoral Fellowship Scheme	19.20	Dr. Sivakumar Singaravelu (NPDF); Guide: Dr. Vignesh Muthuvijayan
15.	Predictive Modeling of Nucleic Acid Recognition Dynamics and Structured Complex Formation by Disordered Proteins	Three years	Council of Scientific and Industrial Research	17.46	Dr. Michael Gromiha
16.	Structural and Molecular Approach of Targeting Bcl-2 Family Anti-Apoptotic Proteins	36 months	Department of Biotechnology, MHRD	41.84	Dr. Michael Gromiha and Dr. Rayala Suresh Kumar
17.	Biochemical and Biophysical Characterization of DnaB Helicase of Pseudomonas Aeruginosa (PaDnaB) to gain insights into ATP Hydrolysis, DNA Binding and Oligomerization	Two years	SERB-National Postdoctoral Fellowship Scheme	19.20	Dr. N. Revathi (NPDF), Guide: Dr. N. Manoj
18.	Examine the Role of Halogenated Marine Drug in Misfolding and Aggregation Mechanism of Amyloid Proteins	Two years	SERB- National Postdoctoral Fellowship Scheme	19.20	Dr. Iniyar Vijaya Pandian (NPDF); Guide: Dr. Michael Gromiha
19.	A Pilot Scale Production of Docosahexaenoic Acid from Microalgae	One year	Biotechnology Industry Research Assistant Council	42.90	Dr. Guhan Jayaraman
20.	Publish science books at high school level in regional languages (Telugu, Tamil and Kannada) and donate them to village school libraries – Phase II	One year	Socially Relevant Projects	3.70	Dr. Srinivasa Chakravarthy
21.	Role of Allosteric Mutations in HIV-1 Protease Drug Resistance: Useful Insights for Rational Drug Design	Two years	Department of Science and Technology	33.36	Dr. Sanjib Senapati

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
22.	Early Translation Accelerator – Industrial Biotechnology (ETA-1B)	Three years	Biotechnology Industry Research Assistance Council	144.80	Dr. Guhan Jayaraman
23.	Exploring the Possibility of Using Venom-Derived Peptides to Mitigate Stroke-Induced Brain Damage by Targeting Acid Sensing Ion Channel	Initially for one year	Indian Council of Medical Research	10.03	Dr. Amal Kanti Bera
24.	Quantitative Tongue Tissue Proteomics of Oral Tongue Squamous Cell Carcinoma for Novel Biomarker Discovery – Biocare Award	Three years	Department of Science and Technology	37.93	Dr. Ananthi Sivagnanam, PDF of Dr. S. Mahalingam
25.	A Computational Pipeline for Identifying the Context of Key Mutations in Cancer Genomes	Three years	Department of Science and Technology	52.79	Dr. Karthik Raman, Dr. Raghunathan Rengaswamy (CH), Dr. B. Ravindran (CS)
26.	Development of Computational Tools for Analysis and Prediction of Disease-Causing Mutations	Three years	Department of Science and Technology	37.84	Dr. Michael Gromiha, Dr. Suresh Rayala
27.	Development of a RiboRegulator-based Platform for Control of Gene Expression and Metabolic Fluxes in Bacterial Cell Factories	Three years	Department of Biotechnology (DBT)	91.35	Dr. Guhan Jayaraman, Dr. Anantha Barathi Muthukrishnan, RA
28.	A Pilot Scale Production of Docosahexaenoic Acid from Microalgae	One year	Biotechnology Industry Research Assistant Council	42.90	Dr. Guhan Jayaraman
29.	Pp Synthesis and 3D Bioprinting Patches of Mangostincarnosine Peptide with SF/Collagen Biomaterial for Cardiac Tissue Engineering	Two years	SERB – National Post Doctoral Fellowship	19.20	Dr. Rama S. Verma, Dr. S. Kandhasamy (Post Doctoral fellow)
30.	Investigating the Role of Trans Fatty Acids on Neuronal Ion Channels Associated with Ischemic Stroke	Two years	Department of Science and Technology	19.20	Dr. Amal Kanti Bera, Dr. S. Dhriti Majumdar (National Post Doctoral Fellow)
31.	Rational Designing, Synthesis, Structural and Functional Analysis of Novel Anti-Hypertensive Peptides	Three years	DBT	85.34	Dr. Nitish Ranjan Mahapatra (Principal Investigator) and Dr. Sanjib Senapati (Co-investigator)
32.	Immobilization of Calnuc Protein on ZnO Nanostructured Film for Biosensor Applications	Three years	Ministry of Science and Technology (DBT)	45.96	Dr. Santhosh P. Nagappan Nair (PH), Dr. Murugavel Pattukkannu (PH), Dr. K. Gopalakrishna (Co-investigator)
33.	Exploring the Role of Gut Microbiota in Parkinson's Disease	7 March 2018-6 March 2019	IC&SR Research Fund	10	Dr. Amal Kanti Bera
34.	Exploring the Potential of miR 27a Mimic as a Novel Therapeutic for Hypercholesterolemia	8 March 2018-7 March 2019	IC&SR Research Fund	9.99	Dr. Nitish Ranjan Mahapatra
35.	Exploring 3 – Aryliso Coumarins for Inflammation Mediated Cancer	7 March 2018-6 March 2019	IC&SR Research Fund	10.13	Dr. Indrapal Singh Aidhen (PI), Dr. Mukesh Doble (Co-PI)
36.	Can Highly Conserved Ribosomal Protein Genes Reshape Phenotypic Variation of a Population	8 March 2018-7 March 2019	IC&SR Research Fund	8.80	Dr. Himanshu Sinha

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
37.	Identification of Population – Specific Biomarkers for Biliary Atresia in Indian Patients using High Throughput RNA – Sequencing: A Pilot Study	7 March 2018-6 March 2019	IC&SR Research Fund	10	Dr. S. Mahalingam
38.	A Computational Model of Neuron Astrocyte Vessel Networks to Simulate Vascular Responses in Whisker Barrel Region of Rodent Somatosensory Cortex	Three years	DBT	37.90	Dr. V. Srinivasa Chakravarthy, Dr. Sanjib Senapati (Co-investigator)
39.	Molecular Characterization of MTX Receptors in Leukemias	2014-2017	DBT	51.46	Dr. Rama Shanker Verma
40.	Examining the Role of FANCA and FANCC Protein in the Regulation of Hematopoietic Stem Cell Self-Renewal and Differentiation through the WNT Signalling	2014-2017	CSIR	21.96	Dr. Rama Shanker Verma
41.	Research of Patterns and Mechanisms of Influence of the Nanoparticles on Human Health in the Industrial Production and Application of Nonmetallic Nanomaterials for Construction	2013-2017	Indo-Russian (DST-RSF)	51	Dr. Rama Shanker Verma
42.	Mesenchymal Stem Cells with Polymeric Scaffold May Improve Cardiac Function in a Mouse Myocardial Model		DBT	46.60	Dr. Rama Shanker Verma
43.	Identification and Targeting of Leukemic Stem Cells using Trail		DST	45.79	Dr. Rama Shanker Verma
44.	National Facility on Community-Based Cancer Tissue Biobank for Drug Targets	2013-2019	DST	3090	Dr. S. Mahalingam
45.	Molecular Analysis of Functional Heterogeneity in Modular Ribosomal Proteins Across Genetically Divergent Yeast Strains	25 November 2016-24 November 2019	IC&SR Research Fund	30.60	Dr. Himanshu Sinha
46.	Prediction of Disease-Relevant Mutations in Transmembrane Proteins	2016-2019	DST	71.28	Dr. M. Michael Gromiha
47.	Design of Sialic Acid Analog Inhibitors to Hemagglutinins and Neuraminidases of Influenza Virus by MD Simulations	2016-2019	DBT	17.16	Dr. M. Michael Gromiha
48.	Development of Three Dimensional Structural Database for Biologically and Functionally Important Glycans and Glycan-Protein Complexes	2016-2019	DBT	15.29	Dr. M. Michael Gromiha
49.	Bioprocess Optimization Strategies for Enhanced and Sustainable Production of Camptothecin from Suspension Culture of Endophyte, <i>Fusarium solani</i>	December 2016-December 2019	DST	35.42	Dr. Smita Srivastava

RBIC Projects (Ongoing and New)

Sl. No.	Faculty Name	Title	Industry	Amount (Rs. in lakh)
1.	Dr. S. Mahalingam	IITM-Indivumed Cancer Library	Indivumed, Germany	790
2.	K. Chandraraj	Development of Enzymatic Method for Conversion of Ammonia Pretreated Rice Straw andWheat Straw to Glucose and Xylose	Hindustan Petroleum Corporation Limited, Bengaluru (2014-2017)	45.98

Exchange Programme with other Universities, Including Institutions/Universities under MoU

Sl. No.	Faculty	Participation details	University/Institution
1.	G. K. Suraishkumar	Guidance for two students in the joint dual PhD programme	Curtin University, Australia

Faculty Members' Participation with Other Institutions under MoU

Sl. No.	Faculty	Participation details	University/Institution
1.	Dr. S. Mahalingam	Collection of Cancer Tissues	JIPMER, Puducherry
2.	Dr. S. Mahalingam	Collection of Cancer Tissues	Dr. Kamatchi Memorial Hospital, Chennai
3.	Dr. S. Mahalingam	CollabratiionTumour Tissue Stratification	Indivumed GmbH, Germany
4.	Dr. S. Mahalingam	Collection of Cancer Tissues	Government Royapettah General Hospital, Chennai

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date of Visit	Purpose of Visit
1.	Dr. Mohan, Adjunct Faculty, Department of Biotechnology, IIT Madras	7 March 2017	Delivered talk: Time has Come to Take Genomics to the Diabetes Clinic
2.	Prof Utpal Bora, Biomaterials and Tissue Engineering Laboratory, Department of Biotechnology, IIT Guwahati, Assam	24 March 2017	Delivered talk: Learning Biology from Silkworms
3.	Dr. Kelath Murali Manoj, Satyamjayatu: The Science and Ethics Foundation, Kulappully, Shoranur, Kerala	17 April 2017	Delivered talk: Why/How Do We Use Oxygen
4.	Dr. Kedar Nath Natarajan, Wellcome Trust, Sanger Institute and European Bioinformatics Institute, Cambridge, UK	8 May 2017	Investigating the Interplay Between Cell Cycle and Gene Expression
5.	Dr. Dineshkumar Ramalingam, Ph.D. (Bioprocess Engineering), IIT Kharagpur	15 June 2017	Development of Microalgae Feedstock-Based Bio-Refinery for the Co-production of Lutein and Biodiesel with Simultaneous CO ₂ Capture
6.	Dr. Vijay Rangachari, Associate Professor of Biophysical Chemistry, Department of Chemistry and Biochemistry, University of Southern Mississippi	29 June 2017	Correlation Between Oligomer Conformation and Pathological Variations in Alzheimer Disease
7.	Shivaram Selvam, Ph.D., Scientist D and INSPIRE Faculty Fellow, Division of Polymeric Medical Devices, BMT Wing, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Trivandrum, India	6 July 2017	From Macro- to Nanoscale-Biopolymer Platforms for Applications in Tissue Engineering and Nanomedicine
8.	Dr. Utpal Tatu, Indian Institute of Science, Bengaluru	10 July 2017	Transcriptomic, Proteomic and Metabolomic Analysis of Sexual Stage Development in Malaria

Sl. No.	Name and Designation	Date of Visit	Purpose of Visit
9.	Neelanjana Janardan, Program Manager, Center for Cellular and Molecular Platforms (C-CAMP), Freelance Scientific Consultant and Editor	17 July 2017	C-CAMP: Efforts in Promoting Entrepreneurship
10.	Krishnamurthy Konduru, Ph.D., Staff Scientist, Laboratory of Emerging Pathogens, Division of Emerging and Transfusion Transmitted Diseases, Center for Biologics Evaluation and Research (CBER), US Food and Drug Administration (FDA), USA	25 July 2017	Ebola virus: Development of Glycoprotein Fc Fusion Protein as FieldBased Subunit Vaccine and Serology Assays
11.	Dr. Rajesh Jayachandran, MBBS, Ph.D., Research Associate, Biozentrum, University of Basel	1 August 2017	Role for Coronin 1-Mediated Signaling in Naive T Cell Immune Responses
12.	Dr. Ashok Venkitaraman, Medical Research Council, Cancer Unit, University of Cambridge	7 August 2017	Early Intervention in Cancer Through the Tumour Suppressive Mechanisms
13.	Dr. Varsha Singh, Fellow of the Wellcome Trust/DBT India Alliance and Assistant Professor, Department of Molecular Reproduction, Development and Genetics Indian Institute of Science, Bengaluru	11 August 2017	Regulation of Longevity in Caenorhabditis elegans by a Neuronal G Protein Coupled Receptor
14.	Sabarinathan Radhakrishnan, Institute for Research in Biomedicine, Barcelona	18 August 2017	Increased Somatic Mutation Rates in Transcription Factor Binding Sites Across Tumors due to impaired DNA repair
15.	Dr. Aravindan Ilangoan, Institute of Structural and Molecular Biology, UCL and Birkbeck, London	4 September 2017	Cryo-EM Structures of the Type 4 Pilus and the Conjugative Relaxase– Mechanistic Insights into Bacterial Conjugation
16.	Avin Ramaiya, Technology and Application Development, LUMICKS, Amsterdam	8 September 2017	Kinesin: A Machine or an Animal - A single molecule force spectroscopy approach
17.	Dr. Ajit Mulasari, Director, Institute of Cardiovascular Diseases, Madras Medical Mission and Adjunct Faculty	21 September 2017	Systems of Care for Treatment of Acute Myocardial Infarction in India
18.	Dr. Ganesh KB, PhD (UT Southwestern Medical Center), NCBS-InStem-Cambridge postdoctoral fellow with Drs. Sunil Laxman (InStem) and Christian Frezza (University of Cambridge)	16 October 2017	Regulation of Phospholipase C- β by G $\beta\gamma$
19.	Dr. Ranjan Pradhan, Research Investigator, University of Michigan	3 November 2017	Local Metabolic and Feed-forward Control of Coronary Blood Flow: A Mechanistic Approach
20.	Prof Victor de Lorenzo, Chemist and Research Professor, CNB CSIC Spain, Eminent Synthetic Biologist	3 November 2017	IBSE Seminar Series: What Transcriptional Noise Tells us about the Cell Inside
21.	Dr. Haja Kadarmideen, Department of Bio and Health Informatics, Technical University of Denmark, Denmark	17 November 2017	Genetics of Obesity in Denmark and Greenland
22.	Dr. Arne Elofsson, Stockholm University	17 November 2017	Large-Scale De Novo Structure Prediction of Protein Families using PconsC3 and ProQ3
23.	Raghu Rao, IIT Madras alumnus and biotech entrepreneur	4 December 2017	Innovation in Drug Design
24.	Dr. Karuna Sampath, Course Director, Warwick-A*STAR Group Leader, Centre for Mechano-chemical Cell Biology, Warwick Medical School, University of Warwick, UK	2 January 2018	Coordinate Regulation of Development by a Shared RNA Element
25.	Thomas J. Webster, Art Zafiropoulos Chair, Department of Chemical Engineering, Northeastern University, Boston, USA	18 January 2018	Two Decades of Commercializing Medical Devices Using Nanotechnology

Sl. No.	Name and Designation	Date of Visit	Purpose of Visit
26.	Sumesh Sukumara, Ph.D. researcher, Global Econometric Modeling Group, Novo Nordisk Foundation Center for Biosustainability, Technical University of Denmark, Lyngby, Denmark	18 January 2018	Early-stage Assessment of the Commercialization Potential of Bio-based Chemicals
27.	Dr. Rajan Sankaranarayanan, CSIR-Centre for Cellular and Molecular Biology, Hyderabad, India	18 January 2018	Chirality-based Proofreading During Translation of the Genetic Code
28.	Dr. Kazuhiko Fukui, AIST, Tokyo, Japan	26 January 2018	Multilevel Approaches to Identify Drug Targets for Mosquito-borne Diseases
29.	Dr. K. Thangaraj, Senior Principal Scientist, Centre for Cellular and Molecular Biology, Hyderabad	29 January 2018	Joseph Thomas Memorial Lecture on The Chronicle of Indian Subcontinent: Origin, Health and Disease Perspectives
30.	Dr. Akira R. Kinjo, Associate Professor, Institute for Protein Research, Osaka, Japan	1 March 2018	Mechanism of Evolution by Genetic Assimilation: Equivalence and Independence of Genetic Mutation and Epigenetic Modulation in Phenotypic Expression
31.	Rahuman Sheriff, Project Leader, European Bioinformatics Institute, European Molecular Biology Laboratory (EMBL-EBI)	8 March 2018	Dynamics of Cellular Signalling Networks: Lessons from Quantitative Imaging

4.3.6. Other Activities of the Department/Centre

Student Visit

Sl. No.	Students	Purpose of Visit	Date and Venue
1.	Anantha Barathi Muthukrishnan, Institute Post Doctoral Fellow	Short-term research visit to Prof Lars Blank Lab	May-June 2017 Aachen University, Germany
2.	Anantha Barathi Muthukrishnan, Institute Post Doctoral Fellow	Research Visit to Dr. Ville Santala's Lab	10 May-21 June 2017 as part of LIGFUEL Project Tampere University of Technology, Finland
3.	Rachana Yellavula (BE14B034)	Novozymes and Henning Holck-Larsen Foundation have signed an agreement with DTU to set up scientist/student exchange between India and Denmark. DTU will be providing a grant towards this. The student will receive a living allowance (DKK 29,250) and travel allowance.	24 August-30 December 2017, Technical University of Denmark
4.	Dipayan Biswas (BT16D003)	Research internship at Tata Consultancy Services – Innovation Lab	29 November 2017-12 January 2018, Kolkata
5.	Soumalya Mukherjee (BT15D303)	Japan-Asia Youth Exchange Program in Science (Sakura Exchange Program in Science) administered by Japan Science and Technology Agency	14-23 December 2017, Japan
6.	Sakshi Agrawal	Exchange programme	February-May 2018, Technical University of Denmark
7.	Herald Wilson (BT15D016)	CIPRS and Research Stipend Scholarship	1 January 2018 for one year, Curtin University
8.	Ankur Chauhan (BT14S200)	Internship	8 January-15 February 2018, TCS Innovation Lab, Kolkata
9.	Sandeep Kumar Panda (BT16D032)	Exchange programme	1 March-30 September 2018; sponsoring agency: Indo-US Science and Technology Forum; host institute: University of Texas, Austin, USA
10.	Vaishnavi (BT16D030)	RWTH Joint Degree Program	June 2018-June 2019, Germany

4.4. Department of Chemical Engineering

4.4.1. Introduction

The Department of Chemical Engineering was established in 1950. It has 29 permanent faculty members who are not only dedicated teachers, but also researchers carrying out cutting-edge research in frontier areas of Chemical

Engineering and inter/multi-disciplinary subjects. The focus of the research is on reaction and transport processes, energy, materials and environment. The faculty work towards analysing these systems at multiple scales by understanding their behaviour from the molecular to macroscopic levels as well as using a system-based approach.

4.4.2. Academic Programmes

New courses introduced

Sl. No.	Course No.	Title
1.	CH5017	Data Analysis for Modeling and Monitoring of Reaction Systems
2.	CH5019	Mathematical Foundations of Data Science
3.	CH5023	Unconventional Oil and Gas Resources
4.	CH5024	Numerical Optimal Control Theory
5.	CH6022	Microwave Processing in Materials, Food and Medical Sciences
6.	CH6531	Multiscale Modeling of Heterogenous Catalytic Systems

Students on roll as of September 2017+M.S. and Ph.D Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
B.Tech.	78	72	66	63	00	279
Dual Degree	22	17	18	23	16	96
M.Tech.	42	33	00	00	00	75
M.S.	8	7	10	10	00	35
Ph.D.	28	22	26	32	36	144
Total	178	151	120	128	52	629

Students/Scholars who Attended conferences/seminars/symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/Workshops	Date and Venue	Financial Assistance from Institute
Abroad – Ph.D					
1.	Babita Kumari Verma	CH14D207	Visiting Scholar, Thomas Jefferson University	1 March 2017–28 February 2018, USA	No
2.	Resmi Suresh M P	CH12D024	AIChE Spring Meeting	26-30 March 2017, San Antonio, TX	Yes
3.	G Swaminathan Bharadwaj	CH11D036	10th Liquid Matter Conference (Liquids 2017)	17-21 July 2017, Ljubljana, Slovenia	Yes
4.	K A Ramya	CH14D408	Liquids 2017	17-21 July 2017, Ljubljana, Slovenia	Yes
5.	Abhishek Kumar Gupta	CH13D016	9th Conference of the Asian Consortium on Computational Materials Science (ACCMS 9)	8-11 August 2017, Kuala Lumpur, Malaysia	Yes
6.	Deepa Elizabeth Eapen	CH13D201	AEM2017	11-13 September 2017, University of Surrey, London, UK	No

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/Workshops	Date and Venue	Financial Assistance from Institute
7.	Busigari Rajasekhar Reddy	CH14D400	2017 International Conference on Coal Science and 2017 Australia-China Symposium on Energy	25-29 September 2017, China	No
8.	Sreeja Narayanan	CH15S020	34 Annual Pittsburg Coal Conference	5-8 September 2017, Pittsburg, USA	Yes
9.	Hemanth Kumar T	CH11D031	232 ECS meeting	1-5 October 2017, National Harbor, MD Washington DC, USA	No
10.	Suseendiran S. R.	CH15D201	232 ECS meeting	1-5 October 2017, National Harbor, MD Washington DC, USA	Yes
11.	A Yerrayya	CH15D010	2017 Annual AIChE meeting	29 October-3 November, USA	Yes
12.	Piyali Dhar	CH14D407	2017 Annual AIChE meeting	29 October-3 November, USA	Yes
13.	Avinash Sahu	CH11D039	2017 Annual AIChE meeting	29 October-3 November, USA	Yes
14.	A Durgadevi	CH14D018	2017 Annual AIChE meeting	29 October-3 November, USA	Yes
15.	T Krishnaveni	CH15D200	2017 Annual AIChE meeting	29 October-3 November, USA	Yes
16.	Sudhakar Kathari	CH14D009	67 th Canadian Chemical Engineering Conference (CSChE 2017)	22-25 October 2017, Edmonton, Canada	Yes
17.	Ribhu Gautam	CH14D209	2017 Annual AIChE meeting	29 October-3 November, USA	Yes
18.	Bala Shyamala	CH13D020	27 th European Symposium on Computer Aided Process Engineering (ESCAPE 27)	1-5 October 2017, Barcelona, Spain	Yes
19.	Deepa Elizabeth Eapen	CH13D201	ESCAPE 27	1-5 October 2017, Barcelona, Spain	Yes
20.	Avula Thulasiram	CH14D414	INASE conference	6-8 October 2017, Athens, Greece	Yes
21.	Binu T. V.	CH15D013	11 th International Conference on Thermal Engineering: Theory and Applications	25-28 February 2018, Doha, Qatar	Yes
22.	Silveru Upendar	CH13D007	APS March Meeting 2018 on Mixture of Spherical and Non-spherical Colloidal Particles for Stabilizing the Pixkering Emulsions	5-9 March 2018, Los Angeles, California	Yes
Abroad - M.S.					
23.	C. Srinesh	CH14S300	21 th International Conference on Process Control	6-9 June 2017, Strbske Pleso, Slovakia	Yes
24.	Garima	CH15S017	ICMNHMTE 2017: 19th International Conference on Micro, Nanoscale Heat and Mass Transfer Engineering	10-11 July 2017, Amsterdam, Netherlands	Yes
25.	Akshaya S.	CH14S008	International Society for Engineers and Researchers	6-7 July 2017, Tokyo, Japan	Yes

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/Workshops	Date and Venue	Financial Assistance from Institute
26.	Seshasai P. C.	CH15S009	2017 Annual AIChE meeting	29 October-3 November, USA	Yes
India – Ph.D					
27.	Raviteja Kurapati	CH15D403	6th International Conference on Functional Electroceramics and Polymers (ICEP 2017)	20 February-23 March 2017, IIT Kharagpur	Yes
28.	K. Lakshmi Kumar	CH14D403	ICEP 2017	20 February-23 March 2017, IIT Kharagpur	Yes
29.	Sushil M. Pachpinde	CH15D304	ICEP 2017	20 February-23 March 2017, IIT Kharagpur	Yes
30.	Abhishek Kumar Gupta	CH13D016	ICEP 2017	20 February-23 March 2017, IIT Kharagpur	Yes
31.	Ankitha Theres George	CH14D215	Second International Conference on Electrochemical Science and Technology (ICONTEST 2017)	10-11 August 2017, IISc Bangalore	Yes
32.	Avinash Sahu	CH11D039	International Complex Fluids conference (CompFlu 2017)	18-20 December 2017, IIT Madras	Yes
33.	Neethu Thoas	CH12D020	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
34.	B. Dinesh	CH12D025	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
35.	Anupriya S.	CH12D026	24 th National and 2 nd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC 2017)	27-30 December 2017, BITS Pilani, Hyderabad Campus	Yes
36.	Siliveru Upendar	CH13D007	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
37.	Abhishek Kumar Gupta	CH13D016	Asia-Pacific Conference of Theoretical and Computational Chemistry (APCTCC8)	15-17 December 2017, IIT Bombay	Yes
38.	Ashna R.	CH13D019	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
39.	P. Logesh Kumar	CH14D020	ICN-3I International Conference on Nanomaterials: Initiatives, Ideas and Innovations	4-8 December 2017, IIT Roorkee	Yes
40.	Ravi Thej Pilla	CH14D024	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
41.	Chandrakant V. Dahiphale	CH14D211	IHMTTC 2017	27-30 December 2017, BITS Pilani, Hyderabad Campus	Yes
42.	G. Prasanth	CH14D212	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
43.	Kinhal Krishna V.	CH14D214	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
44.	Remya Ann Mathews K.	CH14D216	CompFlu 2017	18-20 December 2017, IIT Madras	Yes

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/Workshops	Date and Venue	Financial Assistance from Institute
45.	B. Rajasekhar Reddy	CH14D400	Second International Conference on Sustainable Energy and Environmental Challenges (SEEC 2018)	1-3 January 2018, IISc Bangalore	Yes
46.	Jacob John	CH14D402	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
47.	Kunche Lakshmi Kumar	CH14D403	APCTCC8	15-17 December 2017, IIT Bombay	Yes
48.	Ramya K. A.	CH14D408	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
49.	Attada Yerrayya	CH15D010	SEEC 2018	1-03 January 2018, IISc Bangalore	Yes
50.	Binu T. V.	CH15D013	IHMTC 2017	27-30 December 2017, BITS Pilani, Hyderabad Campus	Yes
51.	Ahana P.	CH15D019	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
52.	Akash Choudhary	CH15D206	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
53.	Niraj Kumar Singh	CH15D305	10 th International Conference on Communication Systems and Networks (ITS Workshop)	2-4 January 2018, Bengaluru	Yes
54.	Raviteja Kurapati	CH15D403	APCTCC8	15-17 December 2017, IIT Bombay	Yes
55.	C. Santhan	CH15D413	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
56.	C. Saravanan	CH15D301	Indian Control Conference 2018	3-8 January 2018	Yes
57.	Sushil Pachpinde	CH15D304	APCTCC8	15-17 December 2017, IIT Bombay	Yes
58.	Sanjeet Kumar Singh	CH16D012	International Conference on Molecular Spectroscopy (ICMS 2017)	8-10 December 2017, Mahatma Gandhi University, Kottayam, Kerala	Yes
59.	D. Madhurima Reddy	CH16D018	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
60.	Gande Vamsi Vikram	CH16D201	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
61.	Mohd. Faiz Khan	CH17D404	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
62.	Mohammad Shahab	CH17D406	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
63.	Pinnama Raju Vivek Shankar	CH13D026	3 rd IFAC International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS 2018)	20-21 February 2018, Hyderabad	Yes
64.	Varghese Kurian	CH14D412	ACODS 2018	18-22 February 2018, Hyderabad	Yes
65.	Bharathi Raja R.	CH16D301	Second National Power Engineering Research Scholars Conference (NPERSC 2018)	24-25 February 2018, IIT Madras	No

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/Workshops	Date and Venue	Financial Assistance from Institute
66.	Dheeraj Kumar	CH14D401	NPERS 2018	24-25 February 2018, IIT Madras	No
67.	Bincy George Abraham	CH13D021	5th International Corrosion Prevention Symposium for Research Scholars (CORSYM 2018)	23-24 March 2018, IIT Madras	No
68.	Saranya Sriram	CE 14 D 030 (ID Scholar)	CORSYM 2018	23-24 March 2018, IIT Madras	No
69.	P. M. Ranjith	CH15D007	CORSYM 2018	23-24 March 2018, IIT Madras	No
India – M.S.					
70.	Kanala Venkata Sravana Chaithanya	CH17S003	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
71.	Sumithra Reddy Yerasi	CH17S005	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
72.	Garima	CH15S017	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
73.	Preetika Rastogi	CH16S004	CompFlu 2017	18-20 December 2017, IIT Madras	Yes
74.	Prasanna M.	CH16S301	Indian Control Conference 2018	3-8 January 2018, IIT Kanpur	Yes
75.	Priyan Bhattacharya	CH16S300	ACODS 2018	18-22 February 2018, Hyderabad	Yes

Internship

Sl. No.	Scholar	Country Visited	Date	Purpose of visit	Funding from Institute
1	Akash Choudhary	Karlsruhe Institute of Technology, Karlsruhe, Germany	15 May-15 August 2017	Internship	No
2	Babita Kumari Verma	Thomas Jefferson University, Philadelphia, USA	March 2017-June 2018	PhD Research work	No

Visits abroad by Scholars under Exchange Programme

Sl. No.	Scholar	Country Visited	Date	Purpose of visit	Funding from Institute
01.	Bharathi Raja CH16D301	Nagaoka University of Technology, Japan	20 June-21 July 2017	Research exchange programme	No

Students/Scholars who won Outside Prizes and Awards

Sl. No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
Ph.D				
1.	Saranya Sriram	CE14D030 (ID Scholar)	Best Oral Presentation Award for paper, Electrochemical remediation of chromium contaminated soil on titania nanotubes, Electrocatalysis session, was won by PhD scholar	Society for Advancement of Electrochemical Science and Technology

Sl. No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
2.	Abhishek Kumar Gupta	CH13D016	Won second prize for presenting a poster, Counter ion specific collapse of fully ionized PAA in water-ethanol mixture in presence of Li ⁺ and Cs ⁺ alkali metal cations-A molecular dynamics simulation study	6 th International Conference on Functional Electroceramics and Polymers (ICEP 2017)
3.	Raviteja Kurapati	CH15D403	Won third prize for poster: Molecular dynamics simulation of effect of ionisation on conformational and orientation properties of poly(arylic acid) and poly(methacrylic acid) adsorbed at CCl ₄ -H ₂ O interface	ICEP 2017
4.	Saranya Sriram and Bincy George Abraham	CE14D030 and CH13D021	Technical Excellence Award to the Team W6 - Carbon Zero Challenge Electrochem – for project, Sustainable zero-energy prototype for desalination coupled wastewater treatment	2017-18 Grand Finale
5.	Bincy George Abraham	CH13D021	Best Oral Presentation in the session, Electrodeposition and Nano-technology, CORSYM 2018, for the presentation, Effect of electrodeposition techniques on the performance of platinum electrocatalyst towards methanol oxidation	CORSYM 2018
6.	Saranya Sriram	CE14D030	Best Oral Presentation in the session, Electrochemical Testing Techniques, CORSYM 2018 for the presentation, A low-energy electrochemical approach for dual waste management	CORSYM 2018
M.S.				
7.	Akshaya S.	CH14S008	Won ISER Excellent Paper Award for, Study of the effect of packings in an energy-optimized binary tray distillation column, in the category of Best Presentation/Best Content at the ISER International Conference, Tokyo, Japan, 6-7 July 2017	International Society for Engineers and Researchers (ISER)
B.Tech				
8.	Ragini Sreenath	CH15B058	Won the first edition of Women of Mettle scholarship instituted by Tata Steel. This scholarship programme is open to second-year female engineering students of select national institutes, and entails an amount of Rs.2 lakh along with an internship opportunity in third year and a pre-placement offer from Tata Steel.	Tata Steel
9.	Abhinav Parakh and Anish Patil	CH13B002 and CH13B005	Won first prize in Design is in my DNA!, an Innovation contest conducted by Asian Paints Limited, for their write-up and final presentation, Applications of graphene as a coating	Asian Paints

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl. No.	Student/Scholar	Roll No.	Prize	Donor
Institute Day Prize – B. Tech.				
1.	Praneeth Srivanth R.	CH14B049 B.Tech	Won the Best Academic Record prize in the III and IV semesters. He was given the Dr Anita Mehta-Damini Prize with a silver medal and cash award of Rs.5000.	Dr Anita Mehta-Damini Prize
2.	Marri Krishna Chaitanya	CH14B042	Awarded Prof M. Ramanujam Memorial Prize, for the student with highest marks in Mechanical Operation Course (Department level)	Prof M. Ramanujam Memorial Prize
Institute Day – M. Tech.				
3.	Anbuchelvan Anamica	CH15M005 M.Tech	Awarded M/S Chevron Products Company Prize for the Best Academic Record in I and II semesters of the M.Tech programme with a silver medal and cash award of Rs.5000	M/S Chevron Products Company Prize

Sl. No.	Student/Scholar	Roll No.	Prize	Donor
Institute Day- Dual Degree				
4.	N. Pradeep	CH13B086	Won the Best Academic Record prize in the V and VI semesters. He has been awarded by Dr R. K. Viswanath Memorial Prize with a silver medal and cash award of Rs.5000.	Dr R. K. Viswanath Memorial Prize
5.	Srijith R.	CH12B091	Awarded Dr Anita Mehta-Damani Prize for the student with the Best Academic Record in the VII and VIII semesters in Dual Degree programme.	Dr Anita Mehta-Damani Prize
6.	N. Pradeep	CH13B086	Awarded K. Srinivasan and Indira Srinivasan Prize For highest CGPA in courses offered under HS category in III, IV, V, VI and VII semesters in B.Tech/DD programme.	K. Srinivasan and Indira Srinivasan Prize
Convocation Day - B.Tech/Dual Degree				
7.	Meghana Venkata Palukuri	CH12B083	For the best overall performance in curricular and co-curricular activities	C. A. Sastry Endowment Prize
8.	Abhinav Parakh	CH13B002	Best inter-disciplinary B.Tech project	Reliance Heat Transfer Private Limited Prize for the highest CGPA in B.Tech Chemical Engineering and S. R. I. Prize
9.	Srijith Rajagopalan	CH12B091	For the highest CGPA in Dual Degree Chemical Engineering	B. Ravichandran Memorial Prize
10.	Nama Praveen Kumar	CH13B044	For the B.Tech Chemical Engineering student who has done project in the area of Particle Technology and secured the highest CGPA at the end of the pre-final semester	Prof. M. Ramanujam Memorial Award
11.	Anish R. Patel	CH13B005	For the best student in GN6001 Integral Karma Yoga	Duvvuru Sarada Award
12.	Minal Patil	CH12B084	For the Dual Degree student with the best project in the area of Biotechnology	48th Indian Pharmaceutical Congress Prize
13.	Daniel Viju V.	CH12B080	For the best Dual Degree project in area of Environmental Engineering	Smt. D. L. Saraswati Memorial Prize
14.	Anbuchelvan Anamicca	CH15M005	For the highest CGPA in M.Tech Chemical Engineering	Dr K. Subba Raju Memorial Prize
15.	Shree Sumanas Badrinath	CA15M007	For the highest CGPA in M.Tech Catalysis Stream in Chemical Engineering	Sri S. V. Balakrishnan Merit Prize

4.4.3. Faculty and their activities

Name	Major Areas of Specialisation
Professors	
Dr. A. Kannan (Head)	Mathematical modeling, simulation and optimisation of chemical processes
Dr. Abhijit Deshpande	Rheology of complex fluids, polymers and polymeric composites, processing flow visualization
Dr. Arun K. Tangirala	Process systems engineering; control, identification and monitoring, applied signal processing
Dr. R. Nagarajan	Ultrasonic and megasonic fields, cleanroom and contamination control, nano-particle synthesis and nano-composite formulation
Dr. T. Panda	Bioprocess optimisation, enzyme design, bionanotechnology
Dr. Preeti Aghalayam	Chemical reaction engineering
Dr. S. Pushpavanam	Modeling and simulation, non linear dynamics, flow visualisation
Dr. Raghunathan Rengasamy	Process systems engineering, fuel cells, computational discrete microfluidics
Dr. Rajagopalan Srinivasan	Safety, sustainability and resilience of complex systems, cognitive engineering, supply chain management and enterprise optimisation
Dr. S. Ramanathan	Electrochemistry, chemical mechanical planarisation for semiconductor processing
Dr. R. Ravi	Applied statistical mechanics, foundations of thermodynamics and mechanics, process dynamics and control

Name	Major Areas of Specialisation
Dr. P.S.T.Sai	Chemical reactor analysis and design
Dr. Shankar Narasimhan	Process design, data mining, fault diagnosis
Dr. Sreenivas Jayanti	Fuel cells, combustion, energy systems
Dr. Susy Varughese	Physics and mechanics of polymeric materials, polymeric nano composites
Dr. Tanmay Basak	Microware application, mathematical modeling and simulation
Dr. Upendra Natarajan	Polymer science and engineering, molecular simulation, statistical thermodynamics of complex fluids, nanostructured hybrid composite materials
Associate Professors	
Dr. M.G. Basavaraja	Directed assembly of colloids, Microstructure and rheology of colloids, surfactants, polymer and their mixtures, interfacial rheology, Ionic liquids, particulate gels
Dr. Niket S. Kaisare	Catalytic combustion, micro-reactors, advanced process control, energy and fuel processing
Dr. Raghuram Chetty	Electrocatalysis, fuel cells, wastewater treatment, CO ₂ reduction
Dr. R. Ravikrishna	Contaminated sediment remediation, contaminant fate and transport, air pollution process and control
Dr. Rajnish Kumar	Gas hydrates (formation, inhibition and recovery), carbon dioxide capture, storage and utilisation methane and hydrogen storage hydrothermal liquefaction at sub-critical and supercritical conditions
Dr. T. Renganathan	Multiphase systems, gasification, capture of CO ₂
Dr. Sridharakumar Narasimhan	Process system engineering, optimisation, process control, fault diagnosis
Dr. Ethayaraja Mani	Molecular simulations, self-assembly, mathematical modeling
Dr. R. Vinu	Thermo-catalytic conversion of biomass to useful intermediates, photocatalysis for environmental decontamination, microkinetic modeling of complex reactions
Assistant Professors	
Dr. Arvind Kumar Chandiran	Solar cells, solar water splitting, carbon dioxide reduction, photoconductivity, oxide semiconductors and solar energy research
Dr. R. Ramnarayanan	Applying physical chemistry concepts to biology, light and state of matter interaction, Solid state materials
Dr. Sumesh P. Thampi	Hydrodynamics of complex fluids, interfacial flows, active matter
Professor Emeritus	
Dr. M.S. Ananth	Molecular thermodynamics and mathematical modelling
INSPIRE Fellows	
Dr. Nirav P. Bhatt	Data analysis, process systems engineering, kinetic modeling
Dr. Swagatika Sahoo	System biology, constraint-based metabolic modeling, human metabolism, metabolic disorders, and inerted metabolic disorders

Short-term Courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conference			
1.	Dr. Abhijit P. Deshpande, Dr. Basavaraja M Gurappa, Dr. Ethayaraja Mani, Dr. Sumesh P. Thampi	Complex Fluids, CompFlu 2017	18-20 December 2017
Short-term Course			
1.	Dr. T. Renganathan and Dr. Ethayaraja Mani	AICTE QIP Short-Term Course - Development of Chemical Engineering Thermodynamics Laboratory for Undergraduates	22-27 January 2018
2.	Dr. Niket S. Kaisare, Host Faculty and Prof. Jay H. Lee, Korea Advanced Institute of Science and Technology, Daejeon, South Korea	GIAN course: Model Predictive Control: Theory and Applications	29 January–2 February 2018
3.	Dr. R. Vinu and Dr. Rajnish Kumar	AICTE-QIP sponsored short term course: Thermochemical Conversion of Biomass for Energy and Fuels	12-17 February 2018

Short-term courses/workshops/seminars/symposia/conferences/training attended by the faculty members in academic institutions and public sector undertakings

Sl. No.	Faculty Member	Title	Institution	Period
Workshops				
1.	Dr. R. Nagarajan	Research-Collaboration Workshop	Attended the workshop with delegates from Iranian universities, New Delhi	August 2017
2.	Dr. R. Vinu	High Density (JP 10) High Energy (Boron Based) Slurry Fuel for Gas Turbine Engines	Gas Turbine Research Establishment (GTRE), Bengaluru	30-31 August 2017
3.	Dr. R. Nagarajan	2 nd Annual Pan IIT Workshop in Bio-Sciences	Goa	5-7 October 2017
4.	Dr. Raghuram Chetty	National Conference and WorkshopTECHSYNOD'17	Mohandas College of Engineering and Technology, Trivandrum	19 -21 December 2017
5.	Dr. Abhijit P. Deshpande	Attended the workshop on Soft and Active Matter and delivered two lectures on Polymers	University of Hyderabad, Hyderabad	14-15 February 2018
6.	Dr. T. Panda	National workshop, Department of Chemical Engineering, Advanced Technologies for Biomolecule Separations	Visakhapatnam, Andhra Pradesh	16-17 February 2018
7.	Dr. Abhijit P. Deshpande	Consultation workshop: Smart Village	National Institute Of Rural Development Panchayati Raj, Hyderabad	22-23 February 2018
8.	Dr. Sreenivas Jayanti	Battery Technology and Electric Mobility	HP Green R&D Centre, Bengaluru	8-9 March 2018
9.	Dr. T. Renganathan	Resource person for a two-day workshop on Advanced process simulation using Aspen Plus, Department of Chemical Engineering	SRM Institute of Science and Technology, Tamil Nadu	9-10 March 2018
10.	Dr. T. Renganathan	Resource person for a two-day workshop on Process modeling and simulation of chemical processes using MATLAB and Aspen Plus, in workshop on Modeling and simulation aided computations in chemical engineering	Pandit Deendayal Petroleum University, Gujarat	16-17 March 2018
Short-term Course				
1.	Dr. Sreenivas Jayanti along with Dr. H. Leion from Chammers, University of Technology, Sweden	GIAN course: Chemical Looping Combustion for CO ₂ Capture	National Institute of Technology, Warangal	20-24 November 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1.	Dr. Swagatika Sahoo	Mathematical modeling of inherited metabolic disorders	IISc Bangalore	5-7 April, 2017
2.	Dr. Raghuram Chetty	Shape-controlled platinum and palladium nanostructures for electro-catalytic applications	IISc Bangalore	4 July 2017
3.	Dr. Tanmay Basak	CFD analysis of heat transfer and fluid flow problems using FEM and FVM	IITM (ISM) Dhanbad	5-6 July 2017
4.	Dr. Abhijit P. Deshpande	Coarse-grained models for polymers understanding of polymer structures and interactions with solvents	Amal Jyothi College of Engineering, Kottayam	14 July 2017
5.	Dr. S. Ramanathan	Electrochemical Science and Technology (ICONEST 2017)	IISc Bangalore	10-12 August 2017

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
6.	Dr. Aravind Kumar Chandiran	Building transient photovoltage or photocurrent spectrometer; workshop: Instrumental aspects in analytical electrochemistry	Department of Chemistry, IIT Madras	16 August 2017
7.	Dr. S. Pushpavanam	Technology development for a zero discharge process for e-waste treatment	HICC, Hyderabad	1 September 2017
8.	Dr. R. Nagarajan	Applications of sono-chemistry in clean coal technology	SRM University	14 September 2017
9.	Dr. R. Vinu	Production of high quality bio-oil from biomass residues and waste plastics via microwave-assisted co-pyrolysis and catalytic upgradation	Mayfair Convention Bhubaneswar, Odisha	13-15 January 2018
10.	Dr. Tanmay Basak	Computational fluid dynamics (CFD) and its applications in engineering and science	College of Engineering and Technology, Bhubaneswar	19-23 February 2018
11.	Dr. S. Ramanathan	Applications of electrochemistry in energy and environment	NIT Calicut	9 March 2018
12.	Dr. A. Kannan	Design of experiments for engineers	Anna University	10 March 2018

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from Institute
1.	Dr Arun K. Tangirala	San Antonio Michigan State University, USA	29-30 March 2017	2017 AIChE Spring Meeting	No
2.	Dr S. Pushpavanam	France	24 April-3 May 2017	Meet collaborators to write an Indo-French proposal	No
3.	Dr Sumesh P. Thampi	United Kingdom	6-12 May 2017	Share knowledge, experience and hold informal discussion with counterparts	No
4.	Dr R. Nagarajan	USA	6-20 May 2017	Attend alumni meetings and visit US universities	No
5.	Dr. Swagatika Sahoo	Denmark	7-11 May 2017	Copenhagen Bioscience Conference	INSPIRE fellowship
6.	Dr Rajnish Kumar	China University of Petroleum Beijing, China	13-24 May 2017	Lectures on Thermodynamics	No
7.	Dr. Raghunathan Rengasamy	Visited Columbia University in the City of New York	1-15 June 2017	Give presentations and participate in research discussions	
8.	Dr. Shankar Narasimhan	Columbia, USA	3-18 June 2017	Brief visit	No
9.	Dr. Raghunathan Rengasamy	Columbia University New York, USA	3-18 June 2017	Industry 4.0 Summit	Project
10.	Dr. Pushpavanam S.	Pierre and Marie Curie University, Paris, France	3-5 July 2017	2017 Annual conference FLOW 17	No
11.	Dr. Vinu R.	Russia	10-14 July 2017	9th International Seminar on Flame Structure	Partial
12.	Dr. Pushpavanam S.	Amsterdam, Netherlands	10-11 July 2017	19th International Conference on Micro, Nanoscale Heat and Mass Transfer Engineering (ICMNHMTE 2017)	No
13.	Dr. Basavaraja M. G.	St. John's Newfoundland and Labrador, Canada	31 July-4 August 2017	ECI Conference, Association in Solution IV	Partial

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from Institute
14.	Dr. Sridharakumar Narasimhan	USA	13-16 August 2017	AICHe-CCPS-SACHe faculty Workshop on Process Safety Management	Partial
15.	Dr. Ethayaraja Mani	Madrid, Spain	3-8 September 2017	31 st Conference of the European Colloid and Interface Society	Partial
16.	Dr S. Ramanathan	Washington, USA	1-5 October 2017	232 th ECS Meeting	Partial CPDA
17.	Dr Arun K. Tangirala	Canada	22-25, 27 and 30 October 2017	CSCHE 2017 conference and exhibition, and brief visit of the Department of Chemical and Materials Engineering, Univesity of Alberta, Edmonton, Canada	Partial CPDA
18.	Dr. S. Pushpavanam	USA	29 October-3 November 2017	2017 Annual AICHe Conference at Minneapolis, Minnesota, USA; organise and host a reception on 30 October 2017 to: 1.Connect with alumni and non-alumni. 2. Showcase the activities and recent new exciting developments in the department 3. Attract quality faculty to the department	No
19.	Dr P. S. T. Sai	France	16-17 November 2017	2 nd International Conference on Advances in Chemical Engineering and Technology, Paris	CPDA
20.	Dr Raghuram Chetty	Egypt	18-26 November 2017	Project discussion on Nano-materials-reverse osmosis antifouling membrane formulations for water desalination	No
21.	Dr. A. Kannan	Yokohama, Japan	13-14 December 2017	Japan-India YNU Symposium 2017 on Emerging Materials and Systems for Green and Life Innovations	Partial CPDA
22.	Dr. Raghuram Chetty	Yokohama, Japan	13-14 December 2017	Japan-India YNU Symposium 2017 on Emerging Materials and Systems for Green and Life Innovations	Partial CPDA
23.	Dr. Rajnish Kumar	Singapore	22-30 December 2017	Brief visit to University of Singapore	No
24.	Dr. Aravind Kumar Chandiran	United Kingdom	26 February-2 March 2018	EPSRC Global Challenges Research Fund Discussion at Cardiff University, UK	No
25.	Dr. Niket S. Kaisare	United Kingdom	26 February-2 March 2018	EPSRC Global Challenges Research Fund Discussion at Cardiff University, UK	No
26.	Dr. R. Vinu	United Kingdom	26 February-2 March 2018	EPSRC Global Challenges Research Fund Discussion at Cardiff University, UK	No
27.	Dr. Rajnish Kumar	Malaysia	20-23 March 2018	Offshore Technology Conference Asia 2018	Yes

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Member	Award	Awarded by	Awarded for	Date of award
i. Honours					
1.	Dr. S. Pushpavanam	Selected as Institute Chair Professor	IIT Madras	Excelled in teaching and service to the institute/nation/profession	1 June 2017
ii. Awards					
1.	Dr. Niket Kaisare	Early Career Research and Development Award 2016-17	Institute Day, IIT Madras	Early career research and development award	18 April 2017
2.	Dr. S. Pushpavanam	Prof. Dr. Y. B. G. Varma Award for Teaching Excellence for academic year 2016-2017	Alum Nite, IIT Madras	Teaching excellence for academic year 2016-2017	22 July 2017
3.	Dr. Raghuram Chetty	Bhagyalakshmi & Krishna Ayengar Award	Institute Day, IIT Madras	For having guided best M.Tech, project titled, Palladium dendrites as catalyst for portable air breathing formic acid fuel cells	18 April 2017
4.	Dr. R. Vinu	Amar Dye Chem Award for Excellence in Research and Development (Under the age of 35)	Indian Institute of Chemical Engineers (IChE)	Excellence in research and development (Under the age of 35)	27 December 2017
5.	Dr. M. Chidambaram (Retired)	1. Chemical Weekly Award 2. IChE NRC Award 3. Kuloor Memorial Award	IChE	Best technical paper published in Indian Chemical Engineer for 2016	CHEMCON 2017

Other Achievements of Faculty

- Dr. Rajnish Kumar visited Guangzhou, China on 8 April 2017 to kick start an initiative on collaborative research in the area of gas hydrates involving Indian and Chinese researchers.
- Dr. P.S.T. Sai was nominated by Thapar University, Punjab to evaluate UG engineering programmes in tier I format for grant of NBA accreditation. The process took place from 21-23 April 2017.
- Dr. R. Vinu was selected as Young Associate of the Indian Academy of Sciences (IAS), Bengaluru. The term of associateship is 2017-2020.
- Dr. R. Nagarajan
 - Attended the Board of Directors meeting of Indian Additives Limited in Chennai on 27 June, 2017
 - Participated in faculty promotion interviews in the Department of Chemical Engineering, SRM University, Kattankulathur on 4 July, 2017
- Dr. Sreenivas Jayanti attended the 4th meeting of Methods and Equipments for Underground Coal Gasification and Coal Bed Methane Sectional Committee, MED 37, on 5 June 2017, at Institute of Reservoir Studies, ONGC, Chandkheda Campus, Sabarmati, Ahmedabad.
- Dr. Shankar Narasimhan became a member of the Selection Committee for Indian Institute of Technology Ropar, Punjab on 17 July 2017.
- Dr. Rajnish Kumar became a member of the Faculty Selection Board for Indian Institute of Petroleum Engineering, Vizag on 18 July 2017.
- Dr. Ramanathan, Department of Chemical Engineering, IIT Madras, attended the oral viva voce examination of Uma Krishna-kumar, Studies on catalytic conversion of rubber seed oil into biodiesel using metal oxides, 29 June 2017, Calicut, Kerala.
- Dr. Sreenivas Jayanti, Department of Chemical Engineering, IIT Madras attended the oral viva voce examination of Deshpande Amol Anilrao, 7 July 2017, BITS Pilani, Goa.
- Dr. Rajnish Kumar attended the Research Advisory Council (RAC) meeting of Methane production from marine hydrate deposits: bench scale studies for methane recovery by carbon dioxide replacement on Tuesday, 29 August 2017 at GAIL Corporate Office, Ground Floor MP Hall, 16, Bhikaji Cama Place, R.K. Puram, New Delhi.

11. Dr. R. Nagarajan
 - Attended a research collaboration workshop with delegates from Iranian universities on 17 August, 2017 in New Delhi.
 - Was the Chief Guest at Teachers Day function organised by Rotary Club of Madras Traditional on 9 September, 2017 at Agarwal Vidyalyaya Mat. Hr. Sec. School, Vepery.
 - Attended Board of Directors meeting of Indian Additives Limited in Chennai on 27 September 2017.
12. Dr. Swagatika Sahoo, INSPIRE Faculty, attended Women Scientist & Entrepreneurs Conclave at the Indian International Science Festival (IISF), 13-16 October, 2017
13. Dr. S. Ramanathan attended the Syllabus Sub-Committee meeting for framing the syllabi for III to VIII semesters of B.Tech. pro-programmes on 7 November 2017 at Anna University, Chennai.
14. Dr. Abhijit P. Deshpande attended the 14th PAC (Review Meeting) of Chemical and Environmental Engineering on 20-21 November 2017 at 9 a.m., Indian Institute of Technology, Delhi. Project Title: Large amplitude oscillatory shear of physically aggregating complex fluids.
15. Dr. Shankar Narasimhan attended the 13th PAC meeting of Chemical and Environmental Engineering on 16-17 October 2017 at Central Sericultural Research and Training Institute (CSRTI), Mysore, Karnataka.
16. Dr. Rajnish Kumar evaluated the thesis and attended viva voce exam in Civil Engineering Department, IIT Bombay on 2 November 2017. The title of the thesis was Evaluation of gas and water permeability in hydrate bearing sediments.
17. Dr. R. Nagarajan attended Board of Directors meeting of Indian Additives Limited on 26 November 2017, Kumarakom, Kerala.
18. Dr. Shankar Narasimhan attended the Selection Committee meeting for faculty position in the Department of Chemical Engineering on 19 January 2018.
19. Dr. Sreenivas Jayanti attended Member of Selection Committee for faculty recruitment in the Department of Chemical Engineering on 30 January 2018.
20. Dr. P.S.T attended Member of Selection Committee for faculty recruitment from 28-30 January 2018.
21. Dr. R. Nagarajan attended Board Meeting of Ivycap Ventures on 16 December 2017 at IIT Delhi.
22. Dr. A. Kannan participated in Board of Studies meeting, Department of Chemical Engineering, Rajalakshmi Engineering College on 12 January 2018.
23. Dr. Sreenivas Jayanti participated in the exhibition organised by Army Design Bureau, Directorate General of Perspective Planning, General Staff Branch, Integrated HQ of MoD (Army), DHQ, PO, New Delhi 110011. Vanadium redox flow battery stack was exhibited at the IIT Madras stall on 7 January 2018.
24. Dr. Sumesh Thampi visited IIT Bombay from 11-14 January 2018. He had discussions with Dr. Ratul Dasgupta, Assistant Professor, Department of Chemical Engineering, IIT Bombay on a collaborative effort related to a research proposal on measuring rainfall in the country, and for potential funding in collaboration with colleagues at IIT Madras and IIT Hyderabad.
25. Dr. Arun K. Tangirala attended the Technical Chair at Third IFAC International Conference on Advances in Control and Optimization of Dynamical Systems, Hyderabad, 18-22 February 2018. He was session chair at this conference and gave an invited talk on Introduction to research at IEEE APS Madras Chapter, Professional Development Program on Scholarship and Re-search, February 2018.
26. Dr. R. Vinu was nominated as a member of the Biofuels Working Group sub-committee to evaluate "Biomass to drop-in fuel and biomass to biocrude for co-refining" by Ministry of Petroleum and Natural Gas (MoP&NG), Government of India, New Delhi and participated in the 2nd meeting of the sub-committee on 23 March 2018 in IOCL, New Delhi.
27. Dr. T. Renganathan attended kick-off meeting and award event for Indo-UK projects on Water Quality Research programme, organised by DST on 19 February 2018, New Delhi. Title of the project: Antimicrobial resistance and pollutants: interactive studies and novel sensor technologies; collaborating universities: IIT Madras, IIT Roorkee, Heriot-Watt University, University of Edinburgh, James Hutton Institute; project cost: Rs.3.22 crore.
28. Dr. Raghuram Chetty visited FEC World Class Testing Equipment at New Delhi on 2 February 2018 in connection with a DRDO project on air filtration system.
29. Dr. Raghuram Chetty participated in the 5th meeting of the MNRE Project Monitoring Committee on Fuel Cells regarding on-going projects on Titania nanotube as alternate catalyst support for direct methanol fuel cells at National Institute of Solar Energy (NISE), Gurugram, 16 February 2018.
30. Dr. Raghuram Chetty visited BPCL Corporate R&D Centre, Greater Noida (UP) on 23 February 2018 in connection with approval of the IITR-IITM consortium proposal on recovery of metal values from spent Lithium batteries.
31. Dr. T. Panda participated in the CSIR Assessment Committee in the area of Biosciences and Biotechnology, CSIR-Central Leather Research Institute, Adyar, 7-8 February 2018.
32. Dr. Shankar Narasimhan attended the 81st meeting of Scientific Advisory Committee (SAC) on Hydrocarbons of MoP&NG at NOIDA on 14 March 2018.
33. Dr. Rajnish Kumar participated and contributed as technical session chairperson in Offshore Technology Conference Asia 2018, 20-23 March 2018, Kuala Lumpur, Malaysia.

34. Dr. Sesha Talpa Sai attended selections for faculty recruitment on 26 February 2018.
35. Dr. Sesha Talpa Sai attended the meeting of selection board for recruitment of scientists for Defence Research and Development Organisation (DRDO), New Delhi, 28 February 2018.
36. Dr. Abhjit P. Deshpande participated in RuTAG Project Review Committee Meeting in New Delhi on 21 February 2018.
37. Dr. Abhijit P. Deshpande participated as an expert in faculty selection committee, on 28 March 2018.
38. Dr. Sreenivas Jayanti participated in the 5th meeting of the Project Monitoring Committee on Fuel Cells RD&D projects at National Institute of Solar Energy, Gwal Pahari, Gurugram on 16 February 2018.
39. Dr. A. Kannan participated in the CSIR Assessment Committee CSIR – Central Leather Research Institute, Adyar on 9 February 2018.
40. Dr. A. Kannan participated as Member, Selection Committee, AGFS on 20 March 2018.
41. Dr. A. Kannan inaugurated the conference on Recent Trends in Chemical, Energy and Environmental Engineering (RTCEE 2018) on 27 March 2018 at Sriram Engineering College, Perumalpattu.

Fellowships of Academies and Professional Societies

Sl. No.	Faculty Member	Year of admission
INAE		
1.	Dr. Raghunathan R.	1 November 2017

Journal Editorial Boards

Sl. No.	Faculty Member	Position	Journal Name
1.	Dr. R. Vinu	Editorial Board Member	Advanced Powder Technology (Elsevier journal, impact factor 2.48)
2.	Dr. Rajagopalan Srinivasan	Academic Editor	PLOS One Journal (http://journals.plos.org/plosone/)
3.	Dr. Rajagopalan Srinivasan	Editorial Board Member	Process Safety and Environmental Protection (Elsevier journal, impact factor 2.90)
4.	Dr. Niket S. Kaisare	Associate Editor	International Journal of Control, Automation and Systems (2016 Impact factor 1.7)

4.4.4. Design and Development Activities

Brief and specific details of process/instruments/equipment/software designed and developed

The new Chemical Engineering Department website was created by Shri D. Krishnamurthy (System Administrator) under the supervision of Prof. Abhijit P. Deshpande and Dr. Ethayaraja Mani.

New Facilities Added or Major Equipment Procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1.	Smart interactive board	1.5
2.	Control panel spinning basket reactor	1.7
3.	Tank and pump for spinning basket reactor	1.5
4.	Computer systems (30 Nos.) for DCF Lab	12.25

Patents Filed

Sl. No.	Faculty Member	Topic of patent
1.	Dr. Raghuram Chetty	An effective strategy to remove chromium from wastewater
2.	Dr. Raghuram Chetty	Sediment-water electrolytic cell for dual phase chromium removal and energy recovery
3.	Dr. Nagarajan R.	Designing of an Indian spice based nano-scaled system for medicinal applications
4.	Dr. Pushpavanam S.	Continuous concentration of a dilute solution of a solute using an integrated microfluidic device
5.	Dr. Ramanathan S.	Nonlinear electrochemical impedance spectroscopy to identify processes, their interactions and system stability
6.	Dr. Raghuram Chetty	Redox electrolytic fuel cell for desalination coupled wastewater treatment

4.4.5. Research and Consultancy

Sponsored Research Projects (ongoing and new)

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
1.	Development of Alternate Electrodes and Electrolyte Materials for Ameliorating the Performance of Vanadium Redox Flow Battery (National Post Doctoral Fellowship)	3 April 2017-2 April 2019	Department of Science and Technology (DST)	19.2	Dr. Raghuram Chetty
2.	Development of Nanocomposite Thin Film with Plant Oil Using Biopolymer and its Antimicrobial Efficacy on Wound Causing Microorganisms In Vitro	19 April 2017-18 April 2019	DST	19.2	Dr. R. Nagarajan
3.	National Carbonaceous Aerosols Programme (NCAP) Working Group III Project	63 months (30 March 2016-29 June 2021)	Ministry of Environment and Forests	399.5 (for 5 years)	Dr. R. Ravi Krishna (CH), Dr. Shiva Nagendra (CE), Dr. Sachin Gunthe (CE), Prof. Chandra Venkataraman (IIT Bombay)
4.	Effective Cracking of Endothermic Fuels Using Different Initiators – Experimental and Mechanistic Study	3 years w.e.f. 14 May 2017	Science & Engg Research Board (DST, GoI)	45.97	Dr. R. Vinu
5.	Development of Tubular PEM fuel Cells	3 years	Naval Research Board	32.48	Dr. Raghunathan Rengsamy
6.	Technology Demonstration of Nanofilter Media for Self-Cleaning Air Filtration System and Performance Prediction Using Computational Fluid Dynamics Modeling and Simulation	3 years w.e.f. 31 March 2017	DRDO	99.89	Dr. Arul Prakash K. (PI, AM), Dr. Raghuram Chetty (Co-PI, CH), Dr. Saravana Kumar G. (Co-PI, ED)
7.	Metal-Organic Frameworks for Solar Rechargeable Battery	3 years	Science and Engineering Research Board (SERB)	65.88	Dr. Aravind Kumar Chandiran
8.	Aliovalent Ionic Substitution in Methylammonium Tin Iodide for All-screen-printed Perovskite Solar Cells (National Post Doctoral Fellowship)	2 years	DST	19.2	Dr. Aravind Kumar Chandiran
9.	Design, Synthesis and Applications of Magnetic Nanohybrid Materials for Gas Hydrate Engineering and Research	2 years	DST	19.2	Dr. Rajnish Kumar
10.	Antimicrobial Resistance and Pollutants: Interactive Studies and Novel Sensor Technologies	3 years	Project sponsored by DST, NERC, EPSRC under the India-UK Water Quality Research Programme	322	IIT Madras: Dr. Indumathi M. N., Dr. Pushpavanam S., Dr. Raghavendra Sai V., Dr. Ravi Krishna R., Dr. Renganathan T.; IIT Roorkee: Dr. Gargi Singh
11.	Emulsification: A Promising Approach for Utilizing Biodiesel Fuels in Automotive Engines	3 years	DST (Science and Engineering Research Board)	65.29	Dr. Basavaraja Madivala Gurappa (co-PI, ChE), Dr. K. Anand (PI, ME), Dr. Indrapal Singh (co-PI, CY)

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
12.	Recovery of Valuable Hydrocarbons from Crude Sludge via Microwave-assisted Pyrolysis	1 year	Chennai Petroleum Corporation Limited	20.76	Dr. R. Vinu
13.	Enabling Technologies for Enhancing Access of Medicines in India through Point of Demand Production of Oral Dosage Forms	2 years	Ministry of Health and Family Welfare (ICMR) Dr. Reddy's Laboratories Limited (DRL)	200	Dr. R. Raghunathan, Dr. Basavaraj M. G.
14.	Device Fabrication for Rapid Antibiotic Susceptibility Test	2 years (27 February 2018-26 February 2020)	Biotechnology Industry Research Assistance Council (BIRAC)	21	Dr. S. Pushpavanam
15.	Development of Large Area (100 cm ²) Organic-Inorganic Hybrid Perovskite Solar Cells	2 years (22 March 2018-21 March 2020)	Indian Space Research Organisation	30.5	Dr. Aravind Kumar Chandiran
16.	Studies on the Development of Devices using MXenes/2D Materials for Energy Harvesting Applications	3 Years	BRNS	32.7	Dr. Aravind Kumar Chandiran
17.	New Strategies for Optimal Operation of Water Supply Schemes by Use of Scheduling and Decentralized Infrastructure	3 years (15 March 2018-14 March 2021)	DST	134.9	Dr. Sridharakumar Narasimhan, Dr. Shankar Narasimhan
18.	AMR and Pollutants: Interactive Studies and Novel Sensor Technologies	3 years (17 February 2018-16 February 2021)	DST	322	Dr. T. Renganathan, Dr. S. Pushpavanam, Dr. R. Ravikrishna

Industrial Consultancy Projects (Ongoing and New)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	Project Coordinator: Dr. M. Kamaraj, MME; Co-Project Coordinator: Dr. S. Ramanathan, ChE; Period: 5 months	Analysis of Much receipt in Manali-Meenambakkam ATF pipeline and suggesting remedial measures	IOCL	7.3
2.	Dr. R. Vinu; Period: 2 years	Conduct microwave-wave assisted pyrolysis of two varieties of coals and their blend in microwave pyrolysis reactor and characterise coal, coke, volatiles and non-condensable gases	TATA Steel, Jamshedpur	13.93
3.	Project Coordinator: Dr. Rajnish Kumar; Co-Project Coordinator: Dr. Jitendra S. Sangwai, Dr. T. Pradeep	Methane production from marine hydrate deposits: bench scale studies for methane recovery by carbon dioxide replacement	Gas Authority of India Limited	185.26
4.	Dr. S. Pushpavanam; Period: 2 years	Systematic study of smart maturation process for malt spirit using appropriate maturation markers for maturation model development	United Spirits Limited, Bengaluru	23.51
5.	Dr. R. Vinu; Period: 1 Year	Recovery of valuable hydrocarbons from crude sludge via microwave assisted pyrolysis	Chennai Petroleum Corporation Limited	20.77

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
6.	Dr. Raghunathan Rengasamy; Period: 1 Year	Module 2 - Industrial internet applications for aluminium digital smelter	GE India Technology Centre Private Limited	10.35
7.	Dr. Sreenivas Jayanti; Period: 5 months	Dry flue desulphurization	Bharat Heavy Electricals Limited	5.90
8.	Dr. S. Ramanathan	Test of compatibility of given organic material with hydrogen peroxide	L&T Technology Services	2.41
9.	Dr. R. Vinu	Analysis of fire accident in M/s. Meghmani Industris Limited, Ahmedabad	United India Insurance Co. Limited	1.15

RBI projects (ongoing and new)

Sl. No.	Faculty Member	Title	Industry	Amount
1.	Dr. R. Vinu	Understanding biomass pretreatment technologies that produce monomeric sugars and lignin from biomass of Indian varieties; duration: One year	Exxon Mobil, USA	\$50,000 (Unrestricted grant)
2.	Dr. Sreenivas Jayanti	Establish the technological basis of Dry FGD systems and reconcile the basis of the Dry FGD system offered in the market; duration: 6 months	BHEL	Rs.5.9 lakh

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date of visit	Purpose of visit
1.	Dr. Venkat Venkatasubramanian, Samuel Ruben-Peter G. Viele Professor of Engineering, Department of Chemical Engineering, Columbia University, New York	13 July 2017	Seminar talk: The promise of artificial intelligence in PSE: Is it here, finally?
2.	Dr. Alan R. Jacob, Post Doctoral Researcher Department of Chemical and Biomolecular Engineering, North Carolina State University	31 July 2017	Seminar talk: Colloidal gels tuned by oscillatory shear
3.	Prof. David Lewis, Ph.D CEng FICHEM, School of Chemical Engg., Faculty of Engineering, University of Adelaide, Australia	14 August 2017	Meet the faculty of Chemical Engineering
4.	Dr Thallada Bhaskar, Principal Scientist and Head of Biomass Bio-fuels division, CSIR, IIP, Dehradun	21 August 2017	Biomass as a renewable carbon resource for bio-fuels and chemicals through integrated thermochemical and biochemical pathways
5.	Shri B. S. Girda (Batch 1967), President Orient Paper Mills	24 August 2017	Why chemical industry and chloro alkali (caustic soda, chlorine and their downstream) is vital for national development and leapfrogging developments in last 50 years in chloro alkali industry
6.	Dr Srikanth Toppaladoddi, PDFAll Souls College, University of Oxford	7 September 2017	Brownian motion, polar oceans, and the statistical physics of climate
7.	Dr Srikanth Toppaladoddi, PDFAll Souls College, University of Oxford	8 September 2017	Heat transport in turbulent thermal convection over rough walls
8.	Dr Neale R Neelameggham, IND LLC, 1967 Alumnus of our Institute	13 September 2017	Stored renewable energy in coal
9.	Dr Balaji Rao, Associate Professor, Department of Chemical and Biomolecular Engineering, North Carolina State University	21 November 2017	Engineering molecular recognition for quantitative biology

Sl. No.	Name and Designation	Date of visit	Purpose of visit
10.	Dr Umesh Kulshreshtha, Professor, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi	22 November 2017	Atomospheric dust and its interactions with C, N and S cycles in South Asia
11.	Dr Harikrishnan Ramanan, Former Engineering Manager, GE-Singapore Water Technology Centre, NUS	21 December 2017	Electro-separation technologies for water treatment
12.	Prof. Sue Powers and Suresh Dhanyala, Clarkson University, USA	21 December 2017	Discussions and exploring collaborations
13.	Prof. Bala Subramanian, Dan F. Servey Professor of Chemical Engineering and Courtesy Professor of Chemistry, Director, Center for Environmentally Beneficial Catalysis (CEBC), University of Kansas, Lawrence, KS, USA	5 January 2018	Intensified oxidative processes for producing commodity chemicals
14.	Mohandas, Ph.D student, University of Crete	9 January 2018	Microstructural changes in colloidal rod suspension undergoing shear flow
15.	Dr. Saikishan Suryanarayanan, PDF University of Texas at Austin	11 January 2018	Mechanics of roughness-induced-boundary layer transition and is control
16.	Dr Harshwardhan H. Katkar, Postdoctoral scholar, University of Chicago	22 January 2018	Modeling and simulations of biopolymers and synthetic polymers
17.	Dr. Leja Hattiangadi, Adjunct Professor, IIT Bombay	28 February 2018	Reliance Hazira complex audio visual presentation
18.	Prof. R. Kannan, John Hopkins School of Medicine, USA	1 March 2018	Precision nanomedicines for neurological disorders – from chemistry to the clinic
19.	Dr. Shrikumar Suryanarayanan, Chairman and Co-Founder of Sea6 Energy Private Limited	14 March 2018	Career opportunities for practitioners of chemical engineering in biotechnology
20.	Prof. Devang Vitin Khakhar, Director, IIT Bombay	20 March 2018	Visit to the department
21.	Ms. Lurdes Ribeiro, Chemical Engineering Academic Office, Instituto Superior Técnico	26 March 2018	Erasmus+ staff mobility for training, know about the department for possible collaboration

Other Activities of the Department/Centre

Faculty and Staff

1. Dr. Ethayaraja Mani and Dr. R. Vinu have been promoted to the position of Associate Professor in the Department of Chemical Engineering, IIT Madras with effect from 21 July 2017.
2. Prof. M. S. Ananth, Former Director and Professor (Retd.), IIT Madras joined as Emeritus Research Fellow in the Department of Chemical Engineering, IIT Madras from September 2017 to carry out academic research activities for a period of three years.
3. Dr. Rajagopalan Srinivasan joined the department as a Professor on 15 March 2018.
4. Shri V. K. Rajkumar has been appointed as Junior Technical Superintendent in the Department of Chemical Engineering on 14 August 2017
5. Dr. M. Chidambaram retired from the services of this institute on 30 April 2017. A workshop, Trends in Process Control, was organised on 21 April 2017 in his honour by the Chemical Engineering Department.

Students Matters

1. CHEMCLAVE 2018: Events: Aquarocket, Chem-e Car, Chem-e Debate, Chemical Engineering Entrepreneurship, Chemical X, Main Quiz, Paper and Poster Presentation, Workshops, Aspen Plus, R, LaTeX, Matlab, 9-11 March 2018, 800 participants, 37 colleges, 9-11 March 2018.
2. ChemSymp 2k18: The research scholars of Chemical Engineering Department, IIT Madras conducted Research Scholars Symposium on 3 March 2018 at IC&SR Auditorium. The scholars presented their research publications and had discussions on research. Events: Oral Presentation, Invited Lecture by Dr. R. Kannan, Poster Presentation, ChemESure Hunt

3. Improving Smart Skills of M. Tech. Students: With initiative from Alumni Relations Office, the department conducted a soft skills improvement programme for M. Tech. students with the objective of excelling in placement interviews on 28 November 2017. IIT Madras alumnus, Mr. S. Shankar (MT8113CH), now a soft-skills trainer, conducted a three-hour programme for III semester M. Tech. students. The students gave positive feedback of the programme.

Important Visit: National/International collaboration achievements by the Department

1. **GAIL Visit:** Mr. Parivesh Chugh (GM, R&D) and Mr. Nawal Kishore Pandey (Chief Manager, R&D), in coordination with Dr. Rajnish Kumar, held discussions with Dr. Shankar Narasimhan, Dr. Preeti Aghalayam, Dr. Niket Kaisare, Dr. R. Vinu, Dr. Ara-vind Kumar Chandiran, on 19 January 2018 on existing and potential project proposals with GAIL funding.
2. **Visit by Dr. Bhima Sastry (1982 batch):** The former faculty member and current Program Manager and Acting Director, Office of Fossil Energy, Department of Energy, Maryland, USA, visited the institute on 18 January 2018 (after coordinating with IAR).
 - a. Initiate an exchange programme where a faculty/student may visit the lab and faculty and stay for six months with full expenses paid
 - b. Arrange a visit of the technical and HR personnel from Sotacarbo, Italy by May 2018 to discuss possible collaborations with the department and NCCRD
 - c. Arrange a visit of a ChE faculty to Sotacarbo.
 - d. Possibly support RuTAG activity

Results obtained in research work (from M.S. and Ph.D thesis) of the Scholar/Faculty

Sl. No.	Scholar/Faculty Member
Ph.D.	
1.	Subin Poulouse CH09D006, Dr. T. Panda, Studies on biosynthesis and application of silver nanoparticles
2.	K. S. Rajmohan CH10D003, Dr. Raghuram Chetty, Electrochemical reduction of nitrate on copper-based electrodes in solid polymer electrolyte reactor
3.	Santhosham Aruna CH10D012, Dr. Preeti Aghalayam, Nitric oxide emissions in diesel and biodiesel engines-A detailed study using surrogate fuels
4.	Nithya M. CH11D006, Dr. T. Panda, Dr.Sarit Kumar Das, Studies on chemotaxis and thermotaxis of e. coli in a microfluidic device
5.	Sam David S. CH11D009, Dr. T. Renganathan, Dr. K. Krishnaiah, Cocurrent downward liquid-liquid system: hydrodynamics and residence time distribution
6.	Satheesh Kumar Perepu CH11D011, Dr. Arun K. Tangirala, Novel sparse optimization-based methods for signal recovery and system identification
7.	Abhishankar Kumar CH11D016, Dr. Sridharakumar Narasimhan, Optimal input signal design for plant friendly identification of process systems
8.	Ajith C. CH11D017, Dr. Abhijit P. Deshpande, Dr. Susy Varghese, The effect of heterogeneities and hydration on the microstructure and transport in crosslinked hydrophilic ionic polymer membranes
9.	Jason Ryan Picardo CH11D026, Dr.S Pushpavanam, Physics of layered micro-flows
10.	Satyam Naidu Vasireddy CH11D030, Dr.Sreenivas Jayanti Dr. Preeti Aghalayam, CO ₂ gasification reactivity studies of coals and biomass blends of Indian origin for power generation with CO ₂ capture
11.	Tanneru Hemanth Kumar CH11D031, Dr.Raghunathan Rengasamy, Modeling and optimization of micro photosynthetic power cells
12.	Praveen Kumar Sappidi CH11D033, Dr. Upendra Natarajan, Molecular simulations of structure of anionic polyelectrolytes in aqueous solution and water-alcohol mixture
13.	Pratibha Biswal CH11D037, Dr.Tanmay Basak, Studies of natural convection during differential and Rayleigh-Bénard heating within cavities involving curved (concave/convex) wall(s): heatline and entropy generation approaches
14.	Sivaramakrishna Burela CH12D001, Dr. R. Ravi, Application of mass transfer models: Case studies on Stefan and capillary tubes for the diffusion of ideal gas mixtures
15.	Trivikram Reddy N. CH12D008, Dr. Basavaraja M. Gurappa, Role of charge and hydrophobicity of colloidal particles in stabilisation of pickering emulsions
16.	Venkata Reddy P. CH12D009, Dr. Shankar Narasimhan, Dr. Raghunathan Rengasamy, Sensor and actuator network design for contaminant detection and mitigation in water distribution networks
17.	Vir Anil Babasaheb CH12D010. Dr. S. Pushpavanam, Hydrodynamics, Mass transfer and reactions in liquid-liquid two-phase microreactors

Sl. No.	Scholar/Faculty Member
18.	S. Manigandan CH12D016, Dr. Ethayaraja Mani, Synthesis and self-assembly of spherical and non-spherical patchy colloids
19.	Chandra Shekar Bestha CH14D002, Dr. M. Chidambaram, Centralized PID controllers for linear multivariable systems
M.S.	
1.	Kadhiresan A. CH11S018, Dr. Susy Varughese, Cross-linked PVA membranes for CO ₂ separation by facilitated transport
2.	Snigdha Sree R. CH12S016, Dr. Preeti Aghalayam, Experiments and modeling of after-treatment options for diesel based engines
3.	Prajapati Aditya CH13S015, Dr. Renganathan T, Kinetic studies of CO ₂ capture by supported K ₂ CO ₃ in a fluidized bed reactor
4.	Siddharth Rajendra Jain CH13S022, Dr. Vinu R, Investigation of ethylbenzene oxidation in SMPO process to improve the yield and selectivity of ethylbenzene hydroperoxide
5.	Mohan Das CH14S006, Dr. Susy Varughese, Sustainable approaches to the recycling of carbon fiber reinforced polymer composite (CFRP) waste
Dual Degree (M.S. and Ph.D)	
1.	Danny Raj M CH11D038, Dr. Raghunathan Rengasamy, Drops as agents: Understanding complex behavior in 2d microchannels
2.	Nikita Saxena CH14D208, Dr. M Chidambaram, Relay tuning of PID controllers for unstable systems

Interdisciplinary Group Achievements of the Departments

The different interdisciplinary groups, including faculty from Chemical Engineering Department have been successful in getting projects in their collaborative areas as detailed in section 5.1. These include funded projects in aerosols (with CE in IIT Madras and IIT Bombay), nanofilter media (AM, ED), antimicrobial resistance (CE, IIT Madras, IIT Roorkee), biodiesel fuels (with CY), methane production (CY, OE), and water distribution networks (CE, CY and IITB).

Socially Relevant Activities Carried out by the Department

Dr. R. Nagarajan is Project Coordinator, CSIE (Centre for Social Innovation and Entrepreneurship; <http://csie.iitm.ac.in>). The centre focuses on teaching and research related to social enterprise in India

International collaboration achievements by the Department

Faculty visit

Sl. No.	Faculty Member	Purpose of Visit	Date and Venue
1	Dr. Raghuram Chetty, Dr. Kannan A.	Collaboration and symposium, Yokohama National University, Japan	11-15 December 2017
2	Dr. Raghuram Chetty	Indo-Egypt International collaborative project (DST funded)	19-25 November 2017

Major Infrastructure Development

Adding new experiments to the UG lab

1. Spinning basket reactor
2. DCF (30 systems)

4.5. Department of Chemistry

4.5.1. Introduction

The Department of Chemistry was a part of the Department of Chemical Engineering during 1959–1961. It was established as an independent department in the year 1961, with Prof. V. Srinivasan as the Head-in-Charge. Prof. M.V.C. Sastri assumed charge as the first Head of the Department in November 1961. He was instrumental in building the department as well as the Applied Chemistry Building (completed in 1973). Prof. Sastri was also responsible for the Special Instruments Laboratory (established in 1970; later known as RSIC and presently known as SAIF), and the Material Research Science Centre (established in 1974

with Prof. Sastri as the Head and Prof. V. Srinivasan as the Associate Head).

The department offers M.Sc. and Ph.D. programmes in chemistry. As of date, 917 students have graduated with the M.Sc. degree and 677 students with the Ph.D. degree. Various aspects of chemistry are also taught at the preparatory level (for weaker section students) and in the B.Tech. programme (core as well as minor stream courses in chemistry). Today, the department is very well equipped, has modern instrumentation facilities, and is actively engaged in performing quality teaching and research in frontier areas.

4.5.2. Academic Programmes: M.Sc. and Ph.D.

New courses introduced

Sl. No.	Course No.	Title
1	CY5011	Transition Metal and Bioinorganic Chemistry
2	CY5012	Main Group Chemistry and Spectroscopic Characterisation of Inorganic Compounds
3	CY5013	Conceptual Organic Chemistry
4	CY5015	Classical and Statistical Thermodynamics
5	CY5016	Kinetics and Reaction Dynamics
6	CY5018	Chemical Bonding and Group Theory
7	CY5019	Organometallic Chemistry
8	CY5020	Analytical Chemistry: Principles, Practices and Applications
9	CY5021	Computational Chemistry Lab
10	CY5023	Organic Chemistry Lab
11	CY6013	Spectroscopic Applications in Organic Chemistry
12	CY6015	Electrochemistry: Fundamentals and Applications
13	CY6017	Optical and Magnetic Resonance Spectroscopy
14	CY6019	Modern Synthetic Methods in Organic Chemistry
15	CY6023	New Methods and Strategies in Organic Synthesis
16	CY6025	Project

New lab(s) established

- Joint Facility of Computational Laboratory and TLC Class Room
- HRMS

Students on roll as of September 2017+ M.S. and Ph.D Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
M.Sc.	53	53	-	-	-	106
Ph.D.	36	41	50	55	59	241
Total	89	94	50	55	59	347

Endowment prize instituted

- Keshav-Rangnath Excellence in Research Award for two research scholars and the respective guides.
- Cash award of Rs.25,000 each for a postgraduate scholar and faculty guide to be credited to the PCF A/c

Student/Scholar who Attended conferences/seminars and symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue
Abroad				
1	Sankeerthana B.	CY14D021	Oral Presentation, Highly Active and Stable 3D CNT-GR-TiO ₂ Nanohybrid for Efficient Water Splitting	21-26 May 2017, Strasbourg, France
2	Prithi Jayaraj	CY14D029	Oral Presentation, FCH ₂ Technical Conference 2017	31 May-1 June 2017, Birmingham University, UK
3	Rama Krishna Jagarapu	CY12D070	International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC)	2-6 July 2017, Cambridge, UK
4	Manju C. K.	CY13D018	Gordon Research Conferences	9-17 July 2017, Mount Holyoke College, South Hadley
5	Jyoti Sarita Mohanty	CY14D028	Gordon Research Conferences	9-14 July 2017, Mount Holyoke College, South Hadley
6	Anangsha De	CY14D036	16 th International Meeting on Boron Chemistry (IMEBORON XVI)	9-13 July 2017, Chinese University of Hong Kong, Hong Kong
7	Swathy J. R.	CY15D301	Gordon Research Seminar and Conferences on Applied and Environmental Microbiology	15-21 July 2017, South Hadley, USA
	Swayam Prakash	CY16D039	International Conference on Sophisticated Instruments in Modern Research	30 June-1 July 2017, IIT Guwahati, Guwahati
2	Naziya Parveen	CY15D050	International Conference on Sophisticated Instruments in Modern Research	30 June-1 July 2017, IIT Guwahati, Guwahati
3	Soumyakanta Prusty	CY12D036	21 st CRSI National Symposium in Chemistry (CRSI NSC-21)	14-16 July 2017, CSIR-IICT, Hyderabad
4	Sudhakar G.	CY12D092	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
5	Chennrui Bharath Kumar	CY13D009	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
6	Ramkumar V.	CY15D108	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
7	Chennrui Bharath Kumar	CY13D009	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
8	Sateesh Kumar K.	CY13D065	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
9	Sandeep Bose	CY14D078	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
10	Md. Rabiul Islam	CY15D053	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
11	Jhili Mishra	CY14D062	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
12	Debasmita Ghosh	CY14D050	CRSI NSC-21	14-16 July 2017, CSIR-IICT, Hyderabad
13	Prabaharan T.	CY14D072	Crystal Ball Vision on Science and Engineering for Societal Upliftment	7-8 August 2017, CSIR-NIO, Goa
14	Hareesha D.	CY12D014	Crystal Ball Vision on Science and Engineering for Societal Upliftment	7-8 August 2017, CSIR-NIO, Goa
15	Sruthi Guru	CY15D099	Second International Conference on Electrochemical Science and Technology 2017 (ICONEST 2017)	10-12 August 2017, IISc, Bengaluru
16	Yashwant Pratap Kharwar	CY15D112	ICONEST 2017	10-12 August 2017, IISc, Bengaluru
17	Dr. Shobhana Krishnaswamy	CYIPF04	24 th Congress and General Assembly of the International Union of Crystallography	21-18 August 2017, HICC, Hyderabad
18	Sudip Manda	CY14D084	School and Hands-on Training on Photovoltaics for Solar Energy Harvesting	18-20 September 2017, CSIR-CECRI, Karaikudi

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue
19	Dr. S. Soumya	CY16IPF06	8 th East Asia Symposium on Functional Dyes and Advanced Materials (EAS8)	20-22 September 2017, CSIR-NIIST, Thiruvananthapuram
20	Anuja Singh	CY15D036	EAS8	20-22 September 2017, CSIR-NIIST, Thiruvananthapuram
21	Naziya Parveen	CY15D050	6 th International Conference and Exhibition, CHIRAL INDIA 2017	7-8 November 2017, Ramada Plaza Palm Grove, Juhu, Mumbai
22	Koushik Saha	CY14D065	National Workshop on Theory and Applications of Single Crystal X-Ray Diffraction	8-10 November 2017, SAIF, IIT Madras
23	Chandrasekhar A.	CY13D046	XIII JNOST Conference for Research Scholars (JNOST)	9-12 November 2017, Banaras Hindu University, Varanasi
24	Arunprasath D.	CY14D002	JNOST	9-12 November 2017, BHU, Varanasi
25	Chinta Bhavani Shankar	CY14D005	JNOST	9-12 November 2017, BHU, Varanasi
26	Rajib Saha	CY14D018	JNOST	9-12 November 2017, BHU, Varanasi
27	Harekrishna Sahoo	CY14D055	JNOST	9-12 November 2017, BHU, Varanasi
28	Santu Sadhukhan	CY14D203	JNOST	9-12 November 2017, BHU, Varanasi
29	Swayam Prakash	CY16D039	International Conference on Photochemistry and its Applications	10-13 November 2017, Kottayam, Kerala
30	Dharmendra Singh	CY13D010	12 th National Conference on Organics Metallorganics and Thermodynamics (NCOMT) 2017	17-18 November 2017, Hisar, Haryana
31	Basaiahgari Anusha	CY14D044	NCOMT 2017	17-18 November 2017, Hisar, Haryana
32	Rabi Narayan Patra	CY14D074	NCOMT 2017	17-18 November 2017, Hisar, Haryana
33	Sumana Brahma	CY15D038	NCOMT 2017	17-18 November 2017, Hisar, Haryana
34	Yashwant Pratap Kharwar	CY15D112	I2CAM School on Renewable Energy Technologies Via Chemical Route	27 November-2 December 2017, JNCASR, Bengaluru
35	Avijit Baidya	CY13D043	Bengaluru INDIA NANO 2017	7-8 December 2017, Bengaluru
36	Sruthi Guru	CY15D099	3 rd International Conference on Global Trends in Pure and Applied Chemical Sciences	8-9 December 2017, Delhi-NCR
37	Ramya K.	CY13D063	Bioprocessing India (BPI 2017) Recent Trends in Bioprocess for Healthcare, Energy and Environment	9-11 December 2017, IIT Guwahati
38	Kalapaneni Mohan Rao	CY13D050	Symposium on Modern Trends in Inorganic Chemistry (MTIC-XVII)	11-14 December 2017, CSIR-NCL, Pune
39	Anangsha De	CY14D036	MTIC-XVII	11-14 December 2017, CSIR-NCL, Pune
40	Prabaharan T.	CY14D072	MTIC-XVII	11-14 December 2017, CSIR-NCL, Pune
41	Randhir Rai	CY14D076	MTIC-XVII	11-14 December 2017, CSIR-NCL, Pune
42	Benson Joseph	CY15D003	MTIC-XVII	11-14 December 2017, CSIR-NCL, Pune
43	Mohammad Zafar	CY15D023	MTIC-XVII	11-14 December 2017, CSIR-NCL, Pune
44	Sourav Kar	CY15D200	MTIC-XVII	11-14 December 2017, CSIR-NCL, Pune
45	Kuzhanthaivelan S.	CY15D005	Asia-Pacific Association of Theoretical and Computational Chemists (APCTCC 8)	15-17 December 2017, IIT Bombay

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue
46	Parth Gupta	CY15D037	APCTCC 8	15-17 December 2017, IIT Bombay
47	Manmath Panigrahy	CY17D053	APCTCC 8	15-17 December 2017, IIT Bombay
48	Anuja Singh	CY15D036	14 th DAE-BRNS Biennial Trombay Symposium on Radiation and Photochemistry (TSRP-2018)	3-7 January 2018, BARC, Mumbai
49	Jhili Mishra	CY14D062	TSRP 2018	3-7 January 2018, BARC, Mumbai
50	Swayam Prakash	CY16D039	TSRP 2018	3-7 January 2018, BARC, Mumbai
51	Ayan Bhattacharyya	CY14D041	TSRP 2018	3-7 January 2018, TIFR, Mumbai
52	Kingshuk Debsharma	CY16D041	TSRP 2018	3-7 January 2018, TIFR, Mumbai
53	Imran Kazi	CY14D056	Introduction to Gaussian: Theory and Practice	8-12 January 2018, New Delhi
54	Anup Mandal	CY15D056	International Conference on Chemistry for Human Development (ICCHD-2018)	8-10 January 2018, Kolkata
55	Vinod Bhajammanavar	CY15D098	ICCHD 2018	8-10 January 2018, Kolkata
56	Sourav Khan	CY11D086	Conference on Advances in Catalysis for Energy and Environment (CACEE 2018)	10-12 January 2018, TIFR, Mumbai
57	Pavul Raj	CY17IPF01	CACEE 2018	10-12 January 2018, TIFR, Mumbai
58	Sanjeev Gupta	CY13D028	CACEE 2018	10-12 January 2018, TIFR, Mumbai
59	Surya Kumar V.	CY13D070	CACEE 2018	10-12 January 2018, TIFR, Mumbai
60	Surya Kumar V.	CY13D070	Applied Catalysis in Emerging Technologies for Chemicals	17-19 January 2018, Bengaluru
61	Sanjeev Gupta	CY13D028	Applied Catalysis in Emerging Technologies for Chemicals	17-19 January 2018, Bengaluru
62	Rabi Narayan Patra	CY14D074	THERMANS 2018	18-20 January 2018, Goa University, Goa
63	Sumana Brahma	CY15D038	THERMANS 2018	18-20 January 2018, Goa University, Goa
64	Kalapaneni Mohan Rao	CY13D050	National Conference on Luminescence and its Applications (NCLA 2018)	14-16 February 2018, Trivandrum
65	Ramavath Janraj Naik	CY16D083	Electrochemistry in Advanced Materials, Corrosion and Radiopharmaceuticals	15-17 February 2018, BARC, Mumbai
66	M. R. Chinmaya	CY16D043	Electrochemistry in Advanced Materials, Corrosion and Radiopharmaceuticals	15-17 February 2018, BARC, Mumbai
67	Arnab Dey	CY14D001	24th Conference of the National Magnetic Resonance Society of India	16-19 February 2018, IISER Mohali
68	Koushik Saha	CY14D065	International Conference on Emerging Trends in Chemical Sciences	26 February-1 March 2018, Dibrugarh
69	M. R. Chinmaya	CY16D043	Workshop on Battery Technologies and E-mobility	8-9 March 2018, HP R&D Centre, Bengaluru
70	Vasudevarao P.	CY13D058	Workshop on Battery Technologies and E-mobility	8-9 March 2018, HP R&D Centre, Bengaluru
71	Sudip Mandal	CY14D084	Workshop on Battery Technologies and E-mobility	8-9 March 2018, HP R&D Centre, Bengaluru
72	Amrita Chakraborty	CY15D052	International Conference on Nanoscience and Technology	21-23 March 2018, IISc, Bengaluru
73	Papri Chakraborty	CY15D054	International Conference on Nanoscience and Technology	21-23 March 2018, IISc, Bengaluru
74	Biswajit Mondal	CY13D203	International Conference on Nanoscience and Technology	21-23 March 2018, IISc, Bengaluru

Students/Scholars who won outside prizes and awards

Sl.No.	Student/Scholar	Roll No.	Prize	Prize awarded by
1	Dr. Vikram Singh	CY11D091	Gandhian Young Technological Innovation Award	Rashtrapati Bhawan, New Delhi
2	Monojit Ghosal Chowdhury	CY13D021	Best Poster Award in ISACS: Challenges in Inorganic Chemistry	Royal Society of Chemistry, Manchester, UK
3	Swayam Prakash	CY16D039	Best Poster Award for The Use of Zn(II) as Enhancer of Stercobilin Fluorescence: Implication in Water Quality Monitoring	IIT Guwahati, Guwahati
4	Anangsha De	CY14D036	Best Poster Award for Early Transition Metal Guarded Neutral Pendant Heptaborane	Chinese University of Hong Kong, Hong Kong
5	Hareesha D.	CY12D014	Best Poster Award	Indian IJAA Alumni Association
6	Hareesha D.	CY12D014	Crystal Ball Vision on Science and Engineering for Societal Upliftment	CSIR-NIO, Goa
7	Dr. G. Velmurugan	CY16IPF09	Young Scientists' Award in Medical and Veterinary Microbiology	Association for Microbiologists in India
8	Dharmendra Singh	CY13D010	ISCB Best Thesis Award 2018 in Chemical Sciences	Indian Society of Chemists and Biologists
9	Ramavath Janraj Naik	CY16D083	ChemComm Oral Prize	Indian Society for ElectroAnalytical Chemistry
10	M. R. Chinmaya	CY16D043	Award for the Best Poster Presentation	Indian Society for ElectroAnalytical Chemistry
11	Sanjeev Gupta	CY13D028	Award for the Best Oral Presentation	Catalysis Society of India, Bengaluru Chapter
12	Ayan Bhattacharyya	CY14D041	One of the best posters in Phytochemistry	Indian Society for Radiation and Photochemical Sciences (ISRAPS)
13	Arnab Dey	CY14D001	Best Student Poster prize	National Magnetic Resonance Society of India
14	Basaiahgari Anusha	CY14D044	Best Oral Presentation Award	International Conference on Recent Trends in Analytical Chemistry (ICORTAC-2018)

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl.No.	Student/Scholar	Roll No.	Prizes	Donor
1	Bijan Mondal	CY11D052	Institute Research Award	IIT Madras
2	Nisha	CY15C021	1) Mrs. Kalaimani Natarajan Prize 2) Swathi/Jayalakshmi Memorial Award	IIT Madras
3	Hemkalyan Ballav	CY15C013	R. Padmanabhan Memorial Prize	IIT Madras
4	Sudarshan Reddy Senthil Kumar	CY11D033 CY09D051	Prof. C. N. Pillai	IIT Madras
5	Dr. Krishnadas K. R. Dr. Avik Kumar Pati	CY11D016 CY11D049	Prof. Langmuir	IIT Madras
6	Jinu P.Y. Pavan Kumar Mandali	CY09D028 CY10D044	Prof. Werner	IIT Madras
7	Nidhi Sharma	CY11D073	Prof. G. Sundararajan	IIT Madras

4.5.3. Faculty and their activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
S. Sankararaman, Ph.D. (Victoria, Canada)	Synthetic and mechanistic organic chemistry
R. Dhamodharan, Ph.D. (U.Mass, USA)	Chemistry of macromolecules
A.K. Mishra, Ph.D. (IIT Kanpur)	Physical photochemistry, fluorescence spectroscopy

Name and Qualifications	Major Areas of Specialisation
T. Pradeep, Ph.D. (IISc, Bengaluru)	Solid state chemistry, materials science
M.V. Sangaranarayanan, Ph.D. (IISc, Bengaluru)	Electrochemistry
U.V. Varadaraju, Ph.D. (IISc, Bengaluru)	Solid state chemistry, materials science
P. Selvam, Ph.D. (IIT Madras)	Catalysis, solid state chemistry
Archita Patnaik, Ph.D. (BHU)	Physical chemistry, colloid and Interface Science, nanoscience and nanotechnology
S. Baskaran, Ph.D. (IIT Kanpur)	Organic synthesis and asymmetric synthesis
Indrapal Singh Aidhen, Ph.D. (University of Pune)	Synthetic organic chemistry
K. Mangala Sunder, Ph.D. (McGill, Canada)	Theoretical spectroscopy
K. Vidyasagar, Ph.D. (IISc, Bengaluru)	Solid state chemistry
P. Bhyrappa, Ph.D. (IISc, Bengaluru)	Bioinorganic, supramolecular and materials chemistry of porphyrinoids
G. Ranga Rao, Ph.D. (IISc, Bengaluru)	Materials chemistry, solid state electrochemistry, surface chemistry and heterogeneous catalysis
Sanjay Kumar, Ph.D. (IIT Kanpur)	Theoretical chemistry, quantum chemistry
N. Narasimha Murthy, Ph.D. (IISc, Bengaluru)	Bio-inorganic chemistry, inorganic chemistry, spectroscopy
Dillip Kumar Chand, Ph.D. (IIT Kanpur)	Supramolecular chemistry, inorganic chemistry
G. Sekar, Ph.D. (IIT Kanpur)	Enantioselective organic synthesis
Sundaragopal Ghosh, Ph.D. (IIT Bombay)	Organometallic and metalloborane chemistry
B. Rajakumar, Ph.D. (IISc, Bengaluru)	Atmospheric chemistry, gas-phase kinetic and high-resolution cavity ring down spectroscopy, computational chemistry
K.M. Muraleedharan, Ph.D. (RRL, Trivandrum)	Bioorganic chemistry, medicinal chemistry
Edamana Prasad, Ph.D. (RRL, Trivandrum)	Divalent lanthanide and dendrimer chemistry
Debashis Chakraborty, Ph.D. (University of Gottingen, Germany)	Organometallic chemistry
Associate Professors	
Arti Dua, Ph.D. (IISc, Bengaluru)	Statistical mechanics, polymer theory, stochastic processes
Amrendra Vijay, Ph.D. (IISc, Bengaluru)	Theoretical physical chemistry
Ramesh Gardas, Ph.D. (South Gujarat University)	Solution thermodynamics, ionic liquids
Pazhamalai Anbarasan, Ph.D. (IISc, Bengaluru)	Design and development of new synthetic methodologies based on carbenes, trifluoromethylation and trifluoromethylthiolation, synthesis of therapeutically important natural products
R. Kothandaraman, Ph.D. (IISc, Bengaluru)	Electrochemical systems and electrocatalysis
M. Jeganmohan, Ph.D. (NTHU, Taiwan)	Metal catalysed organic reactions, total synthesis and asymmetric synthesis
Assistant Professors	
Beeraiah Baire, Ph.D. (IISc, Bengaluru)	Organic synthesis
P. Venkatakrishnan, Ph.D. (IIT Kanpur)	Organic functional materials
Md. Mahinddin Baidya, Ph.D. (CLMU, Munich, Germany)	Design and development of new synthetic methodologies, asymmetric organic synthesis, synthesis of therapeutically important natural products
Kartik Chandra Mondal, Ph.D. (Karlsruhe Institute of Technology, Germany)	Inorganic chemistry
Arnab Rit, Ph.D. (University of Muenster, Germany)	Organometallic chemistry and catalysis, main-group chemistry

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conference			
1	Dr. P. Anbarasan Dr. Md. Mahiuddin Baidya	Medicinal Chemistry (Medchem 2017)	27-28 November 2017
Symposium			
1	Dr. Beeraiah Baire (Convenor) Dr. P. Venkatakrishnan (Co-Convenor)	Chemistry In-house Symposium (CiHS- 2017)	17 August 2017
Workshop			
1	Dr. R. Kothandaraman	Instrumental Aspects in Analytical Electrochemistry	16 August 2017

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Name	Title	Institution	Period
Meetings				
1	Prof. U. V. Varadaraju	Ph.D. Viva Voce Examination	Indira Gandhi Centre for Atomic Research, Kalpakkam	4 April 2017
2	Dr. Edamana Prasad	DC meeting	VIT University, Vellore	18 April 2017
3	Prof. N. N. Murthy	Ph.D. Viva Voce Examination	Pondicherry University, Puducherry	28 April 2017
4	Prof. K. Mangala Sunder	PRSG Meeting	IIT Kharagpur	12-13 April 2017
5	Dr. Edamana Prasad	Faculty development programme	Trivandrum, Kerala	21 April 2017
6	Prof. K. Mangala Sunder	Screening Committee	IIT Palakkad	20-21 April 2017
7	Dr. K. M. Muraleedharan	Screening Committee	IIT Palakkad	20-21 April 2017
8	Prof. M.V. Sangaranarayanan	Synopsis meeting	PSG, Coimbatore	3 May 2017
9	Prof. G. Ranga Rao	MHRD initiative	IIT-KGP, Kharagpur	3-5 May 2017
10	Prof. M. V. Sangaranarayanan	Review meeting	CSIR, New Delhi	24-25 May 2017
11	Dr. Ramesh Gardas	Ph.D. Viva Voce examination	SVNIT, Surat	16-19 June 2017
12	Prof. M. V. Sangaranarayanan	Selection committee meeting	CECRI, Karaikudi	16 June 2017
13	Prof. U. V. Varadaraju	Viva Voce Examination	IITH, Hyderabad	20 July 2017
14	Prof. Sanjay Kumar	Viva Voce Examination	University of Hyderabad	21 July 2017
15	Prof. Dillip Kumar Chand	Selection Committee meeting	NEHU, Shillong	31 July 2017
16	Prof. Sanjay Kumar	Viva Voce Examination	NEHU, Shillong	31 July 2017
17	Prof. M. V. Sangaranarayanan	Comprehensive Exam	IIST, Trivandrum	10 August 2017
18	Dr. Ramesh Gardas	Viva Voce Examination	Veer Narmad South Gujarat University, Surat	4 September 2017
19	Dr. Prasad Edamana	Project Review Meeting	IGTU, Amarkantak	13-15 September 2017
20	Dr. Prasad Edamana	Project Review Meeting	IISER, Bhopal	13-15 September 2017
21	Dr. R. Kothandaraman	Proposal Defence	IISER, Bhopal	14-16 September 2017
22	Dr. R. Kothandaraman	Project Review Meeting	NIAS, New Delhi	18-19 September 2017
23	Dr. Prasad Edamana	Project Review Meeting	INSA, New Delhi	18-19 September 2017
24	Prof. G. Ranga Rao	DST Meeting	Delhi	18 September 2017
25	Dr. Ramesh Gardas	Viva Voce Examination	IIT Guwahati	21 September 2017
26	Dr. R. Kothandaraman	Research Collaboration Meeting	IIT Hyderabad	3-4 October 2017
27	Dr. Prasad Edamana	Conduct Faculty Development Programme	IISER, Bhopal	13-14 October 2017
28	Prof. G. Ranga Rao	UAY Project Meeting	Thermax, Pune	16 October 2017
29	Prof. M. V. Sangaranarayanan	Viva Voce Examination	CECRI Karaikudi	25 October 2017
30	Dr. Ramesh Gardas	Viva Voce Examination	IIT Delhi	27 October 2017
31	Dr. Ramesh Gardas	Viva Voce Examination	JNTU, Hyderabad	28 October 2017
32	Prof. M. V. Sangaranarayanan	Society for the Advancement of Electro Chemical Science and Technology	CECRI Karaikudi	25-26 October 2017
33	Prof. M. V. Sangaranarayanan	Ph.D. Viva Voce examination	Sathya Sai Institute, Puttaparthi	9 November 2017
34	Dr. R. Kothandaraman	Field Visit	Titan Factory, Kolkata	13-14 November 2017
35	Dr. R. Kothandaraman	Industrial Visit	Vaigai Industries, Karaikal	21 November 2017
36	Prof. M. V. Sangaranarayanan	Humboldt Colloquium Bangalore 2017	Bengaluru	23-24 November 2017

Sl. No.	Name	Title	Institution	Period
37	Dr. R. Kothandaraman	Selection Committee Meeting	CECRI, Karaikudi	30 November 2017
38	Dr. Ramesh Gardas	Ph.D. Viva Voce examination	SVNIT Surat	29-30 November 2017
39	Prof. M. V. Sangaranarayanan	Ph.D. Viva Voce examination	PES University, Bengaluru	1 December 2017
40	Prof. M. V. Sangaranarayanan	Ph.D. Viva Voce examination	NIT, Warangal	4 December 2017
41	Prof. M. V. Sangaranarayanan	Selection Committee Meeting	CECRI, Karaikudi	14 December 2017
42	Prof. M. V. Sangaranarayanan	Meeting at CECRI-Karaikudi	CECRI-Karaikudi	12 February 2018
43	Prof. M. V. Sangaranarayanan	Ph.D. Viva Voce	IIT Hyderabad	23 February 2018
44	Prof. M. V. Sangaranarayanan	Academic Audit	Bishop Heber College, Trichy	8 March 2018
45	Dr. K. M. Muraleedharan	Ph.D. Viva Voce	Cochin University of Science and Technology	9 March 2018
46	Dr. R. Kothandaraman	Conference Meeting	HPCL, Bengaluru	9 March 2018
47	Prof. M. V. Sangaranarayanan	Project Discussion	PSG College, Coimbatore	13 March 2018
Workshop				
1	Dr. Prasad Edamana	Workshop	College at Sivakasi	21-23 February 2018
Symposia				
1	Prof. P. Selvam	8th International Symposium on Acid-Base Catalysis (ABC-8)	Rio de Janeiro, Brazil	7-10 May 2017
2	Dr. Arnab Rit	Symposium on Modern Trends in Inorganic Chemistry (MTIC-XVII)	CSIR-NCL, Pune	11-14 December 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Name	Title	Institution	Period
1	Prof. M. V. Sangaranarayanan	Electro Chemical Applications of Conducting Polymers	CECRI, Karaikudi	22 May 2017
2	Dr. Kartik Chandra Mondal	Single Molecule Magnet Behaviour of Coordination and Organometallic Complexes	Georg-August University, Germany	6 June 2017
3	Dr. Ramesh Gardas	Invited Talk: Comparison of Calorimetric, Rheological and Solvatochromic Properties of Protic and Aprotic Ionic Liquids	Colorado Springs, Colorado, USA	30 July-4 August 2017
4	Dr. Ramesh Gardas	Thermodynamics of Ionic Liquid	PSGR Krishnammal College for Women, Coimbatore	11 August 2017
5	Dr. Ramesh Gardas	Invited Talk: Trends, Applications and Challenges in Ionic Liquids as Green Solvents for the Sustainable Future	PSGR Krishnammal College for Women, Coimbatore	11-12 August 2017
6	Dr. Ramesh Gardas	Invited Talk: Ionic Liquids as Green Solvents for Technological Applications	Vignan University, Guntur	18-19 August 2017
7	Dr. Ramesh Gardas	Prof. H. C. Gaur Memorial Lecture	University of Delhi	11 October 2017
8	Dr. K. M. Muraleedharan	Innovative Lead Optimisation and Candidate Selection	Stella Maris College, Chennai	13 October 2017
9	Dr. Ramesh Gardas	Ionic Liquids as Green Solvents for the Sustainable Development	APSC-2017, Amaravati	7-8 November 2017

Sl. No.	Name	Title	Institution	Period
10	Prof. Indrapal Singh Aidhen	Invited Lecture	IIT Kharagpur	20 December 2017
11	Prof. Indrapal Singh Aidhen	Invited Lecture	IIT Roorkee	23 December 2017
12	Dr. Prasad Edamana	Photophysical Chemistry	Kozhikode	28 February 2018
13	Prof. U. V. Varadaraju	Invited talk	HPCL, Bengaluru	8-9 March 2018

Visits Abroad by Faculty

Sl. No.	Name	Country Visited	Date	Purpose of visit	Funding from
1	Dr. Sundargopal Ghosh	The University of Manchester, UK	10-13 April 2017	Present a plenary research lecture at the International Conference on Advancing the Chemical Sciences (ISACS)	Project
2	Prof. T. Pradeep	San Francisco, USA	1-13 April 2017	Editorial meetings at the Spring ACS National Meeting	Project
3	Prof. P. Selvam	Rio de Janeiro, Brazil	7-10 May 2017	8th International Symposium on Acid-Base Catalysis (ABC-8)	CPDA
4	Prof. T. Pradeep	London, UK	24-29 May 2017	Research meeting at Bio Nano Consulting	Project
5	Prof. T. Pradeep	MTD, KIT, Germany	29 May- 2 June 2017	Discussion on project CANDECT	Project
6	Dr. Kartik Chandra Mondal	Gottingen	8 June-20 July 2017	Research work in Gottingen	CPDA
7	Prof. T. Pradeep	Singapore	17-21 June 2017	Brief visit to Department of Chemical and Biomolecular Engineering, National University of Singapore	Others
8	Prof. A. K. Mishra	Portugal	17-26 June 2017	Exploring the possibility for research collaboration between IIT Madras and Portuguese Scientific Academic Institutions	Others
9	Prof. Dillip Kumar Chand	Japan	18 June-2 July 2017	Scientific research on Innovative Areas "Soft Molecular Systems"	Project
10	Prof. P. Selvam	Melbourne, Australia	23-26 July 2017	CHEMECA 2017 - International Chemical Engineering Conference	CPDA
11	Dr. Ramesh Gardas	Colorado Springs, USA	30 July-4 August 2017	Seventy Second Calorimetry Conference	Project
12	Prof. Dillip Kumar Chand	NEHU, Shillong	31 July 2017	Selection Committee Meeting	Others
13	Dr. Md. Mahiuddin Baidya	Munich, Germany	2-4 August 2017	International Symposium on Dynamics and Intermediates of Molecular Transformations	CPDA
14	Prof. T. Pradeep	M/s. Idropan- Dell'orto, Italy	13 August 2017	Brief visit	Project
15	Prof. T. Pradeep	Ascona, Switzerland	13-16 August 2017	International Symposium on Monolayer Protected Clusters (ISMPC)	Project
16	Prof. T. Pradeep	Indropan- Dell'Orto, Italy	14 August 2017	Brief Visit	Project
17	Prof. T. Pradeep	Aalto University, Finland	16-19 August 2017	Brief Visit	CPDA
18	Prof. T. Pradeep	Washington DC, USA	19-24 August 2017	254th ACS National Meeting and Exposition	Project
19	Prof. T. Pradeep	Purdue University, USA	23-26 August 2017	Brief Visit	Project

Sl. No.	Name	Country Visited	Date	Purpose of visit	Funding from
20	Prof. A. K. Mishra	Technical University of Dresden, Germany	27 August-3 September 2017	3rd Consortium Meeting of the IGSTC Project, Online Indication of Pathogen-like Pollution in Water by Fecal Pigment Analysis	Project
21	Prof. M. V. Sangaranarayanan	Brussels, Belgium	28-30 August 2017	8th Annual Congress on Analytical and Bioanalytical Techniques	CPDA
22	Dr. Ramesh Gardas	University of Cambridge, UK	11-13 September 2017	Conference on Ionic Liquids: From Fundamental Properties Application: Faraday Discussion	CPDA
23	Prof. G. Sekar	Leeds, UK	3-6 October 2017	RSC-NOST Symposium on Organic and Biomolecular Chemistry	CPDA
24	Dr. P. Anbarasan	Leeds, UK	3-6 October 2017	RSC-NOST Symposium on Organic and Biomolecular Chemistry	Project
25	Prof. A. K. Mishra	Moscow and Tomsk, Russia	5-10 October 2017	2nd Meeting of the Russia-India Network of Universities (RIN)	Others
26	Prof. Archita Patnaik	Tsukuba, Japan	27 November-2 December 2017	Scientific Discussion at the International Center for Materials Nanoarchitectonics	Project
27	Dr. Arti Dua	University of Cambridge, UK	1-21 December 2017	Collaborative Research Work	Others
28	Prof. P. Selvam	Manchester, UK	21-25 February 2018	Brief visit	Project
29	Prof. T. Pradeep	Florida, USA	26 February-1 March 2018	PITTCON 2018	Project
30	Dr. P. Anbarasan	Cardiff, UK	26 February-2 March 2018	EPSRC Global Challenges Research Fund Discussion	Others
31	Prof. P. Selvam	Cardiff, UK	26 February-2 March 2018	EPSRC Global Challenges Research Fund Discussion	Project

Honours and Awards Obtained by Faculty

Sl. No.	Name	Award	Awarded by	Awarded for
1	Prof. G. Sekar	Elected as a member	CRSI (Chemical Research Society of India) Council	Three-year term with effect from 1 April 2017
2	Prof. S. Sankararaman	Institute Chair Professor	IIT Madras	2017
3	Dr. Md. Mahiuddin Baidya	Associateship for the Indian Academy of Science	Indian Academy of Sciences, Bengaluru	
4	Dr. Sundargopal Ghosh	Fellow of National Academy of Sciences	Fellow of National Academy of Sciences, India (Allahabad)	
5	Dr. Sundargopal Ghosh	Member of the Editorial Advisory Board of Organometallics	The American Chemical Society (ACS), USA	
6	Prof. M. V. Sangaranarayanan	Member of Research Council of CSIR-Lab, Central Electrochemical Research Institute, Karaikudi	CSIR, Government of India	
7	Dr. Ramesh Gardas	Associate Fellow of Andhra Pradesh Akademi of Sciences	Andhra Pradesh Akademi of Sciences	
8	Prof. P. Selvam	Visiting Professor (Honorary) in the Department of Chemical Engineering and Analytical Science	The University of Manchester, UK	
9	Prof. G. Ranga Rao	Member on the Editorial Board of Polyhedron	International Journal for Research in Inorganic Chemistry, Elsevier	
10	Dr. B. Rajakumar	Member Editorial Advisory Board	International Journal of Chemical Kinetics	

Sl. No.	Name	Award	Awarded by	Awarded for
11	Prof. M. V. Sangaranarayanan	Associate Editorship for the journal, Bulletin of Materials Science	Indian Academy of Sciences, Bengaluru	
12	Dr. Ramesh Gardas	Associate Fellow of the Telangana Academy of Sciences	Telangana Academy of Sciences	
13	Prof. M. V. Sangaranarayanan	Associate Editor, Bulletin of Materials Science	Indian Academy of Sciences, Bengaluru	
1	Prof. G. Sekar	Mid-Career Research and Development Award	IIT Madras	2017
2	Dr. Md. Mahiuddin Baidya	INSA Medal For Young Scientists	Indian National Science Academy	2017
3	Prof. M. V. Sangaranarayanan	CNR Rao National Prize in Chemical Sciences	CNR Rao Education foundation, JNCASR, Bengaluru	
4	Dr. Md. Mahiuddin Baidya	NASI-Young Scientist Platinum Jubilee Award 2017	The National Academy of Sciences India, Allahabad	2017
5	Dr. Ramesh Gardas	Prof. H. C. Gaur Memorial Lecture Award	University of Delhi and RSC-North India Section	
6	Dr. Md. Mahiuddin Baidya	Institute Research and Development Award (IRDA) (Early Career Level)	IIT Madras	
7	Prof. T. Pradeep	TWAS Prize in Chemistry	The World Academy of Sciences	

Fellowships of Academies and Professional Societies

Sl. No.	Name	Year of admission
INSA	Dr. Md. Mahiuddin Baidya	2017

Journal Editorial Boards

Sl. No.	Name	Position (Editor/Member)	Journal Name
1	Prof. T. Pradeep	Editor	Joyful Years with the Journal, Balancing the Editor-Professor Life
2	Prof. T. Pradeep	Editor	Direct Observation of the Formation Pathway of [Mo132] Keplerates
3	Dr. B. Rajakumar	Member	International Journal of Chemical Kinetics
4	Prof. G. Ranga Rao	Member	International Journal for Research in Inorganic Chemistry, Elsevier
5	Dr. Sundargopal Ghosh	Member	The American Chemical Society (ACS), USA

4.5.4. Design and Development Activities

New facilities added or major equipment procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1.	HRMS	175
2.	Upgradation of HRMS	30

Patents applied

Sl. No.	Faculty Member	Topic of Patent
1	T. Pradeep, S. Arun Karthick, Pillalamarri Srikrishnarka, Vishal Kumar and Ramesh Kumar	Multilayer multifunctional nasal filter, 201741007433, 2 March 2017
2	T. Pradeep, Depanjan Sarkar and Anirban Som	Method of making nanometer thin sheets of metals in air, 201741036233, 12 October 2017

Sl. No.	Faculty Member	Topic of Patent
3	T. Pradeep, Avijit Baidya, Azhar Ganayee and Jakka Ravindran Swathy	Aqueous composition for durable and extremely efficient water repelling superhydrophobic materials, 201741036772, 17 October 2017
4	T. Pradeep, Papri Chakraborti and Esma Khatun	Method of making nanoparticles of precise isotopic composition by rapid isotopic exchange, 201741037148, 20 October 2017
5	T. Pradeep, Depanjan Sarkar, Anirban Som, Biswajit Mondal and Jakka Ravindran Swathy	Method for creating nanopores in MoS ₂ nanosheets by chemical drilling for disinfection of water under visible light, 201741037148, 20 October 2017.
6	T. Pradeep, Ankit Nagar and Ramesh Kumar Soni	A modified surface for condensation, 201741039127, 2 November 2017
7	T. Pradeep, Pallab Basuri, Depanjan Sarkar, Ganesan Paramasivam	Method of field-induced photoionisation of molecules using low power pointer laser in laser assisted paper spray ionisation mass spectrometry (LAPSI MS), 201741040383, 13 November 2017
8	T. Pradeep, Abhijit Nag, Papri Chakraborty, Ananya Baksi, Ganapati Natarajan	A method of identifying isomers of curcumin and preferential stabilisation of one of them, 201741040570, 14 November 2017
9	T. Pradeep, Sandeep Bose, Depanjan Sarkar,	Method of reduction of carbon dioxide on nickel nanobrushes formed by electrospray deposition, 201741042540, 28 November 2017
10	T. Pradeep, Biswajit Mondal, Ananthu Mahendranath, Anirban Som, Sandeep Bose, Tripti Ahuja, Avula Anil Kumar and Jyotirmoy Ghosh	Removal of lead from waste water using nanoscale MoS ₂ , 201741044447, 11 December 2017
11	T. Pradeep, Sandeep Bose, Mohd. Azhardin Ganayee, Biswajit Mondal and Sudhakar Chennu	Method for preparing luminescent silicon nanoparticles from rice husk using microwave irradiation, 201741046491, 23 December 2017
12	T. Pradeep, Pallab Basuri, Avijit Baidya and Tripti Ahuja	A method of detection of low concentration of analytes by superhydrophobic pre-concentration paper spray ionisation mass spectrometry (SHPPSI MS), 201741047403, 30 December 2017
13	T. Pradeep, Ramesh Kumar and Anupam Chandra	A portable water filtration device for removing impurities from water using contaminant-specific purification cartridges, 201741047404, 30 December 2017
14	T. Pradeep, Md. Rabiul Islam, Soujit Sengupta and Srikrishnarka Pillalamarri	An integrated CDI electrode, 201741047400, 30 December 2017

Patents Awarded

Sl. No.	Faculty Name	Topic of patent
1	T. Pradeep, M. Udhaya Sankar, Anshup and Amrita Chaudhary	Gravity-fed axial flow filter block for domestic water purifiers and the method of making the same, 2892/CHE/2010 filed on 30 September 2010, patent number 282257, granted on 31 March 2017
2	T. Pradeep, Anshup, Amrita Chaudhary, M. Udhaya Sankar and S. Gayathri	A sustained silver release composition for water purification, 947/CHE/2011 filed on 25 March 2011, patent number 286423, granted on 18 August 2017
3	T. Pradeep, A. Leelavathi, Amrita Chaudhary, M. Udhaya Sankar and Anshup	Multilayer organic-templated-boehmite-nanoarchitecture for fluoride removal, 4062/CHE/2011, 24 November 2011, patent number 286929, granted on 31 August 2017
4	T. Pradeep	Domestic water purification unit, design patent number 288810, dated 24 November 2016, granted on 16 October 2017

4.5.5. Research and Consultancy

Sponsored Research Projects

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	Thematic Unit of Excellence (TUE) on water purification using anotechnology at IIT Madras	31 March 2019	Department of Science and Technology (DST)	1081	Prof. T. Pradeep
2	Improve rubber to steel bonding in steel radial tyres through scientific understanding	31 December 2018	MRF Limited	130	Prof. T. Pradeep
3	Dust free glass	31 October 2019	Saint-Gobain Research India Limited	36	Prof. T. Pradeep with Prof. R. Nagarajan
4	Structure and reactivity of novel lanthanide and heavy main group carboranylaminidate coordination complexes	4 February 2019	DST	19.2	Prof. Sundargopal Ghosh
5	Unified synthetic approach towards polycyclic polyprenylated acylphloroglucinols (PPAPs) natural products: Doitunggarcinones A-C	4 February 2019	DST	19.2	Dr. P. Anbarasan
6	Synthesis and characterisation of chitosan-based hydrogels using natural crosslinking agents towards SAP (superabsorbing polymer) application	4 October 2019	DST	19.2	Prof. R. Dhamodharan
7	Metal-radical based molecular magnets having strong magnetic interactions Dr. Kartik Chandra Mondal	20 March 2020	DST	46.61	
8	Development and demonstration of 250W, 1kWh vanadium redox flow battery systems rechargeable by renewable energy such as solar and wind energy	16 May 2020	DST	81.37	Dr. R. Kothandaraman
9	Synthesis of ordered mesoporous BiVO ₄ and InTaO ₄ for high order photocatalysis and high-energy density supercapacitor	17 July 2019	DST	19.2	Prof. P. Selvam
10	Enhance photovoltaic performances of dye-sensitized solar cells sensitized with triphenylamine/phenothiazine-oxindole/dithienobenzotriazole based dyes - National Post Doctoral Fellowship (NPDF)	20 July 2019	DST	19.2	Dr. R. Kothandaraman
11	Size and shape-controlled synthesis of monometallic and bimetallic palladium polyhedra/nanocrystals and their applications in catalysis- NPDF	20 July 2019	DST	19.2	Prof. P. Selvam
12	Design and engineering of thermally activated delayed fluorescence molecular systems for organic light emitting diodes	1 August 2019	DST	19.2	Prof. Archita Patnaik
13	A new class of NIR probes based gelators and bioimaging	2 August 2019	DST	19.2	Prof. Edamana Prasad
14	Peptide-based mutual pro-drugs for dual inhibition of key protein components in cancer cell signaling	19 July 2020	DST	49.9	Prof. K. M. Muraleedharan

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
15	TiO ₂ -reduced carbon dot heterostructures with large interfacial contact for hydrogen generation	13 August 2019	DST	19.2	Prof. G. Ranga Rao
16	Development of pulse electrodeposited metallic thermoelectric materials for energy application - NPDF	5 September 2019	DST	19.2	Prof. M.V. Sangaranarayanan
17	Thematic projects in frontiers of nano S&T (TPF-Nano) on water purification using nanotechnology	31 August 2020	DST	541.02	Prof. T. Pradeep
18	Molecular diagnosis and imaging - molecular probes for detection of biomolecules	5 September 2019	DST	19.2	Prof. A.K. Mishra
19	Energy migration down-/up conversion luminescence in lanthanoids doped nanostructures: Core-shell/hollow model	5 September 2019	DST	19.2	Prof. A.K. Mishra
20	Design and synthesis of highly functionalized heterocycles via a domino ring-opening cyclization sequence of donor - acceptor cyclopropanes - NPDF	3 September 2019	DST	19.2	Dr. Md. Mahiuddin Baidya
21	Solubility of gases in ionic liquid or binary mixture of ionic liquid + ionic liquid	22 August 2020	DST	7.75	Dr. Ramesh L. Gardas
22	Permselective membrane and polymer/garnet electrolyte from Li-S batteries - NPDF	20 September 2019	DST	19.2	Dr. R. Kothandaraman
23	Studies in synthesis and characterization of supramolecular organogels towards the fluorescence sensing of anions, metal ions and explosives – NPDF	25 September 2019	DST	19.2	Prof. Edamana Prasad
24	Physicochemical insights into biocompatible solid lipid nanoparticles for drug delivery - NPDF	25 September 2019	DST	19.2	Prof. A. K. Mishra
25	Design and synthesis of functional organic material with aggregation induced emission for optoelectronic, bio image and sensor applications	3 October 2019	DST	19.2	Prof. Edamana Prasad
26	Molecular engineering for the design and development of lanthanide-based organic light emitting diodes (L-OLEDs)	27 September 2019	DST	19.2	Prof. T. Pradeep
27	Novel porous 3D architectures of nanocarbons for the photo and electrochemical production of green fuels from CO ₂ and H ₂ O: A better solution for the two global problems	24 October 2019	DST	11.66	Dr. R. Kothandaraman
28	Synthesis of novel superbase ionic and analysis of their interactions with CO ₂ - A thermodynamic approach towards rational design of efficient absorbent for CO ₂ capture and regeneration	11 March 2021	DST	50.56	Dr. Ramesh L. Gardas
29	Development of novel self-assembling dendritic systems for biomedical applications: characterization and kinetic analysis	19 March 2021	DST	42.43	Prof. Edamana Prasad

Industrial Consultancy Projects

Sl. No.	Faculty Name	Title	Industry	Amount (Rs. in lakh)
1	Prof. S. Baskaran	Solvents for stain removal in foam sheets	Common Code	0.6
2	Head of the Department	NMR/Mass Spectrum/FTIR/CHN/SXRD/PXRD/TGA and DSC/TRDA/TPR/Sorptometer, UV-VIS, etc	Common Code	3.18

RBIC Projects

Sl. No.	Faculty Name	Title	Industry	Amount (Rs. in lakh)
1	Prof. T. Pradeep	Analysis of residual pesticides from vegetables by mass spectrometry	Kent	4.6
2	Prof. Archita Patnaik	Interfacial engineering and molecular modelling of polymer - silica nanocomposites	M. R. F. Limited	33.26
3	Prof. S. Baskaran	Alternate solvents for ketones	Titan Company Limited	0.6
4	Prof. T. Pradeep	Celluclean - measurements of water contaminants	Aalto University	8.53
5	Prof. T. Pradeep	Confocal Raman analysis of a medicinal patch	Zydus Technologies Limited	5.9
6	Prof. T. Pradeep	Heavy metals, arsenic and fluoride mitigation using nanostructured adsorbents	Hydromaterial Private Limited	23.6
7	Prof. P. Selvam	Development of new product, high reactive poly iso- butene (HR PIB)	Kothari Petrochemicals Limited	4
8	Dr. Beeraiiah Baire	Synthesis of anthraquinone derivatives	Denisco Chemicals Private Limited	11.73
9	Prof. S. Baskaran	Synthetic route for APIs	Apex Laboratories Private Limited	4.07
10	Prof. T. Pradeep	Improve rubber to steel bonding in steel radial tyres through scientific understanding	M. R. F. Limited	47.81

Retainer Consultancy

Sl.No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1	Prof. G. Ranga Rao	Technical opinion on the preparation of ferric carboxy maltose	Suven Life Sciences Limited	5.9
2	Prof. T. Pradeep	Consultancy and honorarium, Safewater Nano Private Limited	Safewater Nano Private Limited	21.44
3	Prof. T. Pradeep	Improve rubber to steel bonding in steel radial tyres through scientific understanding	M. R. F. Limited	50.58

Distinguished Visitors to the Department (Guest lecture)

Sl. No.	Name and Designation	Date of Visit
1	Dr. Robert L. Whetten, Professor of Physics, University of Texas	9 May 2017
2	Dr. N. G. Ramesh, Professor, Department of Chemistry, IIT Delhi	23 May 2017
3	Dr. Annika Kriisa, Postdoctoral Fellow, Department of Physics and Astronomy, Georgia State University, Georgia, USA	5 June 2017
4	Dr. Eluvathingal D Jemmis, Inorganic and Physical Chemistry, IISc, Bengaluru	28 June 2017
5	Prof. Satrajit Adhikari, Physical Chemistry Department, IACS, Jadavpur	14 July 2017
6	Dr. Shiju Raveendran, Associate Professor, University of Amsterdam	8 August 2017
7	Dr. Sourav Pal, Professor, IIT Bombay	11 August 2017
8	Dr. Roderick Wayland Bates, Associate Professor, Nanyang Technical University	8 September 2017
9	Dr. Pedro Carvalho, Departamento de Quimica, Universidade de Aveiro, Portugal	12 October 2017
10	Dr. Sidharth Chopra, Senior Scientist Division of Microbiology, CSIR-CDRI, Lucknow	13 October 2017

Sl. No.	Name and Designation	Date of Visit
11	Dr. Ravindra Pandey, Department of Spectroscopy, IACS Kolkata	16 October 2017
12	Dr. P. S. Mukherjee, Department of Inorganic and Physical Chemistry, IISc, Bengaluru	31 October 2017
13	Dr. Kana M. Sureshan, Indian Institute of Science Education and Research, Thiruvananthapuram	3 November 2017
14	Prof. Arumugam Manthiram, Adjunct Professor, Department of Chemistry, Distinguished Alumnus Awardee, IIT-Madras and Director, Materials Science and Engineering Program, Texas Materials Institute, Department of Mechanical Engineering, University of Texas, Austin	9 November 2017
15	Prof. Herbert W. Roesky, University of Goettingen, Germany	7 December 2017
16	Dr. Arijit K. De, Department of Chemical Sciences, IISER Mohali	8 December 2017
17	Dr. Andrew L. Rohl, Curtin Institute for Computation, Curtin University	15 December 2017
18	Dr. Guido H. Clever, TU Dortmund University, Germany	15 December 2017
19	Prof. M. S. Balakrishna, Phosphorus Laboratory, IIT Bombay, Mumbai	22 December 2017
20	Prof. Zuwei XIE, Department of Chemistry, The Chinese University of Hong Kong	5 January 2018
21	Prof. Masaya Sawamura, Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo, Japan	12 January 2018
22	Prof. Dr. Roger Gläser, Director, Institute of Chemical Technology, Universität Leipzig, Germany	16 January 2018
23	Prof. Jean-François Soulé, CNRS Researcher (HDR), Campus de Beaulieu, 35042 Rennes, France	18 January 2018
24	Prof. Thomas Prisner, Institute of Theoretical and Physical Chemistry, Goethe University, Frankfurt, Germany	25 January 2018
25	Dr. Takashi Nakanishi, International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan	25 January 2018
26	G. Narahari Sastry, Centre for Molecular Modeling, CSIR-IICT, Hyderabad	19 February 2018
27	Prof. Eric Doris, Institut des Sciences du Vivant Frédéric Joliot, Service de Chimie Bioorganique et de Marquage, France	26 February 2018
28	Dr. K. V. Radhakrishnan, Principal Scientist, CSIR-NIIST, Thiruvananthapuram	28 February 2018
29	Dr. Kana M. Sureshan, School of Chemistry, IISER Thiruvananthapuram	16 March 2018
30	Dr. Anukul Jana, TIFR Hyderabad	27 March 2018

4.5.6. Other Activities of the Department/Centre

Faculty Visit

Sl.No	Faculty Member	Purpose of Visit	Date and Venue
1	Pierre Dos Santos, Vice-president Research, University of Bordeaux, France	Eminent Visitor	14 November 2017, Chemistry Department
2	Dr. Roland Bürli, AstraZeneca, United Kingdom	Plenary lecture for Medchem conference	27-28 November 2017, Chemistry Department
3	Prof. (Dr.) Ennapadam S. Krishnamoorthy, Founder, Neurokrish – the neuropsychiatry centre	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
4	Dr. Rishikesh V. Behere, KEM Hospital Research Center, Pune	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
5	Dr. Akshay Anand, PGIMER, Chandigarh	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
6	Dr. Mohanakumar K. P. IUCBR&SSH, Mahatma Gandhi University, Kottayam	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
7	Dr. Vidita Vaidya, Tata Institute of Fundamental Research, Mumbai	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
8	Dr. Pravat K. Mandal, National Brain Research Center, Manesar	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
9	Dr. Nihar Ranjan Jana, National Brain Research Centre, Manesar	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
10	Prof. Amal Kanti Bera, Indian Institute of Technology Madras, Chennai	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department

Sl.No	Faculty Member	Purpose of Visit	Date and Venue
11	Dr. P. Srihari, CSIR-Indian Institute of Chemical Technology, Hyderabad	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
12	Dr. D. Srinivasa Reddy, CSIR-National Chemical Laboratory, Pune	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
13	Prof. Sandeep Verma, IIT Kanpur	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
14	Prof. Mange Ram Yadav, The Maharaja Sayajirao University of Baroda, Vadodara	Invited lecture for Medchem conference	27-28 November 2017, Chemistry Department
15	Dr. Aparna Ganguly, Royal Society of Chemistry, Bengaluru, India	Eminent Visitor	8 January 2018, Chemistry Department
16	Dr. Michaela Muehlberg, Royal Society of Chemistry, UK Office	Eminent Visitor	8 January 2018, Chemistry Department

Student Visit

Sl. No	Name	Purpose of Visit	Date and Venue
1	Madhya Pradesh Council of Science and Technology under Mission Excellence Programme (Vigyan Manthan Yatra 2017)	Students visit	9 October 2017, Chemistry Department
2	Rashtriya Madhyamik Shiksha Abhiyan (RMSA) Scheme (150 students from secondary schools)	Students visit	22 November 2017, Chemistry Department



4.6. Department of Civil Engineering

4.6.1. Introduction

A significant department of Indian Institute of Technology Madras since its establishment in 1959, the Department of Civil Engineering has contributed to India's infrastructure development and human resource development in the sector enormously. The department's academic programmes in B. Tech, Dual Degree, M.Tech., M.S. and Ph.D. are some of the best across the world. The faculty members possess advanced degrees and/or training from reputed institutions in India, Germany, the U.K., the U.S.A., Japan, Singapore, Canada, Netherlands, the former USSR, and other nations. The faculty members and research scholars of the department carry out innovative and challenging high-end research and industrial projects.

The prime activities of the department are teaching, research, consultancy and training. The alumni of the department hold prestigious positions in leading academic institutes, industries and government organisations worldwide. The department functions under different

disciplines, administratively organised into five divisions, namely Building Technology and Construction Management (BTCM), Environmental and Water Resources Engineering (EWRE), Geotechnical Engineering (GT), Structural Engineering (ST) and Transportation Engineering (TR). There are 14 well-equipped laboratories attached to these divisions. The EWRE and ST laboratories have received substantial initial funding from the Federal Republic of Germany.

4.6.2. Academic Programmes

The Department of Civil Engineering provides training to students in both theoretical and practical aspects of civil engineering. The students are trained in latest state-of-the-art technologies to enable them to adapt themselves to fast-changing technological developments in the world. The department has postgraduate programmes leading to Dual Degree, M.Tech., M.S., and Ph.D. degrees in various disciplines of civil engineering in addition to an undergraduate B.Tech. programme in civil engineering.

New Courses Introduced

Sl. No.	Course No.	Title
1.	CE 5331	Metro Systems and Engineering
2.	CE 5332	Special Topics in Metro Engineering
3.	CE 5335	Metro Internship
4.	CE 7071	Advanced Traffic Flow Theory
GIAN Courses		
5.	CE 5591	GIAN ID 15100L14: Pavement Preservation and Environmental Impact Assessment of Recycled Materials in Pavement Management
6.	CE 6033	GIAN 171033C05: Spatial Modeling and Analysis of Environment Systems using Open Source Tools
7.	CE 6034	GIAN 171003C06: Weather Radar and Hydrology

New Laboratories Established

- Structural Glass Research and Testing Facility – Dr. Arul Jayachandran
- National Centre for Safety of Heritage Structures – Dr. Arun Menon
- Emulsion Laboratory – Dr. J. Muralikrishnan
- Concrete Materials Research Laboratory IV – BTCM
- Geosynthetic Laboratory – Dr. K. Rajagopal

Students on roll as of September 2016+M.S. and Ph.D Admission in January 2017

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
B.Tech.	64	62	60	55	34	275
Dual Degree	35	35	34	42	43 + 16	205
M.Tech.	116	72	20 (more than two years)	-	-	208
M.S.	15	7	9	10	41	
Ph.D.	37	46	68	53	91	295
Total	267	222	191	150	194	1024

Students/Scholars who Attended conference/seminar and symposia abroad/India

Sl. No.	Student/Scholar	Conference/Seminar/Symposia/Workshop	Date and Venue
1	Srinath Mahesh (CE14D061)	Transportation Research Board Annual Meeting 2018	7-11 January 2017, Washington DC, USA
1.	Hima Elsa Shaji (CE14D029)	97th Transportation Research Board Annual Meeting	7-11 January 2017, Washington Convention Centre, Washington
2.	Kancharla Surendra Reddy (CE13D201)	6th INFORMS Transportation Science and Logistics Society Workshop	7-10 January 2017, Hong Kong
3.	Ramaswamy K. P. (CE14D054)	14th International Conference on Durability of Building Materials and Components	29-31 May 2017, University of Ghent, Belgium
4.	Mahesh B. (CE15D005)	Engineering Project Organization	5-8 June 2017, Stanford Sierra Camp, Lake Tahoe, California, USA
5.	Ram V.G. (CE12D202)	Conference (EPOC) 2017	
6.	Johan Ninan (CE14D040)		
7.	Ram V. G. (CE12D202)	Advances in Recycling and Management of Construction and Demolition Waste	21-23 June 2017, Netherlands
8.	Malavika Varma (CE14D047)	51 st US Rock Mechanics, Geomechanics Symposium	25-28 June 2017, San Francisco
9.	Senthen Amuthan M. (CE15S007)	3 rd International Conference on Performance-based Design in Earthquake Geotechnical Engineering (PBD III)	16-20 July 2017, Vancouver, Canada
10.	Vema Vamsi Krishna (CE12D068)		
11.	Cicily Kurian (CE13D022)	2017 ASABE Annual International Meeting	16-19 July 2017, Spokane, Washington, USA
12.	Sahila Beegum (CE14D018)		
13.	Ramon (CE14D055)	PBD III	
14.	Dinesh N. (CE15D017)	PBD III	16-19 July 2017, Vancouver Canada
15.	Vijaya R. (CE14D063)	PBD III	
16.	Chethana R. (CE13D021)	International Conference on Highway Pavements and Airfield Technology	
17.	Uma C. (CE15D030)	ASCE-T&DI 2017 International Conference on Highway Pavements and Airfield Technology	27-30 August 2017, Philadelphia, USA
18.	Sakthivelan R. (CE12D016)	International Conference on Highway Pavements and Airfield Technology	
19.	Shereena O. A. (CE14D020)	The 2017 World Congress on Advances in Structural Engineering and Mechanics (ASEM17)	28 August–1 September 2017 KINTEX (Korea International Exhibition Center), Ilsan, South Korea
20.	Saranya Siram (CE14D030)	Electrochem 2017	10-13 September 2017, Birmingham, UK
21.	Sridharan B. (CE14D023)	Seventh International Conference on Flood Management	3-11 September 2017, University of Leeds
22.	Jyothisna V. (CE13D208)	GeoOttawa 2017	1-4 October 2017, Ottawa, Canada
23.	Purushothaman Srinath S. (CE13D048)	Arcom Doctoral Workshop – the Meaning of Numbers – Part 1	11-12 November 2017, Manchester, UK
24.	Yaparla Deepthi (CE14D301)	AGU Fall Meeting 2017	11-15 December 2017, Louisiana, USA
25.	Vijayanarayanan, A.R. (CE12D065)	16 th World Conference on Earthquake Engineering	9-13 January 2017, Santiago, Chile
26.	Aditya Balasaheb Deshmukh (CE15S003)	16 th World Conference on Earthquake Engineering	9-13 January 2017, Santiago, Chile
27.	Aparna R. Pillai	ICSMGE 2018: 20th International Conference on Soil Mechanics and Geotechnical Engineering	19-20 February 2018, Paris, France
28.	Anu Rachel (CE14D005)	33 rd International Conference on Solid Waste Technology and Management	11-14 March 2018, Annapolis, Washington DC, USA
29.	Prabha M. (CE13D046)	ACI Convention and Exposition 2018	24-29 March 2018, Salt Lake City, Utah

All the above visits were funded by IIT Madras.

Students/Scholars who Attended conferences/seminars and symposia abroad/India

S.No.	Name	Co-Author	Title of the paper	Conference	Place and Date
1	Rajesh Nagar (CE15S005)	Dr. S. R. Sathish Kumar	Performance-based design of industrial pallet racks	ICSECM 2017	Kandy Sri Lanka, 7-9 December 2017
2	Kancharla Surendra Reddy (CE13D021)	Dr. Gitakrishnan Ramadurai	An adaptive large neighborhood search approach for electric vehicle routing with load dependent energy consumption - accepted oral presentation		
3	Anna Mary Philip (CCE15D002)	Dr. Gitakrishnan Ramadurai and Dr. Lelitha Vanajakshi	Travel time prediction on urban arterials using support vector regression		
4	Ganesh Ambi Ramakrishna (CE15D071)	Surya Pavan Pynda and Dr. Karthik K. Srinivasan	Modeling consideration and choice of BVS for work commute using discrete choice models	4 th Conference of Transportation Research Group of India	IIT Bombay, 17- 20 December 2017
5	Aravinda Devaraj (CE15S014)	Dr. Karthik Srinivasan and Ms. Shehna Basheer	Awareness, consideration and usage frequency of on demand transport services in the Indian context		
6	A. Priyanka (CE15D040)	P. Anusree, V. Anne, G. Asaithambi, Dr. Karthik K. Srinivasan, Dr. R. Sivanandan, Dr. Bhargava Rama Chilukuri	Calibration of vehicle following model parameters using mixed traffic trajectory data		
7	Shehna Basheer (CE13D053)	Dr. Karthik Srinivasan and Dr. R. Sivanandan	Investigation of information quality and user response to real time traffic information under heterogeneous traffic conditions	4 th Conference of Transportation Research Group of India	IIT Bombay, 17- 20 December 2017
8	Dhanya J. S. (CE113D027)	Dr. A. Boominathan and Dr. Subhadeep Banerjee	Finite element study on the seismic response of geo-isolated RC buildings	ASCE India Conference, IIT Delhi	IIT Delhi, 12-19 December 2017
9	Amrutsamanvo Rushikesh Baleso (CE13D013)	Dr. Bharathiraja Muthurajan and Dr. Lelitha Devi	Empirical analysis of disordered heterogeneous traffic flow	Indian Geotechnical Conference 2017 Indo- Japan Workshop on Natural Disaster Mitigation	IIT Guwahati, 14-16 December 2017
10	J. Jayapal (CE15D020)	Dr. K. Rajagopal	3D Numerical analysis of embankments supported by ordinary and encased granular columns	3 rd Indo-Japan Workshop- Geotechnic for Natural Disaster Mitigation and Management	IIT Guwahati 13 December 2017

S.No.	Name	Co-Author	Title of the paper	Conference	Place and Date
11	B. R. Madhusudhan (CE14D021)	Dr. A. Boomnathan and Dr. Subhadeep Banerjee	Large strain cyclic properties of dry sand rubber tyre shred mixture		
12	Aruna Kumar Nayak (CE16D020)	Dr. K. P. Sudheer	Calibration and evaluation of the efficacy of xinjiang model in a watershed in the USA		
13	Jayaprathiga (CE15D052)	Dr. K. P. Sudheer and Dr. Cibiraj	A generalised methodology for identification of threshold for HRU SWAT model		
14	Sahila Beegum (CE14D018)	Dr. K. P. Sudheer and Dr. Indumathi M. Nambi	Implementation of solute transport in the vadose zone into the HYDRUS package for MODFLOW	International Conference on Soil and Water Assessment Tool	IIT Madras, 10-12 January 2018
15	Cicily Kurian (CE13D022)	Dr. K. P. Sudheer and Dr. Debabrata Sahoo	Investigation the effect of calibration objective function on a flood forecasting system		
16	Lakshmi G. (CE14D046)	Dr. K. P. Sudheer	Procedure for identifying the triggering point to dynamically vary the parameter values of a hydrologic model		
17	Rohith A. N. (CE16D042)	Dr. K. P. Sudheer	An investigation on the frequency and intensity of extreme precipitation in Chennai city in the context of climate change		
18	Gouri Krishna S. R. (CE14D039)	Dr. Devdass Menon and Dr. Meher Prasad A.	Pushover analysis of GFRG - OGS building systems	International Conference on Civil Engineering Advancements for Sustainable Infrastructure Development and Environment (CEASIDE 2014)	Thrissur, Kerala, 18-20 January 2018
19	Cicily Kurian (CE13D022)	Dr. K. P. Sudheer and Dr. Debabrata Sahoo	Investigating the effect of objective functions on ANN model calibration for flood forecasting		
20	Aruna Kumar Nayak (CE16D020)	Madan Kumar Jha and Sasmita Sahoo	Assessment of groundwater potential for sustainable development of groundwater resources in a deltaic aquifer system, Odisha	International Conference on Sustainable Technologies for Intelligent Water Management	IIT Roorkee, 16-19 February 2018
21	Abhijith G. R. (CE15D083)	Prof. S. Mohan	Evaluation of the efficiency of chlorine sensors in investigating the biological quality of drinking water distribution system		
22	Sudeeptha G. (CE15D049)	Dr. S. Mathava Kumar	Metronidazole and acetaminophen removal in batch bioreactors: effect of MLSS, C/N ratio metronidazole and acetaminophen	International Conference on Waste Management, Recycle 2018	
23	Biny Kumar Tripathy (CE15D045)	Dr. S. Mathava Kumar	Sono-catalytic oxidation of landfill leachate with persulfate and hydrogen peroxide	Recycle 2018	
24	Ninad Oke (CE16D006)	Dr. S. Mohan	Effluent management in a textile industry through recycling a promising environmental friendly alternative	Recycle 2018	IIT Guwahati, 22-24 February 2018
25	Charles P. Joseph (CE15D020)	Dr. S. Mohan	Biomining an innovative and practical solution for reclamation of open dumpsite	International Conference on Waste Management, Recycle 2018	

S.No.	Name	Co-Author	Title of the paper	Conference	Place and Date
26	Jikhil Joseph (CE14D013)	Dr. S. R. Satish Kumar	Moment rotation behavior of cold formed steel box beams	International Conference on Advances in Materials and Structures - ACMS 2018	IIT Roorkee, 6-11 March 2018
27	Sevagan Rajkuma (CE14D208)	Dr. Amlan K. Sengupta	Numerical study on effect warping in cold formed steel beam columns		
28	M. Prabha (CE13D046)	Dr. G. Radhakrishnan	Effect of compressive strength of concrete on the transmission length of PTC system	ACI Convention and Exposition 2018	24-29 March 2018

Students/Scholars who won Outside Prizes and Awards

Sl.No.	Student/Scholar	Roll No.	Prize	Awarded by
1.	Sakthivelan Ramachandran, R. Chethana and Prof. A. Veeraragavan	CE12D016 CE13D021	For paper, Application of system dynamics for pavement preservation	Transportation and Systems Engineering and Management
2.	Ashutosh Gaurav, Dr. Lelitha Devi Vanajakshi	CE15M072	For paper, Use of social media for traffic information in Indian cities	
3.	Yash Patil, Anoubhav Agarwal, Kavan Savla, Shashwat Sahoo, Harsh Parekh	CE16B137, BE16B002, BE16B010, BE16B011, ME16B173	National runners-up for their CFI project, Rail Road Crack Detection Bot in International James Dyson award competition, and qualifying for the international round	IIT Madras iBot Club Team
4.	Y.V.R. Sashi Sekhar, V. Vamsi Krishna, Cicily Kurian, Archana Nori and T. Vishwas Reddy	CE13B062, CE12D068, CE13D022, CE14B032, CE15B059	Second place in Ethics Video Challenge	Annual International Meeting 2017 of the American Society of Agricultural and Biological Engineers (ASABE) at Spokane, Washington, USA
5.	Aparup Biswal	CE15D039	UltraTech Cement Award for outstanding M.S. thesis in the field of concrete in Tamil Nadu for 2016-2017	The Indian Concrete Institute (Chennai Centre)
6.	Sripriya Rengaraju	CE14D024	RILEM Best Student Poster Award for her work, Challenges in determining the chloride threshold of steel embedded in cementitious systems. She is guided by Dr. Radhakrishna G. Pillai.	RILEM - ICACM
7.	H. Ajay Simha, former M.Tech. scholar		Best Paper Award for paper, Seismic design and behaviour of eccentrically braced frame—an outcome of his work at the Department of Civil Engineering under Dr. Rupen Goswami	National Conference on Advances and Trends in Civil Engineering 2017 (ATCE- 2017) held at Bengaluru
8.	Sundar Rathnaraj; Guide: Dr. Radhakrishna G. Pillai	CE15D014	Best Student Poster Award during CORCON 2017 for his poster, Carbonation rates and service life of reinforced concrete systems with mineral admixtures and special cements	NACE International - Gateway India Section
9.	Praveena Gangadharan; Guide: Dr. Indumathi M. Nambi	CE12D048	Magudam Award	Science and Technology category by News18
	P. Gobinath, R. Shreeram, G. V. Santhosh, D. S. N. Akhilesh	CE14B018, CE14B048, CE14B043, CE14B017	First prize for their idea on Foldable Housing to address the need of temporary shelter to rehabilitate the disaster affected victims and refugees across the world	Azim Premji University's National Level Social Enterprise Idea Challenge

Sl.No.	Student/Scholar	Roll No.	Prize	Awarded by
	Rushikesh B. Desai	CE13D013	Best Research Paper Award for his paper co-authored with Bharathiraja Muthurajan (Project Officer) and his guide Dr. Lelitha Devi Vanajakshi, entitled, A semi-automated image processing solution for extracting microscopic traffic data	10th Urban Mobility India and CODATU XVII Conference 2017, Hyderabad
	O. Sooraj Kumar, former M.S. research scholar		Best Masters Thesis Award 2017 for his M.S. Thesis, A study of mechanical and corrosion characteristics of TMT steel reinforcement used in concrete structures. He was guided by Dr. Radhakrishna G. Pillai.	NACE International – Gateway India Section
	P. Anusree, P. Atmakuri, V. Anne, G. Asaithambi, Dr. Karthik K. Srinivasan, Dr. R. Sivanandan, Dr. Bhargava Rama Chilukuri	CE15D040	Calibration of Vehicle Following Model Parameters Using Mixed Traffic Trajectory Data	4th Conference of Transportation Research Group of India, IIT Bombay

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl.No.	Student/Scholar	Roll No.	Prizes	Donor
1.	V. D. Logeswaran	CE14M114	L&T Endowment Prize	
2.	Anjana R.	CE15M116	L&T Endowment Prize	
3.	Praveena Gangadharan	CE12D048	Bhagalakshmi and Krishna Ayengar Award	
4.	Anish Gopal	CE14M018	Bhagalakshmi and Krishna Ayengar Award	Institute Day
5.	Raj Kamal Singh	CE12D069	Keshav Rangnath Excellence in Research Award	
6.	Krishna Kumar P. S.	CD15M058	Prof. Juergen Plaehn Prize	
7.	Dara Varapasad	CE15M068	Prof. Juergen Plaehn Prize	
Third and fourth semesters of the B.Tech/Dual degree programme				
8.	Damera Abhishek	CE15B021	Computer Age Management Services Private Limited Prize	Institute Day
Fifth and sixth semesters of B.Tech/Dual degree programme				
9.	Yogesh	CE14B061	M. S. K. Chaitanya Varma Memorial Prize	Institute Day
Seventh and eighth semesters of Dual degree programme				
10.	Keshav Bharadwaj Ravi	CE13B065	Sri Raghu Ramamoorthy Prize	Institute Day
11.	Sumon Das	CE13B051	Sri Venkataraman Ravi Prize	Institute Day
First and second semesters of the M.Tech programme				
12.	Debidutta Mishra	CE16M121	S. Sambasivan Award	Institute Day
13.	Anilkumar P. M.	CE16M048	Smt. Jayalakshmi Narasimhan Memorial Prize	Institute Day
14.	Gunturu Maniprakash Reddy	CE16M032	Prof. Gerhard Rouve Memorial Prize	Institute Day
15.	Lijith K. P.	CE15M038	Rajnikant Gandhi Memorial Award	Institute Day
16.	Bachu Anil Kumar	CE12D027	Institute Research Award	
17.	Anantha Sundararaman	CE13B004	L&T ECC Endowment Prize	
18.	Narneni Satyanarayana Rao	CE12B082	Dr. N. R. Dave Prize	
19.	K. Gopa Kumar	CE15M009	Valli Anantharamakrishna Merit Prize	
20.	Anu Rachel Thomas, V. Arya	CE14D004 CE12D034	NOWAH (No Waste At Household) Technology – A Novel, Sustainable, Smart and Complete Treatment Technology for Both Feecal Sludge and Organic Waste Management	Convocation
21.	Bilal T. T.	CE15M073	K. Devaraj Memorial Prize	
22.	V. Pranav Jeyam	CE12B063	L&T ECC Endowment	
23.	Aanchal Patel	CE11B001	Dr. N. R. Dave Prize	Convocation

4.6.3. Faculty and their Activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
Dr. P. Alagusundaramoorthy, Ph.D. (IIT Madras)	Composite technology
Dr. K. Ananthanarayanan, Ph.D. (IIT Madras)	Building technology and construction management
Dr. A. Boominathan, Ph.D. (Moscow)	Geotechnical engineering
Dr. Devdas Menon, Ph.D. (IIT Madras)	Structural engineering
Dr. S. R. Gandhi, Ph.D. (IIT Madras)	Geotechnical engineering
Dr. Koshy Varghese, Ph.D. (Texas, Austin)	Building technology and construction management
Dr. Ligy Philip (Ms.) Ph.D. (IIT Kanpur)	Environmental engineering
Dr. Manu Santhanam Ph.D. (Purdue University)	Building technology and construction management
Dr. A. Meher Prasad, Ph.D. (RICE)	Structural engineering
Dr. S.Mohan, Ph.D. (IISc. Bangalore)	Water resources engineering
Dr. B. S. Murty, Ph.D. (Washington St)	Water resources engineering
Dr. B. Nageswara Rao, Ph.D (Iowa University)	Structural engineering
Dr. C. V. R. Murty, Ph.D. (California Institute of Technology)	Structural engineering
Dr. J. Murali Krishnan, Ph.D. (IIT Madras)	Transportation engineering
Dr. K. Rajagopal, Ph.D. (Florida)	Geotechnical engineering
Dr. K. Ramamurthy, Ph.D. (IIT Madras)	Building technology and construction management
Dr. Ravindra Gettu, Ph.D. (Northwestern)	Building technology and construction management
Dr. R. G. Robinson Ph.D. (IISc., Bangalore)	Geotechnical engineering
Dr. S. R. Satish Kumar, D. Engineering (Nagoya University)	Structural engineering
Dr. K. N. Satyanarayana, Ph.D. (Clemson)	Building technology and construction management
Dr. R. Sivanandan, Ph.D. (Virginia Tech)	Transportation engineering
Dr. K. Srinivasan, Ph.D. (IIT Madras)	Water Resources engineering
Dr. K. P. Sudheer, Ph.D. (IIT Delhi)	Water Resources engineering
Dr. A. Veeraragavan Ph.D. (Bangalore University)	Transportation Engineering
Dr. Amlan Kumar Sengupta Ph.D. (University of Missouri)	Structural engineering
Dr. G. Appa Rao Ph.D. (IISc. Bangalore)	Structural engineering
Dr. G. R. Dodagoudar Ph.D. (IIT Bombay)	Geotechnical engineering
Dr. Karthik K. Srinivasan Ph.D. (Texas, Austin)	Transportation engineering
Associate Professors	
Dr. Arul Jayachandran, Ph.D. (IIT Madras)	Structural engineering
Dr. Indumathi M. Nambi, Ph.D. (Clarkson University)	Environmental engineering
Dr. Benny Raphael, Ph. D. (University of Strathclyde, UK)	Building technology and construction management
Dr. Balaji Narasimhan, Ph.D. (Texas A&M University)	Water resources engineering
Dr. Lelitha Devi, Ph.D. (Texas A&M)	Transportation engineering
Dr. S. T. G. Raghukanth, Ph.D. (IISc Bangalore)	Structural engineering
Dr. U. Saravanan, Ph.D. (Texas A&M)	Structural engineering
Dr. S. M. Shiva Nagendra, Ph.D. (IIT Delhi)	Environmental engineering
Dr. Ashwin Mahalingam, Ph. D. (Stanford University)	Building technology and construction management
Dr. T. Thyagaraj, Ph.D. (IISc Bangalore)	Geotechnical engineering
Dr. Dali Naidu Arnepalli, Ph.D. (IIT Bombay)	Geotechnical engineering
Dr. Sachin S. Gunthe, Ph.D. (IITM Pune)	Atmospheric chemistry and physics
Dr. Subhadeep Banerjee, Ph.D. (NUS, Singapore)	Geotechnical engineering
Dr. Vidya Bhushan Maji, Ph.D. (IISc Bangalore)	Geotechnical engineering
Dr. Mathava Kumar Ph.D. (IIT Madras)	Environmental engineering
Dr. Gitakrishnan Ramadurai, Ph. D. (Rensselaer Polytechnic Institute)	Transportation engineering
Dr. Arun Menon, Ph. D. (University of Pavia, Italy)	Structural engineering
Dr. Radhakrishna G Pillai, Ph. D. (Texas A&M University)	Building technology and construction management
Dr. Rupen Goswami, Ph.D. (IIT Kanpur)	Structural engineering
Assistant Professors	
Dr. Sivakumar Palaniappan, Ph.D. (Arizona State University)	Building technology and construction management
Dr. Venu Chandra Ph.D. (IIT Kanpur)	Hydraulics and water resources engineering

Name and Qualifications	Major Areas of Specialisation
Dr. Soumendra Nath Kuiry Ph.D. (IIT Kharagpur)	Hydraulics and water resources engineering
Dr. Atul Narayanan Ph.D. (Texas A&M)	Transportation engineering
Dr. Bhargava Rama Chilikuri	Transportation engineering
Dr. Lakshmi Priya, Ph. D. (Georgia Institute of Technology)	Structural engineering
Dr. P. Alagappan	Structural engineering
Professor of Practice	
Prof. N. Raghavan Ph.D.	Building technology and construction management
Prof. Anupam Vibhuti	Building technology and construction management
Adjunct Faculty	
Dr. Najji Al Mutairi	Building technology and construction management
Visiting Faculty	
Dr. Hadas Mamane	Environmental engineering

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Coordinator(s)	Title	Institution	Period
1.	Dr. Amlan K. Sengupta	Ph.D. thesis examination	IT Guwahati	16 January 2017
2	Dr. Indumathi M. Nambi	Central Pollution Control Board Meeting	Chromium-contaminated sites Nibra, Howrah, West Bengal	7 February 2017
3		25th Meeting of Earthquake Engineering Sectional Committee, CED 39	Bureau of Indian Standards (BIS), New Delhi	27 February 2017
4	Dr. Rupen Goswami	25th Meeting of Earthquake Engineering Sectional Committee, CED 39	BIS, New Delhi	19 July 2017
5		Two-day discussion meeting on earthquake safety assessment of buildings in India	IIIT Hyderabad	30-31 August 2017
6.	Prof. K. Rajagopal	Meeting of faculty coordinating courses under Swayam	Human Resource Development	2 March 2017
7	Dr. Sachin S. Gunthe	Biannual meeting of the heads of the Max Planck Partner Group	Indian Institute of Science Education and Research, Mohali	4 March 2017
8	Prof. Devdas Menon	Meeting of principals and coordinators of M. Tech. programmes offered in the Thrissur cluster of A.P.J. Abdul Kalam Technological University	Government Engineering College, Thrissur	8 March 2017
9		CGPC (M. Tech. programme) meeting of Ernakulam phase I cluster of A. P. J. Abdul Kalam Technological University	Rajagiri School of Engineering and Technology, Kochi	16 March 2017
10	Prof. A. Veeraragavan	15th Meeting of Board of Governors of GEC	Government Engineering College, Idukki	28 March 2017
11	Prof. S. Mohan	Selection Committee Meeting	Pondicherry University	20 March 2017
12	Prof. S. Mohan	20th Board of Governors Meeting	Rajiv Gandhi Institute of Technology, Kottayam	24 March 2017
13	Prof. Ravindra Gettu	Meeting on the Architect selection for Phase 2	Indian Institute of Technology, Mandi	29 March 2017
14	Prof. P. Alagusundaramurthy	Project meeting	Bharat Heavy Electrical Limited, Trichy	29 March 2017
15	Prof. G. R. Dodagoudar	Third Board of Studies Meeting of Civil Engineering	KLE Technological University	1 April 2017

Sl. No.	Coordinator(s)	Title	Institution	Period
16	Prof. Devdas Menon	Board of Governors meeting	LBS Institute of Technology for Women, Thiruvananthapuram	5 April 2017
17	Prof. A. Veraragavan	19 th Research Council meeting of NATPAC	Kerala State Council for Science Technology and Environment, Thiruvananthapuram	7-8 April 2017
18	Prof. Ligy Philip	Expert committee meeting on the pollution caused by the sewage treatment plant of Indian Naval Academy	Ramanthali, Kannur	17 April 2017
19	Prof. G. R. Dodagoudar	KSHITIJ 2017 Annual Day Celebration	Tontadaraya College of Engineering , Gadag	22 April 2017
20	Dr. Mathava Kumar	Thematic Research Committee (TRC) meeting IOGPT of ONGC	Mumbai	24 April 2017
21	Prof. J. Murali Krishnan	Project Presentation Meeting	BPCL R&D, Greater Noida	27 April 2017
22	Prof. Meher Prasad	55 th Meeting of the board directors of Mumbai International Airport Private Limited	Taj Santacruz Hotel, Mumbai	4 May 2017
23	Prof. K. P. Sudheer	Selection committee meeting	Jawaharlal Nehru Technological University, Hyderabad	3 May 2017
24	Prof. Ligy Philip	Senate meeting	National Institute of Calicut	12 May 2017
25	Prof. B. S. Murty	Project meeting	Indo-German Science and Technology Council (IGSTC), New Delhi	3 August 2017
26	Dr. S. M. Shiva Nagendra	MOES-NERC APH project meeting with the Director, NEERI	CSIR-NEERI, Hyderabad Zonal Laboratory, IICT Campus, Hyderabad	17-18 August 2017
27	Dr. Sachin S. Gunthe	Project and collaboration related meeting	Indian Institute of Tropical Meteorology, Pune	28-29 August 2017
28		TAC Meeting of NIH	Central Water Commission, New Delhi	1 September 2017
29		DC meeting	VIT, Vellore	21 September
30	Prof. K. P. Sudheer	Research Council Meeting	CWRDM Calicut	17 September 26-27 September 2017
31	Dr. Sachin S. Gunthe	Discussion and meeting regarding a field measurement campaign	Ministry of Earth Science, Delhi	2 October 2017
32	Prof. B. S. Murty	Meeting with Ministry of Water Resources	Ministry of Water Resources, River Development & Ganga Rejuvenation, Delhi	9 October 2017
33	Dr. Shiva Nagendra S. M.	ERC-MOES sponsored project, Cleaner air for delhi through intervention, mitigation and engagement (CADTIME) meeting	National Environmental Engineering Research Institute (NEERI), Zonal Laboratory, Naraina, Delhi	3-5 December 2017
34		Short-listing for faculty selection	IIT Gandhinagar	11 December 2017
35	Dr. B. S. Murthy	IGCS-DST project meeting to the DST Apex Committee	IIT Delhi	12 December 2017
36		Ph.D. Viva Voce Examination	VIT Vellore	11 December 2017
37	Dr. A Veeraraghavan	DC meeting	IIT Kharagpur	18 December 2017

Sl. No.	Coordinator(s)	Title	Institution	Period
38		National Science Exhibition	Vidya Bharati, Bengaluru	20 December 2017
40		Mission mode meeting regarding the Delhi air pollution	IIT Delhi	28 December 2017
41		Attend DC meeting	VIT Vellore	1 February 2018
42	Dr. Sachin S. Gunthe	Conduct Winter School on Aerosol measurement physics, monitoring and sampling techniques	CSIR-NIO Goa	2 February 2018
43		Upcoming field measurement campaign as a part of MOES-NERC project	Delhi	14 February 2018
44		Ongoing field measurement campaign	Delhi	3 March 2018
45		Discussion and meeting regarding collaboration related to Global Climate Modeling	Dehradun	16 March 2018
46	Dr. Balaji Narasimhan	Project Proposal meeting	IARI, New Delhi	13 February 2018
47		Explore the participation of Civil Engineering students in collecting nearby Rural Emission Data for NCAP –COALESCE Project	PES Engineering College, Mandya	14 February 2018
48		A crisis beyond the Indo-Gangetic Plan followed by a demonstration of SenbsUr-Air – Chairman, KSPCB and Mayor of the city Bengaluru	Bengaluru	21 February 2018
49	Dr. Shiva Nagendra S. M.	Interaction Meet 2018 on Partnership for Enhancing Geospatial Applications	IIRS Dehradun	28 February 2018
50		Project Proposal Meeting	SICE Mysore	2 March 2018
51		Official Meeting	IIT Bombay	20 March 2018
52		2nd Stage GCRF CALCC Hub Project Proposal Discussion	IIT Delhi	21 March 2018
53		Staff Selection Meeting	RRL Trivandrum	19 February 2018
54	Dr. B. S. Murthy	Project Proposal Meeting – Aizwal Mizoram	Aizwal, Mizoram	8 March 2018
55	Dr. G. Radhakrishna Pillai	NACE International Gateway India Section (NIGIS) and IIT Madras are jointly organising the 5th International Corrosion Prevention of CORSYM 2018 (International Corrosion Prevention Symposium for Research Scholars)	ICSR, IIT Madras	23-24 March 2018
Conferences				
1.	Dr. Balaji Narasimhan	Remote Sensing Applications in Water Resources	Conference on Trends in Agriculture and Biosystems Engineering, Coimbatore	26-27 March 2017
2.		10th Biennial National Convention of Church Cultural Heritage Practitioners	Bhopal	24-27 April 2017
3.	Dr. Arun Menon	Round-table conference for the certificate programme in built heritage and studies in conservation	CSMVS Museum Art Conservation Centre, Mumbai	5 May 2017
4.		2nd Indian International Conference on Air Quality Management (IICAQM 2017) and invited lecture on Smart sensors in urban air quality management and exposure analysis-an early warning system	IIT Delhi	1 June 2017
5.	Dr. S. M. Shiva Nagendra	2nd Air-O-Thon conference	Society for Indoor Environment (SIE) in New Delhi.	20 September 2017

Sl. No.	Coordinator(s)	Title	Institution	Period
6.		Corrosion Control in Concrete Structures	IIT Madras, in association with RILEM	8 September 2017
7.	Prof. Amlan K. Sengupta	Textile Reinforced Concrete Systems		4 September 2017
8.		International Conference on Advances in Construction Materials and Systems		5-7 September 2017
9.	Dr. A. Boominathan	Indian Geotechnical Conference (IGC) 2017	IIT Guwahati	14-16 December 2017
10.	Dr. Lelitha Devi	CTRG Conference	IIT Bombay	16-18 December 2017
11.	Dr. U. Saravanan	Recent Advances in Mathematical Sciences and Applications (RAMSA 2017)	Vishakapatnam	19-22 December 2017
12.	Dr. A. Boominathan	3 rd Indo-Japan workshop on Geotechnics for Natural Disaster Mitigation and Management	IIT Guwahati	13 December 2017
13.	Dr. Baaji Narasimhan	SWAT 2018 International conference - collaboration with the USDA-ARS, Texas A&M AgriLife Research and supported by the Indo-German Centre for Sustainability	IIT Madras	10-12 January 2018
Seminar				
1.	Prof. Amlan K. Sengupta	One-day seminar of Precast software, Machinery and Technologies	Hotel Le Meridian, Pune	15 March 2017
Symposium				
1		Indo-German Symposium on Water and Defend a Proposal (IGCS)	DST Delhi	4 October 2017
2	Prof. B. S. Murty	Brainstorming session on Water University	IISc. Bangalore	18 November 2017
Workshops				
1.	Dr. Shiva Nagendra	Core Science and Technical Framework for City Clean Air Coalition	New Delhi	18 January 2017
2.	Dr. S. Mathava Kumar	International technical training programme	SRM University, Chennai	31 January 2017
3.	Dr. Bhargava Rama Chilukuri	National Dissemination Workshop on Development of Indian Highway Capacity Manual (Indo-HCM)	CSIR - IGIB, South Campus, New Delhi	20 February 2017
4.	Dr. Radhakrishna G. Pillai	Housing Technology	Port Blair by BMTPC under JNNURM scheme	23 February 2017
5.	Prof. A. Veeraraghavan	Urban Transport Management	Hotel Asoka, Bengaluru	11 March 2017
6.	Dr. Gitakrishnan Ramadurai	Brainstorming workshop	Indian School of Business, Hyderabad	21 March 2017
7.	Dr. Balaji Narasimhan	National Workshop on New Developments in the Water Sector and Overview and Visioning of Forum's Work	Forum for Policy Dialogue on Water Conflicts in India	21 April 2017
8.	Prof. G. R. Dodagoudar	KSHITIJ 2017 Annual Day Celebration	Tontadaraya College of Engineering, Gadag	22 April 2017
9.	Dr. Sachin S. Gunthe	National Workshop on Network Program on Climate Change and Aerosol	Indian Institute of Technology, Kanpur	10-13 May 2017
10.	Dr. Soumendra Nath Kuiry	Workshop at Institute of Remote Sensing	Anna University	11 July 2017
11.	Dr. Indumathi M. Nambi	Workshop to discuss techno-economical viability of energy recovery from cow dung and other organic waste available in the Gaushala	Ministry of New and Renewable Energy, New Delhi	25 July 2017
12.	Dr. Indumathi M. Nambi	Brainstorming workshop on antimicrobial resistance in environment	Centre for a Science and Environment, Delhi	3 August 2017
13.	Dr. Sachin S. Gunthe	One-day photography workshop for the students of IIT Tirupati	IIT Tirupati	19 August 2017

Sl. No.	Coordinator(s)	Title	Institution	Period
14.	Dr. S. M. Shiva Nagendra	Workshop on liaison officers of SC/ST	Institute of Secretariat Training and Management (ISTM), New Delhi	4-5 September 2017
15.	Dr. A. Boominathan	3 rd Indo-Japan workshop on Geotechnics for Natural Disaster Mitigation and Management	IIT Guwahati	13 December 2017
16.	Dr. Leliitha Devi	IIT Madras-Purdue University Collaborations in Intelligent Transportation Systems	IIT Madras	15 December 2017
17.	Dr. Balaji	International Workshop on Introductory and Advanced Swat	IIT Madras	8-9 January 2018
18.	Narasimhan	International Conference and Workshop on Soil and Water Assessment Tool	IIT Madras	8-12 January 2018
19.		Air-O-Thon-Chennai – organised by IIT Civil in Association with Society for Indoor Environment (SIE), Indian Pollution Control Association (IPCA) Delhi and Prospurs Pte Limited	IIT Madras	16 February 2018
20.	Dr. S. M. Shiva Nagendra	Air Pollution	Bengaluru	21 February 2018
21.		Air Pollution Monitoring Instruments	CPCB, New Delhi	22 March 2018
Short-term courses				
1.	Dr. Soumendra Nath Kuiry and Dr. Balaji Narasimhan	AICTE-sponsored short term training course, Introduction to Two-Dimensional Flow Modelling using GIS	Indian Institute of Technology Madras	13-18 February 2017
2.	Dr. Dali Naidu Arnepalli	QIP short-term course on Advances in geoenvironmental engineering	Indian Institute of Science Bangalore	30 March 2017
Trainings				
1.	Dr. Sachin S. Gunthe	Materials Characterisation	Rajiv Gandhi Institute of Technology, Kottayam	8 February 2017
2.	Dr. S. M. Shiva Nagendra	Volatile Organic Compounds and Hydrocarbon: Monitoring and Management	ONGC, Chennai	17 August 2017

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Institution	Period
Conferences				
1	Prof. Manu Santhanam, Prof. Ravindra Gettu and Prof. Murali Krishnan	International Conference on Advances in Construction Materials and Systems (ICACMS 2017)	IIT Madras	5-7 September 2017
2	Dr. Balaji Narasimhan	International Conference and Workshop on Soil and Water Assessment Tool	IIT Madras	8-12 January 2018
Workshops				
1.	Prof. Koshy Varghese and Dr. Sivakumar Palaniappan	Lean Construction Practices	IIT Madras	27-29 July 2017
2.		Limestone Calcined Clay Cements (LC3)	IIT Madras	4 September 2017
3.	Prof. Ravindra Gettu	Pre-conference Workshop, RILEM Week on Textile Reinforced Concrete (TRC) Systems		5 September 2017
4.	Dr. Balaji Narasimhan	International Workshop on Introductory and Advanced Swat	IIT Madras	8-9 January 2018
Trainings				
1	Dr. Manu Santhanam, Dr. Ravindra Gettu and Dr. Murali Krishnan	71 st RILEM Annual Week	IIT Madras	3-8 September 2017
2.	Dr. Sivakumar Palaniappan	ISO 9001 Quality Management and OHSAS ISO 9001 Safety Management	IIT Madras	28 October- 24 November 2017

Sl. No.	Coordinator(s)	Title	Institution	Period
3.	Dr. B. S. Murthy	Training for TWAD Board Engineers: Process and Network Design – Application of Software	IIT Madras	29 January-2 February 2018
Short-term courses				
1	Dr. Manu Santhanam	Construction materials and management course	Shapooriji Pallonji Construction Limited Mumbai	30 January-3 February 2017
2	Dr. A. Veeraraghavan; Prof. Serji Amirkhanian, University of Alabama	Pavement preservation and environmental impact assessment of recycled materials in pavement management	IIT Madras	4-19 December 2017
3	Dr. Soumendra Nath Kuiry and Dr. Balaji Narasimhan	AICTE-sponsored course: Introduction to two-dimensional flow modelling using GI	IIT Madras	13-18 February 2017
4	Dr. Vidya Bhushan Maji	Investigation in Soil and Rock for Optimal Geotechnical Designs	IIT Madras	20-25 February 2017
5	Dr. S. Mathava Kumar and Dr. Indumathi M. Nambi	Advanced Wastewater Treatment (AWT 2017)	IIT Madras	6-11 March 2017
6	Dr. S. R. Satish Kumar	Structural Analysis and Design	National Institute of Technology, Mysore	23-25 March 2017
7		Quality enhancement in engineering education (QEEE) course on air pollution control engineering	IIT Madras	23-27 March 2017
8	Dr. S. M. Shiva Nagendra	Summer school on Urban air pollution and human exposure assessment	IIT Delhi	29-31 May 2017
9		Operation, maintenance and calibration of instruments for monitoring air pollution and air quality	IIT Madras	6-7 July 2017
10	Dr. Arul Jayachandran and Dr. Lakshmi Priya	Stability Design of Steel Building	IIT Madras	6-11 November 2017
11	Prof. Koshy Varghese	Lean Construction		31 July–4 August 2017
12	Dr. Ashwin Mahalingam	Mentoring and Augmenting Planning Skills 8.1	Larsen & Toubro ECC	8-11 August 2017
13	Dr. Arul Jayachandran	Workshop on the Revised Wind Load Code IS 875 Part 3 (2015)	-	4 February 2018
15	Prof. J. Murali Krishnan	Bituminous Material Characterization	HPCL, Mumbai and HINCOL	15-17 February 2018
16	Prof. Manu Santhanam	ALDEP for SPCL Engineers	SPCL, Mumbai	12-16 February 2018
14	Prof. Koshy Varghese	GCRF-Problem Discovery Workshop	Imperial College, UK	7 March 2018
17	Dr. J. Murali Krishnan and Dr. Parag Ravindran	Rheology of Bituminous Binders	IIT Madras	26-31 March 2018

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1.		Geotechnical aspects of seismic resistant structures	SSN College of Engineering, Chennai	3 February 2017
2.	Prof. A. Boominathan	Geotechnical aspects of earthquake engineering	SRM Valliammai Engineering College, Chennai	16 February 2017
3		Substructure-based numerical analysis of seismic soil structure interaction	Indian Institute of Technology Roorkee	3 March 2017
4		Ground improvement techniques	Sathyabama University, Chennai	15 March 2017

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
	Dr. Sivakumar Palaniappan	Resource planning in construction projects	National Institute of Technical Teachers Training and Research, Taramani	22 February 2017
5		Making concrete structures durable and sustainable	Ultratech Hyderabad	10 February 2017
6.	Prof. Manu Santhanam	Durability performance of ternary cementitious systems involving limestone powder	SRM University	3 March 2017
7.		Use of characterisation techniques for linking concrete microstructure to performance	Purdue University, USA	31 March 2017
8.	Dr. Arun Menon	Stabilization and seismic strengthening of Bagan monuments - draft stabilization guidelines and seismic improvement issues	International Conference on the Proposed Programme of Bagan Pagoda Post-quake Restoration and Preservation Project	15-16 February 2017
9.		R&D works on sustainable built forms using GFRG panels	Basaveshwar Engineering College, Bagalkot, Karnataka	27 February 2017
10.	Prof. G. R. Dodagoudar	Dynamic finite element analysis: theory and applications	Plaxis Workshop on National Institute of Technology, Trichy	9-10 March 2017
11.		Fundamentals of FEMdynamic soil properties numerical analysis of pile-raft foundations	National Institute of Technology, Warangal Department of Civil Engineering	25 March 2017
12.		Professional development and creativity in structural engineering	PANIIT Alumni Association, along with National Institute of Technology Tiruchchirapalli	25 February 2017
13.		Basics of bridge engineering	Vellore Institute of Technology (VIT), Chennai, for the Engineers of Larsen & Toubro Construction	3 March 2017
14.	Prof. Amlan K. Sengupta	Handbook on precast concrete for buildings – a primer, and precast concrete building systems	StruEngineers (India) Private Limited, Pune	15 March 2017
15.		Professional development and creativity in structural engineering	Under the PANIIT Alumni Leadership Series (PALS) Theory to Practice (T2P) Lecture programme, IIT Madras	24 August 2017
16.	Dr. Mathavakumar	Ideas for converting conventional WWTPs into sustainable WWTPs in the context of smart city	National Conference on Emerging Trends in Civil Engineering, GCE, Salem	2 March 2017
17.		Environmental impact assessment on WSS, UGSS, and desalination plant	For the staff of TWAD Board, Tamil Nadu Water Supply and Drainage Board	15 February 2017
18.		Personal exposure monitoring using low-cost sensors for exposure assessment	International Conference on Recent Advances in Bioresource Technology (RABT 2017), Thiruvalluvar University, Vellore	16 February 2017
19.		Impact of urbanization on environment	ISRO-sponsored seminar in Jaya Sakthi Engineering Colleges, Chennai	25 February 2017
20.	Dr. S. M. Shiva Nagendra	(i) Basics of vehicular air pollution (ii) Measurement techniques (iii) Modelling of vehicle exhaust emission (iv) Real time exhaust emission modelling-case study	One-day workshop on Vehicular exhaust emission monitoring and modelling, Rajiv Gandhi Institute of Technology, Kottayam	4 March 2017
21.		Air quality management in industries	National Conference on Pollution control strategies in chemical and related industries, SV University College of Engineering, Tirupati	11 March 2017
22.	Dr. Mathavakumar	Keynote lecture	National Conference on Numerical modelling in geomechanics, Indian Institute of Technology Roorkee	3 April 2017

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
23.	Dr. Lelitha Devi	Transportation engineering systems - interdisciplinary research possibilities	Rajiv Gandhi Institute of Technology, Kottayam	24 March 2017
24.	Prof. J. Murali Krishnan	Knowledge Leadership Forum	Sastra University Tirumalaisamudram, Thanjavur	6 April 2017
25.	Dr. Radhakrishna Pillai	Keynote lecture at NCB seminar on Durability and service life design on concrete structures	NCB-Ballabgarh, Faridabad (Delhi NCR), Haryana	7 April 2017
26.	Dr. Venu Chandra	Bed erosion in rivers: problems and mitigation measures	VIT Vellore	10 April 2017
27.	Prof. K. Rajagopal	Desirable properties geosynthetics and testing methods	VIT Vellore	19 April 2017
28.	Dr. Arun Menon	Behaviour of buildings during disasters: historical monuments and earthquakes	10 th Biennial National Convention of Church Cultural Heritage Practitioners, Philippines Bohal	24-27 April 2017
29.	Prof. J. Murali Krishnan	Knowledge Leadership Forum	Sastra University Tirumalaisamudram, Thanjavur	6 April 2017
30.	Dr. Radhakrishna Pillai	Keynote lecture at NCB seminar on Durability and service life design on concrete structures	NCB-Ballabgarh, Faridabad (Delhi NCR), Haryana	7 April 2017
31.	Dr. Venu Chandra	Bed erosion in rivers: problems and mitigation measures	VIT Vellore	10 April 2017
33.	Prof. K. Rajagopal	Desirable properties geosynthetics and testing methods	VIT Vellore	19 April 2017
34.	Dr. Arun Menon	Behaviour of buildings during disasters: historical monuments and earthquakes	10 th Biennial National Convention of Church Cultural Heritage Practitioners, Philippines Bohal	24-27 April 2017
35.	Dr. Sachin S. Gunthe	National workshop on network programme on climate change and aerosol	Indian Institute of Technology Kanpur	11-12 May 2017
36.		Atmospheric bioaerosols in earth system science: Indian perspective	National Institute of Oceanography (NIO), Goa	2 October 2017
37.		Deliver a talk in national workshop on Urban Environmental Management Solutions for Sustainability	CSIR-NEERI, Hyderabad Zonal Laboratory, IICT Campus, Hyderabad	17-18 August 2017
38.	Dr. S. M. Shiva Nagendra	Advanced pollution control remediation techniques for industries	IWMA seminar on Advances in environmental management	16 September 2017
39.		QIP short-term course	TKM College of Engineering, Kollam	6 December 2017
40.	Dr. Sivakumar Palaniappan	Introduction to sustainable built environment and sustainability indicators	Workshop on Low-cost sustainable building materials and construction technologies, PSG College of Technology, Coimbatore	22 September 2017
41.		Waste water treatment towards water reuse	AICTE-sponsored two-day national seminar on Current trends prospects and challenges of Swachh Bharat, KSR College of Technology, Namakkal	15 September 2017
42.	Dr. S. Madhava Kumar	Methodologies for impact identification urban water challenges	TPLC, Government Engineering College, Trivandrum	27-28 October 2017
43.		Overview of environmental impact assessment (EIA) and strategic environmental assessment (SEA)		8 November 2017
44.		AICTE-sponsored QIP short-term course	Coimbatore Institute of Technology (CIT), Coimbatore	1 December 2017

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
45.	Dr. Benny Raphael	Smart buildings and energy efficiency	Alberian Institute of Science and Technology,	4-5 December 2017
46.	Dr. A. Boominathan	Soil structure interaction analysis of pile foundations subjected to dynamic loads (keynote lecture)	IGC 2017, IIT Guwahati	14 December 2017
47.		Being a topper in a technical institute	SRM Easwari Engineering College, Chennai	8 March 2017
48.	Dr. Rupen Goswami	Impact of IS 1893 (Part 1): 2016 and IS 13920: 2016 on Design and Detailing	National Workshop on NBC 2016 and Recently Revised Seismic Codes - Impact on Design, Construction and Safety of Built Structure by Consulting Engineers Association of India (CEAI) and Indian Association of Structural Engineers (IAStructE) jointly with Bureau of Indian Standards, Kolkata	8-9 December 2017
49.		1. Prestressed Concrete Construction and Materials 2. Prestressed Concrete Structural Design	Mar Athanasius College of Engineering, Kothamangala, Kerala	17 December 2017
50.	Dr. Amlan K. Sengupta	<ul style="list-style-type: none"> • Prestressed Concrete Construction and Materials • Prestressed Concrete Structural Design • Precast Concrete Building Systems and Components • Professional Development and Creativity in Structural Engineering 	Muthoot Institute of Technology and Science, Varikoli, Kerala	10 January 2018
51.		Professional development and creativity in structural engineering	IIT Guwahati	17 January 2018
52.		Analysis, design and strengthening of RC beam-column joints under earthquake loading	Sri Venkateswara College of Engineering and Technology, Chittoor, AP	20 November–2 December 2017
53.		Seismic behavior of RC elements and strengthening	AITAM, Tekkali, AP	7-8 February 2018
54.	Dr. G. Appa Rao	Behavior, design and strengthening of RC elements under earthquake loading	Anna University, Chennai	5-12 December 2017
55.		Performance of cement grout in precast construction under general loading	2017, V. R. Siddhartha Engineering College, Vijayawada, AP	28-29 December 2017
56.	Dr. Rupen Goswami	Dynamic analysis of structures for earthquake resistant design	Rajagiri School of Engineering and Technology, Kochi	10 January 2018
57.	Dr. R. Sivanandhan	Leveraging ITS towards Smart City Mission, Chevening Alumni India (Chennai Chapter) Lecture Series-Consultation, Urbanscapes–Contours of Change and Connectivity	Chennai Metro Rail (CMRL) with a focus on Intelligent Transportation System (ITS), Chennai	22 March 2018

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding
1.	Dr. Arun Menon	Myanmar	5-9 March 2018	Technical coordination forum for safeguarding Bagan, organised by UNESCO and Ministry of Religious Affairs and Culture, Myanmar	Other source
2.	Dr. Ashwin Mahalaingam	Antwerp Belgium	14-19 March 2017	Personal visit	Other source
3.			18-24 May 2017		
4.	Dr. Devadoss Menon	Sri Lanka	12 March-12 May 2017	IAC international coaching conference	Other source
5.	Ananthanarayanan K.	UAE, Sharjah	7-21 April 2017	International Conference on Advances in Sustainable Construction Materials and Civil Engineering Systems	CPDA
6.	Prof. A. Veeraraghavan	Germany	16-20 April 2017	Technology Days event and a visit to factory on construction equipment	Other source
7.	Dr. Arun Menon	Philippines	24-27 April 2017	10th National Convention of Church Cultural Heritage Practitioners	CPDA
8.	Prof. K. Rajagopal	Philippines	24-28 April 2017	Seminar on Educate the Educate (EtE)	Other source
9.		Ghana Kumasi	6-25 May 2017	Organising an M.Sc. course on Geosynthetics Engineering for post-graduate students	Other source
10.		Romania, Lasi	9-25 May 2017	Erasmus faculty exchange programme	Other source
11.	Prof. Robinson	Jerusalem	2-12 May 2017	Personal trip	CPDA
12.	Dr. Radhakrishnan G. Pillai	Kuala Lumpur, Malaysia	2-4 May 2017	International Corrosion Prevention Symposium for Research Scholars 2017 (CORSYM 2017)	CPDA
13.	Dr. Devadoss Menon	Croatia and Slovenia	17-24 May 2017	Visit to Croatia and Slovenia	CPDA
14.	Dr. Meher Prasad	Slovenia	17-24 May 2017	Personal Visit	CPDA
15.		Hong Kong	31 May-7 June 2017		
16.	Dr. K. Srinivasan	USA	21 May-19 June 2017	Personal visit	CPDA
17.	Dr. Ashwin Mahalingam	USA	4-16 June 2017	EPOC-MW 2017 Conference, IIT Madras Summit, Deshpande Symposium	CPDA
18.		Croatia	23-30 June 2017	Engineering Project Organizations Conference	Other source
19.	Prof. A. Veeraraghavan	Philadelphia	16 June-26 July 2017	Personal trip	Other source
20.	Prof. J. Muralikrishna	Prague and Zurich, Europe	9-16 June 2017	Evolution of energy dissipation during four point bending of bituminous mixtures	CPDA
21.		Italy	21-24 July 2017	Technology Day event and visit to factory on construction equipment	CPDA
22.	Dr. Lelitha Devi	Hongkong	30 June-4 July 2017	International Conference on Transportation and Traffic Engineering	CPDA
23.	Dr. Balaji Narasimhan	Poland	26-30 June 2017	2017 International SWAT Conference and Workshop	CPDA
24.			25 June-2 July 2017	Analytic Element Method (AEM) and its Relevance with Subbasin/HRU Concept of SWAT for Potential Integration of AEM-based Simple Groundwater Model	CPDA
25.		Sri Lanka	13-14 July 2017	Workshop on Development of Decision Support System to Link Climate Information with Irrigation and Agriculture for Kirindi Oya basin	Other source
26.		Poland	14-25 July 2017	Visitors Programme II	Others

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding
27.	Prof. Koshy Varghese	Taiwan	28 June 2017-1 July 2017	34th International Symposium on Automation and Robotics in Construction	CPDA
28.		Greece	4-12 July 2017	2017 Lean and Computing in Construction Congress (LC2)	CPDA
29.		USA	9-21 June 2017	5th Geotechnical Earthquake Engineering and Soil Dynamics (GEESD V) conference	CPDA
30.	Dr. A. Boominathan	Canada	16-22 July 2017	3rd International Conference on Performance-based Design in Earthquake Geotechnical Engineering, and visit to the Department of Civil and Environmental Engineering Carleton University, Ottawa	
31.	Prof. K. Rajagopal	Morocco	6-11 October 2017	International Geosynthetics Society (IGS) Council Meetings and Geo Africa 2017 and 3rd African Regional Conference on Geosynthetics	
32.	Dr. Devdas Menon	Sri Lanka, Colombo	3-5 December 2017	Professional Development and Creativity in Structural Engineering	Other source
33.	Prof. B. S. Murthy	Germany	14-19 July 2017	IGCS Steering Committee meeting and lecture in IGCS Summer School on Sustainable Urban Water and Wastewater Management: India-Germany, RWTH Aachen University	Other source
34.	Prof. Ligy Philip	Germany	14-19 July 2017	IGCS Steering Committee meeting and lecture in IGCS Summer School on Sustainable urban water and wastewater management: India- Germany, RWTH Aachen University	Other source
35.	Prof. Ligy Philip	USA	24-31 July 2017	Environmental Science: Water Research and Technology Editorial Board Meeting	Other source
36.	Dr. S. T. G. Raghukanth	Bulgaria	4-8 September 2017	International Conference on Engineering Vibration (ICoEV-2017)	CPDA
37.	Dr. Arun Menon	UNESCO	30 September-3 October 2017	Review meeting for post-earthquake rehabilitation at Bagan - UNESCO and field visit for Getty Conservation Institute	Other source
38.	Dr. Gitakrishnan Ramadurai	Tokyo	15-17 November 2017	IIT Madras Alumni Meet	Other source
39.		Washington, DC, USA	5-11 January 2018	TRB 97th Annual Meeting	CPDA
40.	Dr. Sivakumar Palaniappan	Hong Kong	5-8 June 2017	World Sustainable Built Environment Conference	CPDA
41.		Denmark	16-20 May 2017	International Energy Agency Annex 72 expert meeting on Assessing Lifecycle Related Environmental Impacts Caused by Buildings, Danish Building Research Institute at AAU Copenhagen, Denmark	Other source
42.		South Korea	28 August-1 September 2017	2017 International Conference on Earthquake and Structures (ICEAS17)	CPDA
43.	Dr. Sachin S. Gunthe	Cambridge, USA	31 May-28 July 2017	ICEAS17	CPDA
44.	Dr. Benny Rapheal	Taiwan	28 June-1 July 2017	34th International Symposium on Automation and Robotics in Construction (ISARC 2017)	CPDA
45.		Germany	20-25 July 2017	ISARC 2018	
46.		Singapore	11 December 2017	Project workshop	

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding
47.	Dr. S. P. Atul Narayanan	Singapore	26 June-1 July 2017	Personal visit	Other source
48.	Dr. S. P. Atul Narayanan	Singapore	19-26 December 2017	Personal visit	Other source
49.	Dr. Sivakumar Palaniappan	Denmark	18-19 May 2017	International Energy Agency Annex 72 Expert Meeting on Assessing Lifecycle Related Environmental Impacts Caused by Buildings	CPDA
50.	Prof. Ravindra Gettu	Switzerland	22-26 May 2017	Limestone Calcined Clay Cement LC3 Annual Meeting	RILEM workshop
51.		Columbia	28 November-1 December 2017		
52.	Prof. Manu Santhanam	Switzerland	24-27 May 2017	Visit EPFL Switzerland for project team meeting	XIII Durability of Building Materials and Components (DBMC) Conference
53.		Belgium	29-31 May 2017		
54.	Prof. K. P Sudheer	Washington, USA	25-26 May 2017	Visit Purdue University, USA and attend 2017 ASABE Annual International Meeting	
55.	Prof. P. Alagusundaramoorthy	USA	5 June 2017	For visiting University of Kentucky, Lexington	
56.	Prof. S. Mohan	Sri Lanka	21-28 July 2017	To visit International Water Management Institute in Colombo	
57.	Prof. A. Veeraragavan	Philippines	22-23 August 2017	Conference on Road Safety in Asia 2017	Partial funding
58.	Dr. S. T. G. Raghukanth	Bulgaria	4-7 September 2017	International Conference on Engineering Vibration (ICoEV-2017)	No financial funding
59.	Prof. Ravindra Gettu	Paraguay	18-21 September 2017	Latin American Congress on Pathology in Construction (CONPAT)	No financial funding
60.	Dr. Indumathi M. Nambi	USA	30 September-4 October 2017	WEFTEC 2017 Conference	CPDA and project
61.	Dr. A. Boominathan	South Korea	17-22 September 2017	19th International Conference on Soil Mechanics and Geotechnical Engineering (19ICSMGE) and 2nd Korea and India Geotechnical Workshop	Other source
62.	Prof. Ravindra Gettu	Paraguay	18-21 September 2017	Latin American Congress on Pathology in Construction (CONPAT)	
63.	Dr. Indumathi M. Nambi	USA	30 September-4 October 2017	WEFTEC 2017 Conference	
64.	Prof. K. Rajagopal	Morocco	6-11 October 2017	International Geosynthetics Society (IGS) Council Meetings and Geo Africa 2017 and 3rd African Regional Conference on Geosynthetics	No funding
65.	Dr. S. Mathava Kumar	Egypt	18-26 November 2017	Project discussion on Nano-Materials-Reverse Osmosis Antifouling Membrane Formulations for Water Desalination	
66.	Prof. Manu Santhanam	Thailand	23-25 November 2017	2nd Asian Concrete Federation (ACF) Symposium 2017	
67.	Dr. Gitakrishnan Ramadurai	Tokyo	15-17 November 2017	IIT Madras Alumni Meet	CPDA
68.	Prof. Ravindra Gettu	Columbia	28 November-1 December 2017	RILEM Workshop	No funding
69.	Prof. S. Mohan	Netherland	7-12 May 2018	Ph.D. thesis examination at UNU-IHE Delft Institute of Water Education	Other source

Honours, awards and new assignment obtained by Faculty

Sl. No	Faculty Member	Name of Award	Awarded by	Date
Honours				
1.	Prof. Ligy Philip	Elected as a Fellow of The Royal Society of Chemistry	Royal Society of Chemistry	
2.		J.C. Bose Patent Award		
3.	Prof. A. Veeraragavan	Member of the Pilot Project Committee of the Indian Roads Congress	The Council of the Indian Roads Congress	For 2017-2020
4.	Prof. S. R Gandhi	Institute Chair Professors	Institute Peer Committee consisting of Prof. Ashok Jhunjhunwala, D. Balasubramanian, Roddam Narasimha and S. C. Dutta Roy	
5.	Prof. R. G. Robinson	IGS-Mr. H. C. Verma Diamond Jubilee Award 2017	Indian Geotechnical Society	

New Assignments

- Prof. Meher A. Prasad has joined as the Board of Directors of Navi Mumbai International Airport as an Independent Director.
- Prof. S. Mohan is nominated as Independent Director on the Board of SIDCO.
- Dr. S. Mathava Kumar is nominated as a State Level Advisory Board (SLAB) Member for the Union Territory of Lakshadweep.
- Dr. R. Sivanandhan was nominated as Advisory Committee Member, 5th Conference on Transportation Systems Engineering and Management (CTSEM2018), 17-19 May 2018, National Institute of Technology, Warangal.
- Dr. K. Rajagopal nominated/organised: \
 - Associate Editor of the Journal of Geotextiles and Geomembranes, Elsevier
 - Associate Editor of Indian Geotechnical Journal, Springer
 - Chairman of the Asian Activities Committee of the International Geosynthetics Society
 - Elected Board Member of the International Geosynthetics Society
 - The International Educate the Educators Program at IIT Madras, Chennai, 5-6 February 2018, as part of the activities of the International Geosynthetics Society.

Fellowships of Academies and Professional Societies

Sl. No.	Faculty Member	Year of admission
INAE		
	Prof. Ligy Philip - Fellows of the Indian National Academy of Engineering (INAE)	1 November 2017

Journal Editorial Boards

Sl. No.	Faculty Member	Position (Editor/Member)	Journal
1.	Prof. A. Veeraragavan	Member on the Editorial Board	Infrastructure Asset Management published by the Institution of Civil Engineers, UK
2.	Prof. R. Sivanandhan	Calibration of Vehicle Following Model Parameters Using Mixed Traffic Trajectory Data	4th Conference of Transportation Research Group of India (CTRG), Mumbai, India, 4th Conference of Transportation Research Group of India (CTRG), Mumbai, India

Design and Development Activities

New facilities added or Major Equipment Procured

Sl. No.	Name of the Item	Amount (Rs.)
1	Membrane test skid	22,15,400
2	Strain gauge	2,80,250
3	Desktop, monitor	2,13,100
4	Furnace	1,85,968
5	Talkbox	2,35,988
6	PH/TDS conductivity meter	73,160
7	Replace of the TMP	3,55,346
8	Voltage stabilizer	1,38,957
9	Fire extinguisher	66,794
10	Autoclave	53,690
11	Network switch 5130 HPE	57,820
12	Dell precision	82,600
13	Pump kit	1,63,700
14	Semi Auto. Polishing M	1,58,450
15	UPS Battery	2,06,204
16	GPIB-USB-HS software	94,400
17	Profoscope	2,18,300
18	Hot plate	79,632
19	WS3	1,05,320
20	Teakwood island tables	52,23,066
21	Monitor and WS3	1,14,260
22	TV Sony - C Room	60,000
23	Stainless steel pipe	1,16,041
24	Network switches	6,56,108
25	Diamond coring tool	1,62,627
26	Chicago pneumatic screw	1,60,386
27	UPS (RC)	1,39,830
28	Circulating waterbath	67,703
29	HP600 and Monitor (M4) (7)	4,27,517
30	Spares – DCT	1,45,849
31	Aerosol generator	2,32,566
32	Torque sensor	5,85,841
33	LXI compliant data	1,96,203
34	Computer chairs (50)	2,36,000
35	Activated carbon plant	1,72,280
36	Multi-grade filter	1,60,480
37	Biometric/EM Lock	63,720
38	DSK2 and DSK5	67,171
40	Resonant Colum motor	3,00,000
41	CoD Digeter	55,040
42	Membranes	56,811
43	HP Pump	1,82,900
44	Membranes	1,88,800
45	30 HP Pump	1,81,284

Equipment/Project Purchases in the year 2017-18

Sl. No.	Name of the Item	Amount (Rs.)
1	3D Acoustic Doppler velocimeter	6,86,119
2	Mike Flood Software	24,90,468
3	Water Level Recorder	19,99,923
4	Hydro Dynamic Cartation Reactor	9,54,410
5	Contact Angle Meter	11,29,621
6	Piping and instrumentation	5,95,000
7	Abrasion resistance of concrete	3,32,167
8	River Acoustic Doppler Current Profiler	26,67,967
9	Model 6000 Visibility Sensor	4,82,629
10	CTE (Concrete Thermal Expansion system)	14,18,315
11	Mobil DTE 25	3,92,964
12	FTIR spectrometer	28,12,627
13	3-DEC software	26,02,317
14	2D-Laser Doppler Velocity	70,36,430
15	MDSC-TGA-DTA	44,48,000
16	Large Cyclic Direct Shear Apparatus	59,80,000
17	Xenon Arc Weathermeter	54,40,212
18	EOT Crane 5.0 Ton	9,48,000
19	TGA Analyser	12,50,300
20	AVL MDS 418 with accessories	18,11,300
21	Plug Flow Reactor	7,42,025
22	Tower server	292398
23	Chemical reactor service unit	688922
24	Bentley software WaterGEMS	12572022
25	Pundit PL-20v transducer	498518
26	Continuous stirred reactor	554108
27	Envirotech instrument	872100
28	CATMAN software	288288
29	Platform (steel protective floor)	881197
30	Large-scale 3D printer	503000

Faculty Members' participation with other Institutions under MoU

Sl. No.	Faculty Member	Participation details	University/Institution
1	Benny Raphael	Supervision of master's thesis	Czech Technical University, Prague

Distinguished Visitors to the Department

S. No.	Name and Designation	Title of the Talk	Date
1	Dr. Gary Fones, Reader in Aquatic Biogeochemistry in the School of Earth and Environmental Sciences, University of Portsmouth, UK	Use of passive sampling devices for monitoring polar and emerging (non-regulated) pollutants in river catchments	15 May 2017
2	Dr. Chandrakant S. Desai, Regents Professor at the University of Arizona, Department of Engineering and Engineering Mechanics, Tucson, AZ, USA	Constitutive modeling vital for computation mechanics	14 December 2017
3	Dr. Susan E. Powers, Associate Director for Sustainability Spence Professor of Sustainable, Environment Systems, Clarkson University, Potsdam, NY	Defining and measuring sustainability on college campus smart housing project: motivating students to cut down power consumption in hostels	22 December 2017
4	Prof. Abhijit Mukherji, Curtin University, Australia	Collaboration and Joint Ph.D. Supervision	15-16 December 2017
5	Dr. S. Joseph Antony, Faculty of Engineering, University of Leeds, UK	Recent advancements on the multi-scale mechanics of discrete and cementitious materials	5 January 2018
6	Anupam Vibhuti, Tranxiti Mobility Logistics Private Limited, New Delhi	Autobots – On demand, driverless, personalised rapid transit systems	17 January 2018
7	Dr. Sampadananda Mishra, Director of Sri Aurobindo Foundation for Indian Culture (SAFIC), Puducherry	Sanskrit - A language of the soul	17 January 2018
8	Prof. Paulet Fideliu from Romania	1. Smart Cities and Civil Engineering 2. Trends in Civil Engineering 3. Structural Control part 2	1. 17 January 2018 2. 18 January 2018 3. 25 January 2018
9	Sai Ganesh Pai, a doctoral student of EPFL	Structural monitoring and system identification	24 January 2019
10	Prof. Tom Mathew, IIT Bombay	Taxonomy of signal systems and broad working philosophies of popular traffic control systems and their suitability to Indian conditions: The methodology and results of an adaptive control system	7 February 2018
11	Dr. P. Ravikumar	CE 5840 – Industrial lecture	27 February 2018
12	Kirthivasan V., a NIT graduate with 25 years of domestic and international experience in developing and selling Civil Engineering software (AEC, GIS, plant and infrastructure domains), has worked at UK, Dubai for organisations like Autodesk, Trimble and Bentley	Transoft company and its software solutions along with case studies	8 March 2018
13	Prof. V. Chandrasekar from Colorado State University	From raindrop to thunderstorm: Advances, challenges and opportunities in rainfall measurement using dual polarized radar	15 March 2018
14	Dr. Andrea Müller, Helmholtz-Centre for Environmental Research UFZ-Leipzig, Department of Molecular Systems Biology, Leipzig, Germany	Risk assessment of airborne particulate matter	16 March 2018

Other Activities of the Department

- Launch of Phase 2 of Carbon Zero Challenge (CZC) - Renewable Energy Innovation competition was conducted on 18-19 July 2017 in collaboration with Shastra 2018.
- The CZC is a pioneering initiative by Department of Civil Engineering, IIT Madras in association with US Consulate and Polaris, a Virtusa company, to identify innovative and indigenous solutions to India's unique energy problems. College students from south India and early-stage start-ups were challenged to develop

innovative renewable energy solutions through concepts and building prototypes and take it forward as a business startup. The competition was launched on 9 March by Director of IIT Madras and Chairman of Tamil Nadu Energy Development Agency (TEDA). It received around 534 applications in five thematic areas – industries, transportation, urban areas/cities, agriculture and water and waste management in phase I. These applications were screened by an expert committee panel and a total of 54 teams were invited for a face-to-face interview on

18 July. From this, a total of 26 teams were selected to go to the next phase of CZC. The selected teams received up to Rs.5 lakh each as prototype funding. The contest culminated into a demo day during Shaastra in January 2018.

International collaborations by the department

IIT Madras–Purdue University collaborations in Intelligent Transportation Systems by Dr. Lelitha Devi

Details of sponsored projects

S. No	Project No	PI	Co-PI1	Title	Agency	Value (Rs. In lakh)
1	CIE1718253DSTXDALI	Dali Naidu Arnepalli	Maji V. B.	Role of sorption and desorption characteristics of formation media in geological storage of carbon dioxide	Department of Science and Technology (DST)	58.29
2	CIE1617251DSTXBNAE	Nageswara Rao B.		Uncertain static and dynamic analysis of imprecisely defined structures using fuzzy and interval based approach	DST	19.2
3	CIE1718252DSTXRADH	Radhakrishna G. Pillai	Lakshman Neelakantan	Assessment, prevention, and mitigation of corrosion in reinforced concrete (RC) systems	DST	45.5
4	CIE1718255MOESSMSH	Shiva Nagendra S. M.	Gitakrishnan Ramadurai	Clean air for Delhi through interventions, mitigations and engagement (CADTIME)	Ministry of Earth Sciences, New Delhi	67.44
5	CIE1617244OPSABALJ	Balaji Narasimhan	Sreenivasa Murthy B.	Design of an expert system for flood forecasting and management for the city of Chennai	Office of the Principal Scientific Adviser	128.57
6	CIE1718257MOESSACI	Sachin S. Gunthe		Process analysis, observations and modeling- Integrated solutions for cleaner air for Delhi (PROMOTE)	Ministry of Earth Sciences, New Delhi	31.14
7	CIE1718258DSTXLIGY	Ligy Philip		Nanomaterials and porous coordination polymers for the sensing and sorption of small volatile organic compounds in aqueous and gaseous phase- DST-NST PDF - through JNCASR Bangalore	DST	17.2

S. No	Project No	PI	Co-PI1	Title	Agency	Value (Rs. In lakh)
8	CIE1819262IGSTBSMT	Srinivasa Murthy B.		Smart and reliable water and wastewater infrastructure systems for our future cities in India and Germany (SMART and WISRE)	Indo-German Science and Technology Centre	87.8
9	CIE1718261DSTXLIGY	Ligy Philip		Fate and management of emerging contaminants	DST	164.93
10	CIE1617245GNCTSM SH	Shiva Nagendra S. M.		Source apportionment of ambient particulate matter during winter season in Delhi city	Government of National Capital Territory of Delhi	51.89
11	CIE1617246DSTXSMSH	Shiva Nagendra S. M.		Design and development of algae based reactor for air pollution control at waste management site	DST	19.2
12	CIE1617236CPCBSMSH	Shiva Nagendra S. M.		Ambient air quality monitoring Station at IIT Madras-Phase II	Central Pollution Control Board	8.3
13	CIE1617237MUAYINDU	Indumathi M. Nambi		Accelerated treatment of petroleum chemical sludge using coupled physicochemical, photochemical, electrochemical and biological processes	Uchhatar Avishkar Yojana - IIT Madras	97
14	CIE1617238DSTXINDU	Indumathi M. Nambi		Recovery and removal of oil from petroleum contaminated wastewater/sludge using advanced oxidation processes	DST	26.45
15	CIE1617239ARDBSARU	Arul Jayachandran S.	Rupen Goswami	Computational methods for the postbuckling analysis of imperfect laminated composite plates/shells using secant matrix techniques	Aeronautics Research & Development Board	9.15
16	CIE1617240DSTXSPAT	Atul Narayan S. P.		Experimental investigation of dissipation associated with fatigue cracking in bituminous mixtures	DST	36.7
17	CIE1516227DSTXSUBH	Subhadeep Banerjee		Dynamic behaviour of anchor plates in soft clay with geosynthetic reinforcement	DST	33.92
18	CIE1516230DSTXRAVG	Ravindra Gettu		Development characterisation and prototype application of high performance fibre reinforced concrete	DST	17.92

S. No	Project No	PI	Co-PI1	Title	Agency	Value (Rs. In lakh)
19	CIE1516231MOESABOO	Boominathan A.	Subhadeep Banerjee	Evaluation of dynamic properties and seismic isolation performance of soil-rubber mixtures	Ministry of Earth Sciences, New Delhi	88.5
20	CIE1415155ISROBALJ	Balaji Narasimhan		Spatial disaggregation and inverse modelling to quantify field level irrigation water distribution and efficiency across a command area using an integrated thermal remote sensing and crop growth modelling approach	Indian Space Research Organisation	33.33
21	CIE1415224IFCPBENN	Benny Raphael		Multi-objective optimisation of day lighting systems	Indo-French Centre for the Promotion of Advance Research	35.66
22	CIE1213204DSTXSACI	Sachin S. Gunthe		Characterising the properties of biological aerosol particles under different environmental and seasonal conditions over the Indian tropical region: Assessment for possible climatic and health impacts	DST	42
23	CIE1213205DSTXHODX	K Ramamurthy		Integrated closed-loop controlled testing facility for the mechanical characterisation of the nonlinear response of Civil Engineering Materials (FIST)	DST	500
24	CIE1213205DSTXHODX	K Ramamurthy		Integrated closed-loop controlled testing facility for the mechanical characterisation of the nonlinear response of Civil Engineering Materials (FIST)	DST	500
25	CIE1314210MHRDCVRM	Murty C. V. R.	Arun Menon	National Centre for Safety of Heritage Structures (NCSHS)	Ministry of Human Resource and Development	1211.5
26	CIE1314213TNPCINDU	Indumathi M. Nambi	Balaji Narasimhan	Centre for Environment Technology Dissemination, Demonstration and R&D for industrial pollution abatement	Tamil Nadu Pollution Control Board	500

S. No	Project No	PI	Co-PI1	Title	Agency	Value (Rs. In lakh)
27	CIE1314215MUDXLIGY	Ligy Philip	Murty B. S.	CoE of MoUD (Phase II) Performance evaluation study of sewerage treatment plants sanctioned under CBULB scheme	Ministry of Urban Development	272
28	CIE1314216BRNSBNAE	Nageswara Rao B.	Meher Prasad A.	Development of robust data assimilation techniques for nonlinear dynamical systems	Board of Research in Nuclear Sciences	21.77
29	CIE1415218MOESSACI	Sachin S. Gunthe	Shiva Nagendra S. M.	Measurements and modeling of cloud condensation nuclei (CCN) in Indian continental and marine air	Ministry of Earth Sciences, New Delhi	99.6
30	CIE1516233DSTXVENU	Venu Chandra		Investigation on local scour around different shaped piers	DST	32.36
31	CIE1617235DSTXBENN	Benny Raphael	Koshy Varghese	Automated assembly of modular building structures: Control strategies and sensor placement	DST	47.84
32	CIE1617234DSTXSMAT	Mathava Kumar S.	Venu Chandra	Pharmaceutical and personal care products removal and their Bio-toxicity assessment in membrane-bioreactor with immobilised -biomass (iMBR) and carrier-supported-Biomass (casMBR)	DST	34.75
33	CIE1617241MUAYSM SH	Shiva Nagendra S. M.		Low-cost semiconductor and optical sensors based urban air quality monitoring network system (SENSurAIR)	Uchhatar Avishkar Yojana - IIT Madras	53.01
34	CIE1617242UNUXSMOH	Mohan S.		Wastewater and flood management modeling for Chennai city	United Nations University	17.6
35	CIE1617243NRSCBALJ	Balaji Narasimhan		Development of near-real-time hydrological modelling system for india based on ensemble of SWAT simulations	National Remote Sensing Centre	18.6
36	CIE1617244OPSABALJ	Balaji Narasimhan	Sreenivasa Murthy B.	Design of an expert system for flood forecasting and management for the city of Chennai	Office of the Principal Scientific Adviser	128.57

S. No	Project No	PI	Co-PI1	Title	Agency	Value (Rs. In lakh)
37	CIE1617249DSTXSACI	Sachin S. Gunthe		Waves generated due to synoptic scale and mesoscale convective events and their propagation characteristics- DST National Post Doctoral Fellowship	Department of Science & Technology	19.2
38	CIE1617247MIMPLIGY	Ligy Philip	Boby George	Sustainable solar powered wastewater treatment systems to improve hygiene and sanitation in schools by adopting water recycling and online quality monitoring	Impacting Research Innovation and Technology - IMPRINT	132
39	CIE1617250MIMPRADH	Radhakrishna G. Pillai	Ravindra Gettu	Development of pre-packaged, high performance group (HPG) using locally available cementitious materials for the indian post-tensioned (PT) concrete industry	Impacting Research Innovation and Technology - IMPRINT	36.36
40	CIE1718254IDRCSMOH	Mohan S.		Integrated rural-urban water management for climate based adaption in Indian cities	International Development Research Centre	33.98
41	CIE1617248CWCXKRAI	K. Rajagopal	Dr. Dali Naidu Arnepalli, Dr K. Srinivasan, Dr. R. Gettu, Dr. Manu Santhanam, Dr. Arun Menon, Dr. Balaji Narasimhan, Dr. Soumendra Kuiry, Dr. Robinson, R. G., Dr. Thyagaraj, T., Dr. Subhadeep Banerjee, Dr. V. B. Maji, Dr. Meher Prasad, Dr. C. V. R. Murty, Dr. Venu Chandra	Institutional strengthening on analysis of dams, foundation, retrofitting, flood forecasting and related issues	Central Water Commission, New Delhi	592

Details of Industrial Consultancy (Ongoing and New)

S. No.	Project Type	Project Number	Principal Investigator	Co Investigator 1	Agency Name	Value (Rs. In Lakhs)
1	CR	CR1718CIE001LNTELELI	Lelitha Devi V	Bhargava Rama Chilukuri	L&T Technology Services	120
2	CR	CR1718CIE002PCSLINDU	Indumathi M Nambi		Polaris Consulting and Services Limited	150
3	CR	CR1718CIE003CIFICAMAH	Ashwin Mahalingam	Indumathi M. Nambi	Cholamandalam Investment and Finance Company Limited	69.13
4	CR	CR1718CIE004SSEFGITA	Gitakrishnan Ramadurai		Shakti Sustainable Energy Foundation	75.89
5	CR	CR1718CIE005FICCAMAH	Ashwin Mahalingam		Fullerton India Credit Company Limited	5.90

Details of RBIC Project (Ongoing and New)

S. No.	Project Type	Project Number	Principal Investigator	Co Investigator 1	Agency Name	Value (Rs. in lakhs)
1	RB	RB1718CIE001INSPBALJ	Balaji Narasimhan	Sudheer K. P.	Inspire Network for Environment	42.24
2	RB	RB1718CIE002JAIGSTGR	Raghu Kanth S. T. G.		Jaigarh Port Limited	9.00
3	RB	RB1718CIE003SAIOMANU	Manu Santhanam		Saint - Gobain Research India Limited	5.16
4	RB	RB1718CIE004IOCLINDU	Indumathi M. Nambi		Indian Oil Corporation Limited	31.25
5	RB	RB1718CIE005L&TNSTGR	Raghu Kanth S. T. G.		L&T Construction, Buildings and Factories	5.00
6	RB	RB1718CIE006AIRXBNAE	Nageswara Rao B.		All India Radio	7.48
7	RB	RB1718CIE007AIRXBNAE	Nageswara Rao B.		All India Radio	7.48
8	RB	RB1718CIE008RETTJMUR	Muralikrishnan J.		Rettenmaier India Private Limited	8.35
9	RB	RB1718CIE009INGVJMUR	Muralikrishnan J.		Ingevity Corporation	5.31
10	RB	RB1718CIE010NLCLKRAM	Ramamurthy K.	Robinson R. G.	Neyveli Lignite Corporation Limited	21.20
11	RB	RB1718CIE011AIRXBNAE	Nageswara Rao B.		All India Radio	4.60
12	RB	RB1718CIE012AMCSLIGY	Ligy Philip	Sreenivasa Murthy B.	AM Corporate Social Responsibility Foundation	10.05
13	RB	RB1718CIE013AASHPALA	Alagusundaramoorthy P.		Aashhirwad Analytical Laboratory	2.01
14	RB	RB1718CIE014HPCLINDU	Indumathi M. Nambi		Hindustan Petroleum Corporation Limited	19.88
15	RB	RB1718CIE015EPFLMANU	Manu Santhanam	Radhakrishna G. Pillai	Ecole Ploytechnique Federale de Lausanne	84.09
16	RB	RB1718CIE016BEKARAVG	Ravindra Gettu		Bekaert Industries Private Limited	7.08
17	RB	RB1718CIE017ICSASMOH	Mohan S.		ICLEI South Asia	8.26
18	RB	RB1718CIE018EIPRSMH	Shiva Nagendra S. M.		Envirotech Instruments Private Limited	3.24
19	RB	RB1718CIE019PWDXS MOH	Mohan S.		Public Works Department	6.14
20	RB	RB1718CIE020KELLMANU	Manu Santhanam	Robinson R. G.	Keller Ground Engineering India Private Limited	7.97

S. No.	Project Type	Project Number	Principal Investigator	Co Investigator 1	Agency Name	Value (Rs. in lakhs)
21	RB	RB1718CIE021TNUIINDU	Indumathi M. Nambi	Shiva Nagendra S. M.	Tamil Nadu Urban Infrastructure Financial Services Limited	35.40
22	RB	RB1718CIE022TNUIINDU	Indumathi M. Nambi	Shiva Nagendra S. M.	Tamil Nadu Urban Infrastructure Financial Services Limited	35.40
23	RB	RB1718CIE023BHELRSRA	Satish Kumar S. R.		Bharat Heavy Electricals Limited	2.83
24	RB	RB1718CIE024MILIRAVG	Ravindra Gettu	Radhakrishna G. Pillai	Military Engineering Services	6
25	RB	RB1718CIE025AIRXBNAE	Nageswara Rao B.		All India Radio	7.67
26	RB	RB1718CIE026AIRXBNAE	Nageswara Rao B.		All India Radio	3.22
27	RB	RB1718CIE027AIRXBNAE	Nageswara Rao B.		All India Radio	1
28	RB	RB1718CIE028CPWDBNAE	Nageswara Rao B.		Central Public Works Department	29.50
29	RB	RB1718CIE029SAIORAVG	Ravindra Gettu	Dali Naidu Arnepalli	Saint - Gobain Research India Limited	11.80
30	RB	RB1718CIE030PCPRPALA	Alagusundaramoorthy P.		P&C Projects	26.55
31	RB	RB1718CIE031L&TLKOSH	Koshy Varghese	Ravindra Gettu	Larsen and Toubro Limited	44
32	RB	RB1718CIE032TNWSBSMU	Sreenivasa Murthy B.	Ligy Philip	Tamil Nadu Water Supply and Drainage Board	148.68
33	RB	RB1718CIE033BHELRSRA	Satish Kumar S. R.		Bharat Heavy Electricals Limited	6.73
34	RB	RB1718CIE034BHELRSRA	Satish Kumar S. R.		Bharat Heavy Electricals Limited	3.08
35	RB	RB1718CIE035ETHSBENN	Benny Raphael		ETH Singapore SEC Limited	2.44
36	RB	RB1718CIE036JNPTSMH	Shiva Nagendra S. M.		Jawaharlal Nehru Port Trust	290.54
37	RB	RB1718CIE037SAINJMUR	Muralikrishnan J.		Saint-Gobain Glass India Limited	10.27
38	RB	RB1718CIE038TWRDKRAG	Rajagopal K.	Ravindra Gettu	Tamil Nadu Water Resources Department	24.82
39	RB	RB1718CIE039BHELPALA	Alagusundaramoorthy P.		Bharat Heavy Electricals Limited	19.52
40	RB	RB1718CIE040SSEFGITA	Gitakrishnan Ramadurai		Shakti Sustainable Energy Foundation	75.89
41	RB	RB1718CIE041LTLCRADH	Radhakrishna G. Pillai		L&T Limited, Construction	8.26
42	RB	RB1718CIE042BHEL SARU	Arul Jayachandran S.		Bharat Heavy Electricals Limited	8.14
43	RB	RB1718CIE043VECTRADH	Radhakrishna G. Pillai		Vector Corrosion Technologies	10.74
44	RB	RB1718CIE044NTPCDALI	Dali Naidu Arnepalli		National Thermal Power Corporation Limited	9.44
45	RB	RB1718CIE045JNPTSMH	Shiva Nagendra S. M.	Mathava Kumar S.	Jawaharlal Nehru Port Trust	244.20
46	RB	RB1718CIE046RELAJMUR	Muralikrishnan J		Reliance Industries Limited	5.49

Details of Retainer Consultancy (Ongoing and New)

S. No.	Project Type	Project Number	Principal Investigator	Agency Name	Value (Rs. In lakh)
1	RC	RC1718CIE739ADIYMANU	Manu Santhanam	Aditya Birla Science and Technology	8.85
2	RC	RC1718CIE746L&TIAVEE	Veeraraghavan A.	L&T Infrastructure Development Projects Limited	5.9
3	RC	RC1718CIE752PHENSARU	Arul Jayachandran S.	Phenix Construction Technologies	5

S. No.	Project Type	Project Number	Principal Investigator	Agency Name	Value (Rs. in lakh)
1	IC	IC1718CIE001SPRCAMEH	Meher Prasad A.	SPR Construction Private Limited	74.75
2	IC	IC1718CIE002L&TNRAVG	Ravindra Gettu	L&T Construction, buildings & Factories	3.45
3	IC	IC1718CIE003WRDXDEVD	Devdas Menon	Water Resources Department	6.44
5	IC	IC1718CIE004KELLRGRO	Robinson R. G.	Keller Ground Engineering India Private Limited	3.45
6	IC	IC1718CIE005LTCWINDU	Indumathi M. Nambi	L&T Construction, Water & Effluent Treatment IC	5.75
7	IC	IC1718CIE006LAFRRAVG	Ravindra Gettu	Lafarge India Limited	6.90
8	IC	IC1718CIE007KNRCDEVD	Devdas Menon	KNR Construction Limited,	9.09
9	IC	IC1718CIE008SUNABNAE	Nageswara Rao B.	Sundaram Architects Private Limited	6.90
10	IC	IC1718CIE009TWMLSMOH	Mohan S.; Co-investigator 1: Robinson R. G.	Tamil Nadu Waste Management Limited	5.75
11	IC	IC1718CIE010CPWDDDEVD	Devdas Menon	Central Public Works Department	18.64
12	IC	IC1718CIE011IITDEVD	Devdas Menon	IIT Tirupati	5.07
13	IC	IC1718CIE012LTCWGAPP	Appa Rao G.	L&T Construction, Water & Effluent Treatment IC	19.26
14	IC	IC1718CIE013ASAHBNAE	Nageswara Rao B.	Asahi India Glass Limited	6.90
15	IC	IC1718CIE014TSCBABOO	Boominathan A.	Tamil Nadu Slum Clearance Board	6.10
16	IC	IC1718CIE015NTPCDALI	Dali Naidu Arnepalli	National Thermal Power Corporation Limited,	7.00
17	IC	IC1718CIE016LTCWINDU	Indumathi M. Nambi	L&T Construction, Water & Effluent Treatment IC	5.18
18	IC	IC1718CIE017L&TNRAVG	Ravindra Gettu	L&T Construction, Buildings and Factories	3.45
19	IC	IC1718CIE018ZAMISRSA	Satish Kumar S. R.	Zamil Steel Buildings (I) Private Limited	3.20
20	IC	IC1718CIE019BHELNAE	Nageswara Rao B.	Bharat Heavy Electricals Limited (BHEL)	82.80
21	IC	IC1718CIE020MANLSARU	Arul Jayachandran S.	Mangal Precision Products Limited	4.17
22	IC	IC1718CIE021L&TRSARU	Arul Jayachandran S.	L&T Ramboll Consulting Engineers Limited	4.03
23	IC	IC1718CIE022OPPOSRSA	Satish Kumar S. R.	Oppo Mobiles (I) Private Limited	98.29
24	IC	IC1718CIE023WRDXDEVD	Devdas Menon	Water Resources Department	7.30
25	IC	IC1718CIE024WRDXDEVD	Devdas Menon	Water Resources Department	6.44
26	IC	IC1718CIE025AAAAINDU	Indumathi M. Nambi	Common Code	0.00
27	IC	IC1718CIE026L&TNRAVG	Ravindra Gettu	L&T Construction, buildings & Factories	4.14
28	IC	IC1718CIE027NORDPALA	Alagusundaramoorthy P.	The North of England P&I Association Limited	6.33
29	IC	IC1718CIE028IRCOBNAE	Nageswara Rao B.	IRCON International Limited,	34.16

S. No.	Project Type	Project Number	Principal Investigator	Agency Name	Value (Rs. in lakh)
30	IC	IC1718CIE029LTCWGAPP	Appa Rao G.	L&T Construction, Water & Effluent Treatment IC	4.60
31	IC	IC1718CIE030VFMXINDU	Indumathi M. Nambi	Valeo Friction Materials (I) Limited	5.75
32	IC	IC1718CIE0310OCBLIGY	Ligy Philip	Office of the Cantonment Board	5.75
33	IC	IC1718CIE032L&TLMANU	Manu Santhanam	Larsen and Toubro Limited	4.60
33	IC	IC1718CIE033L&TLAMEH	Meher Prasad A.	Larsen and Toubro Limited	2.30
34	IC	IC1718CIE034CONTDEVD	Devdas Menon	Contec Syndicate Private Limited	3.22
35	IC	IC1718CIE035TAMOSMOH	Mohan s.	Tamil Nadu Pollution Control Board	2.30
36	IC	IC1718CIE036GSIDAMEH	Meher Prasad a.	Goa State Infrastructure Development Corp Limited	3.45
37	IC	IC1718CIE037LTCTDEVD	Devdas Menon	L&T Construction Transportation Infrastructure IC	17.37
38	IC	IC1718CIE038AAAASMOH	Mohan S.	Common Code	0.00
39	IC	IC1718CIE039AAAAVENU	Venu Chandra	Common Code	0.99
40	IC	IC1718CIE040AAAAARUM	Arun Menon	Common Code	0.00
41	IC	IC1718CIE041INANSRSA	Satish Kumar S. R.	Indian Commerce and Industries	10.22
42	IC	IC1718CIE042BPCLPALA	Alagusundaramoorthy P.	Bharat Petroleum Corporation Limited	9.78
43	IC	IC1718CIE043BHELBNAE	Nageswara Rao B.	BHEL	61.07
44	IC	IC1718CIE044PREPAMEH	Meher Prasad A.	Perungudi Real Estates Private Limited	85.50
45	IC	IC1718CIE045DLLXDEVD	Devdas Menon	Directorate of Lighthouses & Lightships	4.60
46	IC	IC1718CIE046UTRADEVD	Devdas Menon	Utracon Structural System Private Limited.,	3.75
47	IC	IC1718CIE047COCNAMEH	Meher Prasad A.	Cochin Shipyard Limited,	20.00
48	IC	IC1718CIE048BGRESUBH	Subhadeep Banerjee	BGR Energy Systems Limited	6.90
49	IC	IC1718CIE049EAILDEVD	Devdas Menon	Eastman Industries Limited	3.78
50	IC	IC1718CIE050TSCBABOO	Boominathan A.	Tamil Nadu Slum Clearance Board	13.57
51	IC	IC1718CIE051AAAAEVD	Devdas Menon	Common Code	0.00
52	IC	IC1718CIE052NSPRAMEH	Meher Prasad A.	NSPR Constructions (India) Private Limited	3.22
53	IC	IC1718CIE053PSILBNAE	Nageswara Rao B.	Preca Solutions India Private Limited	4.43
54	IC	IC1718CIE054BHELBNAE	Nageswara Rao B.	BHEL	98.19
55	IC	IC1718CIE055AAAALIGY	Ligy Philip	Common Code	0.00
56	IC	IC1718CIE056AAAAKRAG	Rajagopal K.	Common Code	0.00
57	IC	IC1718CIE057KNRCDEVD	Devdas Menon	KNR Construction Limited	3.30
58	IC	IC1718CIE058LTHLABOO	Boominathan A	L&T Hydrocarbon Engineering Limited	5.55
59	IC	IC1718CIE059RAMFDEVD	Devdas Menon	Ramky Infrastructure Limited	9.68
60	IC	IC1718CIE060VMUCGAPP	Appa Rao G	Vijayawada Municipal Corporation	5.90
61	IC	IC1718CIE061LTCWINDU	Indumathi M. Nambi	L&T Construction, Water & Effluent Treatment IC	5.90
62	IC	IC1718CIE062LTCWGAPP	Appa Rao G.	L&T Construction, Water and Effluent Treatment IC	30.68
63	IC	IC1718CIE063HOVAAMEH	Meher Prasad A.	HOV Auto Limited	7.67
64	IC	IC1718CIE064UNESARUM	Arun Menon	UNESCO	2.50
65	IC	IC1718CIE065HYTESRSA	Satish Kumar S. R.	HYT Engineering Co. Private Limited	3.90
66	IC	IC1718CIE067LTCWGAPP	Appa Rao G.	L&T Construction, Water and Effluent Treatment IC	14.75
67	IC	IC1718CIE068CHIHKRAG	Rajagopal K.	China Harbour Engineering Company Limited	3.00

S. No.	Project Type	Project Number	Principal Investigator	Agency Name	Value (Rs. in lakh)
68	IC	IC1718CIE069AAAAABALJ	Balaji Narasimhan	Common Code	1.18
69	IC	IC1718CIE0700PGCDALI	Dali Naidu Arnepalli	Orissa Power Generation Corporation Limited	4.00
70	IC	IC1718CIE071PRELSRSA	Satish Kumar S. R.	Premco Rail Engineers Limited	11.80
71	IC	IC1718CIE072AAAAADALI	Dali Naidu Arnepalli	Common Code	0.49
72	IC	IC1718CIE073KESPPALA	Alagusundaramoorthy P.; Co-investigator 1: Satish Kumar S. R.	Kavin Engineering and Services Private Limited	2.66
73	IC	IC1718CIE074LTCWVENU	Venu Chandra	L&T Construction, Water and Effluent Treatment IC	4.25
74	IC	IC1718CIE075SUBAAMLA	Amlan K. Sengupta	P. Subramani & Co	2.36
75	IC	IC1718CIE076DECIDEVD	Devdas Menon	D.E.C. Infrastructure Limited	3.61
76	IC	IC1718CIE077PHENSARU	Arul Jayachandran S.	Phenix Construction Technologies	3.59
77	IC	IC1718CIE078TWMLSMOH	Mohan S.	Tamil Nadu Waste Management Limited	2.95
78	IC	IC1718CIE079AAAAAVEE	Veeraraghavan A.	Common Code	1.18
79	IC	IC1718CIE080GARRAVEE	Veeraraghavan A.	Garrison Engineer	3.00
80	IC	IC1718CIE081L&TNRADH	Radhakrishna G. Pillai; Co-investigator: Manu Santhanam	L&T Construction, Buildings & Factories	10.38
81	IC	IC1718CIE082LTCWINDU	Indumathi M. Nambi	L&T Construction, Water & Effluent Treatment IC	5.90
82	IC	IC1718CIE083TSCBABOO	Boominathan A.	Tamil Nadu Slum Clearance Board	7.38
83	IC	IC1718CIE084RAILBNAE	Nageswara Rao B.	Rail Vikas Nigam Limited	3.54
84	IC	IC1718CIE085AAAAJMUR	Muralikrishnan J.	Common Code	0.00
85	IC	IC1718CIE086PSILBNAE	Nageswara Rao B.	Preca Solutions India Private Limited	2.95
86	IC	IC1718CIE087PRALPALA	Alagusundaramoorthy P.	Prabal Enterprises Private Limited	3.54
87	IC	IC1718CIE088LTCWPALA	Alagusundaramoorthy P.	L&T Construction, Water & Effluent Treatment IC	14.16
88	IC	IC1718CIE089DPWRPALA	Alagusundaramoorthy P.	DP World	7.85
89	IC	IC1718CIE090TPLTINDU	Indumathi M. Nambi	TATA Projects Limited	5.90
90	IC	IC1718CIE091GMSTDEVD	Devdas Menon	GM STRUCTURES	4.60
91	IC	IC1718CIE092FOSRDEVD	Devdas Menon	FOSROC Chemicals (India) Limited	5.31
92	IC	IC1718CIE093PACSBNAE	Nageswara Rao B.	Principle ACS Engineering India Private Limited	4.37
93	IC	IC1718CIE094GARRBNAE	Nageswara Rao B.	Garrison Engineer	14.95
94	IC	IC1718CIE095DEWADEVD	Devdas Menon	Dewas Bypass Tollways Private Limited	8.87
95	IC	IC1718CIE096KMVPBNAE	Nageswara Rao B.	KMV Projects Limited	6.60
96	IC	IC1718CIE097RAILDDEV	Devdas Menon	Rail Vikas Nigam Limited	10.38
97	IC	IC1718CIE098LTCWINDU	Indumathi M. Nambi	L&T Construction, Water and Effluent Treatment IC	5.90
98	IC	IC1718CIE099TPLTSRSA	Satish Kumar S. R.	TATA Projects Limited	9.44
99	IC	IC1718CIE100NAGAAMEH	Meher Prasad A.	Nagarjuna Construction Company Limited,	17.51
100	IC	IC1718CIE101SATIPALA	Alagusundaramoorthy P.	Sathiyarayanan	2.66
101	IC	IC1718CIE102AAAALIGY	Ligy Philip	Common Code	1.00
102	IC	IC1718CIE103NLCLRGRO	Robinson R. G.	Neyveli Lignite Corporation Limited,	7.08
103	IC	IC1718CIE104PATRDEVD	Devdas Menon	Patil Rail Infrastructure Private Limited	11.98

S. No.	Project Type	Project Number	Principal Investigator	Agency Name	Value (Rs. in lakh)
104	IC	IC1718CIE105MANNLIGY	Ligy Philip	Mannarai Common Effluent Treatment Plant (P) Limited	5.31
105	IC	IC1718CIE106AAAABRCH	Bhargava Rama Chilukuri	Common Code	0.00
106	IC	IC1718CIE107TSCBABOO	Boominathan A.	Tamil Nadu Slum Clearance Board	25.96
107	IC	IC1718CIE108KELLRGRO	Robinson R. G.	Keller Ground Engineering India Private Limited	7.67
108	IC	IC1718CIE109ASEEGAPP	Appa Rao G.	Associated Engineering Enterprises	4.72
109	IC	IC1718CIE110TSICINDU	Indumathi M. Nambi	Telangana State Industrial Infrastructure Corporation Limited	3.54
110	IC	IC1718CIE111GENAINDU	Indumathi M. Nambi	Green Environmental Association	3.54
111	IC	IC1718CIE112AADIAVEE	Veeraraghavan A.	Arkie Atelier Design India (P) Limited	2.95
112	IC	IC1718CIE113SMCCSRSA	Satish Kumar S. R.	SMCC Construction India Limited	14.99
113	IC	IC1718CIE114HCCLRAVG	Ravindra Gettu	Hindustan Construction Co. Limited	9.44
114	IC	IC1718CIE115KELLRGRO	Robinson R. G.	Keller Ground Engineering India Private Limited	18.88
115	IC	IC1718CIE116AAAAGAPP	Appa Rao G.	Common Code	0.00
116	IC	IC1718CIE118TWADSMAT	Mathava Kumar S.	Twad Board	3.07
117	IC	IC1718CIE119SBLISMOH	Mohan S.	Sterling Biotech Limited	5.90
118	IC	IC1718CIE120VYAPGAPP	Appa Rao G.	Vyapari Trade Centre Private Limited	5.90
119	IC	IC1718CIE121LTCWVENU	Venu Chandra	L&T Construction, Water & Effluent Treatment IC	8.26
120	IC	IC1718CIE122LTCTAMEH	Meher Prasad A.	L&T Construction Transportation Infrastructure IC	31.15
121	IC	IC1718CIE123TBPLAMEH	Meher Prasad A.	Teemage Builders Private Limited	2.39
122	IC	IC1718CIE124TSCBABOO	Boominathan A.	Tamil Nadu Slum Clearance Board	17.11
123	IC	IC1718CIE125GOVRBNAE	Nageswara Rao B.	Government of Andhra Pradesh	5.02
124	IC	IC1718CIE126LTCWVENU	Venu Chandra	L&T Construction, Water & Effluent Treatment IC	4.00
125	IC	IC1718CIE127L&TNAMEH	Meher Prasad A.	L&T Construction, buildings & Factories	8.26
126	IC	IC1718CIE128RAILDEVD	Devdas Menon	Rail Vikas Nigam Limited	4.25
127	IC	IC1718CIE129RAILDEVD	Devdas Menon	Rail Vikas Nigam Limited	3.07
128	IC	IC1718CIE130AESPPALA	Alagusundaramoorthy P.	Astute Engineering Services Private Limited	10.18
129	IC	IC1718CIE131LTCR Pala	Alagusundaramoorthy P.	L&T Construction, Water, Renewable Energy IC	7.67
130	IC	IC1718CIE132VEERLIGY	Ligy Philip	Veerapandi Common Effluent Treatment Plant (P) Limited,	9.44
131	IC	IC1718CIE133L&TLAMEH	Meher Prasad A.	Larsen and Toubro Limited	27.38
132	IC	IC1718CIE134ARIPAMEH	Meher Prasad A.	Aurobindo Realty & Infrastructure Private Limited	71.04
133	IC	IC1718CIE135RAMKSMOH	Mohan S.	Ramky Enviro Engineers Limited	5.90
134	IC	IC1718CIE136IBPPSARU	Arul Jayachandran S.	Interarch Building Products Private Limited	7.38
135	IC	IC1718CIE138LTFDEVD	Devdas Menon	L&T Formwork Factory - Metal Shop	3.89
136	IC	IC1718CIE139JNPTGITA	Gitakrishnan Ramadurai	Jawaharlal Nehru Port Trust	5.90
137	IC	IC1718CIE140APIIDEVD	Devdas Menon	Andhra Pradesh Industrial Infrastructure Corporation Limited	5.90
138	IC	IC1718CIE141TSCBABOO	Boominathan A.	Tamil Nadu Slum Clearance Board	5.90

S. No.	Project Type	Project Number	Principal Investigator	Agency Name	Value (Rs. in lakh)
139	IC	IC1718CIE142PWDXSARU	Arul Jayachandran S.	Public Works Department	20.00
140	IC	IC1718CIE143KNRCDEVD	Devdas Menon	KNR Construction Limited	13.22
141	IC	IC1718CIE144PSILBNAE	Nageswara Rao B.	Preca Solutions India Private Limited	14.16
142	IC	IC1718CIE145LTCWGAPP	Appa Rao G.	L&T Construction, Water & Effluent Treatment IC	17.70
143	IC	IC1718CIE146LTCWGAPP	Appa Rao G.	L&T Construction, Water & Effluent Treatment IC	17.11
144	IC	IC1718CIE147LTCWGAPP	Appa Rao G.	L&T Construction, Water & Effluent Treatment IC	8.85
145	IC	IC1718CIE148DHAHSRSA	Satish Kumar S. R.	Dhaha Consulting Engineers	2.3
146	IC	IC1718CIE149SAIODEVD	Devdas Menon	Saint - Gobain Research India Limited,	3.50
147	IC	IC1718CIE150LTCTAVEE	Veeraraghavan A.	L&T Construction Transportation Infrastructure IC	7.08
148	IC	IC1718CIE151OPGCDALI	Dali Naidu Arnepalli	Orissa Power Generation Corporation Limited	5.90
149	IC	IC1718CIE152AAAASMAT	Mathava Kumar S.	Common Code	0.00
150	IC	IC1718CIE153LTCTSMOH	Mohan S.	L&T Construction Transportation Infrastructure IC	4.01
151	IC	IC1718CIE154LTHLSUBH	Subhadeep Banerjee; Co-investigator 1: Boominathan A.	L&T Hydrocarbon Engineering Limited	2.36
152	IC	IC1718CIE155SCRXBNAE	Nageswara Rao B.	South Central Railway	9.72
153	IC	IC1718CIE156DEWADEV	Devdas Menon	Dewas Bypass Tollways Private Limited	3.49
154	IC	IC1718CIE157T&TIK RAG	Rajagopal K.; Co-investigator: Appa Rao G.	Tracks & Towers Infratech (P) Limited	4.72
155	IC	IC1718CIE158CMRLSUBH	Subhadeep Banerjee	Chennai Metro Rail Limited	1.77
156	IC	IC1718CIE159PERPBNAE	Nageswara Rao B.	PERI (India) Private Limited	3.84
157	IC	IC1718CIE160TAMUBNAE	Nageswara Rao B.	Tamil Nadu Road Development Company Limited	2.66
158	IC	IC1718CIE161LTCWINDU	Indumathi M. Nambi	L&T Construction, Water and Effluent Treatment IC	5.90
159	IC	IC1718CIE162AIRPBNAE	Nageswara Rao B.	Airports Authority of India	17
160	IC	IC1718CIE163KITCDEV	Devdas Menon	Kitco Limited	5.90
161	IC	IC1718CIE164L&TNAMEH	Meher Prasad A.	L&T Construction, Buildings & Factories	
162	IC	IC1718CIE165AIRPTTHY	Thyagaraj T.	Airports Authority of India	1.73
163	IC	IC1718CIE166GANNBNAE	Nageswara Rao B.	Gannon Dunkerley & Co. Limited	5.02
164	IC	IC1718CIE167BHELBNAE	Nageswara Rao B.	BHEL	3.54
165	IC	IC1718CIE168OOCBPALA	Alagusundaramoorthy P.	Office of the Cantonment Board	6.03
166	IC	IC1718CIE169AHELAMEH	Meher Prasad A.	Apollo Hospitals Enterprise Limited	4.09
167	IC	IC1718CIE170DAILSMOH	Mohan S.	Daimler India Commercial Vehicles Private Limited	4.72
168	IC	IC1718CIE171AAAAABOO	Boominathan A.	Common Code	0.00
169	IC	IC1718CIE172LTLCAMEH	Meher Prasad A.	L&T Limited, Construction	11.80
170	IC	IC1718CIE173IBPPSARU	ARUL JAYACHANDRAN S	Interarch Building Products Private Limited	7.38
171	IC	IC1718CIE174RADHDEV	Devdas Menon	Radheshyam Agrawal	3.30
172	IC	IC1718CIE175LTCWGAPP	Appa Rao G.	L&T Construction, Water & Effluent Treatment IC	16.52
173	IC	IC1718CIE176L&TNAMEH	Meher Prasad A.	L&T Construction, Buildings & Factories	31.38

4.7. Department of Computer Science and Engineering

4.7.1. Introduction

Started as the Computer Centre in 1973, the Department of Computer Science and Engineering was established as a full-fledged department in 1983. The department has a vibrant student body with a strength of around 700 and faculty of about 30. About 60% of students are postgraduates, mostly supported by Government of India scholarships and research projects. The department also offers several attractive industry-sponsored fellowships for outstanding PhD scholars. The vision of the department is 'global excellence and local relevance' in research, teaching, and technology development in Computer Science and Engineering.

4.7.2. Academic Programmes

B.Tech., Dual Degree (B.Tech. and M.Tech.), M.Tech., M.S., PhD, Dual M.S./PhD, Dual M.Tech./PhD; Inter-disciplinary Dual Degree in Data Science (B.Tech/M.Tech).

New discipline/branch introduced

A dual-degree B.Tech/M.Tech. programme in data science, open to all B.Tech. students of IIT Madras, has been started from January 2018.

New courses introduced

Sl. No.	Course No.	Title
1	CS4011	Introduction to Machine Learning
2	CS6046	Multi-armed Bandits
3	CS7012	Multi-layer Network Models and Algorithms
4	CS6024	Algorithmic Approaches to Computational Biology
5	CS3205	Introduction to Computer Networks
6	CS6251	Computational Models of Cognition

Students on roll as of September 2017+M.S. and PhD Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and Others	Total
B.Tech.	47	46	46	33	29	201
Dual Degree	16	15	14	28	45	118
M.Tech.	58	45	09	05	01	118
M.S.	22	30	25	01	04	82
PhD	07	13	18	12	37	87
Total	150	149	112	79	116	606

Endowment prize instituted

1. Lakshmi Abhiram Best Dual-Degree Project in Computer Science and Engineering
2. IBM Best PhD Thesis Awards in Computer Science and Engineering

Student/Scholar who Attended conferences/seminars and symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
Abroad					
1	Sahil Sharma	CS12B060	International Conference on Learning Representations (ICLR 2017)	24-26 April 2017, Toulon, France	Non-IIT Madras
2	Ayesha Siddiqua	CS14S012	18th International Conference on Computational Linguistics and Intelligent Text Processing	17-23 April 2017, Budapest, Hungary	IIT Madras
3	Jyothi Krishna V. S.	CS13D022	Chapel Implementers and Users Workshop 2017	2-3 June 2017, Orlando, Florida, USA	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
4	Amit Rawat	CS14S025	12 th International Computer Science Symposium in Russia (CSR 2017)	8-12 June 2017, Kazan, Russia	IIT Madras
6	Punit Khanna	CS12B049	54 th IEEE/ACM Design Automation Conference (DAC 2017)	19-23 June 2017, Austin, Texas	IIT Madras
7	Jyothi Vedurada	CS13D201	ICSE 2017 (Companion)	Brazil	IIT Madras
8	Suyash Gupta, Rahul Shrivastava	CS12S011, CS14S018	International Conference on Supercomputing (ICS) 2017	14-16 June 2017, Chicago	IIT Madras
9	Rajendra Singh Panwar	CS11D001	IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (IEEE WoWMoM)	12-15 June 2017, Macau SAR, China	Project Funds
10	Akshay Gadre, Anix Anbiah	CS12B034, CS15D001	European Conference on Networks and Communications (EuCNC2017)	12-15 June 2017, Oulu, Finland	Conference Travel Grant
11	Ganesh Chennimalai Sankaran	CS12D008	IEEE International Conference on Computer Communications (INFOCOM)	1-4 May 2017, Atlanta, GA, USA	HCL
12	Revathy N, Surabhi Abhimithra Karthikeya	CS14D405, CS14M048	IEEE International Conference on Communications (ICC)	21-25 May 2017, Paris, France	IITM
13	Vijeth Kotagi	CS14D209	2 nd IEEE Convergent Internet of Things (C-IoT) Workshop, held in conjunction with ICC	21-25 May 2017, Paris, France	IITM
14	Anup Chaudhari	CS15S045	15 th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)	21-25 May 2017, Paris, France	IITM
15	Neel Gala	CS12D021,	Work-In-Progress Session, 53 rd Design Automation Conference	18-22 June 2017, Austin, Texas, USA	IITM
16	Neel Gala	CS12D021	Workshop on Hardware and Architectural Support for Security and Privacy (HASP 2017) held in conjunction with ISCA 2017	25 June 2017, Toronto, Canada	IITM
17	Arnab Roy	CS14S006	53 th IEEE/ACM Design Automation Conference	18-22 June 2017, Austin Texas	IITM
18	Arjun Menon C.	CS14S005	Hardware and Architectural Support for Security and Privacy (HASP) 2017	24-28 June 2017, Toronto, Canada	IITM
19	Preksha Nema	CS15D201	55 th Annual meeting of the Association for Computational Linguistics (ACL 2017)	31 July-4 August 2017, Vancouver, Canada	IITM
20	Subhojyothi Mukherjee	CS15S300	26 th International Joint Conference on Artificial Intelligence	18-25 August 2017, Melbourne, Australia	IITM
21	Prathamesh Deshpande	CS14S017	Ninth IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining	31 July-3 August 2017, Sydney, Australia	IITM
22	Purnata Ghoshal	CS14D208	23 rd International Computing and Combinatorics Conference	3-5 August 2017, Hong Kong, China	IITM
23	Praveen Alapati	CS12D013	International Workshop on Ultrascale Computing for Early Researchers, Co-located with International Conference on Algorithms and Architectures for Parallel Processing	21-23 August 2017, Helsinki, Finland	IITM
24	Ditty Mathew	CS13D018	International Joint Conference on Artificial Intelligence (IJCAI) 2017	19-25 August 2017, Melbourne, Australia	TCS and IIT Madras
25	Arun Baby, Jeena J. Prakash	CS15S016, CS13D003	INTERSPEECH 2017	20-24 August 2017, Stockholm, Sweden	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
26	Sakshi Verma, K. L. Prateek, Karthik Pandia	CS15M043, CS15M026, CS14D001	INTERSPEECH 2017	20-24 August 2017, Stockholm, Sweden	IIT Madras
27	Aswin Shanmugam	CS13S005	INTERSPEECH 2017	20-24 August 2017, Stockholm, Sweden	IIT Madras
28	Om Prakash	CS16D017	COCOON 2017	3-5 August 2017, Hong Kong, China	IIT Madras
29	Praveen Alapati	CS12D013	19 th International Conference on High Performance Computing and Communication	18-20 December 2017, Bangkok, Thailand	IIT Madras
30	Gaurav Malhotra, Hitish Chappidi	CS14M017, CS11B011	Languages and Compilers for Parallel Computing.	11-13 October 2017, Texas, USA	IIT Madras
31	Preksha Nema	CS15D201	Google NLP Summit	25-28 September 2017, Zurich, Switzerland	IIT Madras
32	Geethu Miriam Jacob	CS13D019	28 th British Machine Vision Conference (BMVC 17)	4-7 September 2017, London, UK	IIT Madras
33	Jilt Sebastian	CS13D020	ISMIR 2017	23-27 October 2017, Suzhou, China	IIT Madras
34	Swapnil Hingmire	CS11D208	Knowledge Capture (K-Cap) Conference	4-6 December 2017, Texas, USA	TRDDC and self
35	Prateep Bhattacharjee	CS15S027	31 st Conference on Advances in Neural Information Processing Systems (NIPS)	4-9 December 2017, Long Beach, CA, USA	IIT Madras
36	Gnanambikai Krishnakumar	CS15D200	ACM Supercomputing 2017	13-16 November 2017, Denver, USA	IIT Madras
37	Rahul Shrivastava	CS14S018	HiPEAC 2018	22-24 January 2018, Manchester, UK	IIT Madras
38	K. Raghavendra, Biswabandan Panda	CS10D003 CS10D019	HiPEAC 2018	22-24 January 2018, Manchester, UK	IIT Madras
India					
1	Preksha Nema	CS15D201	Microsoft Research India Summer Workshop on Artificial Social Intelligence	5-30 June 2017, Bengaluru	Microsoft
2	Nikita Moghe	CS16S016	Microsoft Research India Summer Workshop on Artificial Social Intelligence	5-30 June 2017, Bengaluru	Microsoft
3	Sanchit Agrawal	CS13B061	Microsoft Research India Summer Workshop on Artificial Social Intelligence	5-30 June 2017, Bengaluru	Microsoft
4	Gurneet Singh	CS13B037	Microsoft Research India Summer Workshop on Artificial Social Intelligence	5-30 June 2017, Bengaluru	Microsoft
5	Samik Banerjee, Prateep Bhattacharjee	CS12D016, CS15S027	7 th International Conference on Pattern Recognition and Machine Intelligence (PReMI 2017)	5-8 December 2017, Kolkata	IIT Madras
6	Sandeep Narayan Parameswaran	CS16S037	6 th National Conference on Computer Vision, Pattern Recognition, Image Processing, and Graphics (NCVPRIPG)	16-19 December 2017, IIT Mandi	IIT Madras
7	Aritra Ghosh	CS11B062	PReMI 2017	5-8 December 2017 Kolkata	IIT Madras
8	Aditya Mehta	CS12S014	PReMI 2017	5-8 December 2017, Kolkata	IIT Madras
9	Abhiram Kumar Singh	CS14S001	PReMI 2017	5-8 December 2017, Kolkata	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
10	Indrani Roy, Himanshi Jain, Gargi Mitra, Sareena K. P.	CS16S020, CS16S014, CS15D303, CS15D400	Cyber Security Awareness Week	9-11 November 2017, IIT Kanpur	IIT Madras
11	Sahiti Labhishetty, Shashank Shrivastava	CS13B043, CS15S009	International Conference on Mining Intelligence and Knowledge Exploration (MIKE) held at IDRBT, Hyderabad	13-15 December 2017, IDRBT, Hyderabad	IIT Madras
12	Shajee Mohan	CS09D022	International Conference on Advances in Pattern Recognition (ICAPR 2017), Bengaluru	27-30 December 2017, Kolkata	IIT Madras
13	William Kumar Moses Jr	CS12D020	International Conference on Distributed Computing and Networking (ICDCN 2018)	4-7 January 2018, Varanasi	IIT Madras and Self
14	Krishnamoorthy Dinesh	CS13D015	Conference on Algorithms and Discrete Mathematics (CALDAM 2018)	15-17 February 2018, Guwahati	IIT Madras
15	Krishna Chaitanya Gogineni, Jom Kuriacose	CS12B041, CS13D208	National Conference on Communications (NCC) 2018	25-28 February 2018, IIT Hyderabad	IIT Madras
16	Karthik Karra	CS15S011	National Conference on Communications (NCC) 2018	25-28 February 2018, IIT Hyderabad	IIT Madras
17	Anil Kumar Chilli	CS14S003	National Conference on Communications (NCC) 2018	25-28 February 2018, IIT Hyderabad	IIT Madras

Students/Scholars who won Outside Prizes and Awards

Sl. No.	Student/Scholar	Roll No.	Prize	Prize awarded by
1	Shouvik Mondal	CS16D004	Silver Medal for Topping M.Tech. (CSE)	IEST, Shibpur
2	Punit Khanna	CS12B049	Richard Newton Young Student Fellowship to attend DAC 2017	DAC Conference
3	Jilt Sebastian	CS13D020	Swiss Excellence scholarship for International Researchers, September 2017–August 2018	Swiss Government
4	Arnab Roy	CS14S006	Richard Newton Young Student Fellowship (partial funding to attend DAC 2017)	DAC Conference
5	Gnanambikai Krishnakumar	CS15D200	Selected for the Lenovo AI Challenge	Lenovo
6	Indrani Roy, Himanshi Jain, Gargi Mitra, Sareena K. P.	CS16S020, CS16S014, CS15D303, CS15D400	First prize in Embedded Security Challenge, CSAW 2017	Cyber Security Awareness Week (CSAW) Event Organizers
7	Arjun Menon	CS14S005	Second prize in Applied Research Contest, CSAW 2017	Cyber Security Awareness Week (CSAW) Event Organizers
8	Prasanna Karthik	CS14D010	Second prize in IDBRT Doctoral Consortium 2017	IDRBT
9	G. Kavitha	CS15B057	Adobe Women in Technology Scholarship	Adobe
10	S. Sudarsun, Jeshuren C.	CS13D030 CS16M017	Best Paper Award, CoDS-COMAD 2018.	Conference Committee
11	Preksha Nema	CS15D201	Google PhD Fellowship Award	Google

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl.No.	Student/Scholar	Roll No.	Prizes	Donor
Institute Day Prize				
1	Rahul Kejriwal	CS14B023	Sri V. Ramachandran Prize	
2	Gurneet Singh	CS13B037	Computer Age Management Services Private Limited Prize	
3	J. P. Sagar	CS12B039	Computer Age Management Services Private Limited Prize	
4	Akshay Utture	CS13B031	Dr Dilip Veeraraghavan Memorial Award	
5	George Joseph	CS15M021	Prakash Arora Prize	
6	K. Ritwika	CS13B024	Rajalakshmi Krishnamurthy English Prize	
7	Susanna Maria Baby	CS13B058	Swati/Jayalakshmi Memorial Award	
8	Vidhya Ramaswamy	CS12B061	Swati/Jayalakshmi Memorial Award	
9	E. Santhosh Kumar	CS16B107	Sri K. Krishnamurthy Prize	
10	G. Kavitha	CS15B057	Sri V. Ramachandran Prize	
11	Rahul Kejriwal	CS14B023	Computer Age Management Services Private Limited Prize	
12	Yelamarthi Satya Surya Venkata Sasi Kiran	CS13B055	Computer Age Management Services Private Limited Prize	
13	Purvi Goel	CS16M042	Prakash Arora Prize	
14	Santhoshini V.	CS13B059	Swati/Jayalakshmi Memorial Award	
Convocation Day Prizes				
1	S. K. Ramnandan	CS11B061	Sri V. Srinivasan Memorial Prize	
2	Aditi R.	CS12B059	B. Ravichandran Memorial Prize	
3	Surabhi Abhimitra Karthikeya, Gorla Sreekanth	CS14M048, CS14M018	Prof H. N. Mahabala Endowment Prize	
Alumni Day Prizes				
1	Sarthak Parui, P. R. Dhathri	CS12S044, CS13S026	Biswajit Sain Best MS Thesis	
2	C. S. Ganesh	CS12D008	IBM Best PhD Thesis in CSE	IBM India
3	Sahil Sharma	CS12B060	Lakshmi Ravi Best Dual Degree Project in CSE	Abhiram Ravi, CSE/DD/2015
4	A. Sundar, Sai Praveen B.	CS13B026, CS13B025	Prof. C. Sivaram Murthy Best B.Tech Project in CSE	Pradeep Madhavarapu, CSE/BT/2000

4.7.3. Faculty and their activities

Name and Qualifications	Major Areas of Specialisation
Professor	
Chandra Sekhar C. PhD (IIT Madras)	Speech recognition, machine learning, kernel methods
Deepak Khemani, PhD (IIT Bombay)	Artificial intelligence, knowledge-based systems, natural language processing and neural networks
Gonsalves T.A., PhD (Stanford)	Computer networks, distributed systems, NMS, operating systems, performance evaluation, telecom software
Hema A. Murthy, PhD (IIT Madras)	Speech technology, music analysis, pattern recognition, signal processing and machine learning, computational brain research
Janakiram D., PhD (IIT Delhi)	Object-oriented systems, software engineering, parallel and distributed systems, database systems, mobile computing, computing education, computing for developing regions, mobile telemedicine
Kamakoti V., PhD (IIT Madras)	Software for VLSI design, computational geometry, high performance computing
Krishna Moorthy Sivalingam, PhD (SUNY Buffalo)	Wireless networks, optical networks, computer networks
[Head of the Department]	
Pandu Rangan C., PhD (IISc Bangalore)	Algorithms, parallel and VLSI algorithms, graph theory, computational geometry, randomized algorithms, computational learning theory, crypto-analysis

Name and Qualifications	Major Areas of Specialisation
Siva Ram Murthy C., PhD (IISc Bangalore)	Parallel and distributed computing, real-time systems, wireless networks
Sreenivasa Kumar P., PhD (IISc Bangalore)	Graph theory, algorithms, parallel computations, data mining and databases
Sukhendu Das, PhD (IIT Kharagpur)	Visual perception, image intelligence, graphics and visualization
Madhu Mutyam, PhD (IIT Madras)	Computer architecture
Narayanaswamy N.S., PhD (IISc Bangalore)	Algorithms, complexity theory, artificial intelligence
Anurag Mittal, PhD (University of Maryland)	Computer vision, pattern recognition and image understanding
Ravindran B., PhD (University of Massachusetts, Amherst)	Machine learning, reinforcement learning, network analytics, deep learning
Associate Professors	
V. Krishna Nandivada, PhD (University of California, Los Angeles)	Compilers, program analysis, programming languages, multicore systems
Sutanu Chakraborti, PhD (The Robert Gordon University, UK)	Information retrieval, memory-based reasoning, machine learning
Jayalal Sarma M.N., PhD (Institute of Mathematical Sciences, Chennai)	Computational complexity theory, circuit complexity, algebra and computation
John Augustine, PhD (University of California, Irvine)	Distributed algorithms, randomized algorithms
Manikandan Narayanan, PhD (University of California at Berkeley)	Bioinformatics, computational network biology, systems biology/genomics in health and disease, data science
Assistant Professors	
Raghavendra Rao B.V., PhD (Institute of Mathematical Sciences, Chennai)	Computational complexity theory, algebraic complexity, combinatorial commutative algebra, descriptive complexity theory
Rupesh Nasre, PhD (IISc Bangalore)	Compilers, parallelization, program analysis
Meghana Nasre, PhD (IISc Bangalore)	Algorithms, graph theory, matching algorithms
Chester Rebeiro, PhD (IIT Kharagpur)	Hardware and system security, side-channel analysis, cryptography, computer architecture, operating systems, VLSI
Aritra Hazra, PhD (IIT Kharagpur) - On Lien at IIT- KGP from August 2017	Formal methods, VLSI CAD, design verification, reliability, fault-tolerant systems, embedded control scheduling, security verification
Mitesh Khapra, PhD (IIT Bombay)	Deep learning, natural language processing, question answering, multimodal multilingual conversation systems
Shweta Agrawal, PhD (University of Texas, Austin)	Cryptography, information theory
L. A. Prashanth, PhD (IISc Bangalore)	Reinforcement learning, stochastic optimization, multi-armed bandits.
Yadu Vasudev, PhD (Institute of Mathematical Sciences, Chennai)	Algorithms, especially sub-linear algorithms and computational complexity theory
Harish Guruprasad, PhD (IISc Bengaluru)	Machine learning, learning theory and optimisation
Pratyush Kumar, PhD (ETH, Zurich)	Cyber-physical systems, machine learning

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conferences			
1	B. Ravindran (General Chair)	Conference on Data Science (IKDD CoDS)	9-11 March 2018, IIT Madras
2	P. Sreenivasa Kumar (General Chair)	Conference on Management of Data (COMAD)	8-10 March 2018, IIT Madras
3	V. Kamakoti	RISC V International Conference (RIC 2017)	2-3 April 2017, IIT Madras
Workshops			
1	B. Ravindran	Lifelong Learning: A Reinforcement Learning Approach	ICML 2017, 10 August 2017 Sydney, Australia
2	B. Ravindran	Reinforcement Learning: Late Breaking Results	ICML 2017, 11 August 2017, Sydney, Australia
3	B. Ravindran	Data Science in India	KDD 2017, 15 August 2017 Halifax, Canada
4	Chester Rebeiro	Technical Program Chair of ADCOM 2017	8-10 September 2017, IIIT Bengaluru
5	Shweta Agrawal, V. Kamakoti, Chester Rebeiro	Faculty Development Program in Secure Systems Engineering	5-14 December 2017 IIT Madras
6	Kaushik Mitra, S. Umesh, Mitesh Khapra, B. Ravindran, Hema A. Murthy, C. Chandra Sekhar	Two-Day Course on Machine Learning for Qualcomm Engineers	13-14 November 2017, IIT Madras

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty Member	Title	Institution	Period
Workshop				
1	John Augustine	Hawaiian Workshop on Parallel Algorithms and Data Structures	University of Hawaii at Manoa	4-8 December 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1	C. Chandra Sekhar	Deep Learning Models	Periyar University, Salem	22 April 2017
2	Krishna M. Sivalingam	Invited speaker at one-day workshop on Next-Generation Networks	SSSIHL, Puttaparthi, AP	8 April 2017
3	Shweta Agrawal	Invited speaker at four-day workshop on Secure Multiparty Computation	IIT Bombay, Mumbai	28-30 April 2017
4	V. Kamakoti	Information Security	Mother Teresa University, Kodaikanal	10 April 2017
5	V. Kamakoti	SHAKTI Processors for DAE Needs	BARC, Mumbai	21 April 2017
6	Chester Rebeiro	Buffer Overflows to ROPs: Threats and Mitigations	Saveetha Engineering College, Chennai	21 July 2017
7	B. Ravindran	Learning Structured Policies using Deep Reinforcement Learning	Stanford University, Palo Alto, USA	8 June 2017
8	B. Ravindran	Learning Structured Policies using Deep Reinforcement Learning	KLA Tencor, Milpitas, CA, USA	9 June 2017
9	B. Ravindran	Introduction to Data Science and AI at IIT Madras, Invited Speaker IIT Madras Foundation Summit	San Jose, USA	10 September 2017
10	B. Ravindran	Introduction to Deep Reinforcement Learning	Summer School of Machine Learning, IIT Kharagpur	20 June 2017

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
11	B. Ravindran	Learning Structured Policies with Deep Reinforcement Learning	Adobe ATL, Bengaluru	3 July 2017
12	Mitesh M. Khapra	Introduction to Deep Learning	TCS Chennai	15 May 2017
13	Mitesh M. Khapra	Convolutional Neural Networks	TCS Bengaluru	22 June 2017
14	Mitesh M. Khapra	Optimization in Deep Learning	TCS Bengaluru	6 June 2017
15	Mitesh M. Khapra	Sequence to Sequence Models using Deep Learning	TCS Bengaluru	15 June 2017
16	C. Chandra Sekhar	Dimension Reduction Techniques, Support Vector Machines and Deep Learning Models	Vignan's LARA College, Guntur, AP	1 May 2017
17	Chester Rebeiro	Topics in Secure Systems Engineering	VIT Vellore	29-30 May 2017
18	Chester Rebeiro	Detecting Fault Vulnerabilities in Ciphers	University of Houston Texas, USA	23 June 2017
19	Chester Rebeiro	Security Engineering	IIT Madras	2 June 2017
20.	V. Krishna Nandivada	Optimizing Task Parallel Programmes	PNNL, WA, USA	12 June 2017
21	Meghana Nasre	Topics in Graph Algorithms	IIT Gandhinagar	26-28 June 2017
22	Prashanth L. A.	Cumulative Prospect Theory Meets Bandits and Reinforcement Learning	IISc Bengaluru	12 June 2017
23	Meghana Nasre	Approximation Algorithms for the Stable Marriage Problem	SSN College of Engineering, Chennai	7 June 2017
24	Rupesh Nasre	Locking in Hierarchies	IISc Bengaluru	5 July 2017
25	B. Ravindran	Introduction to Deep Reinforcement Learning	Deep Learning Summer School, IIIT Hyderabad	13-14 July 2017
26	B. Ravindran	Panel Discussion on Trends in the IT Industry, organised by SICCI	Music Academy, Chennai	22 July 2017
27	B. Ravindran	Some Experiment with Deep Reinforcement Learning - Plenary Talk	ICML, Sydney, Australia	10 August 2017
28	B. Ravindran	Introduction to Deep Reinforcement Learning - Departmental Seminar	University of Melbourne, Australia	14-15 August 2017
29	B. Ravindran	Some Experiments with Deep Reinforcement Learning	IBM Research, Melbourne Australia	16 August 2017
30	B. Ravindran	Introduction to Deep Reinforcement Learning	Monash University, Melbourne, Australia	16 August 2017
31	B. Ravindran	Enriching Encoder Decoder Models with Better Context Representation for Natural Language Generation	University of Melbourne, Melbourne, Australia	17 August 2017
32	B. Ravindran	Introduction to Deep Reinforcement Learning	Deakin University, Geelong, Australia	18 August 2017
33	B. Ravindran	Introduction to Deep Reinforcement Learning	IIT Alumni of Victoria Meeting, Melbourne, Australia	24 August 2017
34	B. Ravindran	Some Experiments with Deep Reinforcement Learning	Intel India Research Colloquium, IIIT Sri City	7 October 2017
35	B. Ravindran	Some Experiments with Deep Reinforcement Learning	Intel India Research Colloquium, Bengaluru	9 October 2017
36	B. Ravindran	Learning from Data	CRIS, Chennai	24 October 2017
37	B. Ravindran	Introduction to Deep Reinforcement Learning	IIT Delhi	25 October 2017
38	B. Ravindran	Some Experiments with Deep Reinforcement Learning	IIT Delhi	25 October 2017
39	B. Ravindran	Introduction to Deep Reinforcement Learning	Robert Bosch India, Bengaluru	9 November 2017
40	B. Ravindran	Why the Recent Excitement in Artificial Intelligence	American Chamber of Commerce, Chennai	8 November 2017
41	B. Ravindran	Introduction to Deep Reinforcement Learning	NVidia Developers Meet, Chennai	22 November 2017

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
42	B. Ravindran	Some Experiments with Deep Reinforcement Learning	University of Arizona, Tempe, AZ, USA	14 December 2017
43	B. Ravindran	Imitation Learning: Learning from Humans to Act like Human - Workshop on Human Centric Robotics	IIT Jodhpur	18 March 2018
44	Prashanth L. A.	Simultaneous Perturbation Methods for Stochastic Non-convex Optimization	ACM MobiHoc	14 July 2017
45	Shweta Agrawal	Conference talks at ICALP, Crypto	Warsaw, Poland	11 July-21 August 2017
46	Madhu Mutyam	Data Compression in Multi-Core Memory System	IIIT Delhi	14 August 2017
47	Sutanu Chakraborti	Language, Memory and Cognition	IIT Mandi	26-27 July 2017
48	V. Krishna Nandivada	Advanced Compilers	VSSC, Thiruvananthapuram	26-28 July 2017
49	V. Krishna Nandivada	How to Give a Bad Presentation	Hindustan University	29 July 2017
50	Chester Rebeiro	Authenticating IOT Edge Devices with Physically Unclonable Functions	Bengaluru	7 October 2017
51	Chester Rebeiro	Formal Methods for Security Analysis	Bengaluru	7 October 2017
52	Chester Rebeiro	Engineering for Security	VIT Chennai	12 September 2017
53	Chester Rebeiro	Blockchains in IOT, Taking it to the Edge	IIT Bombay	9 September 2017
54	Mitesh Khapra	Encode-Attend-Refine-Decode: Enriching Encoder Decoder Models with Better Context Representation	IDC, Hyderabad	5 October 2017
55	Mitesh Khapra	Machine Learning and AI for a Digital India	Anna University Chennai	14 October 2017
56	Sukhendu Das	Clustering Algorithms	SRM University	8 September 2017
57	C. Chandra Sekhar	Deep Neural Network Models and Stacked Autoencoders	SSN College of Engineering, Chennai	22 September 2017
58	Shweta Agrawal	Functional Encryption	TIFR	23 October 2017
59	Sutanu Chakraborti	Machine Learning and AI for a Digital India	Anna University	14 October 2017
60	Chester Rebeiro	Secure Systems Engineering	Anna University, Guindy, Chennai	20 December 2017
61	Hema Murthy	Building Speech Synthesis Systems for Indian Languages	Centenary Celebrations Osmania University ECE Dept, Hyderabad	29 December 2017
62	C. Chandra Sekhar	Deep Learning Models for Pattern Classification	Sri Venkateswara College of Engineering, Chennai	9 November 2017
63	C. Chandra Sekhar	Deep Learning Models for Speech and Image Processing Tasks	CEG, Anna University, Chennai	11 November 2017
64	C. Chandra Sekhar	Autoencoders and Representation Learning	S.S.N. College of Engineering, Chennai	21 November 2017
65	Jayalal Sarma	Algorithmics - Power, Limitations and Connecting the Dots	Government Engineering College Idukki, Faculty Development Program (attended by 35 teachers from Kerala)	19-21 December 2017
66	Jayalal Sarma	An Excursion to Topics in Algorithm Design	Model Engineering College, Faculty Development Program, Funded by KTU (attended by 30 teachers from Kerala)	28-30 December 2017

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
67	Raghavendra Rao B. V.	Advanced Topics in Algorithms	5-7 December 2017, Central University of Kerala, Kasaragod (instructional workshop for graduate students)	5-7 December 2017
68	Hema A. Murthy	Building Speech Synthesis Systems for Indian Languages	Stella Maris College, Chennai	2 February 2018
69	Hema A. Murthy	Analysis of Syllable Rhythm in Prosodic Phrases of Indian Languages	IIT Ropar Plenary talk at BROCAS 2018	18 February 2018
70	Hema A. Murthy	ACM-MSR Academic Research Summit: Future of AI	IIT Hyderabad	24-25 January 2018
71	V.Krishna Nandivada	Efficient Compilation of Irregular Task- Parallel Loops	Cambridge University, UK	24 January 2018
72	V. Krishna Nandivada	Efficient Compilation of Irregular Task- Parallel Loops	Imperial College London, UK	25 January 2018
73	C. Chandra Sekhar	Support Vector Machines and Deep Learning Models	Lakkireddy Bali- reddy College of Engineering, Vijayawada, AP	27 January 2018
74	C. Chandrasekhar	Pattern Classification Models for Speech Recognition	IIITM Kerala, Trivandrum	23 February 2018
75	P. Sreenivasa Kumar	Linked Data and Semantic Web Technologies (Invited Talk)	Bhubaneswar	11 January 2018
76	P. Sreenivasa Kumar	Semantic Web Technology and Applications	Workshop on Large Scale and Complex Networks, University of Kerala, Thiruvananthapuram	25 January 2018
77	Prashanth L. A.	Simultaneous perturbation methods for simulation optimization (Tutorial)	Indian Control Conference, IIT Kanpur	4 January 2018
78	V. Krishna Nandivada	Writing Efficient Parallel Programs	Airbus India Bengaluru	19 February 2018
79	Mitesh M. Khapra	Encode-Attend-Refine-Decode: Enriching Encoder Decoder Models with Better Context Representation	The ACM India Joint International Conference on Data Science and Management of Data (CoDS-COMAD) 2018 (5th ACM IKDD CoDS and 23rd COMAD)	12 January 2018
80	John Augustine	Think Like A Vertex	VIT Chennai	4 November 2017
81	John Augustine	Distributed Memory Models	University of Hawaii	4 December 2017
82	John Augustine	Think Like a Vertex	MIT, Chromepet, Chennai	16 December 2017
83	John Augustine	Distributed Algorithms	Loyola College, Chennai	9 January 2016
84	John Augustine	Distributed Algorithms	Women's Christian College, Chennai	25 January 2018
85	John Augustine	Distributed Algorithms	NIT Tiruchirappalli	27 March 2018

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
1	B. Ravindran	Toulon, France	24-26 April 2017	International Conference on Learning Representations (ICLR 2017)	IIT Madras/Alumni
2	B. Ravindran	Santa Clara, California, and Ann Arbor, Michigan	8-10 June 2017; 11-14 June 2017	IIT Madras Summit, to interact with industry leaders and alumni; Reinforcement Learning and Decision Making Conference	IIT Madras/Alumni

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
3	B. Ravindran	University of Michigan, Ann Arbor, Michigan, USA	11-14 June 2017	3rd International Conference on Reinforcement Learning and Decision Making	IIT Madras/Alumni
4	Chester Rebeiro	Austin and Houston, Texas, USA	18-25 June 2017	54th Design Automation Conference, invited talk at the University of Houston	IIT Madras/Alumni
5	Aritra Hazra	Austin, Texas	18-25 June 2017	54th Design Automation Conference	IIT Madras/Alumni
6	V. Krishna Nandivada	CA, USA Chicago, USA and PNNL	7-15 May 2017; 10-17 June 2017	GPU Technology Conference; ICS 2017	IIT Madras/Alumni
7	Krishna M. Sivalingam	Paris, France	22-25 May 2017	IEEE Conference on Communications (ICC)	IIT Madras/Alumni
8	Hema A. Murthy	Cambridge, MA, USA	20-27 May 2017	Visited Simon Brain Research Center as part of CCBR	IIT Madras/Alumni
9	John Ebenezer Augustine	Chicago, USA	11-17 June 2017	Visiting ORNL (Pasco) and giving a seminar; ICS 2017 (paper presentation + session chair)	IIT Madras/Alumni
10	C. Pandu Rangan	Northeastern University, Boston, USA	1 May - 14 July 2017	Visiting Faculty	IIT Madras/Alumni
11	Hema A. Murthy	University of Southern California, Los Angeles, USA	30 May 2017	To give a talk on Building Indian Language TTS Systems	IIT Madras/Alumni
12	B. Ravindran	Sydney, Australia	5-12 August 2017	International Conference on Machine Learning	IIT Madras/Alumni
13	B. Ravindran	Melbourne Australia.	14-18 August 2017	Visiting University of Melbourne	IIT Madras/Alumni
14	B. Ravindran	Melbourne Australia	19-25 August 2017	International Joint Conference on AI	IIT Madras/Alumni
15	Hema A. Murthy		20-25 August 2017	INTERSPEECH 2017 ISCA board meetings	IIT Madras/Alumni
16	Shweta Agrawal	Warsaw, Poland and Lyon, France	3-14 July 2017	Presenting paper at ICALP in Poland and visiting ENS de Lyon	IIT Madras/Alumni
17	Shweta Agrawal	Santa Barbara, USA	21-25 August 2017	Presenting a paper in Crypto conference	IIT Madras/Alumni
18	C. Chandra Sekhar	Stockholm, Sweden	20-25 August 2017	INTERSPEECH 2017	IIT Madras/Alumni
19	John Augustine	Paderborn, Germany and Houston, TX, USA.	10 June-9 July 2017	Visited University of Paderborn and University of Houston	IIT Madras/Alumni
20	Anurag Mittal	Venice, Italy	22-27 October 2017	International Conference on Computer Vision (ICCV)	IIT Madras/Alumni
21	Rupesh Nasre.	Denver, USA, Asian Technology Information Program (ATIP) Workshop on International Exascale and Next-Generation Computing Programs, Supercomputing 2017 conference (SC17)	14 November 2017	To talk about HPC Initiatives in India	IIT Madras/Alumni

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
22	Sukhendu Das	Long Beach, CA, USA.	4-9 December 2017	NIPS 2017, presenting a paper	IIT Madras/CPDA
23	B. Ravindran	Long Beach, CA, USA	4-9 December 2017	NIPS 2017, presenting posters at a symposium	IIT Madras/Alumni
24	B. Ravindran	Tempe, AZ	14 December 2017	Visiting University of Arizona	IIT Madras/Alumni
25	V. Krishna Nandivada	Manchester, UK	20-28 January 2018	HiPEAC 2018	IIT Madras/CPDA
26	Madhu Mutyam	Manchester, UK	20-24 January 2018	HiPEAC 2018	IIT Madras/CPDA
27	B. Ravindran	New Orleans, USA	1-8 February 2018	AAAI 2018	IIT Madras/Alumni
28	C. Pandu Rangan	New Orleans, USA	5-12 January 2018	Symposium of Simplicity of Algorithms (SIAM) co-located with SODA	IIT Madras/CPDA
29	B. V. Raghavendra Rao	Bordeaux, France	11-13 September 2017	FCT 2017	IIT Madras/Alumni
30	John Augustine	Germany	11-18 June 2017	Research interactions	Host
31	P. Sreenivasa Kumar	Gold Coast, Australia	10-12 November 2017	Joint International Semantic Technology (JIST) 2017	CPDA

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Member	Name of Award	Awarded by	Awarded for	Date of award
i. Honours					
1	Prof. Hema Murthy	INAE Fellow, 2017	INAE	Recognition of technical contributions	December 2017
2	Dr. Aritra Hazra	INAE Young Investigator Award, 2017	INAE	Recognition of technical contributions	December 2017
3	Dr. Anurag Mittal	IEEE Senior member grade elevation	IEEE	Recognition of technical contributions	2017
4	Dr. Mitesh Khapra	Google Faculty Research Award	Google	Faculty Research	2018
ii. Award					
1	Prof. Krishna Sivalingam	IIT Madras Institute Research and Development Award (IRDA): Mid-Career Level	IIT Madras	Recognition of technical contributions	April 2017

Fellowships of Academies and Professional Societies

Sl. No.	Faculty Member	Year of admission
INAE		
1	C. Siva Ram Murthy	2002
2	C. Pandu Rangan	2006
3	Krishna Sivalingam	2015
4	Hema Murthy	2017
INSA		
	C. Siva Ram Murthy	2013
Others		
TWAS	C. Siva Ram Murthy	2014
i. IEEE Fellow		
1	C. Siva Ram Murthy	2012
2	Krishna Sivalingam	2014
ii. ACM Distinguished Scientist		
1	Krishna Sivalingam	2014

Journal Editorial Boards

Sl. No.	Faculty Member	Position	Journal Name
1	Madhu Mutyam	Associate Editor	IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems
2	C Siva Ram Murthy	Associate Editor	IEEE Transactions on Mobile Computing
3	C. Siva Ram Murthy	Editor	Computer Networks (Elsevier)
4	Anurag Mittal	Associate Editor	Computer Vision and Image Understanding (Elsevier)
5	V. Krishna Nandivada	Associate Editor	Sadhana

4.7.4. Design and Development Activities

New facilities added or major equipment procured

Sl. No.	Name of Equipment	Value (Rs. in lakhs)
1	Dell Poweredge T430 server	3.84

Patents Filed

Sl. No.	Faculty Member	Topic of patent
1.	Santhosh Kumar, Swarna Kamlam and Anurag Mittal	Method and apparatus for tracking of object in set of video frames

4.7.5. Research and Consultancy

Sponsored Research Projects (ongoing and new)

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
1	Dynamic graph algorithms on many-cores	March 2017- March 2018	IIT Madras (ERP)	10	Rupesh Nasre
2	A Distributed approach to network function placement in next generation networks	March 2017- March 2018	IIT Madras (ERP)	4.67	Krishna Sivalingam
3	Distributed algorithms for dynamic networks	27 February 2017- 26 February 2020	DST-SERB	43	John Augustine (PI) and Krishna Sivalingam (Co- PI)
4	Explorations on computational problems for polynomials related to arithmetic circuit complexity	June 2017-June 2019	DST-SERB	21.85	Raghavendra Rao B. V. and Jayalal Sarma
5	Secure critical systems laboratory – FIST	November 2017-November 2022	DST	239	Head of Dept (PI), Chester Rebeiro, V. Kamakoti, B. Ravindran
6	Novel methods for encryption	October 2013- October 2018	DST	9.67	Shweta Agrawal
7	Efficiency of secure computation	May 2017-May 2020	ISF-UGC (Israel-India)	45	Shweta Agrawal (joint with Manoj Prabhakaran (IIT Bombay), Vinod Prabhakaran (TIFR))
8	Design and development of Navic receiver	July 2017-January 2020	MeitY	33	Chester Rebeiro, Aritra Hazra, V. Kamakoti
9	Microprocessor Development Programme	September 2017- September 2019	MeitY	1115	V. Kamakoti, Chester Rebeiro, Aritra Hazra

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakhs)	Co-ordinators
10	TTS integration with screen readers	1 year	MeitY	60	Hema A Murthy and E R Pranaw Kumar (CDAC, Mumbai)
11	Scene understanding for identification of covert geo locations, using a hyper-classifier based visual perception system	August 2017-August 2020	IMPRINT (MHRD/DRDO)	187	Sukhendu Das B.Ravindran
12	Development of a highly versatile secure very wide-band wireless communication platform (VERSA-COMM) for defence and strategic applications	September 2017-September 2020	DRDO	970	Krishna Sivalingam (Co-PI); Bhaskar Ramamurthi (PI); IIT Madras and CeWIT
13	Indigenous 5G Test Bed: Building an end-to-end 5G Test Bed in India	March 2018-March 2021	Department of Telecommunications, Government of India	570 (IITM) (out of total of 224 crore)	Krishna Sivalingam (Co-PI): Multi-institutional (IITs/ IISc and National Labs); (PI: Dr. Radhakrishna Ganti, IIT Madras, PI)
14	JC Bose Fellowship	5 year	DST-SERB	75	C. Siva Ram Murthy
15	Indigenous 64-bit processor design	7 November 2013-6 November 2018	DRDO	353	Kamakoti V.
16	Deploying Meghdoot openstack cloud suite on BOOS-MOOL at government scientific and research organization	January 2017-March 2018	MeitY	10	Janaki Ram D.

Corporate Social Responsibility (CSR) Projects (Ongoing and New)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakhs)
1	Rupesh Nasre	Dynamic clustering	Shell	6
2.	V. Kamakoti	CSR: Development of open source platforms and capability creation initiative	City Union Bank Limited	100
3.	B. Ravindran	Robert Bosch Centre for Data Science and AI	Robert Bosch Enterprise India (RBEI)	300

Industrial Consultancy Projects (Ongoing and New)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakhs)
1	Rupesh Nasre	Dynamic clustering	Shell	6

RBIC projects (Ongoing and New)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakhs)
1	Sutanu Chakraborti (PI), Deepak Khemani, Rupesh Nasre, Mitesh Khapra	Towards prescriptive analytics: adaptive planning, reasoning, optimization and decision-making algorithms for the accenture cognitive engine (ACE)	Accenture	16.50
2	Janaki Ram D, Chester Dominic Rebeiro	CARS project Minimalistic object-oriented Linux integration with Anurag's Hardened Linux (AHL)	DRDO	8.32

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakhs)
3	B. Ravindran	Document question answering using Deep Learning	Amazon Development Centre (India) Private Limited	11.64
4	B. Ravindran	IIT Deep learning exploration	Buddi Health	10
5	B. Ravindran, Rupesh Nasre	Business rule extraction from source code	Hitachi India Private Limited	11.5
6	B. Ravindran	Use of attention for motion prediction in videos using deep learning	Intel Technology India Private Limited	36.8
7	Janaki Ram D.	Exploration of large scale and secure private cloud	DRDO	9.75
8	Shweta Agrawal	Foundations for computing on encrypted data and lattice algorithms and attacks	Microsoft Research Lab India Private Limited	6.50
9	Rupesh Nasre	Parallelised identification and update of voxel clusters in digitised images	Shell India Markets Private Limited	6
10	B. Ravindran	AI driven knowledge - based analytics and control	Ericsson India Private Limited	63.72
11	V. Kamakoti	Thermal imaging based breast cancer detection	M/s.Super Auto Forge Limited	97.30
12	Chester Rebeiro	Security framework for software defined radio	Cyient	6

Retainer Consultancy (ongoing and new)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakhs)
1	B. Ravindran	Delivering lecture on Big Data	Gyan Data Private Limited	1.2
2	B. Ravindran	Consulting on Telecom data analytics	Xoanon Analytics Private Limited	20
3	B. Ravindran	Consulting on Deep learning	Photogauge	5
4	Kamakoti V.	Analysis of patents in modern mobile devices	Teleecare Networks India Private Limited	2.5
5	Kamakoti V.	Guidance for IT infrastructure improvement	STAR Health & Allied Insurance	27.6
6	Krishna Moorthy S.	Software defined wide area network gateway	COSGrid Networks	0.25
7	V. Krishna Nandivada	Lap Trac: A tool to track student laptops (building and installation)	ELCOT	1.725

Faculty members participation with other institution under MoU

Sl. No.	Faculty Member	Participation	University/Institution
1	Rupesh Nasre	Co-guiding a PhD student	Indira Gandhi Center for Atomic Research

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date of visit	Purpose of visit
1	Dr. S. Sudarshan, IIT Bombay	18 April 2017	DAA Talk
2	Dr. Swarnendu Biswas, University of Texas, Austin	5 May 2017	Seminar and Meeting
3	Mr. Sandeep Chandran (PhD), IIT Delhi	8 May 2017	Seminar
4	Students and Faculty Member Team from University of South Australia	17 July 2017	Interaction regarding academic curricula
5	Dr. Santosh Nagarkatte, Rutgers University	31 July 2017	Seminar and Meetings
6	Prof. Pushpak Bhattacharyya, IIT Patna	21 August 2017	Seminar

Sl. No.	Name and Designation	Date of visit	Purpose of visit
7	Prof. Hari Balakrishnan, MIT, USA	3-18 August 2017	VHAR Visiting Chair Professor's interaction visit
8	Dr. N. G. Srinivas, Postdoc, MIT, USA	3-18 August 2017	VHAR Visiting Chair Professor's interaction visit
9	Mr. Akshay Narayanan (PhD Scholar), MIT, USA	3-18 August 2017	VHAR Visiting Chair Professor's interaction visit
10	Faculty members from Bannari Amman Institute of Technology, Sathy, TN	31 August 2017	Interaction regarding academic curricula
11	Dr. Partha Mitra, Cold Spring Harbour Lab, NY	August 2017	CCBR Chair Professor's interaction visit
12	Student and Faculty Team from Tokyo Institute of Technology	29-30 August 2017	Lab and classroom visit
13	Pramod Ganapathy	18 September 2017	Seminar and Meetings
14	Dr. K. C. Sivaramakrishnan	9 October 2017	Seminar and Meetings
15	Nodari Sitchinava	3-7 September 2017	Seminar and Meetings
16	John L. Gustafson	30 October 2017	Seminar
17	Dr. Arijit Ghosh, ISI Kolkata	6 November 2017	Seminar and faculty interaction
18	Dr. Swagato Sanyal, NTU	4 December 2017	Seminar and faculty interaction
19	Dr. Adam O'Neill, Georgetown University, USA	December 2017	Collaboration and Seminar
20	Dr. Bhuvana Ramabhadran, IBM Watson Research, NJ	21 December 2017	Seminar and interaction
21	Prof. Damien Stehle from ENS de Lyon, France	11-13 December 2017	Seminar and Interaction
22	Dr. Swarnendu Biswas, University of Texas, Austin, USA	5 January 2018	Faculty Candidate
23	Dr. Abhishek Sinha, Qualcomm, USA	12 January 2018	Faculty Candidate
24	Dr. K.C. Sivaramakrishnan, Cambridge University, UK	17 January 2018	Faculty Candidate
25	Dr. Jinesh Machchar, Technion, Israel	08 January 2018	Faculty Candidate
26	Dr. Srikant Madikeri, IDIAP/ETH, Switzerland	09 January 2018	Faculty Candidate
27	Dr. Kannan Govindarajan, ServiceNow Inc., Santa Clara, USA	25 January 2018	TCS-IITM Colloquium Series Speaker
28	Srinivas Narayanan, Facebook, USA	03 January 2018	Seminar Speaker
29	Dr. Sridhar Mahadevan, University of Massachusetts Amherst, USA	19 February 2018	Seminar Speaker
30	Dr. S. Lakshmiarahan, University of Oklahoma, Norman, USA	29 February 2018	Seminar Speaker
31	Team from Hokkaido University, Japan	20 February 2018	Seeking Research Collaboration

4.7.6. Other Activities of the Department/Centre

Inter-disciplinary group achievements: Establishment of Robert Bosch Center for Data Science and Artificial Intelligence (RBC-DSAI), with funding from Robert Bosch. This is a new interdisciplinary centre established in 2017-18 with faculty participation from several departments.

Socially relevant activities: Cybersecurity training under CSR funding, provided by City Union Bank.

International collaboration achievements: Several joint publications with authors from international institutions.

Faculty Visits

Sl. No.	Faculty Member	Purpose of Visit	Date and Venue
1	V. Krishna Nandivada	IIT Palakkad, Faculty screening	25-26 March 2017, IIT Palakkad
2	V. Krishna Nandivada	NIT Trichy, Meeting, Department of Computer Applications	27-28 April 2017, NIT Trichy
3	B. Ravindran	IIT Palakkad, Faculty screening	25-26 March 2017, IIT Palakkad
4	B. Ravindran	IISc, PhD Viva Voce	28 March 2017, IISc Bengaluru
5	B. Ravindran	IIT Guwahati, PhD Viva Voce	18-19 March 2017, IIT Guwahati
6	B. Ravindran	Board of Studies, Sastra University	8 April 2017, IIT Madras
7	Mitesh Khapra	Microsoft Research, Bengaluru	3-4 April 2017, MSR, Bengaluru
8	C. Chandra Sekhar	SRM University, Amaravati, AP, Faculty selection	1-2 March 2017, Chennai

Sl. No.	Faculty Member	Purpose of Visit	Date and Venue
9	C. Chandra Sekhar	IIIT Kottayam, Faculty selection	25 March 2017, Trivandrum
10	C. Chandra Sekhar	GITAM University, Board of Studies meeting	1 April 2017, Visakhapatnam
11	C. Chandra Sekhar	Gudlavalleru Engineering College, AP, Board of Studies meeting	8 April 2017, Gudlavalleru
12	C. Chandra Sekhar	SRM University, Amaravati, AP, Faculty selection	20-21 April 2017, Chennai
13	Krishna M. Sivalingam	DIAT Faculty Selection/Promotion Committee Meeting	2 April 2017, DIAT, Pune
14	Krishna M. Sivalingam	Senate Meeting, IIITDM, Kancheepuram	17 April 2017, Chennai
15	V. Kamakoti	Program Review Committee of MeitY for SMDP Project	5 April 2017, IIT Bhubaneswar
16	Mitesh M. Khapra	Microsoft Research India Summer Workshop on Artificial Social Intelligence	5-30 June 2017, Bengaluru
17	B. Ravindran	IIT Madras Summit, organised by IIT Madras Foundation	10 June 2017, Santa Clara, California
18	B. Ravindran	Board of Studies Meeting	3 June 2017, SJCE Mysore
19	Chester Rebeiro	PRSG Meeting	1 May 2017, SETS Chennai
20	C. Siva Ram Murthy	Faculty Selection Committee Meeting	20-21 June 2017, IIT Bhilai
21	Krishna M. Sivalingam	Faculty Selection Committee Meeting	12-13 May 2017, IIT Palakkad
22	Krishna M. Sivalingam	Faculty Selection Committee Meeting	19-20 May 2017, IIT Tirupati
23	Krishna M. Sivalingam	Department Advisory Committee Meeting, Department of CSE	11 May 2017, SRM Easwari Engineering College
24	C. Siva Ram Murthy	PhD Oral Examination	24 June 2017, IIT Hyderabad
25	V. Kamakoti	Standing Technical Committee National Stock Exchange	22 June 2017, Chennai
26	V. Kamakoti	PhD Oral Exam	27 June 2017, IIT Kharagpur
27	V. Kamakoti	PRSG Meeting, Information Security Education and Awareness, MeitY, Gol	28 June 2017, New Delhi
28	Krishna M. Sivalingam	IIITDM Kancheepuram Senate Meeting	14 June 2017, Chennai
29	B. Ravindran	PhD Viva	15 July 2017, IIT Kharagpur
30	B. Ravindran	Steering Committee Meeting on Data Analytics Unit, Government of Tamil Nadu	3 August 2017, Chennai
31	Hema A. Murthy	RUSA - Restructuring of curriculum in higher education	16-17 August 2017 Chennai
32	Sukhendu Das	PRSG review meeting at DieTY, MCIT, Delhi	27 July 2017, New Delhi
33	Madhu Mutyam	PhD Viva, CUSAT	7 August 2017, Kochi
34	Madhu Mutyam	PhD Viva, IIIT Delhi	14 August 2017, New Delhi
35	Chester Rebeiro	Blockchain Workshop at IBM Research	14-15 July 2017, Bengaluru
36	Krishna M. Sivalingam	PhD Viva	17 August 2017, IIT Delhi
37	Krishna M. Sivalingam	PhD Viva, IIT Kharagpur	21 July 2017
38	Krishna M. Sivalingam	PhD Comprehensive, SRM University	28 July 2017
39	Chester Rebeiro	Interview Panel	22 September 2017, SETS, Chennai
40	Chester Rebeiro	NFS RSA1024	10 October 2017, IISc Bangalore
41	Chester Rebeiro	Security aspects of BOSE Software Defined Radio	16 October 2017, Saankhya Limited, Bengaluru
42	Madhu Mutyam	PhD Viva Voce	16 October 2017, Department of CSE, IIT Delhi
43	Madhu Mutyam	Inspection of facilities at Multicoreware for external certification	24 October 2017, Multicoreware Inc, Chennai
44	C. Chandra Sekhar	PhD Viva Voce	21 September 2017, Department of ECE, IIT Guwahati
45	Shweta Agrawal	Expert meeting on blockchain technology	10 October 2017 National Security Council Delhi
46	Krishna Sivalingam	Tamil Nadu Government e-Governance Commissionerate: Curriculum and Syllabus Committee for IT Cadre	21 September 2017, CEG Campus, Anna University, Chennai
47	V. Krishna Nandivada	PhD Defense	18 September 2017, NIT Calicut

Sl. No.	Faculty Member	Purpose of Visit	Date and Venue
48	V. Krishna Nandivada	NSM Project presentation	22 September 2017 IISc Bangalore
49	Sukhendu Das	Technical Collaboration with AI Group	15 November 2017, CAIR Bengaluru
50	Krishna M. Sivalingam	Senate Meeting	17 November 2017 IIT Palakkad
51	Krishna M. Sivalingam	Senate Meeting	9 December 2017, IIITDM
52	Krishna M. Sivalingam	Faculty Selection Committee Meeting	13 December 2017, IIT Palakkad,
53	Krishna M. Sivalingam	Expert Committee Meeting to finalise the scheme and curriculum for recruitment of engineers in Tamil Nadu Government, IT Department	14 November 2017, CEG Campus, Anna University
54	Krishna M. Sivalingam	Technical committee meeting of Anna University Center of Excellence for Cloud Computing	2 November 2017, CEG Campus, Anna University
55	Hema A. Murthy	RUSA Curriculum Meeting	30 December 2017, CEG Campus, Anna University
56	C. Chandra Sekhar	Senate Meeting of IIIT Kottayam	20 December 2017 IISER, Trivandrum
57	C. Chandra Sekhar	RUSA Curriculum Meeting	30 December 2017, CEG Campus, Anna University
58	C. Chandra Sekhar	Faculty Selection Committee Meeting	16-17 November 2017 SRM University, Amaravati
59	C. Chandra Sekhar	PhD Comprehensive Examination Committee Meeting	23 November 2017, NIT Trichy
60	Hema A. Murthy	WISSAP 2018	19-22 January 2018, IIT Guwahati
61	Hema A. Murthy	National Programme on Intelligent Systems	18 January 2018, MeitY Delhi
62	Chester Rebeiro	Game theoretic approaches to cyber security	8 February 2018 SETS Chennai
63	C. Chandra Sekhar	WISSAP 2018	19-22 January 2018, IIT Guwahati
64	C. Chandra Sekhar	Academic Council Meeting	15 January 2018, Kalasalingam University
65	C. Chandra Sekhar	Board of Studies Meeting	11 January 2018, Vel Tech University, Chennai
66	Hema A. Murthy	WiSSAP 2018	19-22 January 2018, IIT Guwahati
67	Hema A. Murthy	National Programme on Intelligent Systems	18 January 2018, MeitY, Delhi
68	Hema A. Murthy	PhD Viva via VC	1 March 2018, IIT Guwahati
69	Hema A. Murthy	AI Meeting 1 st	28 February 2018, MeitY
70	Hema A. Murthy	AI Meeting 2 nd	13 March 2018, MeitY
71	Hema A. Murthy	AI Meeting 3 rd	21 March 2018 via Skype
72	Hema A. Murthy	AI Meeting 4 th	10 April 2018 via Skype
73	Anurag Mittal	IoT Camera Standards Development Working Group Meeting, STQC	1 December 2017, STQC, New Delhi
74	Anurag Mittal	PRSG project review meeting, IIITD	29 September 2017, IIITD
75	Anurag Mittal	TASMAC IP camera procurement tender committee meetings	8-22 November 2017 and 6 December 2017, TASMAC corporate office, Egmore, Chennai



4.8. Department of Electrical Engineering

4.8.1. Introduction

The Department of Electrical Engineering of Indian Institute of Technology Madras comprises several laboratories. These laboratories are grouped into five major areas: EE1: Communications (including wireless), Digital, Speech and Image Processing; EE2: Power Systems, Power Electronics and High Voltage; EE3: Microelectronics; EE4: Control, Instrumentation, Bio-Medical; EE5: Photonics; EE6: Integrated Circuits and Systems. All faculty members in the department have earned Ph.D. degrees from reputed universities.

EE1: Communications, Signal Processing and Communication Networks

Facilities: Vector network analyzer, USRP and various RF bands, FPGA facilities, digital communication trainer, 5G test bed

EE2: Power Systems, Power Electronics and High Voltage

Facilities: Machines and Drives Laboratory: Motor generator sets, regulating transformer, cradle-type DC dynamometer, torque transducer, data acquisition systems, vector visualiser, special purpose AC supply generators, multilevel inverters, measurement storage oscilloscopes, microprocessor-based drive systems, simulation software for power electronic systems, PSIU, magnet (2D, 3D, FEM software), motor control DSP kits, FPGA kits (Altera, Xilinx)

High Voltage and Power System Laboratory: HV testing transformer (800 kV, 400 kVA), lightning impulse generator, high-frequency voltage generator, digital bandwidth storage oscilloscopes, capacitance measurement unit, PD detector unit, power system simulator, power system analysis and application software, power quality, monitoring and analysis unit, FACTS and custom power devices experimental units, DSP-based power controllers

EE3: Microelectronics, MEMS and Analog and Digital VLSI

Facilities: Microelectronics and MEMS Laboratory: Class 100/Class 1000 Clean Rooms, laser writer for mask making, e-beam writer, e-beam metallization unit, sputtering units, furnaces for oxidation and diffusion, rapid thermal processing, double-sided mask aligner and exposure systems, PECVD systems and LPCVD system,

reactive ion etching systems and DRIE, substrate bonder and wire bonder, dicing machine and glove box for organic electronics

Characterisation: Spectroscopic ellipsometer, interferometric 3d surface profiler, four-point probe and confocal microscope, tabletop SEM and wafer probe stations, semiconductor parametric analyzer and multifrequency LCR meters, Cantisens and doppler vibrometer, solar simulator device and MEMS simulation tools

EE4: Control Systems, Measurements and Instrumentation

Facilities: Control Laboratory: Micro selection C development systems for VLSI based control, simulation packages (MATLAB, PSPICE, MAXPLUS II), motor control systems and speed control systems (Analog and Digital), benchmark vision system and high precision measuring instruments, Cobra RS-23-5 axis robot and Eshed ER111, Eshed E&V: 5 axes robots, position control systems (AC and DC)

Measurements and Instrumentation Laboratory: Precision indicating instruments and standard R, L and C components, virtual instrumentation laboratory with ELVIS, meter calibrator and pressure calibrator, energy meter testing desk and instrument transformer calibrator, high current AC and DC supply units, biomedical instrumentation (ultrasonic and optical)

EE5: Photonics, Optical Communications and RF

Facilities: Fibre optic educational kit/laboratory: experimental optics laboratory with lightwave measurement unit, BER tester, fibre laser laboratory, integrated optoelectronics laboratory, class 100,000 room for development of space applications, ground stations - satellite communications and control, high speed optical communication laboratory, Fiber Bragg Grating Fabrication Facility, High Power Fiber Lasers (HPFL) laboratory

EE6: Integrated Circuits and Systems

Facilities: Analog and digital circuits and VLSI design lab: Workstations and EDA tools for complete IC design flow, EPLD/FPGA design software and workstations, DSP kits and workstations, IC test facilities

4.8.2. Academic Programmes

New Discipline/Branch Introduced

M. Tech. in EE6 (Integrated Circuits and Systems)

Students on roll as of September 2017+M.S. and Ph.D. Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
B.Tech.	73	70	72	66	34	315
Dual Degree	58	57	57	62	94	328
M. Tech.	114	47			13	174
M.S.	35	40	34	18	5	132
Ph.D.	51	48	51	57	82	289
Total	331	262	214	203	228	1238

Student/Scholar who Attended conferences/seminars and symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/ Symposia/Workshops	Date and Venue	Financial Assistance from
Abroad					
1.	Priyanka Shinde	EE15S035	ICEEN 2017	25-27 March 2017	IIT Madras
2.	T. Sreekanth	EE13D052	ICIT 2017	22-25 March 2017	IIT Madras

Students/Scholars who won Outside Prizes and Awards

Sl. No.	Student/Scholar	Roll No.	Prize	Awarded by
1	STP Srinivas	EE14D038	Best paper	ICETEST 2017
2	Shekhar Bhawal	EE16D014	Best poster	ELROMA 2017
3	Sandeep V. Nair	EE16D023	Best poster	ELROMA 2017
4	Jose Tituts	EE14D022	Best poster	ELROMA 2017
5	Vamsi Krishna	EE14D010	Best poster	ELROMA 2017
6	A. Saranya	EE15S070	Eaton Pratibha	Eaton

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl.No.	Student/Scholar	Roll No.	Prize	Donor
1	G. Sarath	EE12S036	T.S. Vedagiri Award 2017	IIT Madras

4.8.3. Faculty and their activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Head	
Dr. Devendra Jalihal	Signal processing, communication
Professors	
Dr. Amitava Das Gupta	Semiconductor devices
Dr. Anil Prabhakar	Photonics, magnonics, assistive technologies
Dr. Aravind R.	Signal processing, communication
Dr. Ashok Jhunjunwala	Signal processing, communication
Dr. Andrew Thangaraj	Signal processing, communication
Dr. Bhaskar Ramamurthi	Signal processing, communication
Dr. David Koilpillai R.	Signal processing, communication
Dr. Devendra Jalihal	Signal processing, communication
Dr. Enakshi Bhattacharya	Semiconductor devices
Dr. Giridhar K.	Signal processing, communication
Dr. Harishankar R.	Plasma, RF, electromagnetics
Dr. Jagadeesh Kumar V.	Instrumentation and measurements

Name and Qualifications	Major Areas of Specialisation
Dr. Karmalkar S.	Semiconductor devices
Dr. Krishna Vasudevan	Power electronics
Dr. Mahesh Kumar	Power systems
Dr. Nandita DasGupta	Semiconductor devices
Dr. Rajagopalan A. N.	Image processing
Dr. Sarathi R.	High voltage
Dr. Shanthi Pavan Y.	Circuits and RF
Dr. Shanthi Swarup K.	Power systems
Dr. Srikrishna	Signal processing, communication
Dr. Sridharan K.	Control systems and digital architecture
Dr. Umesh	Speech processing
Dr. Vinita Vasudevan	Digital systems and VLSI
Dr. Anjan Chakravorty	Semiconductor devices
Dr. Bijoy Krishna Das	Silicon photonics
Associate Professors	
Dr. Anantha Krishnan	Computational electromagnetics
Dr. Arun D. Mahindrakar	Digital control and systems theory
Dr. Arun Pachai Kannu	Signal processing, communication
Dr. Balaji Srinivasan	Photonics
Dr. Bobby George	Instrumentation and measurements
Dr. Deleep Nair	Semiconductor devices
Dr. Deepa Venkitesh	Photonics
Dr. Gaurav Raina	Communication networks
Dr. Kalyan Kumar	Power systems
Dr. Lakshmi Narasamma	Power electronics
Dr. Mohanasankar S.	Biomedical devices
Dr. Nagendra Krishnapura	Analog circuits
Dr. Nitin C.	Digital systems and architectures
Dr. Ramkrishna Pasumarthy	Control theory
Dr. Ramalingam C. S.	Speech processing
Dr. Shanthi Bhattacharya	Optics
Dr. Srirama Srinivas	Power electronics
Dr. Sheetal Kalyani	Communications
Dr. Venkatesh T. G.	Communication networks
Assistant Professors	
Dr. Aniruddhan S.	Analog and RF circuits
Dr. Arun Karuppaswamy	Power electronics
Dr. Avhishek Chatterjee	Communication networks
Dr. Bharath Bhikkaji	Control theory
Dr. Debdutta Ray	Semiconductor devices and organic LEDs
Dr. Janaki Viraraghavan	Digital systems and architectures
Dr. Kamalesh Hatua	Power electronics
Dr. Krishna S.	Power systems
Dr. Kaushik Mitra	Image processing
Dr. Krishna Jagannath	Communication systems
Dr. Manivasakan R.	Optical networks
Dr. Mathiazhagan C.	Analog circuits
Dr. Pradeep Sarvepalli	Quantum information theory
Dr. Puduru Viswanadha Reddy	Control theory and game theory
Dr. Qadeer Ahmad Khan	Digital system, low power design
Dr. Radhakrishna Ganti	Communication theory and systems
Dr. Rachael Kalpana	Control theory
Dr. Soumya Dutta	Semiconductor devices and organic LEDs
Dr. Saurabh Saxena	Analog and RF circuits
Dr. Uday Khankhoje	Antenna, computational electromagnetics
Dr. Venkatesh Ramaiyan	Communication networks
Inspire Faculty	
Dr. Pramitha V.	Photonics
Scientific Officers/Engineers	
Ponnuraj	
Jeyasutha Avudai Thangam	

Short-term Course Organised by Faculty Members

Sl. No.	Coordinator(s)	Title	Period
1.	K. S. Swarup	Power system operation and energy management for Powergrid engineers	5-9 February 2018

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty	Topic of Lecture	Institution	Date
1	Bijoy Krishna Das	CMOS silicon photonics	IIT Kharagpur (IEEE sponsored)	5 January 2017
2	Bijoy Krishna Das	Silicon photonics - enabling technology for the 21 st century	MNNIT, Allahabad (Dean R&C sponsored special lecture)	12 April 2018
3	Bijoy Krishna Das	Silicon photonics - a new enabling technology	DIAT, Pune	19 April 2018
4	Shanti Bhattacharya	An introduction to complex light and it applications	Max Planck Institute for Intelligent Systems, Stuttgart, Germany	20 November 2017
5	Shanti Bhattacharya	Subwavelength diffractive optics	Institute for Applied Physics, KIT, Karlsruhe, Germany	17 November 2017
6	Shanti Bhattacharya	Manipulating light using diffractive optics	Institute for Optics and Precision Engineering, Fraunhofer IOF, Jena, Germany	13 November 2017
7	Shanti Bhattacharya	Diffractive optics: where small dominates	University of St. Andrews, Scotland	3 November 2017
8	Krishna Jagannathan	Qubits through queues: the capacity of channels with waiting time-dependent errors	IIT Bombay	24 February 2018
9.	Srirama Srinivas	PV and grid side power converters and control in a typical microgrid	IIT Mandi	21 December 2017

International Visits by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
1	Bijoy Krishna Das	Singapore	18-23 June 2017	Invited Talk: ICMAT 2017	IIT Madras
2	Deepa Venkitesh	Singapore	31 July-04 August 2017	Invited Talk: CLEO-PR	IIT Madras
3	Deepa Venkitesh	Russia	1-2 March 2018	First Meeting of the BRICS WG on Photonics	DST
4	Deepa Venkitesh	China	10-13 November 2017	Asia Conference on Communication and Photonics	IIT Madras
5	Shanti Bhattacharya	Germany	September-December 2017	Sabbatical	AvH Foundation
6	Shanti Bhattacharya	USA	8-11 April 2018	OSA Board meeting	OSA
7	Shanti Bhattacharya	USA	17-20 September 2017	OSA Board meeting and FiO conference	OSA
8	Enakshi Bhattacharya	France	9-12 July 2017	FiMPART, Bordeaux	IIT Madras
9	Enakshi Bhattacharya	Australia	4-6 December 2017	ICST 2017, Sydney	Macquarie University
10	Ramkrishna Pasumarthy	Canada	13-21 July 2018	Project meeting	Shastri Indo-Canadian Institute
11	Ramkrishna Pasumarthy	Malta	3-6 July, 2017	Med control conference	IIT Madras

Honours and Awards Obtained by Faculty

Sl. No.	Faculty	Award	Awarded by	Awarded for	Date
i. Honours					
1.	Dr. Saurabh Saxena	Early Career Research	SERB	Science and Engineering	5 May 2018
2.	Dr. Saurabh Saxena	Young Faculty Research Fellowship	Visvesvaraya PhD Scheme of MeitY		17 January 2018
3.	Dr. Puduru Viswanadha Reddy	Core Research Grant (previously called Extramural Research)	SERB	Science and Engineering	4 April 2018
ii. Award					
1.	Dr. Kamalesh Hatua	ELROMA 2017	Electrical Rotating Machines and Drives, Conference Mumbai, India	Best Poster	14-15 September 2017

Journal Editorial Boards

Sl. No.	Faculty Member	Position	Journal
1.	Srikrishna Bhashyam	Editorial Board Member	IEEE Transactions on Communications
2.	Bijoy Krishna Das	Associate Editor	SPIE Optical Engineering
3.	Shanti Bhattacharya	Associate Editor	SPIE Optical Engineering
4.	Krishna Jagannathan	Editor	Performance Evaluation
5.	Krishna Jagannathan	Editor	IEEE/ACM Transactions on Networking
6.	Anil Prabhakar	Editorial Board Member	Scientific Reports (Nature)
7.	Anil Prabhakar	Editorial Board Member	IEEE Transaction on Magnetics

4.8.4. Research and Consultancy

Sponsored Research Projects

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Coordinators
1	Experimental Demonstration and Modeling of SOI based P-I-N/P-N Phase-Shifters and Variable Optical Attenuators with Submicron Waveguides	2015-2018	DST	60.7	Bijoy Krishna Das and Nandita Das Gupta
2	Development of Silicon BiCMOS Technology for RF Applications	2017-2020	ISRO	49.5	Anjan Chakravorty and Nihar R. Mohapatra
3	Development of Numerical Simulation Tool for Three-dimensional Silicon Nanowire MOSFETs	2014-2018	DST	30.5	Anjan Chakravorty, Deleep R. Nair and Amitava DasGupta
4	Development of Robust Markovian Jump Kalman Filter Techniques for an Intelligence Autonomous Vehicle Attitude Estimation	2017-2019	DST	19.20	Arun D. Mahindrakar
5	UK-India Clean Energy Research Institute (UKICERI)	2017-2021	DST	37.72	Kalyankumar B.
6	Compact Energy Efficient SiC based Three Phase Converter for PE System	2017-2018	National Mission for Power Electronics Technology	23.82	Kamalesh Hatua
7	Free Space Optical Link for Line of Sight Communication Near Border Areas	2017-2019	Impacting Research Innovation and Technology - IMPRINT	65.66	Anil Prabhakar

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Coordinators
8	Center for Battery Engineering (CBE) at TCOE		Department of Heavy Industry	1950	Devendra Jalihal, Ashok Jhunjunwala, Krishna Vasudevan, Lakshmi Narasamma
9	Unnat Bharat Abhiyan	2017-2018	Ministry of Human Resource Development	1.75	Devendra Jalihal, Abhijit Deshpande and Sivakumar K. C.
10	UI-ASSIST: US-India Collaborative for Smart Distribution System with Storage	2017-2022	DST	184.50	Mahesh Kumar and Srirama Srinivas
11	Rural electrification works in 94 villages in Manipur	2017-2023	Manipur Renewable Energy Development Agency	1711.92	Devendra Jalihal
12	Soil Moistures Retrieval from Airborne SAR	2017-2020	Space Application Centre	23.22	Uday Khankhije and Harishankar Ramachandran
13	Harnessing Human-centric Networks	2017-2022	DST	35	Awhishek Chatterjee
14	Village electrification programme in J&K, using solar DC Inverterless system	2018-2023	Jammu and Kashmir State Power Development Corporation Limited	560	Ashok Jhunjunwala
15	Nanoelectronics NETWORK for Research and Applications (NNetRA)	2018-2021	DST	1064	Enakshi Bhattacharya
16	Building End to End 5G Test Bed in India	2018-2021	DST	5975.8	Radhakrishna Ganti
17	Synchronous Reluctance Motor Drive for Indian EV	2018-2021	DHI	279.15	Srirama Srinivas and Krishna Vasudevan

RBIC Projects

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	Devendra Jalihal	Center for Battery Engineering and Electric Vehicles (CBEEV)	Common Code	5
2.	Krishna Vasudevan	Opinion on Fault in Wind Generator	Common Code	0
3	Devendra Jalihal	Center of Battery Engineering (CoBE)	Common Code	0
4	Devendra Jalihal	Center for Electric Vehicles (CoEV)	Common Code	8.26
5	Sarathi R.	Electrical Design Verification for the Water Supply and Distribution Project- Bansujara Multi-Villages Water Supply Scheme	Common Code	0
6	Sarathi R.	5 Nos - Individual Rural Piped Water Supply	L&T Construction, Buildings and Factories	3.54
7	Ramkrishna Pasumarthy	On Analysis of NSE TBT Trading Architecture	Acceletrade Technologies Private Limited	17
8	Devendra Jalihal	Center for Battery Engineering and Electric Vehicles (CBEEV)	Common Code	5
9	Nitin Chandrachoodan	Investigation of Artificial Neuron Architectures Suitable for FPGAs	Xilinx Inc.	33.19
10	Krishna Jagannathan	EDGE-1: Smarter Logistics in Shipping	Solverminds Solutions and Technologies Private Limited	10

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
11	Boby George	Feasibility Study on Readout Integrated Circuit Suitable for Piezo MEMS Devices	Defence Research and Development Organisation	13.7
12	Amitava Das Gupta	Fabrication and Characterization of InAlN/GaN HEMTS on Different Substrates for High Frequency Applications	Defence Research and Development Organisation	24.84
13	Rajagopalan A N	Photometric Stereo for SEM	KLA Tencor	16.13
14	Gaurav Raina	IIT Madras-CTS-Ernet Initiative on IoT	Cognizant Technology Solutions	40
15	Venkatesh Ramaiyan	Verification of Netsim Simulation Results	Tetcos Technology	6.5
16	Andrew Thangaraj	Implementation of Turbo Codes	ORB Analytics	19.5
17	Devendra Jalihal	Center for Battery Engineering (AL)	Ashok Leyland	177
18	Devendra Jalihal	Technologies for Battery Swapping for EV	National Thermal Power Corporation Limited	25
19	Devendra Jalihal	Development and Testing of Battery Pack for Electric Vehicles - Bus and Auto	EXIDE Industries Limited	160
20	Kamalesh Hatua	AC-AC Traction Control System for 4500 HP Diesel Electrical Locomotive	Bharat Heavy Electricals Limited	14.01
21	Mohanasankar Sivaprakasam	HQE/31/Blowers - BPVAC/S3S4/430 vide DMDE PO of Even Number dated 9 November 2016	Defence Machinery Design Establishment	40.78
22	Devendra Jalihal	Development and Testing of Battery Pack for Electric Vehicle - Bus and Auto	Exicom Tele-Systems Limited	120.36
23	Devendra Jalihal	Developing Battery Pack Technology for Solar Power Distribution in Homes	Cygni Energy Private Limited	11.8
24	Devendra Jalihal	Development and Testing of Battery Pack for Electric Vehicles - Bus and Auto	Amara Raja Batteries Limited	160
25	Kamalesh Hatua	Induction Motor Control for Integrated Starter Generator	Lucas-TVS Limited	8.11
26	Devendra Jalihal	Wireless Network of RPW-based Radios - Field Trial and Feasibility Test for Secure Communication	Hitachi India Private Limited	10
27	Giridhar K.	Quantum Joint Detection	Qualcomm India Private Limited	13.06
28	Arun Karuppaswamy B	Diode bridge electronic circuit behaviour testing and analysis for efficiency improvement in SIA130 Alternator	Lucas-TVS Limited	4.48
29	Shanthi Swarup K	Study of O Load Tap Changers (OLTC) in Power Transmission Networks	Easun-MR Tap Changers (P) Limited	12
30	Andrew Thangaraj	Development of LDPC and Polar Codes for 5G	Wisig Networks Private Limited	23.60
31	Devendra Jalihal	Center of Electric Vehicle (Power Grid)	Power Grid Corporation of India Limited	29.50
32	Anil Prabhakar	Pulsed Laser for Brain Imaging	Alumni Association	7
33	Andrew Thangaraj	Extension of the Capabilities of the OFDM Troposcatter Modem	Defence Research and Development Organisation	10
34	Nandita Das Gupta	Technology Development for SiC MEMS Pressure Sensor	Indira Gandhi Centre for Atomic Research	45.55
35	Rajagopalan A. N.	KLA Tencor	Robust PCA for Outlier Detection	16.25
36	Devendra Jalihal	Center of Battery Engineering (ESSEL)	Essel Green Energy Private Limited	177

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
37	Devendra Jalihal	Center of Electric Vehicle (ESSEL)	Essel Green Energy Private Limited	90
38	Mohanasankar Sivaprakasam	Advanced Diagnostic Technologies	J. Mitra and Co. Private Limited	36
39	Mohanasankar Sivaprakasam	Segmentation Algorithms for Robotic Orthopedic Surgery	Stryker Global Technology Private Limited	9
40	Kaushik Mitra	Fourier Ptychography	Aindra Systems Private Limited	0.61
41	Saurabh Saxena	Serial Link Design	Signalchip Innovations Private Limited	11.8
42	Aniruddhan S.	Design of 28GHz Transceiver	Cadence Design Systems (India) Private Limited	23.6
43	Aniruddhan S.	Advisory Services to United India Insurance Company	United India Insurance Co. Limited	11.5
44	Srikrishna B.	Design Review of 5G Wireless Modem	Wisig Networks Private Limited	28.32

4.8.5. Other Activities of the Department/Centre

Centre for Rehabilitation and Assistive Technology (create.iitm.ac.in) is working with Enability Foundation for Rehabilitation (enability.in) to deliver products for persons with disability. Four units of the Tachograph were distributed to SSA schools in Tiruvallur district. KAVI-PTS (picture to speech) was developed in collaboration with the Speech and Language Laboratory, CSE Department, in multiple Indian languages and released on Google Playstore.



4.9. Department of Engineering Design

4.9.1. Introduction

Set up in 2006, the Department of Engineering Design became the 16th department of Indian Institute of Technology Madras. Engineering design is a series of steps that engineers follow to come up with a solution to a problem. Many times, the solution involves designing a product that meets certain criteria and/or accomplishes a certain task. It is a decision-making process, often iterative, in which basic sciences and engineering sciences are applied to the optimal conversion of resources to meet a stated objective.

Students are first introduced to the design process along with fundamental mathematics, science and engineering, graphic art, design and aesthetics. They are trained not only in the mechanical aspects of design, but also in electronics, control and embedded systems for all-round

skill development. Courses in geometric modelling, finite elements, materials engineering, automotive engineering, mechatronics, robotics, biomedical imaging and diagnostic techniques are also offered.

4.9.2. Academic Programmes

A first of its kind in India, the department provides much-needed leadership in engineering design with two novel dual-degree programmes. Both the programmes offer a B.Tech. in Engineering Design, and the first that began in 2006 offers an M.Tech. in Automotive Engineering. The second programme, launched in 2008, offers an M.Tech. in Biomedical Design. From 2007, the department also offers M.S. and Ph.D. programmes. Recently, an M.Tech. and Ph.D. dual-degree programme has been introduced.

New courses introduced

Sl. No.	Course No.	Title
1.	ED5016	Bio-MEMS
2.	ED5018	Business Excellence and Quality Management
3.	ED5310	Computational and Differential Geometry
4.	ED5312	Materials and manufacturing for the Automotive Industry
5.	ED5052	Fundamentals of Electromagnetic Compatibility Design
6.	ED6002	Special Topics in Engineering Optimization

New laboratory established

Bio- μ -Nano Laboratory

Students on roll as of September 2017+M.S. and PhD Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
Dual Degree	56	56	54	54	55 + 34	309
M.S.	10	10	6	4	-	30
Ph.D.	8	14	10	16	14 + 18	80
Total	74	80	70	74	121	419

Student/Scholar who Attended conferences/seminars and symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
Abroad					
1.	Mamidi Teja Krishna	ED16D406	7th IFToMM International Workshop on Computational Kinematics (CK 2017)	22-24 May 2017, Poitiers, France	IIT Madras
2.	Emmanuel	ED13D017	18th International Symposium on Laser precision Microfabrication (LPM 2017)	5-8 June 2017, Toyama, Japan	Project
3.	Sooraj Shiby	ED14D200	LPM 2017	5-8 June 2017, , Toyama, Japan	IIT Madras
4.	K. T. Abdul Nasir	ED14S05	Conference on Lasers and Electro- Optics/Europe and the European Quantum Electronics Conference (CLEO/Europe/EQEC)	25-29 June 2017, Munich, Germany	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
5.	Jobin D. John	ED12D025	Summer Biomechanics, Bioengineering, and Biotransport Conference	24-27 June 2017, Tucson, Arizona	-
6.	Ramya Selvaraj	ED14D008	CLEO/Europe/EQEC	25-29 June 2017, Munich, Germany	IIT Madras
7.	Ravi Khatri	ED15B041	39 th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2017)	July 2017, Jeju Island, South Korea	-
8.	Pauline John	ED13D005	Conference on Lasers and Electro-optics Pacific Rim (CLEO-PR)	31 July-4 August 2017, Singapore	-
9.	N. Aparna	ED11D020	International Conference on Laser Ablation (COLA 2017)	3-8 September 2017, Marseille, France	Project
10.	Jobin D. John	ED12D025	IRCOBI Conference	13-15 September 2017, Antwerp, Belgium	-
11.	Mahendra Khened	ED15D404	MICCAI 2017	10-14 September 2017, Quebec, Canada	IIT Madras
12.	Pallavi Shinde	ED16D407	Exchange student to visit Toyohashi University of Technology	1 October-31 December 2017, Toyohashi, Aichi, Japan	Japanese Government Scholarship
13.	Vikas Kumar Anand	ED15D004	30 th European Congress of Radiology (ECR) 2018	28 February- 4 March 2018, Vienna, Austria	-
India					
1.	Dheivya	ED16D010	Workshop on Medical Imaging Techniques, Post Processing and Clinical Application	14-6 April 2017	IIT Madras
2.	M. R. Vidyalakshmi	ED12D022	Observational and Computational Tools for Nowcasting (OBSCON 2017)	15-26 May 2017, Air Force Administrative College, Coimbatore	-
3.	Teja Krishna Mamidi	ED15D402	Advances in Robotics (AIR 2017)	28 June-2 July 2017, IIT Delhi	IIT Madras
4.	Sai Srikar	ED15D201	AIR 2017	28 June-2 July 2017, IIT Delhi	IIT Madras
5.	Y. Esther Blesso Vidhya	ED12D004	International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 10)	7-9 December 2017, IIT Madras	IIT Madras
6.	Srinagalakshmi Nammi	ED11D014	COPEN 10	7-9 December 2017, IIT Madras	IIT Madras
7.	Rahul Bharadwaj	ED12D016	International Ergonomics Conference Humanizing Work and Work Environment (HWWE 2017)	8-10 December 2017, Aligarh Muslim University, Aligarh	Harita Seating Systems
8.	Sathish Kumar Sivasankara	ED14D009	HWWE 2017	8-10 December 2017, Aligarh Muslim University, Aligarh	IIT Madras
9.	Priyadarshini Natarajan	ED16D011	HWWE 2017	8-10 December 2017, Aligarh Muslim University, Aligarh	IIT Madras
10.	Teja Krishna Mamidi	ED15D402	INACOMM 2017	13-15 December 2017, BARC, Mumbai	IIT Madras
11.	T.S. Balamurugan	ED14D015	Conference and Exhibition on Non-Destructive Evaluation (NDE 2017)	14-16 December 2017, Chennai	Project
12.	Swathi Ramesh	ED14D501	NDE 2017	14-16 December 2017, Chennai	Project
13.	Geetha Chakaravarthi	PDF	NDE 2017	14-16 December 2017, Chennai	Project

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
14.	Yugandhara Rao Yadam	ED16D001	6th Biennial IEEE Applied Electromagnetics Conference (AEMC 2017)	19-22 December 2017, Aurangabad, Maharashtra	IIT Madras
15.	T. S. Balamurugan	ED14D015	AEMC 2017	19-22 December 2017, Aurangabad, Maharashtra	IIT Madras
16.	Anjali Maddi	ED15D202	Synthesis and Characterization of Anisotropic Gold Nanoparticles	8-12 January 2018	Project
17.	J. Gokulakrishnan	ED168001	National conference on Multidisciplinary Design, Analysis, and Optimization (NCMDAO) conference	23-24 March 2018	-
18.	Jobin D. John	ED12D025	NCMDAO conference	23-24 March 2018	-
19.	Ravi Khatri	ED15B041	NCMDAO conference	23-24 March 2018	-

Students/Scholars who won outside prizes and awards

Sl. No.	Student/Scholar	Roll No.	Prize	Awarded by
1.	Swagata Borthakur	ED13S017	First Best Student Paper	3rd IFAC International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS 2018), Hyderabad, 18-22 February 2018
2.	Y. Esther Blesso Vidhya	ED12D004	Best Innovative Paper Award	COPEN 10, IIT Madras, 7-9 December 2017
3.	Aparna Neettiyath	ED11D020	Best Poster Award	Second National Power Engineering Research Scholars Conference (NPERSC 2018), IIT Madras, 24-25 February 2018
4.	Geetha Chakaravarthi	PDF	Best Poster Award	NDE 2017, 14-16 December 2017, Chennai

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl. No.	Student/Scholar	Roll No.	Prizes
1.	Srinagalakshmi Nammi	ED11D014	Institute Research Award
2.	D. Vijai Anand	ED13D009	Institute Research Award

4.9.3. Faculty and their activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
Srikanth Vedantam (Head)	Design with novel materials, mechanical behaviour of materials, wetting, microstructure evolution
T. Asokan	Robotics, mechatronics, control, electro-hydraulic servo systems
R. Krishna Kumar	Nonlinear finite elements, vehicle dynamics and tyre mechanics
Nilesh J. Vasa	Opto-mechatronics, laser-based sensing and micro-manufacturing
Venkatesh Balasubramanian	Human factors and ergonomics, transportation safety, healthcare policy and innovation, biomedical devices and implant
Jayaganthan	Materials engineering, nanomaterials and design, biomaterials, additive manufacturing, energy storage devices
Associate Professors	
M. Ramanathan	Geometric and solid modelling, CAD, computer vision, computational geometry, computer graphics, computational biology, shape search
Sankara J. Subramanian	Digital image correlation, nano-indentation, mechanics of materials, finite element analysis

Name and Qualifications	Major Areas of Specialisation
G. Saravana Kumar	CAD, computational geometry, reverse engineering, shape optimisation, biomechanical modeling, biomedical imaging and reconstruction, biomimetic prosthetic and scaffold design, layered manufacturing and soft computing
C. S. Shankar Ram	Model-based control and diagnostics, automotive systems, vehicle dynamics, analysis of transportation systems
Kavitha Arunachalam	Biomedical instrumentation, radio frequency and microwave antenna design, hyperthermia physics, non-destructive material evaluation
Palaniappan Ramu	Optimisation, application of statistical and probabilistic techniques for engineering design under uncertainties, risk/reliability based engineering design, surrogate-based modeling and analysis
Balkrishna C. Rao	Sustainable manufacturing, sustainable design, nano-manufacturing, manufacturing for bio-medical applications, simulation of manufacturing processes
Assistant Professors	
Ganapathy Krishnamurthi	X-ray computed tomography physics, ultrasound image processing, and biological imaging using optical microscopy
Sandipan Bandyopadhyay	Robotics, dynamics of multibody systems, design
Tuhin Subhra Santra	Bio-nano/micro electro mechanical systems (bio-NEMS/MEMS), biomedical micro/nano devices, bio-micro/nano fabrication, single cell technology, nanomedicine, biosensors and bioelectronics, bionanomaterials.

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conferences			
1.	Venkatesh Balasubramanian	TAEI Conference	9 November–10 December 2017
2.	Kavitha Arunachalam, Chair Person, Session 8C	Electromagnetic NDE-2, NDE-2017, Conference and Exhibition on Non-Destructive Evaluation	14-16 December 2017
3.	G. Saravana Kumar	PDMA-India International Conference 2017	30 December 2017
Workshops			
1.	Venkatesh Balasubramanian	International Workshop on Trauma Care Systems	9-10 November 2017
2.	R. Krishna Kumar	The Salt 5ight	11 November 2017
Short-term Course			
1.	Venkatesh Balasubramanian	Anand Excellence in Manufacturing (AMX)	13 November-6 December 2017

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public Sector Undertakings

Sl. No.	Faculty Member	Title	Institution	Period
Conferences				
1.	Venkatesh Balasubramanian	International Conference on Humanizing Work and Work Environment (HWWE 2017)	Aligarh Muslim University, Aligarh, India	8–10 December 2017
2.	G. Saravana Kumar	NCMDAO conference	IISc Bengaluru	23–24 March 2018
3.	G. Saravana Kumar	3 rd International and 18 th National Conference on Machines and Mechanisms	HBNI, Bombay	13–15 December 2017
Short-term Course				
1.	Tuhin Santra	Laser Induced Photoporation to Single Cell Micro/Nano Electroporation: Novel Approaches for Cell Therapy and Diagnostics	IIT Madras	6-10 November 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1.	Venkatesh Balasubramanian	Quest for Innovation – Thoughts on Disruption	M/s CapGemini, Chennai	10 April 2017
2.	C. S. Shankar Ram	Hybrid Electric Vehicles – Overview and Modelling	Mount Zion College of Engineering and Technology, Pudukkottai	7 July 2017
3.	Srikanth Vedantam	Elements of Technical Writing	College of Engineering, Trivandrum	24 July 2017
4.	Venkatesh Balasubramanian	Customer Driven Engineering – Leveraging Human Factors and RIP	Transportation Technical Committee Meeting of Government of Tamil Nadu, Chennai	13 August 2017
5.	C.S.Shankar Ram	Lateral Dynamics and Control for UGV Applications	CVRDE, Chennai	13 September 2017
6.	Nilesh J. Vasa	Optical Coherence Tomography Technique for Dental Imaging	Kyushu University, Fukuoka, Japan (Laser Society of Japan, Kyushu Section)	15 September 2017
7.	Venkatesh Balasubramanian	Integrating Databases and Registry – Past, Present and Future	Indo-Australian Workshop for Trauma and Emergency Care, Chennai	9 November 2017
8.	C.S. Shankar Ram	Autonomous Vehicles and Collision Avoidance	Pondicherry Engineering College	10 November 2017
9.	Venkatesh Balasubramanian	Meeting Sustainable Development Goals (SDG) in Road Safety – The Tamil Nadu Journey	Annual International Conference of the Indian Society of Ergonomics, HWWE 2017, Aligarh Muslim University, Aligarh	5 December 2017
10.	Tuhin Santra	Invited talk: Single Cell Nano-Electroporation to Laser Induced Phototoporation: Novel Approaches for Cell Therapy and Diagnostics	International Conference on Nanotechnology: Idea, Innovation and Initiatives, IIT Roorkee, India	6-8 December 2017
11.	Kavitha Arunachalam	On Numerical Modelling of Eddy Current Probe for Non-destructive Testing, Session 6C: Eddy Current Testing-1	NDE 2017, Conference and Exhibition on Non-Destructive Evaluation, Chennai	14-16 December 2017
12.	C. S. Shankar Ram	Collision Avoidance of Heavy Road Vehicles: Perspective from Vehicle	Invited Lecture, 10th International Workshop on Intelligent Transportation Systems	3 January 2018
13.	C. S. Shankar Ram	Dynamics and Control	Conference on Communication Systems & NETWORKS, Bengaluru	3 January 2018
14.	Nilesh J. Vasa	Recent Advances in Laser Surface Texturing Techniques and Applications	Keynote Lecture, International Conference on Mechanical Engineering (INCOM 2018), Jadavpur University, Kolkata	4-6 January 2018
15.	Venkatesh Balasubramanian	Auditing the 4.0 World – Challenges and Opportunities	M/s Anand Automotive, Chennai	17 January 2018
16.	M. Ramanathan	Art-gallery problems and Voronoi diagrams	Thiagarajar College of Engineering, Madurai	24 January 2018
17.	C. S. Shankar Ram	Invited Lecture: Advanced driver assistance systems for heavy road vehicles in Indian traffic conditions	2018 International Conference on Automotive Engineering, Clemson University, South Carolina, USA	20 February 2018 via video conferencing

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
18.	Mahesh P. Raja, Swathi M. R., C. V. Krishnamurthy, Kavitha Arunachalam	Eddy Current Testing for Nondestructive Material Assessment and Characterisation	Titan Technology Tune-In programme, Hosur	17 March 2018
19.	G. Saravana Kumar	Additive Manufacturing	Invited talk: Design of part preparation, Build Orientation in Additive Manufacturing, College of Engineering, Guindy	19-20 March 2018

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
1.	Tuhin Sabhra Santra	California, USA	8-17 April 2017	12 th IEEE International Conference on Nano/Micro Engineered and Molecular Systems 2017	CPDA
2.	Sandipan Bandyopadhyay	Futuroscope-Poitiers, France	22-24 May 2017	International Workshop on Computational Kinematics (CK2017)	CPDA
3.	T. Asokan	Singapore	29 May-3 June 2017	International Conference on Robotics and Automation (ICRA 2017)	IITM
4.	R. Krishna Kumar	California, USA	8-14 June 2017	Industry 4.0 Summit	Without any financial assistance
5.	M. Ramanathan	Berkeley USA	19-23 June 2017	S3PM-2017: International Convention on Shape, Solid, Structure and Physical Modeling	CPDA/Project
6.	Palaniappan Ramu	Braunschweig, Germany	5-9 June 2017	12 th World Congress of Structural and Multidisciplinary Optimization	CPDA
7.	Sandipan Bandyopadhyay	Azerbaijan	11-14 September 2017	International Symposium on Science and Mechanism and Machine Science (ISMMS 2017)	Without financial assistance from the institute
8.	Nilesh J. Vasa	Japan	13-19 September 2017	Special Lecture Series at Kyushu University	Kyushu University, Fukuoka, Japan
9.	M. Ramanathan	Cambridge, UK	14-15 September 2017	CAE Geometry Workshop	CPDA/Project
10.	R. Krishna Kumar	France	4-7 October 2017	RBIC project meet	IIT Madras
11.	M. Ramanathan	Bangkok, Thailand	27-30 November 2017	SIGGRAPH Asia 2017	CPDA/Project
12.	Tuhin Sabhra Santra	Hsinchu, Taiwan	17 December 2017-10 January 2018	Visiting Professor to conduct 1 credit Bio-MEMS course	National Tsing Hua University, Taiwan
13.	Palaniappan Ramu	Zurich, Switzerland	10-12 January 2018	Global Power and Propulsion Society (GPPS) Forum 18	Partial Institute financial assistance (CPDA)
14.	M. Ramanathan	Australia	30 January-2 February 2017	Melbourne India Postgraduate Program (MIPP) conference	Without financial assistance from the institute

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Member	Name of Award	Awarded by	Awarded for	Date of award
i. Honours					
1.	Tuhin Santra	Bharat Bikas Award	Institute of Self Reliance, Bhubaneswar, Odisha, India	Contribution in Bio-MEMS field in India	19 November 2017
2.	Tuhin Santra	Honorary Research Fellow	National Tsing Hua University	Contribution in Bio-MEMS/Biomedical field	1 January 2018
3.	Tuhin Santra	Wellcome Trust/ DBT Early Career Award	Wellcome Trust (UK) and DBT (India)	Photoporation research	1 January 2018
ii. Award					
1.	R. Krishna Kumar	Lifetime Achievement Research Award of IIT Madras	IIT Madras	Research Work	18 April 2017

Journal Editorial Boards

Sl. No.	Faculty Member	Position	Journal Name
1.	Tuhin Santra	Guest Editor, special issue, Single Cell Technology, 2017	International Journal of Molecular Science
2.	Tuhin Santra	Guest Editor, special issue, Nanomedicine/ Molecular Medicine, 2018	International Journal of Molecular Science

4.9.4. Design and Development Activities

New facilities added or major equipment procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1.	MITSAR-EEG- 31 channel system	7.62

Patents Filed

Sl. No.	Faculty Member	Topic of patent
1.	Geetha Chakaravarthi, Krishna Prasath, Jayaganthan R., Velmurugan R., Kavitha Arunachalam	Reusable passive RFID sensor for structural health monitoring
2.	M. Ramanathan	Method for automatic part-based segmentation of CAD mesh models
3.	T. Asokan	A master-slave teleoperated surgical robotic system for robotic surgery
4.	T. Asokan	An underwater glider based on an actuated flexible chamber buoyancy method
5.	T. Asokan	Design of underwater manipulator using non-conventional variable buoyancy actuators
6.	T. Asokan	A versatile hybrid robotic system for multimodal locomotion and grasping
7.	Jayaprakash Poojali, Kavitha Arunachalam, Krishnamurthy Chitti Venkata	Polarisation independent frequency selective surfaces for atmospheric remote sensing
8.	Kavitha Arunachalam, C. V. Krishnamurthy, Pragyan Prasu Patnaik	Ultra wideband (UWB) ultra high frequency (UHF) sensor for detection of concealed objects using stepped frequency continuous wave (SFCW) radar and methods
9.	Vani Damodaran, N. J. Vasa, R. Sarathi	Quadratic electro-optic based deflection-free wide path-length modulation and lateral scanning device for time domain optical coherence tomography

4.9.5. Research and Consultancy

Sponsored Research Projects (Ongoing and New)

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
1.	Massively parallel high throughput single cell nanoelectroporation chip	29 March 2017-28 March 2020	SERB	54.55	Tuhin Santra
2.	Massively parallel high throughput single cell intracellular delivery using light pulses	1 January 2018-31 December 2022	Wellcome Trust (UK) and DBT (India)	166.84	Tuhin Santra
3.	Next generation heat exchangers design using additive manufacturing and shape optimization	2017–2020	IMPRINT	342	G. Saravana Kumar, Prof. Prasad BVSS, Prof. Sreenivas Jayanti, Prof. Vengadesan S, Dr. Arul Prakash K
4.	Technology demonstration of nano filter media for self cleaning air filtration system (SCAFS)	2017-2020	DRDO	99.89	G. Saravana Kumar, Raghuram Chetty, Arul Prakash K
5.	GPU-based software beamformers and advanced color flow imaging for affordable ultrasound system	1 March 2018–31 August 2019	Biotechnology Industry Research Assistance Council	22.35	Rupesh Nasre, Ganapathy Krishnamurthy
6.	In-situ experimental and numerical studies of abnormal grain and twinning during annealing of cold worked nickel	20 March 2018–19 March 2021	DST	82.58	Srikanth Vedantam
7.	Scale-up process development of highly efficient innovative core-shell structured electrode materials and investigate their electrochemical performance by fabricating lithium batteries for clean energy storage	23 May 2017–22 May 2019	DST	21.12	R. Jayaganthan
8.	Low-cost high-resolution X-ray imaging system with image intensifier augmentation	28 November 2017-27 November 2019	DST	83,45,752	Ganapathy Krishnamurthy
9.	Development of micro–nano zinc oxide-based functional devices	27 September 2017–26 September 2019	DST (Indo Japan Cooperative Science Programme)	5,53,200	Nilesh Vasa
10.	Developing a commercially viable real time driver behaviour and fatigue monitoring system	31 August 2016–30 August 2019	MHRD, MoRTH and M/s. Harita Seating Systems Limited	110.5	Venkatesh Balasubramanian
11.	Development of LDPE, MDPE and HDPE nanocomposites based DC cables	19 July 2016–18 July 2018	Central Power Research Institute	40	Nilesh Vasa, Sarathi
12.	Erosion-corrosion studies on thermal sprayed conventional and nanostructured coatings	18 August 2016-17 August 2018	Central Power Research Institute	68	Jayaganthan, Nilesh Vasa

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
13.	Design for environmental excellence: life cycle assessment of hybrid composite structures	27 October 2016– 26 October 2019	Uchhatar Avishkar Yojana - IIT Madras	57.98	Palaniappan Ramu
14.	Medical microwave radiometry for noninvasive tissue thermometry	29 June 2015-28 June 2018	DST	50.99	Kavitha Arunachalam, C.V. Krishnamurthy
15.	A decision support system for pilot landing in adverse conditions taking advantage of understanding uncertainties in image registration, system reliability, and consequence based decision in pilot manned aircraft and UAV's	26 February 2016-25 February 2019	Aeronautics Research & Development Board	47.05	Ganapathy Krishnamurthy, Amit R. K.
16.	Pulsed laser deposited lead-free perovskite films for photovoltaic cell applications	14 September 2016-13 September 2018	DST	19.2	Nilesh Vasa
17.	Experimental and numerical studies on cold swaging of Zr alloy bars for end cap manufacturing in PHWR fuel assemblies	10 November 2016–9 November 2019	Board of Research in Nuclear Sciences	53.08	Jayaganthan

Industrial Consultancy projects (ongoing and new)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	T. Asokan	Inverse kinematics of serial manipulator	Larsen and Tubro	1.60
2.	R. Krishna Kumar	Advice to a tribunal on wheel rim failure	Tuli & Co, Solicitors and Advocates	1.15
3.	Sandipan Bandyopadhyay	Design and development of 3-DOF motion seat of payload 150kg	ARMY	26.55
4.	Srikanth Vedantam	Studies on SMA embedded FRP composites for energy absorption and damage mitigation under impact loading	DRDO	58.39
5.	Kavitha Arunachalam	Design and development of flexible, miniature array type Eddy current probes for nondestructive imaging of defects in thin walled stainless steel tubes	Indira Gandhi Centre for Atomic Research	25.85
6.	C.S. Shankar Ram	Development of an antilock brake system for heavy commercial road vehicles	Madras Engineering Industries Private Limited	59.86
7.	Palaniappan Ramu	An investigation of using L-moments for efficient robust design	Siemens Technology and Services Private Limited	9.49
8.	Palaniappan Ramu	Meta modeling for automotive FEM/CFD/ Crash use cases	ICUBE Consulting Services India Private Limited	3.92
9.	Kavitha Arunachalam	EM test and measurement	Common Code	0.45
10.	Srikanth Vedantam	Vehicle dynamics using steering robot	Common Code	5
11.	T. Asokan	Study of alternative methodologies for DBW actuation system for teleoperated vehicles	Combat Vehicles Research and Development Establishment	9.6

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
12.	Palaniappan Ramu	Characterization of glass and carbon fiber reinforced composite laminates	Siemens Technology and Services Private Limited	17.6
13.	Kavitha Arunachalam	EM test and measurement	Common code	0.45
14.	Palaniappan Ramu	Characterisation of glass and carbon fiber reinforced composite laminates	Siemens Technology and Services Private Limited	17.6
15.	C.S. Shankar Ramu	Analysis of vibration damping control in an agricultural tractor with a hinged implement	Tafe Ltd	5

RBIC Projects (Ongoing and New)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	R. Krishnakumar	Raghupathi Singhanian Centre of Excellence for tyre and vehicle mechanics phase IV	Hari Shankar Singhanian Elastomer and Tyre Research Institute	82.88
2.	M. Ramanathan	Geometric segmentation for partial search, industry	Sconce Solutions Private Limited	12
3.	M. Ramanathan	Visualisation of 3D printing for optimal design using virtual reality (VR) for product development	Autodesk India Private Limited	2.3
4.	T. Asokan	Alternative actuation methods for DBW system	CVRDE (DRDO)	11.30
5.	G. Saravana Kumar, Prof. Koshy Varghese, Ravindra Gettu, Manu Santhanam, Benny Raphel	3D printing for construction: prototype development	L & T	44
6.	Venkatesh Balasubramanian	Development of instrumented seat for driver performance monitoring	M/s Harita Seating Systems Limited	68.4
7.	Kavitha Arunachalam	Development of modeling and experimental techniques for microwave dielectric NDE of composite structures	ASL, DRDO	75
8.	Kavitha Arunachalam	Design and development of flexible miniature array type eddy current probes for nondestructive imaging of defects in thin walled stainless steel tubes	IGCAR, DAE	26
9.	Kavitha Arunachalam (Others: Velmurugan R, Jayaganthan R)	Condition monitoring of aerospace structural materials adopting multi-fusion sensor system	VSSC, ISRO	32.8

Retainer Consultancy (Ongoing and New)

Sl.No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	R. Krishna Kumar	Retainer Consultancy Services Phase – II	Hari Shankar Singhanian Elastomer & Tyre Research Institute	9
2.	Venkatesh Balasubramanian	Root Cause Analysis of 270 MW Turbine Generator Failure Using RBG Problem Solving Methodology	Puri Crawford Insurance Surveyors and Loss Assessors Private Limited	21.24

Exchange programme with other universities, including Institutions/universities under MoU

1. MoU completed between IIT Madras and Toyohashi University of Technology, Japan for student exchange-Faculty Champion: Tuhin Santra
2. MoU is under process between IIT Madras and Taipei Medical University, Taiwan for student exchange-Faculty Champion: Tuhin Santra

Faculty Members participation with other institution under MoU

Sl. No.	Faculty Member	Participation details	University/Institution
1.	Kavitha Arunachalam	Joint PhD guidance.Scholar: Swathi M. R. (currently at MSU)	Department of Electrical and Computer Engineering, Michigan State University, USA

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date of visit	Purpose of visit
1.	Dr.Simon Pauly and Mr. Gustmann Tobia	19–22 November 2017	Exchange of ideas concerning materials for additive manufacturing
2.	Prof. Eiichi Yamaguchi	25–27 December 2017	Discussion on student exchange programme
3.	Prof. Kimihide Tsukamoto	25–27 December 2017	Discussion on student exchange programme
4.	Prof. Joao Ascenso Professor	13 February 2018	Research discussion and visit to Advanced Geometric Computing Lab
5.	Prof. Masahiko Yoshino	28 February 2018	Nanoplastic forming
6.	Prof. Kai Harmann	2 March 2018	Research discussion and a visit to Advanced Geometric Computing Lab

4.9.6. Other Activities of the Department/Centre

Results obtained in research work (from M.S. and PhD thesis) of the scholar/faculty

M.S. Theses

1. Mahesh P. Raja, Design of an Eddy Current Probe For Sub-Surface Defect Detection in Electrically Thick Conducting Specimens, Guide: Kavitha Arunachalam, Co-guide: Krishnan Balasubramanian, 2017
2. Tharrini R., Development of an Endocavitary Microwave Applicator for Cancer Treatment, Guide: Kavitha Arunachalam, 2017
3. Nithila K., Frequency Selective Surface (FSS) for Reduction of Mobile Phone Specific Absorption Rate (SAR), Guide: Kavitha Arunachalam, 2018
4. Nagendran M., Detection and Prevention of Untripped Rollover in Heavy Commercial Road Vehicles, Guide: Dr. C. S. Shankar Ram, 2017
5. Apoorva. R, Reduced Order Tyre Models, Guide: Dr. Krishnakumar R., 2017
6. Senthilkumar Dhakshnamoorthy, Modeling and Analysis of Longitudinal and Lateral Dynamics of a Tele-Operated Unmanned Tracked Vehicle, Guide: Dr. Asokan Thondiyath, Dr. C.S. Shankar Ram, 2017
7. Parvathy A. S., Generation of ZnO Microspheres by Wire Explosion and Pulsed Laser Ablation Techniques and their Characterisation, Guide: Nilesh J. Vasa and M. S. Ramachandra Rao (PH), 2017

8. Abdul Nasir K. T., Steam Dryness Fraction Measurement Using Superluminescent Diode Based Absorption Spectroscopy Combined With Mie Scattering, Guide: Nilesh J. Vasa and Satyanarayana Seshadri (AM), 2017
9. Edison T., Design and Development of a Four-Degrees-Of-Freedom Hybrid Robotic Arm, Guide: Dr. Sandipan Bandyopadhyay, 2018
10. Arun Nelson X., Longitudinal Force Characteristics of Tyre Snow Interaction Using Coupled FEM-SPH Method
11. Mukil Venthan A., Phase Field Study of Microstructure Evolution, Guide: Dr. Srikanth Vedantam, 2018

Ph.D. Theses

1. Jayaprakash Poojali, Design Fabrication and Characterization of Frequency Selective Surface (FSS) for Atmospheric Remote Sensing, Guide: Kavitha Arunachalam, 2017
2. Vignesh Rajaram, Design and Implementation of Rear-End Collision Avoidance Controllers for Heavy Commercial Road Vehicles. Guide: Dr. C. S. Shankar Ram, 2017
3. Subhasree M, Reconstruction of 2D and 3D Point Sets: Delaunay-Based Simple Approaches, Guide: Dr. M. Ramanathan, 2017

4. Srinagalakshmi Nammi, Investigations into Pulsed Laser Assisted Scribing of Metal Deposited Thin Films on Flexible Substrates, Guide: Nilesh J. Vasa, 2017
5. Aparna Neettiyath, Influence of Thermal Ageing on Diffusion of Copper Sulphide in Oil Impregnated Pressboard Insulation, Guide: Nilesh J. Vasa and R. Sarathi (EE), 2017
6. Vani Damodaran, Electro-Optic Based High-Speed Time Domain Optical Coherence Tomography System for Dental Imaging, Guide: Nilesh J. Vasa, 2018
7. Jiyo Athertya, Automated Methods for Diagnosis of Selective Lumbar Vertebral Disorders Using Image Processing and Classification. Guide: G. Saravana Kumar, February 2018, IIT Madras
8. Vicky Varghese, Biomechanical Studies on Pullout Strength of Pedicle Screws in Instrumented Osteoporotic Spine Fusion, Clinical Engineering Program, February 2018, IIT Madras, Guide: G. Saravana Kumar, Co-guide: Dr. Venkatesh K, Spinal Disorders Unit, CMC Vellore
9. Sameer Kumar, Full-Field Strain and Curvature Computation Using Principal Component Analysis, March 2018, IIT Madras, Guide: G. Saravana Kumar, Co-guide: Dr. Sankara J. Subramanian, Department of Engineering Design, IIT Madras
10. Vijai Anand, Dissipative Particle Dynamics Simulation of Soft Materials in Microchannel Flow, Guide: Dr. Srikanth Vedantam, 2017
11. Pradeeba S., Automated Framework for Fetal Biometry From 2D Ultrasound Images, Guide: Dr. R. Krishna Kumar, 2017
12. Amol V, Multiphase Field Model of Microstructure Evolution Due to Grain Boundary Migration and Grain Rotati, Guide: Dr. Srikanth Vedantam, 2017

Socially relevant activities carried out by the Department

Prof. Venkatesh Balasubramanian is an advisor to National Health Mission in Tamil Nadu and was part of the team that helped to build TAEI (Tamil Nadu Accident and Emergency Initiative), one of India's comprehensive emergency programmes.

Activities Initiated

- A one-week training programme was organised by Prof. Nilesh J. Vasa, Prof. T. Asokan, Prof. C. S. Shankar Ram for motivating ITI graduates for incubation and entrepreneurship in industrial automation and automotive engineering from 24-28 April 2017 at MoSDE-IITM Incubation Centre on Automation, Instrumentation and Automotive Engineering, Department of Engineering Design.
- Approximately 60 participants with ITI Electrical, ITI Automobile, Central Training Institute, Chennai have attended.
- Lecture and laboratory-based training was provided on technical domain and soft skill development.



4.10. Department of Humanities and Social Sciences

4.10.1. Introduction

Founded in 1959, the Department of Humanities and Social Sciences is one of the oldest in Indian Institute of Technology Madras. The department's essentially interdisciplinary nature is its distinguishing factor, which allows students to develop an appreciation for a very diverse set of fields such as development studies, economics, English studies, environmental studies, history, international relations, philosophy, political science and sociology. The department offers both Master's and Doctoral programmes, as well as electives for B. Tech and M.Tech. students.

Coupled with its multi-disciplinary background, the department boasts of a highly diverse and experienced faculty. It has an excellent student-teacher ratio, providing opportunities for academically intense learning. Equipped with state-of-the-art facilities in a serene campus, the department offers an enriching academic environment.

4.10.2. Academic Programmes

Integrated M.A. (five-year programme) and Ph.D

New courses introduced

Sl. No.	Course No.	Title
1	HS 6024	Advanced Studies in Indian Cinema
2	HS 6027	Creative Writing and Practice

Students on roll as of September 2017+Ph.D Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
M.A.	45	45	41	44	40	215
Ph.D.	21	24	27	19	17	108
Total	66	69	68	63	57	323

Student/Scholar who Attended conference/seminar/symposium abroad/India

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposium/ Workshop	Date and Venue	Financial Assistance from
International					
1	Manoranjan Sahoo	HS13D004	7th International Conference on Economics, Trade and Development (ICETD 2017)	10-12 March, 2017, Paris, France	IIT Madras
2	Aswathy P.	HS13D002	Oxford Women's Leadership Symposium 2017	20-22 March 2017, UK	IIT Madras
3	Veenapani Rajeev Verma and Sumirtha Gandhi	HS14D023 and HS14D021	International Conference on Health Economics, Management and Policy	24-25 March 2017, Istanbul	Self Fund
4	Veenapani Rajeev Verma and Sumirtha Gandhi	HS14D023 and HS14D021	International Conference on Health Economics, Management and Policy	24-25 March 2017, Istanbul	Self Fund
5	Sayanty Chatterjee	HS15D026	Annual Conference of British Association of South Asian Studies, University of Nottingham	19-21 April 2017, United Kingdom	IIT Madras
6	Sheeja Rajagopal	HS13D007	Third Biennial, International, Interdisciplinary Talking Bodies Conference 2017	19-21 April 2017, United Kingdom	IIT Madras
7	Parvathi P. K.	HS14D003	12th International Conference on Social Sciences	19-20 May 2017, Amsterdam, Netherlands	IIT Madras
8	Supriya Subramani	HS13D023	Institutionalized Consent: A Mask to Protect Patient Autonomy, at ICCEC	25-27 May 2017, NUS, Singapore	ICCEC Fund by NUS

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposium/ Workshop	Date and Venue	Financial Assistance from
9	Madhura Niveditha Balasubramaniam	HS13H017	Tsai Ing-wen's Administration and Taiwan's Shrinking International Space, China Policy Institute	7 June 2017 University of Nottingham, UK	IIT Madras
10	Supriya Subramani	HS13D023	4 th IME Summer Conference 2017, Liverpool Medical Institution	13-22 June 2017, Liverpool	IIT Madras
11	Shivaja K. Nair	HS12D006	2017 International Health Conference, St. Hugh's College, Oxford	29 June-1 July, 2017, Oxford	Partially project funded
12	Anitha Iris	HS14D012	Fifteenth International Conference on New Directions in the Humanities	5-7 July 2017, London	IIT Madras
13	Sruthi Vinayan	HS14D020	Fifteenth International Conference on New Directions in the Humanities	5-7 July 2017, London	IIT Madras
14	Veenapani Rajeev Verma and Sumirtha Gandhi	HS14D023 and HS14D021	12 th World Congress in Health Economics (IHEA 2017)	7-11 July 2017, Boston University	Organising Fund/Alumni fund
15	Veenapani Rajeev Verma and Sumirtha Gandhi	HS14D023 and HS14D021	12 th World Congress in Health Economics (IHEA 2017)	7-11 July 2017, Boston University	Organising Fund and Alumni fund
16	Sindhu Sekar	HS15D015	3 rd Academic International Conference on Social Sciences and Humanities	17-19 August 2017, University of Oxford	IIT Madras
17	Venkataraman Ganesh	HS13H040	International Entrepreneurship Forum Conference	14-16 September 2017, Kathmandu, Nepal	IIT Madras
18	Deepak Kumar Behera	HS15D001	39 th Annual Australian Health Economics Society Conference	20-22 September 2017, Australia	IIT Madras
19	Jayakrishnan Narayanan	HS15D017	42 nd Annual Conference of Semiotic Society of America	10 October 2017, Mexico	IIT Madras
National (India)					
1	Sindhu Sekar	HS15D015	National Seminar on Writing India: Revisiting Historiographies, Ideology and Genre	16-17 January, 2017, New Delhi	IIT Madras
2	Samik Malla	HS13D020	Conference on De-Centring English Studies: Studying Literature in the Global South	19-21 January 2017, Bhubaneswar	IIT Madras
3	Aswathy P.	HS13D002	IAWS XV National Conference on Women's Studies	22-25 January, 2017, Chennai	IIT Madras
4	Supriya Subramani	HS13D023	TLS presented: Law and Social Facts: A Critical Analysis	9 February 2017	IIT Madras
5	Supriya Subramani	HS13D023	Medical Technologies in Society, organised by CTAP	3-4 March 2017, IIT Madras	IIT Madras
6	Shilpa Menon	HS12H039	Chikitsa 2017: National Students' Seminar on Kaam-Sutra: Sexuality, Work and Workplace	10-11 March 2017, Pune	IIT Madras
7	Krupa Maria Varghese	HS12H024	Looking the Job: Body Work, Aesthetic Labour and Self-Presentation among Beauty Therapists	10-11 March 2017, Pune	IIT Madras
8	Sruthi vinayan	HS14D020	International Seminar on New Feminist Writings: Emancipation to Representation	16-17 March 2017, Pondicherry University	IIT Madras
9	Deepak Kumar Behera	HS15D001	6 th Dr. Raja J. Chelliah Memorial Conference on Public Economics and Policy	23-24 March 2017, New Delhi	Funded by Conference Organise
10	Samik Malla	HS13D020	Erasmus Mundus IBIES (Interdisciplinary Bridges in Indo-European Studies) Workshop titled, Discovering Europe	6-7 April 2017, Kolkata	IIT Madras
11	Banti Deori	HS11D002	Workshop on Comparative and International Social Policy Theories and Methods	24-26 May 2017, Habitat Centre, New Delhi	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposium/ Workshop	Date and Venue	Financial Assistance from
12	Jyoti Mishra	HS16D009	International Conference on Gender Equality, Culture, Education and Social Sciences 2017, organised by International Multidisciplinary Research Foundation	21-22 July 2017, Mysore	IIT Madras
13	Supriya Subramani	HS13D023	5th Annual Conference of the International Association for Education in Ethics	15 November 2017, Karnataka	IIT Madras
14	Sheeja Rajagopal	HS13D007	National Conference on Emerging Themes and Trends in Teaching of English in Schools	4-6 December 2017, RIE, Mysore	IIT Madras
Seminar at IIT Madras					
1	Sreejith Varma	HS13D021	Toxic Fictions: Narrativising Life in Toxic Zones in Three Malayalam Novels	27 April 2017, IIT Madras	Seminar
2	Sreejith Varma R.	HS13D021	Oiko-Autobiographies and Extractivist Fictions: Representing Subaltern Environmentalism and Anti-mining Activism	31 August 2017, IIT Madras	Seminar
3	Aswathy P.	HS13D002	Gender, Labour and Mechanisation: A Case Study of Two Fishing Villages in Kerala	11 September 2017, IIT Madras	Seminar
4	Mannava Sasirekha	HS12D003	Understanding Oneself in the Face of Radical Changes in Society: A Hermeneutic Reading of the Micronarratives in the Literature of Angela Krauss	6 October 2017, IIT Madras	Seminar
5	Sindhu Sekar	HS15D015	Literary Topography of Amitav Ghosh's IBIS Trilogy: An Analysis	11 October 2017, IIT Madras	IIT Madras
6	Sheeja Rajagopal	HS13D007	History in Their Voices: Oral Narratives as a Tool for Documenting the Endosulfan Tragedy	11 October 2017, IIT Madras	IIT Madras
7	Supriya Subramani	HS13D023	Essence of Real or Valid Consent: Within Indian Medical Law	11 October 2017, IIT Madras	IIT Madras
8	Suresh M.	HS16D006	Body, Brain and Free Will: A Philosophical Study on the Notion of Consciousness	25 October 2017, IIT Madras	IIT Madras
9	Deepa	HS13D003	Reinventing Adivasi Healing for Contemporary Times in Attappady Hills, Kerala	30 October 2017, IIT Madras	IIT Madras
10	Sruthi Vinayan	HS14D020	Revisiting the Early Malayalam Women's Magazines: An Exegesis of the Malayalee Woman Narratives of the early 1900s	1 November 2017, IIT Madras	IIT Madras
11	Praveen Singh	HS16D007	Complex Predicates/Compound Verbs in Hindi-Urdu	3 November 2017, IIT Madras	IIT Madras
12	Naseef M. K.	HS15D035	Pious Foundations: Exploring the Trajectories of Muslim Waqf Practices in North Kerala	15 November 2017, IIT Madras	IIT Madras
13	Deepak Kumar Behera	HS15D001	An Assessment of Fiscal Space for Health in India	16 November 2017, IIT Madras	IIT Madras
14	Veenapani Rajeev Verma	HS14D023	Initiating the Discourse on Universal Health Coverage in Jammu and Kashmir	23 November 2017, IIT Madras	IIT Madras
15	Aswathy P.	HS13D002	Gender, Capital and Women's Work: A Comparative Study of Women Workers in Two Fishing Villages	28 November 2017, IIT Madras	IIT Madras

Students/Scholars who won Outside Prizes and Awards

Sl. No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1	Anitha Iris	HS14D012	Research grant for a short visit to the UK for her research	CWIT (Charles Wallace India Trust)
2	Supriya Subramani	HS13D023	Bursary Award	ICCEC
3	Justin Joseph	HS15D018	2017 Chinese Government Scholarship	MHRD, GoI and China Scholarship Council, MoE, PRC

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl. No.	Student/Scholar	Roll No.	Prizes	Donor
1	Krupa Maria Varghese	HS12H024	Dr. Dilip Veeraraghavan Memorial Award	Vasantha Devanathan
2	Liza Tom	HS12H026	Prof. A. V. Krishna Rao Memorial Award	C. Vijaya Padma
3	Pauline Mathew T.	HS16H052	Best academic record	Institute Merit Prize
4	Melwin James	HS15H021	M.A. student (2015 Batch) with best academic record in the third and fourth semesters	Institute Merit Prize
5	Anwasha Pathi	HS14H008	M.A. student (2014 Batch) with best academic record in the fifth and sixth semesters	Institute Merit Prize
6	Divya Vijayakumar	HS14H014	Best academic record in the fifth and sixth semesters in each branch of the M.A. programme (English Studies)	Dr. V Ravikumar Memorial Prize
7	Pritam Majumdar	HS13H026	Best academic record in the seventh and eighth semesters in each branch of the M.A. programme (English Studies)	Gonsalvez Foundation Prize
8	Madhura Niveditha Balasubramaniam	HS13H017	Best academic record in the seventh and eighth semesters of Integrated MA Programme (Development Studies)	Dr. V. Ravikumar Memorial Prize
9	Madhura Niveditha Balasubramaniam	HS13H017	Girl student with best academic record at the end of pre-final semester in M.A.	Swati/Jayalakshmi Memorial Award

4.10.3. Faculty and their activities

Faculty

S.No	Name and Qualifications	Designation	Major Areas of Specialisation
1	Umakant Dash, Ph.D. (Head) (IIT Kanpur)	Professor	Financial economics, health policy analysis, economic evaluation of healthcare programmes and inter-industry analysis
2	Malathy Duraisamy, Ph.D. (Madras University)	Professor	Labour economics/econometrics, economics of education, industrial economics
3	V. R. Muraliedharan, Ph.D. (IIT Madras)	Professor	Healthcare policy, environmental health, technology and development, history of healthcare in South India
4	Sudhir Chella Rajan, Ph.D. (University of California)	Professor	Automobility, sustainability and political theory, social studies of corruption
5	K. Srilata, Ph.D. (University of Hyderabad)	Professor	Creative writing studies, women's writing, Indian writing in English and translation
6	Aysha Iqbal Viswamohan Ph.D. (Vikram University)	Professor	American literature, film studies and popular culture
7	N. Sreekumar, Ph.D. (University of Hyderabad)	Professor	Philosophical and phenomenological hermeneutics, philosophies of Wittgenstein and Gadamer, bioethics
8	S. P. Dhanavel, Ph.D. (Tripura University)	Professor	Indian drama, English language teaching, communication and soft skills
9	Jyotirmaya Tripathy, Ph.D. (IIT Kharagpur)	Professor	Culture studies, postcolonial theory gender studies
10	R. Swarnalatha, Ph.D (Madras University)	Professor	Ecocriticism, American literature
11	M. Suresh Babu, Ph.D (JNU, New Delhi)	Professor	Applied macroeconomics, industrial economics and trade and development

S.No	Name and Qualifications	Designation	Major Areas of Specialisation
12	Rajesh Kumar, Ph.D. (University of Illinois)	Associate Professor	Language in education, sociolinguistics, linguistic theory
13	Satya Sundar Sethy, Ph.D. (University of Hyderabad)	Associate Professor	Philosophy of language, analytical philosophy and Indian philosophy
14	Sonika Gupta, Ph. D. (JNU NewDelhi)	Associate Professor	Chinese domestic politics, foreign policy, international relations theory
15	S. Subash, Ph. D. (IIT Bombay)	Associate Professor	Applied industrial economics, foreign direct investment, economics of innovation and technological change
16	Roland Wittje, Ph.D (NTNU Trondheim)	Associate Professor	History of science and technology, science and technology studies, history of science education and technical training
17	John Bosco Lourdasamy, D.Phil. (Oxford University)	Associate Professor	Plantation studies, history of S&T and medicine in modern India
18	Milind Brahme, Ph.D. (JNU, New Delhi)	Associate Professor	German language and literature, comparative literature and literary theory, education
19	Prema Rajagopalan, Ph.D. (IIT Kanpur)	Associate Professor	Sociology of science and technology, sociology of development
20	Solomon J. Benjamin Ph.D. (Massachusetts Institute of Technology)	Associate Professor	Urban studies, world development
21	Sudarsan Padmanabhan, Ph.D. (University of South Florida and Pondicherry University)	Associate Professor	Social and political thought, Indian philosophy and culture, philosophy of law
22	Anup Kumar Bhandari, Ph.D. (Indian Statistical Institute)	Associate Professor	Industrial economics, applied econometrics, Indian banking and financial economics
23	Binitha V.Thampi, Ph D. (ISEC, Bangalore)	Associate Professor	Gender and development, decentralisation and governance reforms, welfare state, poverty reduction policies and programmes
24	Joe Thomas Karackattu, Ph.D. (Jawaharlal Nehru University)	Assistant Professor	Economic interdependence and conflict, international relations
25	K. Kalpana, Ph.D. (MIDS)	Assistant Professor	Gender and development, women's studies and microfinance
26	Mathangi Krishnamurthy Ph.D. (University of Texas at Austin)	Assistant Professor	Anthropology of work, medical anthropology, gender studies
27	Merin Simi Raj, Ph.D. (IIT Bombay)	Assistant Professor	Postcolonial studies, Indian fiction in English and literary historiography studies
28	Sabuj Kumar Mandal, Ph. D. (ISEC, University of Mysore)	Assistant Professor	Energy and environmental economics, applied econometrics, industrial economics
29	Santhosh Abraham, Ph.D. (University of Hyderabad)	Assistant Professor	Mental asylums in Colonial India, Muslims, history, education, social mobility
30	R. Santhosh, Ph.D. (ISEC, University of Mysore)	Assistant Professor	Sociology, globalization and change
31	S. S. Tabraz, Ph.D. (JNU, New Delhi)	Assistant Professor	International relations theory, conflict resolution, international mediation and politics of West and South Asian regions
32	Hemachandran, Ph.D. (Cambridge University)	Assistant Professor	Literary criticism and rhetoric, disability studies and comparative musicology
33	Santhosh Kumar Sahu, Ph.D. (IIT Bombay, Mumbai)	Assistant Professor	Industrial economics, energy economics, economics of global climate change
34	Anindita Sahoo, Ph.D. (IIT Delhi)	Assistant Professor	Linguistic typology, syntax, Indian English grammar, language acquisition, pragmatics, historical linguistics, language and communication studies
35	Divya A, Ph.D. (NTU, Singapore)	Assistant Professor	19 th Century English fiction and visual culture, early modern English drama and Shakespeare, 19th century colonial writings on India, colonial picturesque and company paintings, gender studies, children's literature
36	Avishek Parui, Ph.D Durham University	Assistant Professor	Modernism, masculinity studies, memory studies, posthumanism
37	Kai – Yun – Peng	Visiting Faculty	Chinese language
38	Johannes Wenzel	DAAD Faculty	German language

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conference			
1	Muraleedharan V. R.	Combined Heat and Power– Towards De-centralized Heat and Electricity: Scope for Adoption and Policy Challenges in Tamil Nadu	13 May 2017
2	Muraleedharan V. R.	Salt Awareness Conference jointly organised by IIT Madras (HSS) and Sapiens Foundation	11 November 2017
Seminar			
1	Merin Simi Raj	Anglo-Indian Studies	3–5 August 2017
Workshop			
1	Aysha Iqbal	Workshop on Film Adaptations and Literature	10 January 2017
2	Jyotirmaya Tripathy	Contemporary Cultural Studies	6 March 2017
3	Swarnalatha R.	Inner Strengths' Advantage	12 April 2017
4	Kalpana K.	Gender, Political Participation and Representation in India with the University of Nottingham, UK	5 May 2017
5	Mathangi Krishnamurthy	Teacher Training Workshop for High School Teachers on Integrating Ethnography in the Classroom	31 May 2017
6	Merin Simi Raj	Midnight's Orphans: Problematizing the Postcolonial in the Telling of Anglo-Indian Histories	3–5 August 2017
7	Mathangi Krishnamurthy, Rakhal Gaitonde and Prof. V. R. Muraleedharan	Critical Thinking in Health	12-14 October 2017
8	Prof. Swarnalatha R. and Prof. Srilata K.	Mapping The Ahampuram	26 October 2017
Short term Course			
1	Rajesh Kumar	Language Structure and Variation	3-8 October 2017

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty	Title	Institution	Period
Workshop				
International				
1	John Bosco Lourdasamy	Moving Crops	Max Plank Institute for the History of Science, Berlin	13–17 March 2017
2	Anup Kumar Bhandari	Export Intensity-Firm Performance Nexus: New Evidence from Basic Metals Industry in India, 15th European Workshop on Efficiency and Productivity Analysis	Loughborough University, London, UK	12–15 June 2017
3	Santhosh R	Contesting Modernities and Compelling Theologies: A Study on the Idea of Progress among Muslims of Kerala, South India, Leibniz Centre for Modern Orient	Berlin, Germany	20 June 2017
4	Santhosh R	Secularism, Secularization and the Contemporary Muslim Situation in India	Humboldt University, Berlin, Germany	23 June 2017
5	Sonika Gupta	The 2 nd India-China Think Tank	Beijing, China	24–26 June 2017
6	Santhosh R.	Engaging with the Secular: Some reflections on the Contemporary Muslim scenario in Kerala, India	Leipzig University, Germany	19 July 2017

Sl. No.	Faculty	Title	Institution	Period
7	Roland Wittje	Instruments of Development: German Teaching Apparatuses and Practices at IIT Madras, in the SIC Symposium, Scientific Instruments Between the Local and the Global, 25th International Congress of History of Science	Brazil	26-28 July 2017
8	Kalpana K.	Design Feminist Economics	Batticaloa, Sri Lanka	23-29 August 2017
9	Malathy D.	Stanford Institute for Theoretical Economics (SITE)	USA	25 August-12 September 2017
10	John Bosco Lourdusamy	Collaborative Book Writing – Authors	Berlin/Germany	12-22 December 2017
National (India)				
1	Anup Kumar Bhandari	Attended Workshop on Advance Panel Data and Time Series Models	IFMR, Andhra Pradesh	9–12 January 2017
2	Mathangi Krishnamurthy	Medical Technologies in Society	Centre for Technology and Policy, IITM	3–4 March 2017
3	S. Subash	Two-Day National Level Workshop on Art of Writing Research Article. Participated in the session on Importance of Publication in Academic Life and Research Problem	Pondicherry University	27–28 March 2017
4	S. Subash	Art of Writing Research Article	Pondicherry University	27–28 March 2017
5	Subash S.	Business Groups and Governance in Emerging Markets	Department of Management Studies, IIT Madras	17–22 July 2017
6	Hemachandran Karah	The Question of Minorities in India	CSDS, Delhi	26 October 2017
7	Suresh Babu	DFID of Evidence Waste Policy	New Delhi	28 November 2017
8	Anup Kumar Bhandari	Theory and Practice of Efficiency and Productivity Measurement	IIT Ropar	18-22 December 2017
Seminar				
1	Sonika Gupta	Presented paper: Internet and Nationalism in China: A Foreign Policy Analysis	Tibet Policy Institute	1 February 2017
2	Malathy D.	Presented paper, Private Higher Education in India: Expansion, Costs and Financing, at the international seminar on Innovations in Financing of Higher Education jointly organised by Centre for Policy Research in Higher Education	National University of Educational Planning and Administration (NUEPA), New Delhi	16-17 February 2017
3	S. P. Dhanavel	Delivered valedictory address on From Technical to Human Communication at National Seminar	Valliammai Engineering College, Kattankulathur	15 March 2017
4	Satya Sundar Sethy	Ethical Issues in Social Science Research	Fakir Mohan University, Balasore, Odisha	24 August 2017
Symposium				
1	Kalpana K.	Women and Empowerment on Water, Women and Wealth	State Institute of Rural Development (SIRD)	28 March 2017
Conference				
International				
1	Evangeline Manickam	International STEM/STEAM Conference	Hawaii University Hawaii	7-10 June 2017
2	Rajesh Kumar	Emergence of English Rooted in Multilingual Ecology of India	Syracuse University	30 June–2 July 2017

Sl. No.	Faculty	Title	Institution	Period
3	Roland Wittje	Instruments of Development: German Teaching Apparatuses and Practices at IIT Madras, SIC Symposium, Scientific Instruments Between the Local and the Global	History of Science, Technology and Medicine, Rio de Janeiro, Brazil	26-28 July 2017
4	Subash S.	Singapore Economic Review 2017	Singapore	2-4 August 2017
5	Sabuj Kumar Mandal	The 7 th Congress of the East Asian Association of Environmental and Resource Economics (EAAERE) 2017	Singapore	5-7 August 2017
6	Avishek Parui	Masculinity and Populist Rhetoric in the Political Sphere: A Study of Post-2014 India, Political Masculinities and Populism conference	University of Landau, Germany	1-3 December 2017
7	Sudarsan P.	Annual Conference of the Association of Global South Studies	Marrakech, Morocco	12-18 December 2017
National (India)				
1	S. P. Dhanavel	Delivered the keynote address on Strategies for ELT in the Classroom in National Conference	M. Kumarasamy College of Engineering (Autonomous), Karur	8 February 2017
2	Satya Sundar Sethy	Profession, Professionalism, and Higher Education Teachers in India, Education in Contemporary India	Delhi University, New Delhi	22-24 February 2017
3	Satya Sundar Sethy	Profession and Professionalism: Roles and Responsibilities of University Faculty Members in Indian Context, Governance of Universities: Issues and Challenges	NUEPA, New Delhi	23-24 March 2017
4	S. P. Dhanavel	Delivered a Plenary Lecture on A Mnemonic Approach to Learning English at National Conference	Ramakrishna Mission, Coimbatore	25 March 2017
5	Santosh Kumar Sahu	Inaugural conference on Leveraging Research for Entrepreneurship Development and Innovation	Chennai	7 September 2017
6	Satya Sundar Sethy	Academic Freedom and Social Responsibility: A Critical Review of Indian Higher Education System, The Futures of Higher Education: Economic and Social Contexts	NUEPA, New Delhi	7-8 September 2017
7	Sudhir Chella Rajan	Periurban Dynamics: Some Observations from Sriperumbudur, Tamil Nadu, Regional Conference on Periurban Ecosystems, GEAG and ICLEI	New Delhi	18-19 September 2017
8	Malathy Duraisamy	4 th International Conference on Business Research	SRM University, Kattankulathur	26 September 2017
9	Subash S	Broadband Adoption and Firm Performance: Evidence from Informal Firms in India, 12 th Annual Conference of the Forum for Global Knowledge, NCDS	Bhubaneswar	10-12 November 2017
10	Mathangi Krishnamurthy	Working Through Gender: A Performance in Three Acts, Sociology Conference	Manipal University Manipal	16 November 2017
11	R. Santhosh	Traditionalism and Development: The Case of Sunni Muslims in Kerala	JNU	7-8 December 2017
12	Anindita Sahoo	On Some Passive Strategies in Natural Language	IIT Patna	10 December 2017
13	S. P. Dhanavel	Opportunities for English Language Learning, International Conference on Emerging Trends in English Language Teaching	Guru Nanak College, Chennai	13 December 2017

Sl. No.	Faculty	Title	Institution	Period
Training				
National (India)				
1	S. P. Dhanavel	FDP programme conducted by Teaching Learning Centre	IIT Madras	6-8 December 2018
2		The Civil Aviation College of Training, Hyderabad Training Centre, Hyderabad	Hyderabad	3-4 January 2018
Short-term course				
International				
1	Dr. Roland Wittji	Winter School	University of Heritage, Cuba	2-9 March 2018

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1	S. P. Dhanavel	Delivered a special lecture on Writing a Research Paper for Impact Factor Journals	VIT Chennai Campus	13 February 2017
2	S. P. Dhanavel	Delivered a plenary lecture on An Agricultural Model for English Language Teaching in India at an International Conference	Bharathiar University, Coimbatore	3 March 2017
3	S. P. Dhanavel	Delivered a plenary lecture on Learning English with Abdul Kalam at National Conference	Periyar University Constituent College, Mettur Dam	18 March 2017
4	N. Sreekumar	Significance of Tibet in Asia: A Special Reference to India and China; paper: Tibet in Exile: Narratives of Democracy, Contestation and Struggle	University of Madras	18 April 2017
5	Milind Brahme	Deutsch als Fremdsprache (DaF, German as Foreign Language), School of Social Sciences and Languages	VIT University	26 April 2017
6	Umakant Dash	Economic Evaluation of Healthcare Programmes for the MPH students	SRM University	11 August 2017
7	Srilata K.	What is the Point of Children's Literature	O. P. Jindal Global University	25-27 August 2017
8	Swarnalatha R.	The National Seminar on Human Civilization and Dietary Practices, Asian Centre for Cross-Cultural Studies	University of Madras	22 September 2017
9	Hemachandran Karah	Understanding Blindness in Literature at Manipal International Literature and Arts Platform	Manipal University	16 September 2017

Visits Abroad by Faculty

Sl. No.	Faculty Name	Country Visited	Date	Purpose of Visit	Funding from
1	John Bosco Lourdasamy	Berlin	13-17 March 2017	Book writing workshop on Moving Crops, Max Plank Institute for the History of Science	IIT Madras
2	Mathangi Krishnamurthy	Canada	16-19 March 2017	The Program Committee for the Association for Asian Studies (AAS) 2017 Annual Conference Embodied Interventions: Body, Gender, and Technology in South Asia	IIT Madras
3	Roland Wittje	Berlin	16 May-15 July 2017	Visiting Scholar at the Max Planck Institute for the History of Science	Max Planck Institute for the History of Science
4	Kalpana K.	United Kingdom	17-25 May 2017	Feminist Labour Politics in the Neo-liberal Era: A Case of Munnar Tea Plantation Labour Struggle, 2017 BASAS Annual Conference	—

Sl. No.	Faculty Name	Country Visited	Date	Purpose of Visit	Funding from
5	Mathangi Krishnamurthy	Singapore	18-19 May 2017	Workshop	—
6	Binitha V. Thampi	United Kingdom	18-23 May 2017	Organizing Women: The Dilemmas of State Sponsored Developmentalism, 2017 BASAS Annual Conference	IIT Madras
7	Malathy D.	USA	22-26 May 2017	University of California, Berkeley for a discussion on the ongoing pilot study of health education curriculum in Chennai schools under the Sarva Shiksha Abhiyan, Government of Tamil Nadu	—
8	Santhosh R.	Berlin	1 June-30 July 2017	Visiting Fellowship by Leibniz Centre for Modern Orient	—
9	Sureshbabu M.	Wurzburg/ Germany	3-16 June 2017	Lectures at the Department of Indology	—
10	Roland Wittje	University of Belgrade, Serbia	8-10 June 2017	Member of the Program, Committee of the XVIII Universeum Network Meeting	CPDA
11	Sudarsan P.	Gambier, USA	14-24 June 2017	Kenyon Review Writing Workshop	—
12	Joe Thomas Karackattu	Paris, France	26 June-4 July 2017	Invited talk at Parish Sorbonne Nouvelle University	IIT Madras
13	Sonika Gupta	Guangzhou, China	27-28 June 2017	Visited China for a panel discussion on India-China relations	Indian Council of World Affairs, New Delhi
14	Sonika Gupta	Guangzhou, China	Visit to Chinese Academy of Functional Materials	Indian Council of World Affairs, New Delhi	
15	Sonika Gupta	Guangzhou, China		Visit to China Development Institute, Shenzhen for a round table discussion addressing bilateral cooperation in agriculture, urban planning and ICTs	Indian Council of World Affairs, New Delhi
16	Roland Wittje	Rio de Janeiro	23-25 July 2017	25th International Congress of History of Science and Technology	Seed Grant
17	Sudarsan P.	Aarhus, Denmark	16-28 August 2017	Coordinating Group Meeting of IBIES Erasmus Mundus Consortium	Project Fund
18	Jyotirmaya Tripathy	Aarhus, Denmark	21-28 August 2017	IBIES Erasmus Mundus Consortium meeting and visit to University of Denmark	—
19	Mathangi Krishnamurthy	University of Edinburgh, UK	21 September-9 October 2017	Invited for exploring research project	
20	Sonika Gupta	Bremen, Germany	25 September-14 October 2017	Research Seminar : Towards a Global Polity	—
21	Sudhir Chella Rajan	New Delhi	5-6 October 2017	Chaired session on Water Governance at German House of Innovation (DWIH), Waterscapes Symposium	—
22	Sudhir Chella Rajan	Belo Horizonte, Brazil	21-24 November 2017	Probing Ancient India for Corruption, 3rd Brazil-India Conference, Federal University of Minas Gerais (UFMG)	—

Sl. No.	Faculty Name	Country Visited	Date	Purpose of Visit	Funding from
23	Santosh Kumar Sahu	Colombo, Sri Lanka	4-5 December 2017	Poverty and Sustainable Development, The International Institute of Knowledge Management	—
24	Jyotirmaya Tripathy	Marrakech Morocco	14-16 December 2017	Association of Global South Studies Conference	CPDA
25	Milind Brahme	Breman, Germany	23-29 December 2017	Take sessions on Rhetoric and Political Communication for the Master course, Governing Sustainability, and discuss possible future collaboration on student exchange	CPDA

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Name	Award	Awarded by	Awarded for	Date of Award
1	Satya Sunder Sethy	Young Philosopher Award	Indian Council of Philosophical Research (ICPR)	Young philosopher	May 2017
2	Santhosh R.	Shastri Indo-Canadian Institute award for Faculty training and Internationalization	Department of Religious Studies, University of Ottawa, Canada		30 May 2017

Fellowships of Academies and Professional Societies

Sl. No.	Faculty Name	Year of admission
Others:		
1	Prema Rajagopalan, Taiwan Fellowship Program, Ministry of Foreign Affairs of the Republic of China (Taiwan), National Kaohsiung Marine University	September-November 2017
2	R. Santhosh, Visiting Fellowship by Leibniz Zentrum Moderner, Berlin	1 June-30 July 2017
3	N. Sreekumar, Fulbright Visiting Scholar, Falk College of Sports and Human Dynamics, Syracuse University, USA	17 August 2017-23 May 2018
4	Anchitha Krishna (HS14D010), Fulbright Nehru Doctoral Research Fellowship, University of Idaho, ID, USA	21 August 2017-20 May 2018
5	Visakh (HS14D005), Fulbright Nehru Doctoral Research Fellowship	24 August 2016-23 May 2017
6	Unnimaya S. Kurup (HS14D009), Fulbright Nehru Doctoral Research Fellowship, University of Texas, Austin	25 August 2017-24 May 2018

Journal Editorial Boards

Sl. No.	Faculty Name	Position (Editor/Member)	Journal Name
1	Swarnalatha Rangarajan	Commissioning Editor	New series-Routledge Studies in World Literatures and the Environment
2	Rajesh Kumar	Guest Editor	SAGE Publications

Book Chapter

Sl. No.	Faculty	Book Chapter
1	Satya Sunder Sethy	Professionalism in Assessing Students' Responses: Roles and Responsibilities of Higher Education Teachers, Higher Education and Professional Ethics: Roles and Responsibilities of Teachers, Routledge: UK, pp 99-123
2	Roland Wittje	Interview by Johannes-Geert Hagmann: Recent Scientific Heritage at Universities, in Challenging Collections – Approaches to Recent Scientific and Technological Heritage, edited by Alison Boyle and Johannes-Geert Hagmann. Washington DC: Smithsonian Scholarly Press

Research and Consultancy

Sponsored Research Projects

Sl. No.	Title	Period		Funding Agency	Amount (Rs. in lakh)	Co-ordinators
1	Rajesh Kumar	15 January 2018	14 January 2020	Indian Council of Social Science and Research	7	NIL
2	Muraleedharan V. R.	28 November 2013	27 November 2018	Ministry of Human Resource and Development	50	Ashok Jhunjhunwala
3	Kalpana K.	1 October 2016	30 June 2018	French Institute of Pondicherry	3.04	NIL
4	Santhosh R.	15 August 2017	14 February 2019	Indian Council of Social Science and Research	5	NIL

RBIC projects

Sl. No.	Faculty	Title	Industry	Amount (Rs. in lakh)
1	Muraleedharan V. R.	C-Section - A Study of Non-medical Causes - Tamil Nadu (India)	Columbia University	19.48
2	Muraleedharan V. R.	Universal health Coverage	Director of Public health and Preventive medicine	10
3	Muraleedharan V. R.	C-Section - A Study of Non-medical Causes - Tamil Nadu (India)	Columbia University	19.48
4	Suresh Babu	Choice of Schooling in Tamil Nadu	Government of Tamil Nadu	2
5	Sonika Gupta	Liminal Spaces of Citizenship: A Case Study of Tibetan Exile Community	Chiang Ching-Kuo Foundation for International Scholarly Exchange	17.20
6	Sudhir Chella Rajan	Future Sea level Rise: Assessment of Loss and Damage in Chennai in 2050	Tamil Nadu State Land Use Research Board	19.41
7	Suresh Babu M.	Choice of Schooling in Tamil Nadu	Government of Tamil Nadu	2

Retainer Consultancy

Sl.No.	Faculty	Title	Industry	Amount (Rs. in lakh)
1	Rajesh Kumar	Bringing Proficiency in English into Slum and Rural School Children	Tamil Nadu Newsprint and Papers Limited	45

Exchange Programme with other Universities, Including Institutions/Universities under MoU

Sl. No.	Student	Roll Number	University/Institution which has MoU	Period
1	Sreelakshmi P.	HS14H038	Hochschule Bremen	1 August-31
2	Jonathan Koshy Alex	HS14H023	Student Exchange Programme	December 2017
3	Feba Sajan	HS14H016		
4	Divyanjana Prashansa	HS14H048		

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date of visit	Purpose of Visit
1.	Prof. Sukhadeo Thorat, Chairman, Indian Council of Social Science Research (ICSSR)	2-5 February 2017	Inaugural lecture in HSS Department Conference 2017

Sl. No.	Name and Designation	Date of visit	Purpose of Visit
2.	Delegates from Drexel University: Professor Julie Mostov, Senior Vice Provost for Global Initiatives and Professor of Political Science	23 February 2017, Department of HSS, Seminar Room (HSB 333)	Explore possible collaborations on joint project/ student and faculty exchanges in development studies, histories of science and technology, environmental studies
3	Prof. Julie Mostov, Senior Vice Provost for Global Initiatives and Professor of Political Science	23 February 2017	A team of delegates from Drexel University visited to the Department of Humanities and Social Sciences to explore possible collaborations on joint project/ student and faculty exchanges in development studies, histories of science and technology, environmental studies (disaster studies, urban ecology, climate change), political theory (borders, gender), international relations and security studies (nuclear) and public health
4	Fortunate visit by senior world-class scholars led by Prof. Sun Ge, Prof. Liang Zhiping, Chen Yun, Prof. Jiang Mei, Prof. Liu Zhiwei, Prof. Wu Chongqing, Prof. Wu Xiaoli, Prof. Yang Chunyu, Prof. Zhang Zhiqiang	24 March 2017, China Studies Centre, IIT Madras	Discussion with HSS faculty, research scholars and MA and other IIT students, apart from Chennai's scholarly community
5	Prof. Paul Greenough, Emeritus Professor	30 March 2017	Talk on Indian Crows in Urban Decline: Writing the Environmental History of a Companionate Species
6	Dr. Arvind Subramanian, Chief Economic Adviser, Ministry of Finance, Government of India	31 March 2017	Talk on Economic Survey 2016-17: How India Surprise
7	Prof. Sushanta Mallick, Professor of International Finance Queen Mary University of London	26 July 2017	Talk on the topic, Is financial inclusion good for bank stability? International Evidence, followed by interaction with research scholars
8	Praveen Chakravarty, Visiting Senior Fellow, IDFC Institute	18 August 2017	Talk on A Policy Dialogue on Tamil Nadu Farmer Pays for the UP Loan Waiver
9	Frédéric Landy, the Director of the French Institute of Pondicherry	5 September 2017	To explore the avenues for potential collaborations between the two institutions
10	Dr. Upendra Choudhary, Director, ICSSR, New Delhi	24 October 2017	Talk on Funding Opportunities for Research in Social Sciences in India and the role of ICSSR
11	Pinak Rajan Chakravarthy Amb. (Rtd.)	30 October 2017	Talk on India's Changing Global Priorities and The Role of Act East Policy
12	Gideon Haigh	30 October 2017	The Pitch and the Pen: A Conversation with Gideon Haigh
13	Dr. J. M. Sampath, Managing Director, Arpitha Associates Private Limited	21 November 2017	Talk on Education for Integrating Life

Other Activities of the Department/Centre

DoHSS: Academic Conference 2017 on Traversing the Margins organised by MA students and research scholars; inaugural lecture by Prof. Sukhadeo Thorat, Chairman, ICSSR; 2-5 February, 2017

- Dr. Dilip Veeraragavan Memorial Trust lecture on The Discourse of the Jathi in South Indian Historiography by Prof. Subbiah Sivakumar
- Students Activities
- The annual inter-batch cricket tournament was held in March. The five-day tournament organised in the memory of late MA student, Prem Ranjan is an event that fosters inter-batch bonding.
- A visit was organised for Indian philosophy students to the Jiddu Krishnamurthy Centre at Raja Annamalai Puram, Chennai. A exhaustive discussion session with the inmates and screening of a few lectures were done.
- A fundae session for the upcoming NET exams were conducted by the fifth-year students.
- A exhaustive session on academic writing and publishing was held by the final-year students.
- Department Challenger Trophy Football Tournament was held.

4.11. Department of Management Studies

4.11.1. Introduction

The Department of Management Studies (DoMS) was founded in April 2004. The department offers a two-year, full-time M.B.A. programme (started in July 2001), research programmes leading to M.S. and Ph.D. degrees, an M.S. (Entrepreneurship) programme, Visionary Leadership in Manufacturing (VLM) programme, and the Post-graduate Diploma for Executives (PGPEX-VLM), jointly with IIM Calcutta and IIT Kanpur. There is also an Executive MBA degree programme (two-year) for working professionals.

The contributions of the faculty and research scholars of DoMS have been highly acclaimed in academic circles and peer groups. The growing number of well-qualified applicants, with many having significant professional experience both from the industry and academia, is a good indication of the academic reputation of the department. The summer internships and employment offers made to the students by best-in-class companies present a strong evidence of the growing stature of the programmes both nationally and internationally.

The DoMS currently has the largest number of management research scholars in India. Its research programmes attract many applicants, including a high proportion of working professionals. Research scholars' work is regularly published in reputed international and national journals and presented at prestigious conferences across the world. In the recent past, research scholars received international awards for their doctoral theses. The papers of several research scholars have consistently received 'best paper' awards and are cited frequently in the literature.

The alumni of the department have had scholastic achievements in different disciplines and continue to make significant contributions to the organisations and

institutions they work for. Some of the qualities that characterise our graduating students include high levels of initiative and energy, capacity for hard work, strong task orientation, willingness to learn and a temperament suitable for teamwork. Many MBA alumni won awards, honours and promotions in their organisations very early in their careers, besides winning laurels for their respective companies.

Over the years of its existence, the department thoroughly revised its MBA programme curriculum, expanded its research activities, re-launched the M.S. (Entrepreneurship) programme with a new structure and worked towards establishing long-term relationships with globally reputed institutions and organisations. The following sections present an outline of the work of the Department of Management Studies.

Some major areas of research at the department are:

- Applied statistics
- Models in supply chain management
- Combinatorial optimisation
- Production and operations management
- Finance
- Project Management
- Human resource management
- Quality management
- Information systems
- Strategy and business policy
- Knowledge management
- Services management
- Marketing
- Technology management

4.11.2. Academic Programmes

MBA, MS, Ph.D., PGPEX (VLM)

New Courses Introduced

Sl. No.	Course No.	Title
1.	MS 6880	Information Privacy and Security, Dr. Saji K. Mathew, MBA and Research Scholars, January 2017
2.	MS 5715	Marketing at the Bottom of the Pyramid, Dr. Varisha Rehman, MBA, MS and Ph. D.
3.	MS 5729	Social Media Computing, Dr. Nargis Pervin, MS and MBA
4.	MS 5754	Nurturing the Inner You: Developing Positive Capacities for Inspired Action, Dr. V. Vijayalakshmi

Students on roll as of September 2016+M.S. and Ph.D. Admission in January 2017

Programme	Year I	Year II	Year III	Year IV	Year V and Others	Total
M.S.	33					
Total	33					

Students/Scholars who Attended conference/seminar and symposia abroad/India

Sl. No.	Name	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue	Financial Assistance from
Abroad					
1.	Ananthalakshmi; Guide: Dr. R. Madhumathi	MS14S006	International Academy of Business and Public Administration Disciplines; Paper: Mutual fund performance predictability from fund flows: evidence from India	2-5 January 2017, Orlando, Florida	IIT Madras
2.	Anuja S., Guide: Thenmozhi M.	MS15D010	Global Finance Conference 2017: Paper: Effect of blockholder promoters on leverage	4-6 May 2017, Hofstra University, Hempstead, NY, USA	IIT Madras
3.	Bobin Cherian Jos, Guide: C. Rajendran	MS15D011	POMS 28th Annual Conference; paper: Order acceptance and scheduling decisions in manufacturing	5-8 May 2017; Seattle, Washington, USA	IIT Madras
4.	Sundara Natarajan P., Guide: Rahul R. Marathe	MS14S015	POMS 28th Annual Conference; paper: Managing dishonest retailers in a supply chain	5-8 May 2017, Seattle, Washington, USA	IIT Madras
5.	Srivatsa Srinivas S; Guide: Dr. Rahul R. Marathe	MS15D400	POMS Annual Conference; paper, Managing the perceived quality of outpatient medical services	5-8 May 2017, Seattle, Washington, USA	IIT Madras
6.	Jaimini Bhattacharyya; MS14D008 Guide: Dr. Rahul R. Marathe, Prof. G. Srinivasan	MS14D008	POMS Annual Conference; paper, Multi-channel retailing: inventory and pricing issues	5-8 May 2017, Seattle, Washington, USA	IIT Madras
7.	AVS Prakash; Guide: Dr Saji Mathew	MS12D020	AMCIS Conference; paper: Antecedents of information privacy assimilation in Indian IT organization	10-12 August 2017, Boston, USA	IIT Madras
8.	Dixon Prem, Daniel R., Guide: Dr. R. P. Sundarraj	MS15S015	ICRIIS 2017- paper titled, Latent factor model-based recommender system	13-21 July 2017, Langkawi, Malaysia	IIT Madras
9.	Vipin B., Guide: Dr. R.K. Amit	MS12D017	INFORMS Behavioral Operations Conference 2017; paper: Supply chain contracting with behavioral agents: Models and extensions	12-14 July 2017, Massachusetts Institute of Technology, USA	IIT Madras
10.	Abraham Cyril Issac	MS16D027	Understanding knowledge sharing among researchers by social network analysis	10-12 August 2017, Americas Conference on Information System (AMCIS 2017), Boston, Massachusetts	IIT Madras
11.	Parthasarathy S., Guide: Dr. R. K. Amit	MS15S017	INFORMS Healthcare conference; paper: Ambulance repositioning algorithms for improving the operational efficiency of EMS	26-28 July 2017, Rotterdam, Netherlands	IIT Madras
12.	Rajan Ranjith Kumar; Guide: Prof. L. S. Ganesh, Prof. C. Rajendran	MS16S010	XXI Annual International Conference of the Society of Operations Management; paper: Meta-research on quality management – a morphological analysis framework representation	21-23 December 2017, Amrut Mody School of Management, Ahmedabad University	IIT Madras
13.	Suraj Kumar	MS14D013	4th Applied Financial Modelling Conference; paper: Liquidity in Asian markets: intensity of regional and global linkages	1-2 February 2018, Melbourne, Australia	IIT Madras

Sl. No.	Name	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue	Financial Assistance from
India					
1.	Varuna Newatiya; Guide: Dr. Richa Agrawal	MS12D016	Academy of Indian Marketing – American Marketing Association – Doctoral Consortium; presented research work: Consumption of luxury brands (speed dating) – national conference	6-8 January 2017, Welinkar Institute of Management Development and Research, Mumbai	IIT Madras
2.	Sujatha Manohar Guide: Varisha Rehman.	MS14D012	Role of Food Neophobia and Type of Unfamiliarity in Influencing Willingness to Try Novel Healthy Foods, included in the book of Abstracts: 2017 IIM Indore-NASMEI Summer Marketing Conference. ISBN: 978-1-78635-416	27-29 July 2017, IIM Indore	IIT Madras
3.	Sriji E. S.; Guide: Dr. Lata Dyaram	MS13D005	Manager's pro voice behavior and employee upward voice: A moderated mediation model of psychological safety and power distance; 17 th Consortium of Students in Management Research	20-21 November, IISc Bangalore	IIT Madras
4.	Suraj Kumar; Guide: Dr. P. Krishna Prasanna	MS14D013	COSMAR 2017; paper: Liquidity in Asian markets intensity of regional and global linkages	20-21 November, IISc Bangalore	IIT Madras
5.	G. Aravind; Guide: Dr. Arshinder Kaur	MS16S003	International conference on ICRBS 2017; paper: Lifecycle assessment of end-of-life vehicle treatment system in India for sustainability	13-21 December 2017, IIT Roorkee	IIT Madras
6.	Selvanayagam K, Guide: Varisha Rehman	MS16S013	Who Did What When? - Brand Equity and Corporate Response as Antecedents of impact on Brand Perception in times of a Brand Crisis; 5th Biennial Indian Academy of Management Conference 2017	18-20 December 2017, IIM Indore	IIT Madras
7.	Srivatsa Srinivas S.; Guide: Dr. Rahul R. Marathe	MS15D400	XXI Annual International Conference of the Society of Operations Management; paper: On managing outpatient queues with strategic patients	21-23 December 2017, Ahmedabad University, Ahmedabad	IIT Madras
8.	Jaimini Bhattacharyya; Guide: Dr. Usha Mohan	MS14D008	Contracting with a dishonest retailer under asymmetric demand information	21-23 December 2017, Ahmedabad University, Ahmedabad	IIT Madras
9.	Ashwin J. Baliga; Guide: Dr. Upendra Kumar Maurya	MS16003	North American Society for Marketing Education in India (NASMEI): paper: The need for continuous improvement in supplier performance: the mediating effect of commitment constructs (Chosen as one of the five best research proposals)	22-23 December 2017, Great Lakes Institute of Management, Chennai	IIT Madras
10.	G. Aravind; Guide: Dr. Arshinder Kaur	MS16S003	International conference on ISDSI; paper: Sustainability assessment of automobiles through mass-based recyclability profiling	27-31 December 2017, IIM Trichy	IIT Madras
11.	Jaimini Bhattacharyya; Guide: Dr. Usha Mohan	MS14D008	Paper: An integrated study of wholesale price, buy back and quantity flexibility contracts under supply and demand uncertainty	27-31 December 2017, IIM Trichy	IIT Madras
12.	Suraj Kumar; Guide: Dr. P. Krishna Prasanna	MS14D013	11 th ISDSI International Conference; paper: Regional and global liquidity spillover in Asia	27-30 December 2017, IIM Trichy	IIT Madras

Sl. No.	Name	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue	Financial Assistance from
13.	Srivatsa Srinivas S.; Guide: Dr. Rahul R. Marathe	MS15D400	11th ISDSI International Conference; paper: Managing service queues in the presence of revisiting customers	27-30 December 2017, IIM Trichy	IIT Madras
14.	Neethu Mohammed; Guide: Dr. Kamalanabhan T.J	MS15D006	11th ISDSI Conference; Social capital, knowledge sharing and work performance: an empirical study in knowledge-based organisations	27-30 December 2017, IIM Trichy	IIT Madras
15.	Nilanjan Dutta; Guide: Dr. Arshinder Kaur	MS15D201	11th ISDSI Conference; A contracting model for an agro-business firm procuring directly from multiple farmers	27-30 December 2017, IIM Trichy	IIT Madras
16.	Kelitha Mary Cherian; Guide: Dr. T. J. Kamalanabhan	MS13D211	4th Management Doctoral Colloquium and VGSOM Research Scholar's Day; Developing interest-based employability measures for the it industry	14-15 March 2018, IIT Kharagpur	IIT Madras
17.	Suraj Kumar; Guide: Dr. P. Krishna Prasanna	MS14D013	Management Doctoral Colloquium and VGSOM Research Scholar's Day; paper: Global financial crisis: dynamics of liquidity risk in emerging Asia	14-15 March 2018, IIT Kharagpur	IIT Madras

Students/Scholars who won outside prizes and awards

Sl. No.	Name	Roll No.	Prize	Awarded by
1.	Surya Karunakaran; Guide: Dr. Saji K. Mathew	MS13D201	Best poster award for paper, Privacy protection dashboard: a study of cloud users information privacy protection responses, ACM SIGMIS Computers and People Research Conference 2017	IIM Bangalore
2.	Anuja Sethiya; Guide: Dr. M. Thenmozhi	MS15D010	Emerald best paper award in Corporate Finance for paper, Which type of blockholder promoters prefer more leverage; International Conference on Corporate Finance and Financial Markets (ICFMCF 2017), 7-8 July 2017	IIT Kharagpur
3.	Sriji E. S.; Guide: Dr. Lata Dyaram	MS13D005	Best paper award: What Matters to Speak Up at Work, 9th Annual American Business Research, 10-11 July 2017	New York, USA
4.	Sriji E. S.; Guide: Dr. Lata Dyaram	MS13D005	Best paper award, certificate and cash prize of Rs.5,000 to paper, Manager's pro voice behavior and employee upward voice: A moderated mediation model of psychological safety and power distance, 17th Consortium of Students in Management Research (COSMAR 2017)	20-21 November, IISc Bangalore
5.	Bhargava Chandra	MS16A023	Campus Reporter chosen as the Star Reporter of the Month (cash prize of Rs.5000, certificate and cheque)	8 December 2017, Chennai
6.	Attili, V. S. P.; Guide: Dr. Saji K. Mathew	MS12D020	Doctoral student award (\$1000 and a certificate), Workshop on Information Security and Privacy (WISP) – Pre-ICIS Workshop, during International Conference on Information Systems (ICIS), for paper, Information privacy assimilation in IT organizations: an empirical investigation	December 2017, Seoul, South Korea
7.	Akanksha Jaiswal	MS13D010	Doctoral colloquium, 11th ISDSI conference for paper, What matters: reality or perceptions? (Cash prize: Rs.15,000)	27-30 December 2017, IIM Trichy
8.	Bansal S.; Guide: Dr. M. Thenmozhi	MS14D010	Best paper award: Does CEO duality affect board independence? Moderating impact of founder ownership and family block holding, 18th World Business Research Conference	2-3 November 2017, San Francisco, USA
9.	Shashank Bansal; Guide: Dr. Thenmozhi M.	MS14D010	Best doctoral research paper award for the paper, Does increasing controlling ownership affect board independence? 5th PAN IIM World Management Conference	14-16 December 2017, Indore

Sl. No.	Name	Roll No.	Prize	Awarded by
10.	Aravind Ganesh; Guide: Dr. Arshinder Kaur	MS16S003	Best paper award for paper, Lifecycle and value assessment of end-of-life vehicle treatment system in India for sustainability, co-authored in the Operations and IT track of the International Conference on Research and Business Sustainability (ICRBS-17) held on 16-17 December 2017	Noida
11.	Sudhanshu Gupta	MS12D208	Best paper in conference award; What is environmentally responsible consumption and how to measure it; EMCB Annual Conference, 5-7 January 2017.	IIM Lucknow
12.	Ms. A. Ayesha	MS14S009	Outstanding paper award for paper, Labour absenteeism in Indian construction industry - conceptual model proposal; National Conference on Construction Management, Mechanization and Environmental Sustainability (CMMES 2017); 21-22 February 2017	Ranchi.
13.	Shashank Bansal, Ph.D. scholar; Guide: Dr. M. Thenmozhi	MS14D010	Erasmus Plus International Credit Mobility Fellowship	European Union, Spain (five months)
14.	Rahul R. Lexman; Ph.D. scholar; Guide: Dr. Rupashree Baral	MS17D013	Best research paper award for paper, Being a happy digital learner: A learning perspective through the adoption of playfulness in MOOCs; Berchmans National Conference on the theme, Happiness Edge: The Holistic Business Mantra	16 February 2018, Kerala
15.	J. H. Jyotsna; Guide: Dr. Upendra Kumar Maurya	MS16S008	The role of authenticity in marketing Kerala village tourism - 2nd Runner-Up at the Research Grant Proposal Competition conducted by NASMEI received a research grant of Rs.25,000	22-23 December 2017, Great Lakes Institute of Management, Chennai
16.	Nilanjan Dutta; Guide: Arshinder Kaur	MS15D201	Highly commended paper in Doctoral Colloquium of 11th ISDSI International Conference	27-30 December 2017, IIM Trichy
17.	Nilanjan Dutta; Guide: Arshinder Kaur	MS15D201	Highly commended winner of the 2017 Emerald/INDAM Indian Management Research Fund Award with Nilanjan Dutta for the research topic: Modelling the decision-making behaviour of farmers in context of contract farming in India; cash prize: £500	

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl.No.	Student/Scholar	Roll No.	Prize	Donor
1.	S. Santhoshraghavan	MS15A047	Meritorious performance in first and second semesters of MBA programme; meritorious performance in first, second and third semesters of MBA programme	IIT Award; Prof. T. N. Govindarajan Prize; Rajagopalan Memorial Prize, respectively

4.11.3. Faculty and their activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
Prakash Sai L., (Head), B. Tech, M. Tech, Ph. D.	Strategic management, IT outsourcing and IT strategic planning business models, technology management, entrepreneurship
Arun Kumar G., M. Com., Ph. D.	Market microstructure, IPOs, mergers and acquisitions, joint ventures and multinational business
Ganesh L. S., B.E. (Hons.), M. Tech, Ph. D.	Systems thinking and applications, project management, technology management, data and decision analysis, forecasting
Kamalanabhan T. J., M.A., M. Phil., Ph. D.	Organizational behaviour, human resource management and training and development

Name and Qualifications	Major Areas of Specialisation
Madhumathi R, M. Com., Ph. D.	Financial management and accounting, forex research, bank management, capital market studies
Rajendran C, B.E. (Hons), M.E., Ph. D.	Operations management, production and materials management, supply chain management, scheduling
Srinivasan G., B.E. (Hons), M.S., Ph. D.	Fundamentals of operations research, advanced operations research, operations management, supply chain management, manufacturing systems management, O. R. applications, services operations management
R.P. Sundarraj, B.E. (Hons), M.S. (USA), Ph.D. (USA)	Information systems, supply chain management, e-business, computational optimization, decision support system
Thenmozhi M., M. Com., M. Phil, Ph. D.	Financial management, strategic management, computational finance
Thillai Rajan A., B.E., M.Sc, Fellow IIM Bangalore	Venture capital and private, equity project and infrastructure finance, public private participation, corporate finance
Associate Professors	
Amit R. K., M. Tech., Ph. D.	Game theory, operations research, decision theory, natural resources management
Arshinder Kaur, M. Tech, Ph. D.	Operations research, supply chain management, total quality management, services operations management
Krishna Prasanna P., B. Com., M. Com., M. Phil., Ph. D.	Corporate governance, fixed income securities, financial risk management and market micro structure
Lata Dyaram, M.A., Ph.D.	Leadership development, corporate sustainability, cognition in organizations, organizational behaviour, organizational development, industrial and organization psychology
Rahul R. Marathe, B.E., M.S. (USA), Ph.D. (USA)	Simulation, industrial engineering, TQM, operations research, operations management
Saji K. Mathew, B. Tech., Ph. D.	Management information systems, IT strategy, data mining and business intelligence, IT services and outsourcing, information systems development
Usha Mohan, M. Sc., M. Phil., Ph. D.	Quantitative models in operations management, probability and statistics, combinatorial optimization
Assistant Professors	
Nandan Sudarsanam, M. S., Ph. D.	Experimentation, data mining, applied statistics, algorithmic and heuristic approaches to problem solving
Nargis Pervin, M.Sc., M.Tech., Ph.D.	Social network mining, recommender systems, mobile app analytics
Richa Agrawal, B. A. (Econ), MBA, Ph. D.	Customer relationship marketing, consumer behaviour and insight advantage
Rupashree Baral, B.Sc., M.A. (IR&PM), Ph. D.	Strategic human resources management, organizational behaviour, work-life balance, employee engagement, diversity and inclusiveness, career exit and re-entry of women
V. Vijayalakshmi, M.Sc., Ph.D.	Positive organizational behavior: happiness and performance, mindfulness, discovering calling, humour in the workplace, workplace emotions, creativity and innovative capability of firms
Varisha Rehman, B. Com (Hons), MBA, Ph.D.	Marketing management and research, advertising and publicity, experiential marketing
Upendra Kumar Maurya, B. Tech. Fellow XIMB, XUB	Brand management, entrepreneurship and marketing interface, identity issues in organisations
Vaibhav Chawla B.Tech (Hons.), Fellow, IIM Kozhikode	Mindfulness and sales call reluctance, spirituality in sales organizations, salesperson performance
MHRD IPR Chair Professor	
Feroz Ali Khader, B.A., LL.M., S.J.D., Ph. D.	Patent law and policy, intellectual property law, international trade law, law and technology

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinators	Title	Period
1.	Dr. Richa Agrawal and Dr. Upendra Kumar Maurya	3rd Scale Development Workshop Continuing Education Program	5-9 April 2017
2.	Dr. Rupashree Baral, Dr. Arun Kumar, Dr. Vijayalakshmi, Dr. Suresh (HSS)	Dialogue Event at IIT Madras on Social Enterprise and Women Empowerment	4 April 2017
3.	Dr. Thenmozhi	EPBA -NPTEL	13-28 May 2017

Sl. No.	Coordinators	Title	Period
4.	Dr. R. P. Sundarraj	Verizon	23-24 May 2017
5.	Dr. R. P. Sundarraj	CEP program on Thriving in the Digital Economy-SMAC	19 June–11 July 2017
6.	Dr. M. Thenmozhi	Workshop on Business Groups and Governance in Emerging Markets - A Faculty Development Programme supported by the AICTE	17-22 July, 2017
7.	Dr. L. S. Ganesh	Polytechnic and Engineering students from Nagaland - skill development course	14-25 August 2017
8.	Dr. Richa Agrawal	Prof Russell Belk, Schulich School of Business, York University, Canada; Course: Qualitative Consumer and Marketing Research, DoMS, IIT Madras	16-30 August 2017
9.	Dr. Rupashree Baral	CL Dealership Program	23-24 August 2017
10.	Dr. Rupashree and Dr. Vijayalakshmi	Empowerment through capacity building: a program for women entrepreneurs	13-14 September 2017
11.	Dr. Rupashree Baral	Disha: Dealership training programme	25-26 September 2017
12.	Dr. Thenmozhi	L&T Training Programme	17-22 September 2017
13.	Dr. Krishna Prasanna	Training for NSE Academy Limited	17-18 November 2017
14.	Dr. Richa Agrawal	Workshop on Theory Development for Model Specification	22-26 November 2017
15.	Dr. Rupashree Baral	Executive Development Programme for the Officers of Talent Management and Career Progression Programme for Chennai Petroleum Corporation Ltd. (CPCL), Executives	20-24 November 2017
16.	Dr. T. J. Kamalanabhan and Dr. M. Thenmozhi	Project Leadership and Managerial Development Programme – L&T E&C, Chennai	4-9 December 2017
17.	Dr. Rupashree Baral	DISHA-IOCL Dealer Training Program	27-28 November 2017
18.	Dr. G. Arun Kumar and HSS faculty	Workshop: Effects of Interventions in Poverty Reduction and Development for Migrants in South Asia, HSB, IIT Madras	13 Dec 2017
19.	Dr. M. Thenmozhi and Dr. T. J. Kamalanabhan	Executive Programme in Business Administration	25 November–3 December and 2-10 December 2017, respectively
20.	Dr. Usha Mohan	Training programme for the executives of Royal Enfield	2-5 January 2018
21.	Dr. T. J. Kamalanabhan and Dr. Rupashree Baral	Executive Development Programme for CPCL, Chennai	29 January-2 February 2018
22.	Dr. Rupashree Baral and Dr. T. J. Kamalanabhan	IOCL Dealer Training Programme	19-20 February 2018
23.	Dr. Rahul R. Marathe	VLM Training Program, Tokyo, Japan	17 February–4 March 2018
24.	Dr. Rupashree Baral and Dr. T. J. Kamalanabhan	DISHA-IOCL Dealer Training Programme	19-20 March 2018
25.	Dr. M. Geetha and Dr. Upendra Kumar Maurya	Workshop on Research Methodology in Social Sciences	2-7 January 2017

Short-term course/workshop/seminar/symposium/conference/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty Member	Title	Institution	Period
Workshop				
1.	Dr. Upendra Kumar Maurya	Teaching with cases	IIM Indore	27 July 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1.	Dr. R. K. Amit	Delivered a lecture on Game Theory in Manufacturing	SAE India, Chennai	27 July 2017
2.	Dr. R. K. Amit	Game Theory in a Modern Economy, XXI Annual Conference of Society of Operations Management	Ahmedabad University	21-23 December 2017

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of Visit	Funding from
1.	Dr. T. J. Kamalanabhan	Texas, USA	28 February-10 March 2017	Academy of Human Resource Development Conference (AHRD)	IIT Madras
2.	Dr. Lata Dyaram	Germany	1-22 May 2017	Visiting Professor at the Faculty of Business Administration and Economics, University of Passau, Germany	IIT Madras
3.	Dr. L. S. Ganesh	Germany	29 May-2 June 2017	International Week at RheinAhr Campus, Ramagen, Germany	IIT Madras
4.	Dr. C. Rajendran	Germany	2-28 June 2017	Faculty of Business Administration and Economics, University of Passau	IIT Madras
5.	Dr. Rahul R. Marathe	USA	8-16 June 2017	Industry 4.0 Summit	IIT Madras
6.	Dr. T. J. Kamalanabhan	Mauritius	12-16 June 2017	For meetings and discussion at University of Mauritius	IIT Madras
7.	Dr. P. Krishna Prasanna	Singapore	27-28 July 2017	Oral presentation at the APEF	IIT Madras
8.	Dr. R. K. Amit	Singapore	31 July-2 August 2017	Present a paper at the East Asian Game Theory Conference 2017 (EAGT 2017)	IIT Madras
9.	Dr. G. Arun Kumar	Thailand	7-16 August 2017	Workshop on Financial Strategies for Utilities at Asian Institute of Technology	IIT Madras
10.	Dr. L. S. Ganesh	Kathmandu, Nepal	18-19 August 2017	Fifth International Conference Science and Scientist 2017	IIT Madras
11.	Dr. C. Rajendran	Houston, Texas, USA	20-29 October 2017	12th INFORMS Workshop and the Annual Meeting	IIT Madras
12.	Dr. G. Arun Kumar	Thailand	30 October-3 November 2017	Workshop-cum discussion at Asian Institute of Technology	IIT Madras
13.	Dr. C. Rajendran	University of Passau, Germany	October 2017	Visiting faculty	IIT Madras
14.	Dr. T. J. Kamalanabhan	Ohrid, Macedonia, China	6-7 October 2017	3rd China CEE Conference	IIT Madras
15.	Dr. Nandan Sudarsanam	Kensington, UK	21-23 September 2017	London Alumni Meet	IIT Madras
16.	Dr. Richa Agrawal	Indonesia	4-8 September 2017	Tropical Landscapes Finance Facility (TLFF) – research on distributed risk development model	IIT Madras
17.	Dr. V. Vijayalakshmi	Germany	1 November– 30 December 2017	Visiting Professor, Faculty of Business Administration and Economics, University of Passau	IIT Madras
18.	Dr. A. Thillai Rajan	Hong Kong	11 November 2017	2nd IIT Madras Alumni Meet Panel discussion on Fintech and Financial Innovation in Emerging Markets	IIT Madras
19.	Dr. G. Arunkumar	Hong Kong	21-22 November 2017	2nd IITM Alumni meet Panel discussion on Fintech and Financial Innovation in Emerging Markets	IIT Madras
20.	Dr. M. Thenmozhi	Hochschule Koblenz, Germany	23-30 November 2017	Workshop on Managing Cultural Diversity at University of Applied Sciences	IIT Madras
21.	Dr. Varisha Rehman	Germany	27 November-10 December 2017, 11-12 December 2017	Visiting Professor	IIT Madras
22.	Dr. C. Rajendran	Germany	27 November-21 December 2017	Visiting Professor at University of Passau	IIT Madras
23.	Dr. V. Vijayalakshmi	Germany	27 November-6 December 2017	Visiting Professor at University of Passau	IIT Madras
24.	Dr. Richa Agrawal	Indonesia	23-30 March 2018	Visit to Tropical Landscapes Finance facility, Jakarta, Indonesia	IIT Madras

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Member	Award	Awarded by	Awarded for	Date of award
Honours					
1.	Prof. L. S. Ganesh	Distinguished Professor Award	Computer Society of India, Mumbai Chapter	Distinguished Professor Award	January 2017
2.	Prof. L. S. Ganesh	Distinguished Fellow Award 2016		Highest research award given to teacher-researchers for their significant academic contributions to the theory, methodologies and practices of project management	February 2017
3.	Prof. R. P. Sundarraj	Associate Editor	IEEE-Engineering Management Review (EMR) University of	Honour/Appointment for research excellence	June 2017
4.	Prof. C. Rajendran	Doctor of Business Administration and Economics-Honoris Causa	Passau, Germany	Contribution to Institutional collaboration and research	8 December 2017
5.	Dr. A. Thillairajan	Associate of Mossavar-Rahmani Center for Business and Government	M-RCBG, Harvard Kennedy School for the second year	Harvard Kennedy School for the second year	1 February 2018-31 January 2019
6.	Dr. Rupashree Baral	Outstanding Woman in Management (certificate, bronze medal and memento)	Venus International Women Awards-VIWA 2018	Being an outstanding woman in management	3 March 2018, Chennai

Journal Editorial Boards

Sl. No.	Faculty Member	Position (Editor/Member)	Journal Name
1.	Prof. R. P. Sundarraj	Associate Editor	IEEE-Engineering Management Review (EMR)
2.	Dr. R. K. Amit	Guest Editor, Special Issue	Sustainable Operations in Manufacturing Enterprise, Annals of Operations Research
3.	Dr. R. K. Amit	Guest Editor, Special Issue	Sustainable Operations in Manufacturing Enterprise, Annals of Operations Research
4.	Dr. R. K. Amit	Guest Editor, Special Issue	Sustainable Operations in Manufacturing Enterprise, Annals of Operations Research

4.11.4. Research and Consultancy

Sponsored Research Projects (Ongoing and New)

Sl. No.	Faculty Member	Project	Sponsor
1.	Dr. R. P. Sundarraj and Dr. M. P. Gupta, IIT Delhi	Training in Cyber Security	MHRD and DRDO, Rs.1,95,60,000; 36 months wef May 2017
2.	Dr. V. Vijayalakshmi and Dr. Rupashree Baral	Creating a Ripple Effect in the Youth's Development: Through Holistic Education	M/s. Banca Sella, Taramani, Chennai, 5,00,000; 1 June 2017-30 June 2018
3.	Dr. A. Thillairajan	Case Study on T-Hub	Government of Telangana; Rs.1.25 crore; August 2017-March 2018

Exchange Programme with Other Universities Including Institutions/Universities under MoU

Number of students who visited the universities abroad	18
UoP, Passau, Germany	11
University of Applied Science, Rhein Ahr Campus, Remagen, Germany	01
Nanyang Technological University, Singapore	01
Management Centre Innsbruck, Austria	02
University of Mannheim, Mannheim, Germany	03

M.S./Ph.D. Research Scholars = 1

K. Ramesh	MS16D005	University of Technology, Sydney, Australia	22 January 2018-21 January 2019
Casual/foreign students visited DoMS, IIT Madras	32 Foreign scholars		2017
	10 Foreign scholars		2018

Faculty Members participation with other institution under MoU

Sl. No.	Faculty member	Participation details	Name of University/Institution which has MoU
1.	Dr. Vijayalakshmi	Faculty exchange and a seminar	University of Passau, Germany

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date of Visit	Purpose of Visit
1.	Kiruba Shankar, CEO of Business Blogging and Founder Director of Five Technologies	Talk: Branding	MBA Invitational Lecture Series (MILS), 16 March 2017
2.	Anusuya Ghosh (currently working as post-doctoral fellow in IIM Bangalore)	The semidefinite representation of non-compact convex set	12 April 2017
3.	Prof. Elizabeth Rose, University of Otago	To share her experiences and research topics	28 April 2017
4.	Dr. Kamal Sharma, MBA alumnus, Faculty, IIM Indore	Impact of CEO succession on strategic changes in firms	16 May 2017
5.	Dr. Mohammad Khasawneh, Professor and Department Chair, State University of New York, Binghamton	Healthcare systems and data sciences: theory and case studies	26 July 2017
6.	Nabil Raad, Director Enterprise Risk Management Ford USA	Research in risk management	26 July 2017
7.	M/s. Caroline International office, Austin Peay State University, USA	Crypto-currencies: History, technology and policy issues	27 July 2017
8.	Laks Krishnamoorthy, Director, PayPal India	Being a customer champion	17 August 2017
9.	Vaibhav Vashisht, CEO, Acadly	Demo session: New generation learning management system	17 August 2017
10.	Prof. Chinmoy Ghosh, Department of Finance, University of Connecticut	Discussion on the joint research work	16-17 August 2017
11.	Daniel Raj David, CEO, Detect Technologies	Discussion on start-ups	24 August 2017
12.	Jürgen Hase, CEO, Unlimit powered by Reliance	Lecture: Internet of things	7 September 2017
13.	Dr. Mayuri Duggirala and Dr. Jayashree Ravindran (alumni), TCS R&D	To interact with the MS/PhD students, particularly in the areas of OB/HR	11 September 2017
14.	Sadhguru Jaggi Vasudev, Founder, Isha Foundation	Address: Youth and ethics	11 September 2017, SAC (MILS)
15.	Suresh Narayanan, Chairman and Managing Director, Nestle India	Talk: Maggi on the rebound	14 September 2017
16.	Dr. Shastri, Adjunct Faculty at Curtin University, Australia	Talk: On big data guided digital ecosystems and technologies (DEST) and their knowledge management	21 September 2017
17.	Prof. Rema Padman, Management Science and Healthcare Informatics, H. John Heinz III College, Carnegie Mellon University, Australia	Talk: Physical and cognitive workload reduction via order set optimisation in clinical information systems	4 January 2017
18.	Prof. Rajan Varadarajan, Distinguished Professor of Marketing, Regents Professor and Ford Chair in Marketing and E-Commerce, Mays Business School, Texas A&M University, USA	Talk: Research and publishing: some guideposts for crafting conceptual articles for scholarly journals in business disciplines	10 January 2018

4.12. Department of Mathematics

4.12.1. Introduction

An important department of Indian Institute of Technology set up in 1959, the Department of Mathematics today offers M.Sc. programme in Mathematics, M.Tech. programme in

Industrial Mathematics and Scientific Computing (IMSC), and PhD programme. In addition, the department has taken the responsibility of teaching mathematics courses to B.Tech., M.Tech. (other than IMSC), M.Sc. and PhD students of the institute.

The major research areas of the department are

1. Algebraic combinatorics	26. Graph theory
2. Algebraic geometry	27. Harmonic analysis
3. Algebraic topology	28. Inverse and ill-posed problems
4. Applied probability	29. Linear algebra
5. Approximation theory	30. Low-dimensional topology
6. Category theory	31. Mathematical modeling
7. Combinatorial optimization	32. Mathematical study of ferromagnetic networks
8. Combinatorics	33. Nonlinear analysis
9. Combinatorics of words	34. Nonlinear analysis of functional differential equations
10. Commutative algebra	35. Nonlinear differential equations
11. Complex analysis	36. Number theory
12. Conformal geometry	37. Operator algebras
13. Contact and symplectic topology	38. Operator equations
14. Convective heat and mass transfer	39. Operator theory
15. Computational fluid dynamics	40. Optimisation
16. Computational number theory	41. Partial differential equations
17. Cryptology	42. PDE numerics
18. Differential and integral equations	43. Solid mechanics
19. Differential topology	44. Special functions
20. Fixed point theory	45. Systems and control theory
21. Fluid mechanics	46. Theory of codes
22. Functional analysis	47. Theory of computation
23. Fractals	48. Theory of wavelets
24. Game theory	49. Time frequency analysis
25. Graph algorithms	50. Wave structure interactions

4.12.2. Academic Programmes

New courses introduced

Sl. No.	Course No	Title
1	MA2070	Differential Geometry of Curves and Surfaces

Students on roll as of September 2017+ PhD Admission in January 2018

Programme	Number of Students
M.Sc.	120
M.Tech.	21
PhD	103
Total	244

Endowment Prize Instituted

Sl.No	Endowment Prize	Purpose	To be awarded from
1	Smt. Lakshmikutty Amma and Shri A. Krishnankutty Nair Prize instituted by Retired Professor Dr. P. Achuthan award for the year 2017: Dr. Monisha Roy, PhD scholar under the supervision of Prof. Satyajit Roy, Guide, and Prof. Tanmay Basak, Co-Guide	For the best PhD thesis in mathematics	The 2013 Convocation

Student/Scholar who Attended conferences/seminars and symposia abroad/India

Sl. No.	Research Scholar	Roll No.	Conference/Seminar/Symposia/Workshop and Venue	Date	Financial Assistant
Abroad					
1	Sangita Jha	MA14D017	Presented paper: Fractal approximants on the circle in the 10 th International Conference on Chaotic Modeling and Simulation, University of Zaragoza, Spain	28 May-31 July 2017	IIT Madras
2	Arundhathi Krishnan		Presented paper: Determining elements of a Banach Algebra through Pseudospectra at Szeged, Hungary	16-23 June 2017	IIT Madras
3	Lavanya S.	MA14D014	Presented paper: N-operators on partially ordered Banach space, University of Alberta, Edmonton, Canada	17-21 July 2017	
4	Komandla Mahipal Reddy	MA13D003	Interdisciplinary–International Conference on Applied Mathematics Modeling and Computational Sciences, Waterloo, Ontario, Canada	18-28 August 2017	
India					
1	Abhishek Kesarwani	MA15D030	Workshop on TEW Algebra, Discrete Mathematics, Complex Analysis at IMSc, Chennai	22-27 May 2017	--
2	Abhishek Kesarwani	MA15D030	Instructional Workshop on Cryptography (NIWC 2017), LNM Institute of Information Technology, Jaipur, Rajasthan	2-9 July 2017	
3	Samprita Das Roy	MA14D016	Research-related visit to IIT Bombay	2-14 April 2017	
4	Ajoy Janaz	MA14D001	Workshop on AIS Linear Partial Differential Equation 2017 at TIFR CAM, Bengaluru	19 June-8 July 2017	
5	Subhajit Chanda	MA15D022	Seminar on Positive characteristic methods in cumulative algebra, IIT Bombay	18-30 June 2017	
6	Susmita Agarwal	MA12D017	Presented paper: Effect of the shape parameter of infinitely smooth radial basis function while capturing the moving interfaces	11-16 July 2017	
7	N. Poornapushkala		Presented paper: On the semistability of certain Lazarsfeld-Mukai bundles on Abelian surfaces	13-14 July 2017	
8	A. Selvakumar	MA16D0	Seminar on ATMW Differential Geometry at IISER, Pune	24-29 July 2017	
9	Mohit Kumar	MA15D203	Fractal geometry: Foundations to frontiers (GIAN Course), IIT Madras	14-31 August 2017	
10	Ranjeet Kara Dharsanda	MA16D042	International Conference on Exploring the History of Indian Mathematics at IIT Gandhi Nagar, Gujarat	4-6 December 2017	
11	Ranjeet Kara Dharsanda	MA16D042	International Conference on Exploring the History of Indian Mathematics, IIT Gandhinagar, Gujarat	4-6 December 2017	
12	Amit Kumar Singh	MA14D008	AJMW Schubert Varieties – 2017 at IMSc Chennai	23 October-4 November 2017	
13	Subhajit Chanda	MA15D022	National Conference on Commutative Algebra and Algebraic Geometry at IISER Pune	5-8 December 2017	
14	Sushmitha P.	MA16D007	International Conference on Linear Algebra and Applications at Manipal Academy of Higher Education, Karnataka	9-16 December 2017	

Sl. No.	Research Scholar	Roll No.	Conference/Seminar/Symposia/Workshop and Venue	Date	Financial Assistant
15	Arvind Kumar	MA16D012	Workshop on Gröbner bases and their applications, IIIT, New Delhi	11-23 December 2017	
16	R. Vijayakumar	MA16D031	GIAN course on Quasi conformal mapping and applications, IIT Indore	11-16 December 2017	
17	Sarvesh Kumar	MA13D023	International Meet on Function Spaces and Inequalities, 83rd Annual Conference of IMA, S.V. University, Tirupati	12-15 December 2017	
18		MA13D023	15th Discussion Meeting in Harmonic Analysis, IISc Bangalore	17-22 December 2017	
19	KuntalSom	MA15D019	Game Theory Gurukulam at Pulavanur Village, Cuddalore	15 December 2017-1 January 2018	
20	Arati Shashi	MA14D009	15th Discussion Meeting in Harmonic Analysis, IISc Bangalore	18-22 December 2017	
21	Parveena Shamim A.	MA17D003	Meshfree particle methods for solving fluid dynamics problem, NIT Calicut	18-22 December 2017	
22	AratiShashi	MA14D009	National Conference in Analysis, CMI, Chennai	23 December 2017	
23	Sampa Dey	MA15D005	Workshop on Analytic number theory, ISI Kolkata	25-30 December 2017	
24	Rohini S.	MA17D017	Regional Mini Workshop on Indian Women and Mathematics, CUSAT, Cochin	2 January 2018	
25	Debabrata De	MA15D001	Quantum Groups and Non-Cumulative Geometry, NISER Bhubaneswar	14-21 January 2018	
26	Repana Devendra	MA16D020	International Workshop on Recent Advances in Operator Semigroups, University of Delhi, New Delhi	17-22 December 2017	
27	Somnath Maity	MA16D201	Conference on A Meshfree Particle Method for Solving Fluid Dynamics Problems, NIT Calicut	18-22 December 2017	
28	Rahul Kumar R.	MA15D015	Conference on Quantum Groups and Non-Commutative Geometry, NISER Bhubaneswar	15-19 January 2018	
29	Mohan Kumar Mallick	MA13D021	Research collaboration on Nonlinear Elliptic Boundary Value Problems with Dr. Sarath Sai, Assistant Professor, Department of Mathematics, IIT Palakkad	22 January-5 February 2018	

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl. No.	Student/Scholar	Roll No.	Prizes	Donor
1	Sahiba Arora	MA15C037	Geetha Raghupathy Prize	IIT Madras
2			LKVV Sarma Prize	IIT Madras
3	Rimpa Mondal	MA15M011	Institute Merit Prize	IIT Madras
4			LKVV Sarma Prize	IIT Madras

4.12.3. Faculty and their activities

Faculty

Name and Qualifications	Major areas of specialization
Professors	
Prof. Arindama Singh, PhD (IIT Kanpur)	Logic, numerical analysis
Prof.S.H.Kulkarni, PhD (IIT Bombay)	Functional analysis, numerical analysis
Prof. S. Ponnusamy, PhD (IIT Kanpur)	Complex analysis, function spaces, special functions and conformal geometry
Prof. R. Radha, PhD (IMSC Chennai)	Harmonic analysis, wavelets, time-frequency analysis
Prof. R. Rama, PhD (Anna University)	Formal language and automata theory/molecular computing

Name and Qualifications	Major areas of specialization
Prof. Y.V.S.S. Sanyasiraju, PhD (IIT Madras)	Computational fluid dynamics
Prof. Satyajit Roy, PhD (IISc. Bangalore)	Convective heat and mass transfer, computational fluid dynamics
Prof. K.C. Sivakumar, PhD (IIT Madras)	Functional analysis, mathematical programming
Prof. Ch. Srinivasa Rao, PhD (IISc Bangalore)	Non-linear differential equations
Prof. S. Sundar, PhD (IIT Madras)	Computational fluid dynamics, numerical analysis for partial differential equations, mathematical modeling
Prof. M.Thamban Nair, PhD (IIT Bombay)	Applicable functional analysis: spectral approximation, operator equations, inverse and ill-posed problems
Prof. R. Usha, PhD (IIT Madras)	Fluid dynamics
Prof. P. Veeramani, PhD (IIT Bombay)	Fixed point theorems and their applications to problems in optimization and best approximation, fuzzy set theory
Prof. V. Vetrivel, PhD (IIT Madras)	Non-smooth optimisation, fixed point theory, complementarity problems
Associate Professors	
Dr. A. K. B. Chand, PhD (IIT Kanpur)	Fractals, approximation theory and wavelets
Dr. A. V. Jayanthan, PhD (IIT Bombay)	Commutative algebra and algebraic combinatorics
Dr. Kalpana Mahalingam, PhD (University of South Florida, Tampa)	Theory of codes, DNA computing, combinatorics of words
Dr. S.R. Manam, PhD (IISc, Bangalore)	Applied mathematics
Dr. A.J. Shaiju, PhD (IISc, Bangalore)	Game theory, systems and control theory
Dr. Shruti Dubey, PhD (IIT Kanpur)	Nonlinear analysis of functional differential equations, mathematical study of ferromagnetic systems
Dr. Sounaka Mishra, PhD (ISI, Kolkata)	Discrete mathematics, approximation algorithm, combinatorial optimisation
Dr. R. Balaji, PhD (IIT Madras)	Linear algebra and optimisation
Assistant Professors	
Dr. T. V. Anoop, PhD (IMSC, Chennai)	Linear and nonlinear partial differential equations, nonlinear functional analysis
Dr. Arijit Dey, PhD	Algebraic geometry
Dr. Dipramit Majumdar, PhD (Brandeis University)	Algebraic number theory, p-adic aspects of modular forms and Galois representations
Dr. Kunal Krishna Mukherjee, PhD (Texas, A&M)	Operator algebras
Dr. N. Narayanan, PhD (IMSC, Chennai)	Graph Theory: Graph colouring, structural and extremal graph theory probabilistic combinatorics, discrete mathematics
Dr. Neelesh S. Upadhye, PhD (IIT Bombay)	Probability theory and applications
Dr. Priyanka Shukla, PhD (JNCASR, Bangalore)	Fluid mechanics: hydrodynamic instability, nonlinear dynamics, numerical PDE, granular flows, pattern formation
Dr. Santanu Sarkar, PhD (ISI, Kolkata)	Cryptology and computational number theory
Dr. Sarang S. Sane, PhD (TIFR, Bombay)	Commutative algebra, homological algebra, algebraic K-theory, algebraic geometry
Dr. Sivaraman Ambikasaran, PhD (Stanford University)	Numerical linear algebra, fast algorithms, scientific computing
Dr. Soumen Sarkar PhD (ISI, Kolkata)	Algebraic topology, geometric topology, differential geometry, convex geometry, K-theory, topological complexity, persistent homology, ring of continuous functions
Dr. Sriram Balasubramanian, PhD (University of Florida)	Functional analysis
Dr. Suhas Jaykumar Pandit, PhD (ISI, Bangalore)	Geometric group theory and low dimensional topology
Dr. K. Sumesh, PhD (ISI, Bangalore)	Operator algebra
Dr. V. Uma, PhD (IMSC Chennai)	Topology and geometry of Toric varieties and related spaces
Dr. T.E. Venkata Balaji, PhD (CMI, Chennai)	Algebraic geometry and commutative algebra

Name and Qualifications	Major areas of specialization
Inspire Faculty	
Dr. J. Jaikrishnan, PhD (Indian Institute of Science, Bangalore)	Complex analysis
Visiting Professor	
Dr. S. Kesavan (1 February 2016-31 January 2017)	Partial differential equation- homogenisation, isoperimetric inequality
Adjunct Professor	
Dr. S.Kesavan (1 February 2017 to date)	Partial differential equation- homogenisation, isoperimetric inequality
Institute PDF	
Dr. Pabitra Barik (16 September 2014 to date)	Algebraic geometry
Dr. Manasi Kulkarni (1 February 2016 to date)	Combinatorics on kiords, formal language and automata theory DNA computing
Dr. Pranav Haridas (1 July 2016 to date)	Several complex variables
Dr. J. Kokila (10 February 2017 to date)	Fractional differential equation

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conferences			
1	Prof. R. Usha	AICTE-sponsored workshop on Nonlinear Partial Differential Equations, delivered four lectures on Nonlinear Conservation Laws	22-27 January 2018
2	Dr. Ch. Srinivasa Rao, Prof. Y.V.S.S. Sanyasiraju	AICTE-sponsored QIP short-term course on Non-Linear Partial Differential Equations: Theory and Numerics. The short-term course was attended by 35 teachers from Andhra Pradesh, Telangana and Tamil Nadu colleges	22-27 January 2018
3.		AICTE-sponsored QIP short-term course on Non-Linear Partial Differential Equations: Theory and Numerics	23 January 2018
4	Prof. S. Sundar	GIAN course coordinator for Advanced Mathematical Methods for Real Data Analysis	5-10 March 2018
5		GIAN course coordinator for From Subdivision to Wavelets and Fractals	4-11 December 2017
6	Dr. A.K.B. Chand	GIAN course coordinator for Fractal Geometry: Foundations to Frontiers	14-31 August 2017
7	Prof. K.C. Sivakumar	GIAN course coordinator for Matrices with Positive Principal Minors: Theory and Applications	18-22 December 2017
8	Prof. R. Usha	GIAN course coordinator for Instability Methods in Hydrodynamics	18-22 December 2017
9	Dr. N. Narayanan	GIAN course coordinator for Graph Minors and Homomorphism: Correlation	20 January-2 February 2018
10	Dr. Santanu Sarkar and Dr. Dipramit Majumdar	Forays 2018	3-4 March 2018
11	Prof. R. Usha/Dr. Priyanka Shukla	AICTE-sponsored STC on Introduction to Hydrodynamic Stability; two talks on (1) Derivation of Orr-Sommerfeld-Squire System (2) Linear Stability Analysis: computation aspects (3) Tutorial Talk on Plane Poiseuille Flow	28-30 March 2018
12	Prof. R. Usha/Prof. S.H. Kulkarni	AICTE-sponsored short-term course on Numerical Linear Algebra, Department of Mathematics, IIT Madras	19-24 March 2018

Sl. No.	Coordinator(s)	Title	Period
13		AICTE-sponsored STC on Nonlinear PDE: Theory and Numerics, Department of Mathematics, IIT Madras	22-23 January 2018
14		Science Academies lecture workshop on Differential Equations and Dynamical Systems at The Madura College, Madurai; two talks on Nonlinear Conservation Laws	6 March 2018
15		AICTE-sponsored STC on Numerical Linear Algebra; One talk on The Power Method	22 March 2018
16	Prof. R. Usha	Department of Mathematics, Seminar, SAMVADA(Discussion) on Properties of Continuous Functions	12 March 2018
17		Organised a Lecture Series by Prof. Alexander Oron, David T. Siegel Chair professor in Fluid Mechanics, Department of Mechanical Engineering, Technion-Israel Institute of Technology, Haifa, Israel Prof. Oron visited the institute as Arcot Ramachandran Chair professor in the Department of Mathematics, IIT Madras	15 February-13 March 2018
18		Organised pedagogical workshop on Algebra and Linear Algebra at Kerala School of Mathematics, Kozhikode	24 March-26 April 2018
19		Advanced Training in Mathematics National Workshop titled Annual Foundation School – II at Kerala School of Mathematics, Kozhikode, for PhD students. Supported by the National Centre for Mathematics IITB-TIFR Mumbai. Co-organisers: Prof. Manickam Murugesan, Director KSOM and Prof. Vijayarajan, KSOM	8 May-3 June
20	Dr. T. E. Venkata Balaji	Refresher course in Advanced Analysis for College teachers working in Kerala state held at Kerala School of Mathematics, Kozhikode. Co-Resource-Person: Dr. J. Jaikrishnan, Inspire Faculty, IIT-Madras. Coordinators: Prof. Manickam Murugesan, Director KSOM and Prof. Vijayarajan, KSOM	9-12 November 2017

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty Member	Title	Institution	Period
Workshop				
1.	Sumesh K.	Advances in Noncommutative Mathematics	ISI Bangalore	11-13 January 2017
		Quantum Probability: Past, Present and Future	ISI Bangalore	10-12 August 2017
		Conference on Functional Analysis @ IIT Bombay 2017	IIT Bombay	12-15 October 2017
		International Workshop on Recent Advances in Operator Semigroups	University of Delhi	18-21 December 2017
Symposia				
	Dr. P. Veeramani and Dr. R. Usha	Non-Linear Analysis and Fluid Dynamics	IIT Madras	30-31 March 2018
	Dr. A.V. Jayanthan	National Symposium on Mathematics and Applications (NSMA)	IIT Madras	22 December 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1	K. Sumesh	Conference on Functional Analysis at IIT Bombay, 2017	Paper presentation: Regular representation of completely bounded maps	12-15 October 2017
		Refresher course on Real Analysis, Ramanujan Institute, University of Madras	Gave two lectures on Riemann-Stieltjes Integral	18-20 November 2017
2		70th Annual meeting of the APS meeting of the Division of Fluid Mechanics, Denver, Colorado, USA (19-21 November 2017)	Finite amplitude instability in two-layer viscosity stratified plane Poiseuille flow, R. Usha, Priyanka Shukla, Geetanjali Chattopadhyay	21 November 2017
3	Prof. R. Usha	70th Annual meeting of the APS meeting of the Division of Fluid Mechanics, Denver, Colorado, USA	Role of anisotropy and inhomogeneity on the instability due to viscosity stratification of Poiseuille flow in a porous channel, R. Usha, Geetanjali, Severine Millet	21 November 2017
4		Miscible two-fluid flow down an incline: stability analysis	Laboratoire de Mécanique des Fluides et d'Acoustique - UMR 5509, University of Lyon, France	20 June 2017
5		Linear stability analysis of viscosity stratified free surface flow	Université Claude Bernard Lyon 1 –Département of Mécanique	6 June 2017
6	Prof. Satyajit Roy	Lecture: Numerical Solutions of Differential Equations in short-term refreshers' course, Pondicherry University	Pondicherry University, Puducherry	17 July 2017
7		Four lectures on School Mathematics at Teachers workshop	Kerala School of Mathematics, Kozhikode	16-17 September 2017
8		Four lectures at the Refresher course on Real Analysis for College Teachers	Ramanujan Institute, University of Madras	7-8 November 2017
9	Prof. Arindama Singh	Five lectures on Matrix Theory at Pedagogy workshop for College Teachers	Central University of Tamil Nadu, Thiruvavur	17-23 December 2017
10		Five lectures on Analysis at Mathematics Workshop for undergrads		
11		Lecture on Bedbugs and a Lonely Hermit	Forays, IIT Madras	7 March 2018

Invited talks/paper presentation at conferences/symposia/workshop

Sl. No.	Faculty Member	Programme	Paper/Talk/Lectures	Date
1	Dr. Dipramit Majumdar	Number Theory and Representation Theory workshop in NUS	Invited Talk: P-adic transfer	18 April 2017
2		Research Science Initiative Chennai 2017 at Media Centre, Library, IIT Madras organised by IITM, PSBB Schools Chennai and Shastra University Thanjavur	Invited Lecture (2): The notion of curvature	29 April 2017
3	Dr. T. E. Venkata Balaji	Annual Foundation School-II at Kerala School of Mathematics	Invited lectures: Differential geometry	27 May-3 June 2017
4		Refresher course in Advanced Analysis, Kerala School of Mathematics, Kozhikode	Mini-course of eight lectures: Harmonic Functions on the Plane	9-12 November 2017

Sl. No.	Faculty Member	Programme	Paper/Talk/Lectures	Date
5	Prof. M. Thamban Nair	National Conference on Mathematical Methods for Engineering Applications at Mar Baselios College of Engineering, Trivandrum	Invited Talk: Heat Equation and Fourier Series	29 July 2017
6	Prof. R. Radha	IWM Annual conference, IISc Bangalore	Invited Talk	14 July 2017
7	Dr. Shruti Dubey	20 th International Conference of International Academy of Physical Sciences (CONIAPS XX) at University College of Science, Osmania University, Hyderabad, Telangana State, India	Invited Talk	15-16 July 2017
8	Prof. M. Thamban Nair	"Talk to a Professor" in Kendriya Vidyalaya, IIT Madras	Gave a talk titled, Concept of limit through Geometry and Physics	12 August 2017
9	Sumesh K.	Conference on Functional Analysis at IIT Bombay, 2017	Paper presentation: Regular representation of completely bounded maps	12-15 October 2017
10		Refresher course on Real Analysis, at Ramanujan Institute, University of Madras	Gave two lectures on Riemann-Stieltjes Integral	18-20 November 2017
11	R. Usha	70 th Annual meeting of the APS meeting of the Division of Fluid Mechanics, Denver, Colorado, USA	Finite amplitude instability in two-layer viscosity stratified plane Poiseuille flow, R. Usha, Priyanka Shukla, Geetanjali Chattopadhyay	21 November 2017
12		70 th Annual meeting of the APS meeting of the Division of Fluid Mechanics, Denver, Colorado, USA	Role of anisotropy and inhomogeneity on the instability due to viscosity stratification of Poiseuille flow in a porous channel, R. Usha, Geetanjali, Severine Millet	21 November 2017
13	Prof. Arindama Singh	Forays 2018	Talk: A Lonely Hermit and Bedbugs	7 March 2018
14		AICTE Course on Numerical Linear Algebra at IIT Madras	Talk: Linear Transformations	19 March 2018
15		Invited talk on Linear Algebra (Seven Lectures)	Kerala School of Mathematics	24-26 March 2018
16		Invited Talk	Hindustan College, Coimbatore	6 March 2018
17		Invited talk	Lakshmikanthan Institute for Social Studies and Maths	16 March 2018
18		Invited Talk	Hindustan College	23 March 2018
19		Invited Talk	Hyderabad University	26 August 2017
20		Invited talk	Hyderabad University	26 August 2017
21		Invited talk	Hyderabad University	30 August 2017
22		Invited Talk	K.L. University, Vijayawada	17 November 2017
23	Prof. S. Sundar	Invited Talk	SRM University, Chennai	8 December 2017
24		Invited Talk	VIT Vellore	1 December 2017
25		Invited Talk	Kongu Engineering, College, Erode	27 October 2017
26		FDP Talk	St. Joseph College, FDP Talk	18 August 2017
27		Invited Talk	PSG Institute	18 September 2017
28	Dr. A.K. B. Chand	Special Lecture	VIT University	14 March 2018

Sl. No.	Faculty Member	Programme	Paper/Talk/Lectures	Date
29	Prof. Satyajit Roy	Invited talk: International Seminar on Emerging Trends in Mathematics (ISETM)	VIT University, Vellore	29 March 2018
30		Special Lecture in Faculty Development Program	VIT University, Vellore	28 March 2018
31	Dr. Sarang Sane	Invited talk: The Pfaffian of a matrix and unimodular rows	Indian Statistical Institute (ISI), Bengaluru	20 March 2018
32		Invited talk: Specialisation closed subsets, thick subcategories and Cohen-Macaulay rings	Indian Statistical Institute (ISI), Bengaluru	22 March 2018
33	Prof. K.C. Sivakumar	Invited talk: On almost skew-symmetric matrices	SRM Institute of Science and Technology, Vadapalani	23 February 2018
34	Prof. P. Veeramani	Talk on Basic concepts on analysis and algebra, Workshop on Analysis, Algebra and Applications	Vivekanandha College of Arts and Science for Women, Sankari West	3 February 2018
35		Talk on National Science Day	Muthayammal College of Engineering, Rasipuram	17 February 2018
36	Prof. P. Veeramani	Chaired a session and gave an invited talk on Applications of fixed point theorems, best proximity point theorems to generalised Nash equilibrium points, International Conference on Mathematical Sciences and Applications	Guru Ghasidas Vishwavidyalaya (Central University), Bhillasapur	23 February 2018
37		Talk on Applications of LUB Axiom and some results on uniform convergence on National Workshop on Analysis and Algebra	St. Joseph's College, Tiruchirappalli	28 February 2018
38	Prof. P. Veeramani	Talk on Applications of Completeness Axiom	Kanchi Mamunivar Centre for Post Graduate Studies, Pondicherry	15 March 2018
39		P. Subramanian Endowment Lecture: On Zorn's Lemma and its Applications	Presidency College	28 March 2018
40	Prof. P. Veeramani	A trick with Koszul complexes and a derived equivalence Cohen-Macaulay rings and derived equivalences	Mathematisches Institut, Ludwig Maximilians Univeritat (LMU), Munchen	31 May 2017
41		Cohen-Macaulay rings and derived equivalences	Harishchandra Research Institute (HRI), Allahabad	1 December 2017
42	Dr. Sarang Sane	The Pfaffian of a matrix and unimodular rows	Indian Statistical Institute (ISI), Bengaluru	20 March 2018
43		Specialisation closed subsets, thick subcategories and Cohen-Macaulay rings	Indian Statistical Institute (ISI), Bengaluru	22 March 2018
44	Dr. Sarang Sane	Specialisation closed subsets, thick subcategories and Cohen-Macaulay rings	Indian Institute of Science (IISc), Bengaluru	23 March 2018
45		Instructional School for Teachers in St. Joseph's College, Irinjalakuda, Kerala	Lectures and tutorials on Commutative Algebra	24-29 April 2017
46	Prof. Y.V.S.S Sanyasiraju	National Conference on Commutative Algebra and Algebraic Geometry (CAAG) in IISER, Pune	A criterion for local rings to be Cohen-Macaulay based on a derived equivalence	5-8 December 2017
47		Advanced Foundational School (AFS-1) in Bhaskaracharya Pratishthan, Pune	Lectures and three tutorials based on Artin's Algebra	15-22 December 2017
48	Prof. Y.V.S.S Sanyasiraju	Lecture on Shape parameter optimisation of the RBF functions for solving the PDE	Discipline of Mathematics, School of Sciences, IIT Indore	5 January 2018
49		Invited talk on Flow and heat transfer computations using Higher Order Compact Schemes, National Conference on Fluid Mechanics 2017	SSN College, Chennai	28 October 2017
50	Prof. Y.V.S.S Sanyasiraju	Invited talk on Flow computations using Higher Order Compact Schemes, National Workshop on Mathematical Modeling and Computational Techniques	NIT Karaikal	15 July 2017

Sl. No.	Faculty Member	Programme	Paper/Talk/Lectures	Date
51		Invited talk on Mathematical sampling theory - some recent developments, IWM conference	Indian Institute of Science, Bangalore	13-15 July 2017
52		Invited talk on Wavelets and applications in signal and image processing, National Conference on Emerging Trends in Mathematics 2017	Ethiraj College for Women, Chennai	12-13 December 2017
53	Prof. R. Radha	Invited talk on Frames and bases of system of translates on the Heisenberg group, 83rd Annual (International) Conference on Function Spaces and Inequalities	Indian Mathematical Society, Tirupati	12-15 December 2017
54		Invited talk on Frames and shift invariant spaces on the Heisenberg group, 15th Discussion meeting in Harmonic Analysis (International conference)	Indian Institute of Science, Bangalore	18-21 December 2017
55		Invited talk in National Conference in Analysis on Yves Meyer and Wavelet Analysis	Chennai Mathematical Institute	23 December 2017

Visit to Other Institutions

S.No.	Faculty Member	Programme	Venue	Date
1		Joint Research work	IIT Bhubaneswar	8-16 May 2017
		Faculty Selection Seminar Evaluation	IIT Tirupati	24 May 2017
2		Shape Preserving Rational Graph Directed Fractal Interpolation at 83rd Annual conference	IMS, Tirupati	12-15 December 2017
3	Dr. A. K. B. Chand	Cubic Spline Fractal Solutions to Two-point Boundary Value Problems at International Conference on Nonlinear Differential Equations- Theory, Modeling and Computations	SRM University, Kattankulathur, Chennai	8-9 December 2017
4		DC Meeting	VIT Chennai	9 December 2017
5		DC Meeting	SRM University, Kattankulathur, Chennai	18 January 2017
6		Special Lecture	VIT University	14 March 2018
7		Faculty selection short listing meeting as a Member	IIT Palakkad	4 April 2017
8		DST-SERB PAC Meeting as a Member	IIT Guwahati	20-21 April 2017
9		PhD viva-voce meeting as an examiner	NIT Surat	18 May 2017
10	Prof. S. Sundar	Faculty selection meeting as a member of the selection committee	IIT Tirupati	24-25 May 2017
11		PhD viva voce meeting	IIT Bombay	27 June 2007
12		Faculty selection committee meeting	Central University of Tamil Nadu, Thiruvavur	1 July 2017
13		DST-SERB PAC meeting	IISc Bangalore	6 July 2017
14		PhD review meeting	SASTRA University	22 July 2017
15		Faculty Selection Committee Meeting	NIT, Warangal	14 July 2017

S.No.	Faculty Member	Programme	Venue	Date
16		BoS meeting	Nagpur Engineering College, Nagpur	5 August 2017
17		Selection Committee Meeting	Indian Institute of Petroleum Engineering, Vizag held at Kolkata	16 August 2017
18		PhD Viva	NIT Calicut	8 September 2017
19		Guest Speaker	Ethiraj College Maths Fest "Numera"	14 September 2017
20		DC Meeting	SRM University	28 October 2017
21		PhD viva voce examination	NIT Warangal	27 December 2017
22		Compact Course PDE	Vasavi College, Erode	02 September 2017
23		PhD Viva	IISc Bangalore	13 September 2017
24		PhD Viva	NIT Jamshedpur	15 September 2017
25		PhD Viva	IIT BHU	22 September 2017
26		Faculty Selection Committee Meeting	IIT Kharagpur	4 October 2017
27		DST-SRB PAC Meeting	IISc Bangalore	13-14 October 2017
28	Prof. S. Sundar	DAAD Workshop	Hyderabad	28 October 2017
29		PhD Viva	IISc Bangalore	3 November 2017
30		DST-PAC Meeting	IMRL Hyderabad	10-11 November 2017
31		Recruitment	NIT Calicut	29 November 2017
32		Chief Guest, Maths Conference	Ethiraj College, Chennai	12 December 2017
33		Attended the PhD viva voce meeting	IISc Bangalore	26 December 2017
34		Faculty Development Programme (FDP)	REC, Chennai	26 December 2017
35		PhD Viva voce meeting/invited talk	IIT Kharagpur	29 December 2017
36		Chief Guest	Velammal Bodhi School, Chennai	6 January 2018
37		PhD Viva	IIT Kharagpur	2 February 2018
38		PhD Viva	Madurai Kamaraj University	23 February 2018
39		DC Meeting	Sastra University	21 March 2018
40		Faculty Selection	NITC	24 March 2018
41	PhD Viva	BHU	28 March 2018	
42	PhD viva voce meeting	SIT Tumkuru, Karnataka	28 June 2017	
43	Faculty Selection Committee Meeting	GITAM University, Hyderabad	5 July 2017	
44		PhD Viva Voce Meeting	IIT Kharagpur	14 July 2017
45		Special Lectures in FDP	VIT University	27-28 October 2017
46		Expert lectures for students	AIT Razampeta, AP	4 November 2017
47	Prof. Satyajit Roy	PhD Viva	IIT Kharagpur	13 November 2017
48		PhD Viva	NIT Calicut	27 November 2017
49		Invited talk	SRM University, Chennai	8 December 2017
50		Synopsis meeting	IIST, Trivandrum	15 February 2018
51		PhD Viva conducted	NIT Trichy	28 February 2018
52		Comprehensive Viva	NIT Puducherry	3 March 2018
53		DC Meeting	Sri Ramachandra University	21 March 2018
54		Doctoral Committee Meeting	Anna University, Chennai	14 December 2017
55		PhD Viva Voce	NIT Calicut	25 January 2018
56		Selection Committee Meeting	IIT Patna	12-16 May 2017
57		IIT ISM-Dhanbad	30 October 2017	
58	Prof. Arindama Singh		IIT Hyderabad	5-8 March 2018
59		Selection Committee Meeting	Central University of Rajasthan	13-14 June 2017
60		Selection Committee Meeting	Indian Maritime University	12 October 2017
61		Selection Committee Meeting	IIT ISM Dhanbad	30 October 2017

S.No.	Faculty Member	Programme	Venue	Date
62		Plenary talk: A discrete regularization method for Fredholm integral equations of the first kind, 2nd International Conference on Recent Advances in Mathematical Sciences and its Applications	Jaypee Institute of Information Technology, New Delhi	12 December 2017
63		Lectures in ATS on Functional Analysis for Teachers and research Scholars	IIT Tirupati	14-15 December 2017
64		Member, Faculty Selection Committee	IIT Delhi	3-4 January 2018
65		Senate meeting	IIT Palakkad	6 April 2017
66		Board of Studies meeting	Amrita Vishwavidyalaya, Coimbatore	21 April 2017
67		Chaired PhD interview committee	IIT Palakkad	18-19 May 2017
68	Prof. Thamban Nair	Subject Expert for Selection Committee	IIT Ropar	11 July 2017
69		Senate Nominee for Selection Committee Meeting for IIT Jammu	IIT Delhi	19-20 July 2017
70		Expert for Academic Audit of Mathematics department of VNIT Nagpur	VNIT Nagpur	22 July 2017
71		Talk: Concept of limit through examples from physics and geometry, INSPIRE Camp	SRM University	9 January 2018
72		Talk: Elementary concepts in calculus through examples from physics and geometry, INSPIRE Camp	SSN College of Engineering	27 January 2018
73		As subject expert for faculty selection	Madras University	9 February 2018
74		As subject expert for faculty selection	NIT Trichy	17-19 February 2018
75		Conduct GATE Examination	Sri Lanka	1-4 February 2018
76		Admission Committee Meeting	KIIT Bhubaneswar	19 February 2018
77		Member, Expert Audit Committee Meeting	PSG Tech., Coimbatore	24 February 2018
78		As subject expert for faculty selection	NIT Surathakal	28 February 2018
79	Prof. V. Vetrivel	Member, Doctoral Committee, PhD scholar	Dr. M.G.R. Educational and Research Institute, Maduravoya	23 March 2018
80		Chief Guest, Symposium SIT Scihum – 2018	Sai Ram Institute of Technology, Madras,	9 March 2018
81		Board of Studies Meeting	Bishop Heber College	9 March 2018
82		Viva Voce Meeting	Sri Ramachandra University	10 March 2018
83		Selection Committee Meeting	CIT Coimbatore	24 March 2018
84		29 th Ramanujan Endowment Lecture on Dynamics of wavy films, Department of Mathematics, Chennai	College of Engineering, Anna University	23 February 2018
85	Prof. R. Usha	Attended Science Academies' Lecture Workshop	The Madura College, Madurai	6 March 2018
86		Ramanujan Day, Chennai	College of Engineering, Guindy, Anna University,	23 February 2018

S.No.	Faculty Member	Programme	Venue	Date
87		Ph. D viva voce, Department of Mathematics	Bharathiar University, Trichy	12 March 2018
88		Board of Studies Meeting	Department of Mathematics Meenakshi College For women, Chennai	14 March 2018
89	Prof. R. Usha	Board of Studies Meeting	Department of Mathematics Stella Maris College, Chennai	14 March 2018
90		Special Lecture	Srimad Andavan Arts and Science College, Trichy	12 March 2018
91		KVPY interview selection committee	Anna University MIT, Chennai,	10-12 February 2018
92		RSIC interview selection committee	Padma Seshadri Bala Bhavan Senior Secondary School, Nungambakkam	25 February 2018
93		Advanced Training in Mathematics Schools–National Workshop titled Annual Foundation School – II, gave invited lectures on Differential Geometry	Kerala School of Mathematics, Kozhikode	8 May-3 June 2017
94	Dr. Venkata Balaji	Refresher course in Advanced analysis for college teachers working in Kerala state, gave invited lectures on Harmonic Functions on the Plane	Kerala School of Mathematics, Kozhikode	9-12 November 2017
95		Workshop on K-theory	HIM, Bonn, Germany	May2017
96		Collaboration visit	NTNU, Trondheim, Norway	May2017
97		Collaboration visit and talk	LMU, Munich, Germany	May-June2017
98	Sarang Sane	Committee meeting	IISER, Tirupati	12 October 2017
99		Collaboration visit and talk	HRI, Allahabad	November 2017
100		Collaboration visit and talk	ISI, Bengaluru	March2018
101		Doctoral Committee Meeting	SRM University, Kattankulathur	25 July 2017
102		Comprehensive viva at Tamil Nadu	SRM University, Kattankulathur	25 July 2017
103	Dr. Shruti Dubey	Invited talk	SRM University, Chennai	8 December 2017
104		Doctoral Committee Meeting	Anna University, Chennai	14 December 2017
105		PhD Viva Voce	NIT Calicut	25 January 2018
106	Dr. Sivaram Ambikasaran	FEAST Project Collaboration	Vikram Sarabhai Space Centre, Trivandrum	3 November 2017
107		Expert member, PhD Thesis Synopsis meeting	SRM University	22 March 2018
108		Subject expert member, BOS (Board of Studies) for undergraduate courses	SRM Institute of science and Technology	8 March 2018
109		Expert member, Board of studies of the Mathematics	PSG College of Technology, Coimbatore	24 February 2018
110		External Examiner, PhD Viva Voce examination	VIT Vellore	20 February 2018
111	Prof. Y.V.S.S. Sanyasiraju	DC Committee meeting of three research scholars	SRM Institute of Science and Technology	18 January 2018
112		Expert member, PhD Viva Voce examination, Discipline of Mathematics, School of Sciences	IIT Indore	5 January 2018
113		External examiner, PhD viva voce examination	JNTU Ananthapur	29 December 2017
114		Expert member, Faculty recruitment,	VIT Vellore	1 July 2017

S.No.	Faculty Member	Programme	Venue	Date
115		Expert member, PhD Viva Voce examination,	NIT Surat, Surat	28 June 2017
116		GATE meeting	IIT Kharagpur	24-25 June 2017
117		Attended as Expert member, Board of Studies meeting for revision of PG studies in Mathematics	SRM University	13 June 2017
118	Prof. Y.V.S.S. Sanyasiraju	Expert member to scrutinise the seminar talks of the candidates of the faculty recruitment (Mathematics department)	IIT Tirupati	24 May 2017
119		Expert member, comprehensive viva examination	SRM University, Chennai	29 April 2017
120		Expert member, PhD viva voce examination	S V University, Tirupati	26 April 2017
121		Expert member, PhD viva voce examination	JNTU Ananthapur	12 April 2017
122		Expert member, Mathematical Modeling Competition	SRM University	4 April 2017
123	Dr. Soumen Sarkar	Annual Foundation School -I (2017) - Kozhikode	Kerala School of Mathematics (KSoM)	11-29 December 2017
124	Prof. R. Radha	Participated as a resource person for the course Real Analysis	Ramanujan Institute for Advanced study in Mathematics, Chennai.	7-27 November 2017

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country visited	Date	Purpose of Visit	Funding from
1	Dr. Arijit Dey	Mexico	7-12 May 2017	BIRS-CMO workshop on Beyond Toric Geometry	Institute (Partial)
2	Dr. Dipramit Majumdar	Singapore	17-24 April 2017	Attended and gave invited talk at workshop on Number Theory and Representation Theory at National University of Singapore	NUS and IIT
3	Dr. Kunal Mukherjee	Germany	23-29 April 2017	RIP Research programme	--
4	Prof. K. C. Sivakumar	USA	18 May-31 July 2017	Visiting Professor at UMBC, USA	--
5		USA	29 May-1 June 2017	Princeton-Rider workshop on Polyhedral Products	Institute (Partial)
6	Dr. Soumen Sarkar	Halifax, Canada	5-13 July 2017	Visiting Professor Dorette Pronk, Halifax, Canada <ul style="list-style-type: none"> Talk 1: Some lovely relations between combinatorics and Toric topology Talk 2: On integral cohomology of Toric orbifolds 	Dalhousie University
7		Vancouver, Canada	15-22 July 2017	CT 2017: International category Theory Conference, UBC, Canada	Institute (Partial)
8		Sanya, China	4-9 December 2017	International Open Chinese-Russian Conference. Title: On integral homology of orbifolds.	Institute (Partial)

Sl. No.	Faculty Member	Country visited	Date	Purpose of Visit	Funding from
9	Dr. R. Balaji	Germany	24-28 April 2017	Advance training programme on Distance Learning and Double Degree in a Modern University – A way of Internationalisation	--
10	Prof. S. Sundar	Germany	24-28 April 2017	Advance training programme on Distance Learning and Double Degree in a Modern University – A way of Internationalisation	ERASMUS+
11		Germany	8-20 January 2018	International Workshop on Mathematical Modeling of Complex Systems - Internationalization and Double Degree	Universität Koblenz Landau, Germany
12	Prof. V. Vetrivel	Germany	8-20 January 2018	International Workshop on Mathematical Modeling of Complex Systems - Internationalization and Double Degree	Universität Koblenz Landau, Germany
13	Prof. R. Usha	France	1-30 June 2017	Visiting professor, Department of Mecanique	Université Claude Bernard Lyon 1 – France
14	Sarang Sane	Germany, Norway	May-June 2017	Visits to Hausdorff Institute of Mathematics, Bonn, NTNU, Trondheim and LMU, Munich	Self, IITM, NTNU, LMU

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Member	Name of Award	Awarded by	Date of award
Awards				
1	Dr. Kalpana Mahalingam	Young Scientist Award	The Academy of Sciences, Chennai	28 March 2018
2		Young Faculty Recognition Award 2017	IIT Madras	5 September 2017
3	Dr. A.K.B. Chand	Open Arm Travel Grant for ICM-2018	International Mathematical Union	10 March 2018

Distinguished Visitors to the department

Sl. No.	Name and Designation	Date of visit	Purpose of Visit
1	Dr. D. Venku Naidu, Assistant Professor, IIT Hyderabad	15-19 July 2017	
2	Dr. S. Sivanathan, Assistant Professor, IIT Delhi	23 May-2 June 2017	Research collaboration with Dr. R. Radha
3	45 Students from Bishop Heber College (Autonomous), Department of Mathematics, Tiruchirappalli	18 September 2017	Lecture-cum-interactive session at Madhava Hall for students organised by Prof. M. Thamban Nair and Prof. P. Veeramani
4	Mr. Supreeya Bhandari, Royal Bank of Scotland (RBS)	25 September 2017	Opportunities in Financial Mathematics for possible training and placement
5	Dr. Asok K. Nanda, Department of Mathematics and Statistics (IISER Kolkata)	27 September 2017	Special seminar talk: Glance through reliability
6	A delegation, consisting of 12 members, includes the President of the UCA, Prof. Jean-Marc Gambaudo and other Program Directors of the research and excellence programs	18 January 2018	The delegation met the faculty members to discuss potential synergies along the lines of the Ecoles Universitaires de Recherche (EUR) programmes that cover all the fields of expertise UCA offers
7	Prof. Peter Massopust, Technical University Munich, Germany	14-31 August 2017	GIAN course and joint research work with Dr. A.K.B. Chand
8	Prof. David Levin, Tel-Aviv University, Israel	3-11 November 2017	GIAN course and joint research work with Dr. A. K. B. Chand

Other Activities of the Department/Centre

Seminar Talks

Sl. No.	Faculty Member	Title	Date
1	Prof. B. V. Limaye, IIT Bombay	Condition numbers of matrices and bases	3 April 2017
2	Dr. S. Viswanath, IMSc, Chennai	Chromatic polynomials of graphs and words in commutation monoids	4 April 2017
3	Dr. D. Senthil Babu, French Institute of Pondicherry (IFP)	Mathematics of the practitioners in early modern south India	6 April 2017
4	Dr. Anusuya Ghosh, Post-doctoral fellow, IIM Bengaluru	Compactly SDR set and sufficient conditions for semidefinite representation	13 April 2017
5	Prof. Roy Joshu, Ohio State University, Columbus, Ohio, USA	Cohomology of group actions	19 April 2017
6	Prof. R. Radha, IIT Madras	Yves Meyer and wavelets	20 April 2017
7	Dr. Sudhanshu Shekhar, IIT Kanpur	Residual Galois representations and parity of ranks of elliptic curves	17 May 2017
8	Prof. Basudeb Datta, IISc Bangalore	Semi-equivelar maps on the tours are Archimedean	18 May 2017
9	Dr. Kashyap Rajeev Sarathy, Department of Mathematics, IISER Bhopal	Geometric realisations of cyclic actions on surfaces	31 July 2017
10	Prof. Krishnaiyan Thulasiraman, Hitachi Chair Emeritus in Computer Science, University of Oklahoma, USA	Resistance distance, Kirchhoff Index/network criticality and Foster's Theorems: generalisation and unification	3 August 2017
11	Prof. S. Kesavan, Adjunct Professor, Department of Mathematics, IIT Madras	From Poincare to Saint Venant-via Donati, Lions and Korn	10 August 2017
12	Dr. Panchatcharam Mariappan, NUMA Engineering Services Limited, Dundalk, Ireland	Fast finite element bioheat solver for cancer treatment lesion predictions	17 August 2017
13	Prof. Arindama Singh, Department of Mathematics, IIT Madras	A curious ball game	24 August 2017
14	Prof. Peter Massopust, Centre of Mathematics, Technical University Munich, Germany	Fractional cone and hex splines	31 August 2017
15	(Retd.) Prof. Peeyush Chandra, Department of Mathematics and Statistics, IIT Kanpur	Lecture series on Mathematical population dynamics and mathematical epidemics	4-8 September 2017
16	Dr. Shibasish Dasgupta, Lead Statistician, Global Data Insight and Analytics, Ford Motor Private Limited	Variable selection using Kullback-Leibler divergence loss	14 September 2017
17	Prof. R.K. Amit, Department of Management Studies, IIT Madras	Getting together when others get together - some results in cooperative games with externalities	21 September 2017
18	Prof. K. N. Raghavan, Institute of Mathematical Sciences, Chennai	Tableaux, paths and character formulas	28 September 2017
19	Dr. Usha Mohan, Department of Management Studies, IIT Madras	Formulations of the travelling salesman problem and linear programming relaxations	5 October 2017
20	Dr. Sriram Balasubramanian, Department of Mathematics, IIT Madras	Compact sets in the free topology	6 October 2017
21	Dr. Sunder Ram Krishnan, PDF, Department of Electrical Engineering, Technion-Israel Institute of Technology, Israel	Convergence of the reach for a sequence of random manifolds	12 October 2017
22	Dr. P. Veeramani, Department of Mathematics, IIT Madras	Nondiametral Points and Zorn's Lemma	19 October 2017
23	Prof. G. Srinivasan, Department of Management Studies, IIT Madras	On a few interesting O.R. Applications	26 October 2017
24	Dr. Shanker Raman, Senior Project Adviser, RISE Lab, Department of Computer Science and Engineering, IIT Madras	Mathematical models for a computer network protocols and security – a need for a new perspective	2 November 2017

Sl. No.	Faculty Member	Title	Date
25	Prof. M. Seetharama Gowda, Department of Mathematics and Statistics, University of Maryland, USA	Weakly homogeneous variational inequalities	21 November 2017
26	Dr. Gopalan Nair, The University of Western Australia, Perth	The Eigenvalue map and spectral sets/cones/functions	22 November 2017
27	Dr. Kamalakshya Mahatab, Department of Mathematical Sciences, Norwegian University of Science and Technology (NTNU), Trondheim, Norway	Ballot Theorem Generalisations and Combinational Analysis of M/M/1 Queues	4 December 2017
28	Prof. Ratnasingham Shivaji, W.L. Giles Distinguished Professor Emeritus of Mathematics (Mississippi State University), The University of North Carolina at Greensboro, USA	Extreme values of the Riemann Zeta Function on the 1-line	7 December 2017
29	Dr. Sudarshan Tiwari, AG Technomathematik, TU Kaiserslautern, Germany	Uniqueness results for semipositone problems	12 December 2017
30	Dr. Laurence Grammont, University of Lyon, Institut Camille Jordan (ICJ), St-Etienne, France	Modeling and simulations of interacting particle systems	1 January 2018
31	Prof. M. Manickam, Director of Kerala School of Mathematics	Correspondence between Bayesian estimation and optimal constrained interpolation	17 January 2018
32	Prof. H.G. Feichtinger, Faculty of Mathematics, University of Vienna, Austria	Om Hecke Theory	18 January 2018
33	Professor. K. Srinivas Reddy (Department of Mechanical Engineering, IIT Madras)	The Kernel Theorem for the Banach Gelfand Tiple (S0, L2, S)) and applications	23 January 2018
34	Prof. B.S.V. Prasad Patnaik (Department of Applied Mechanics, IIT Madras)	Optimisation of energy systems for sustainable development	25 January 2018
35	Dr. Satyajit Pramanik (Post-doctoral fellow, Nordita, Royal Institute of Technology and Stockholm University, Stockholm, Sweden)	Introduction to turbulent flows and their prediction: A tribute to Prof Tulaji	1 February 2018
36	Prof. S. Kesavan, Department of Mathematics, IIT Madras	Confinement and nonlocal elasticity effects in pre-melting dynamics	8 February 2018
37	Prof. J. K. Verma (Department of Mathematics, IIT Mumbai)	Lecture series on Topics in advanced PDE	13 February 2018
38	Prof. Alexander Oron, David T. Seigel Chair in Fluid Mechcnics, Department of Mechanical Engineering, Technion-Israel Institute of Technology, Haifa 32000, Israel	Counting roots of polynomials using Newton polytopes	15 February 2018
39	Dr. T.E. Venkata Balaji, Department of Mathematics, IIT Madras	Lecture series on Long wave theory of thin liquid films	15 February- 14 March 2018
40	Dr. Shiv Prakash Patel, ISI Bangalore	Some beautiful butterflies in Mathematics	22 February 2018
41	Dr. Sabyasachi Mukhopadhyay, University of Hohenheim, Germany	Restriction of representations of metaplectic GL_2	22 February 2018
42	Dr. A. V. Jayanthan, Department of Mathematics, IIT Madras	Modelling spatio-temporal variation in rainfall using a hierarchical Bayesian regression model	26 February 2018
43	Dr. Arnab Saha, Australian National University	Edge ideals - A bridge between combinatorics and commutative algebra	1 March 2018
44	Dr. K. Sumesh, Department of Mathematics, IIT Madras	Isocrystals associated to arithmetic jet spaces of Abelian schemes	1 March 2018
45	Prof. N.S. Narayanaswamy, Department of Computer Science and Engineering, IIT Madras	Completely positive maps - An introduction	8 March 2018
46	Dr. Sounaka Mishra, Department of Mathematics, IIT Madras	An exposition of property B of uniform hypergraphs	15 March 2018
47		Greedy algorithm for maximum independent set and its generalization	22 March 2018

4.13. Department of Mechanical Engineering

4.13.1. Introduction

The Department of Mechanical Engineering was established in the year 1959. It offers Ph.D., M.S., M.Tech., B.Tech. and Dual Degree programmes. The department has excellent facilities to carry out state-of-the-art research in three major disciplines of Mechanical Engineering, namely, Thermal Engineering, Mechanical Design and Manufacturing Engineering.

The Thermal Engineering stream comprises of six laboratories, namely, Heat Transfer and Thermal Power, Turbo Machines, I.C. Engines, Refrigeration and Air Conditioning, and Thermodynamics and Combustion. The Design stream consists of Machine Design Section, Machine Dynamics Laboratory, NDE Laboratory. The Manufacturing Engineering stream consists of the Machine Tools Laboratory, CAD/CAM and Precision Engineering and Instrumentation Laboratory.

4.13.2. Academic Programmes

New Courses Introduced

Sl. No.	Course No.	Title
1.	ID 5030	Machine Learning for Engineering and Science Applications
2.	ME 6231	Tensor Analysis in Mechanics
3.	ME 5001	Prognostics and Health Management of Machine Tools

Students on roll as of September 2017+M.S. and Ph.D Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
B. Tech.	83	77	82	80	22	344
Dual Degree	79	77	80	71	101	408
M Tech.	132	80				212
M.S.	51	34	51	26	4	166
Ph.D.	45	53	83	95	102	378
Total	390	321	296	272	229	1508

Students/Scholars who Attended conference/seminar and symposia abroad/India

Sl. No.	Students/Scholars	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue	Financial Assistance from
Abroad					
1.	Prasanna J.	ME13D010	ASTFE-Thermal and Fluids Engineering Conference	2-7 April 2017, Las Vegas, Nevada, USA	IIT Madras
2.	Ajith Jogi	ME14D213	WCX 17: SAE World Congress Experience	4-6 April 2017, COBO Center, Detroit, Michigan, USA	IIT Madras
3.	Jaganathan	ME14D049	11 th The European Conference on Industrial Furnaces and Boilers (INFUB-11)	18-21 April 2017, Albufeira, Algrave, Portugal	IIT Madras
4.	Shreekant Srivastava	ME14S077	Photovoltaic Technical Conference	26-28 April 2017, Marseille, France	IIT Madras
5.	Hitesh Singla	ME14S059	2 nd International Conference on Energy Materials and Applications (ICEMA 2017)	10-12 May 2017, Hiroshima, Japan	IIT Madras
6.	Behera	ME13D216			
7.	Biranchi Narayan	ME13D004	7 th International Conference on Nanomaterials by Severe Plastic Deformation (NanoSPD7)	2-7 July 2017, Sydney, Australia	IIT Madras
8.	Faseeulla Khan Md	ME12D034			
9.	Abhijeet Dhal	ME12D207			

Sl. No.	Students/ Scholars	Roll No.	Conference/Seminar/Symposia/ Workshop	Date and Venue	Financial Assistance from
10.	Jaykumar Yadav	ME15S021	ASME Power Energy 2017	26-30 June 2017, Charlotte, North Carolina, USA	IIT Madras
11.	Chirag Alreja	ME15D206	Proceedings of the ASME, MSEC2017 International Manufacturing Science and Engineering Conference	4-8 June 2017, Los Angeles, CA, USA	IIT Madras
12.	Aditya Dilip Lele	ME15S084	10th U.S. National Meeting on Combustion.	23-26 April, 2017 College Park, University of Maryland, USA	IIT Madras
13.	Nishant Surendrakumar Sawarkar	ME15S023	19th International Conference on Finite Elements in Flow Problems - FEF 2017	5-7 April 2017, Rome, Italy	IIT Madras
14.	Rohit Khare	ME15S089	10th U.S. National Combustion Meeting	23-26 April 2017, College Park, University of Maryland, USA	IIT Madras
15.	Govind M.	ME14D011	9th European Nonlinear Dynamics Conference (ENOC 2017)	25-30 June, 2017, Budapest University of Technology and Economics, Budapest, Hungary	IIT Madras
16.	Rajaguru	ME14D092	NAMRC	4-8 April 2017, Los Angeles, California	IIT Madras
17.	Nitesh Kumar	ME15S020	29th Annual Conference on Liquid Atomization and Spray Systems (ILASS Americas) 2017	15-18 May 2017, Georgia Tech, Atlanta, USA	IIT Madras
18.	Aditya Pillai	ME15S047	4th International Conference on Heat Transfer and Fluid Flow	8-10 June 2017, Rome, Italy	IIT Madras
19.	Manjunath C T	ME15D063	PIERS 2017	22-25 May 2017, St. Petersburg, Russia	IIT Madras
20.	Rahul Yadav	ME13D215	Advances in Computational Heat Transfer 2017	28 May-1 June 2017, Naples, Italy	IIT Madras
21.	Hemant	ME14D014	7th International Symposium on Advances in Computational Heat Transfer (CHT-17)	28 May-1 June 2017, Naples, Italy	IIT Madras
22.	Sooraj G.	ME15S052	24th International Congress on Sound and Vibration	23-27 July 2017, Park Plaza Westminster Bridge Hotel, London	IIT Madras
23.	Harish V.	ME12D036	6th European Conference on Tribology (ECOTRIB 2017)	7-9 June 2017, Ljubljana, Slovenia	IIT Madras
24.	Raja P	ME13D045	6th European Conference on Tribology (ECOTRIB 2017)	7-9 June 2017, Ljubljana, Slovenia	IIT Madras
25.	Chinnagangu Jahnavi	ME15S048	6th International Conference on Whole Body Vibration Injuries	19-21 June 2017, Gothenburg, Sweden	IIT Madras
26.	Prakash Saxena	ME14S068	International Energy Exergy and Environment Symposium (IEEES-9)	14-17 May, 2017, Split, Croatia	IIT Madras
27.	Naresh K.	ME14D212	25th Annual International Conference on Composites or Nano Engineering	16-22 July, 2017, Rome, Italy	IIT Madras
28.	Priyanka D.	ME14S070	18th International Conference on Computational Methods and Experimental Measurements	4-6 July 2017, Alicante, Spain	IIT Madras
29.	Harikrishnan S.	ME14D067	13th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT-2017)	17-19 July 2017, Porturoz, Slovenia	IIT Madras

Sl. No.	Students/ Scholars	Roll No.	Conference/Seminar/Symposia/ Workshop	Date and Venue	Financial Assistance from
30.	Jensen Samuel J.	ME14D016	Symposium for Combustion Control	28-29 June 2017, Aachen, Germany	IIT Madras
31.	Krishnamoorthy C.	ME13D019	17 th Conference on Mesoscale Processes	24-28 July 2017, San Diego, California, USA	IIT Madras
32.	Karthick S.	ME14D072			
33.	Alwar Swamy	ME15D422	FLOW Conference 17	3-5 July 2017, Paris	IIT Madras
34.	Abhishek Srivastava	ME15S300			
35.	Regulagadda Kartik	ME14D410	Droplets 2017	24-26 July 2017, UCLA, Los Angeles, California, USA	IIT Madras
36.	Sunkara Satya Durga Rao	ME14D208	5 th International Conference on Isogeometric Analysis (IGA 2017)	11-13 September 2017, Pavia, Italy	IIT Madras
37.	Jensen Samuel J.	ME14D016	Symposium for Combustion Control 2017	28-29 June 2017, Aachen, Germany	IIT Madras
38.	Amireddy Kiran Kumar	ME13D021	Progress In Electromagnetics Research Symposium (PIERS) 2017	21-25 May 2017, St. Petersburg, Russia	IIT Madras
39.	Sundarraj N.	ME14S081	International Conference	17-21 July 2017 Nantes, France	IIT Madras
40.	Naresh K.	ME14D212	25 th Annual International Conference on Composites or Nano Engineering	16-22 July 2017, Rome, Italy	IIT Madras
41.	Kishor E.	ME13D005	28 th International Conference on Diamond and Carbon Materials	3-7 September 2017, Gothenburg, Sweden	IIT Madras
42.	Rishikesan	ME14D125	20 th International Conference on Composite Structures (ICCS20)	4-7 September 2017, Conservatoire National Des Arts Et Métiers (CNAM), Paris, France	IIT Madras
43.	L. N. Pramod Aladurthi	ME15D050	International Conference on Advances in Computational Mechanics	2-4 August 2017, Phu Quoc Island, Vietnam	IIT Madras
44.	Ilango M.	ME14D015	IAVSD 2017, 25 th International Symposium on Dynamics of Vehicles on Road and Tracks	14-18 August 2017, Central Queensland University, Rockhampton, Australia	IIT Madras
45.	Krishna Addepalli S.	ME14D020	13 th International Conference on Engines and Vehicles	10-14 September 2017, Capri Italy	IIT Madras
46.	Hari M. Nair	ME14D200	19 th International and 14 th European-African Regional Conference of the ISTVS	25-27 September 2017, Budapest, Hungary	IIT Madras
47.	Deepika Sudevan	ME13D065	21 st International Conference on Composites Materials	20-25 August 2017, Xi'an Qujiang International Conference and Exhibition Center, Xi'an, China	IIT Madras
48.	Senthil Kumar P.	ME12D016	ILASS Europe 2017	5-8 September 2017, Valencia, Spain	IIT Madras
49.	Yashas K.	ME16S023	2 nd International Conference on Computational Fluid Dynamics in Research and Industry	3-6 August 2017, Songkhla, Thailand	IIT Madras
50.	Om Prakash Saw	ME15S070			
51.	Vigneshwaran K.	ME14D113	ASME IMECE2017	3-9 November 2017, Tampa, Florida, USA	IIT Madras

Sl. No.	Students/ Scholars	Roll No.	Conference/Seminar/Symposia/ Workshop	Date and Venue	Financial Assistance from
52.	Jayaprakash K. S.	ME14D069	Microtas 2017	22-26 October 2017, Savannah, Georgia, USA	IIT Madras
53.	Abhishek	ME13D020			
54.	Krishna Addepalli S.	ME14D020	13th International Conference on Engines and Vehicles	10-14 September 2017, Capri, Italy	IIT Madras
55.	Mohammed Suhail	ME15S066	13th International Symposium on Fusion Nuclear Technology (ISFNT)	25-29 September 2017, Miyakomesse Kyoto, Japan	IIT Madras
56.	Allwyn Blessing Johnson N.	ME12D023	232nd Electro Chemical Society (ECS) Meeting	1-5 October 2017, Washington D.C.	IIT Madras
57.	Krishna Addepalli S.	ME14D020	13th International Conference on Engines and Vehicles	10-14 September 2017, Capri, Italy	IIT Madras
58.	Sagar Jambukar	ME14D099	19th International and 14th European-African Regional Conference of the ISTVS	25-27 September 2017, Budapest, Hungary	IIT Madras
59.	Priyabrata Mohapatra	ME15S025	XXIII International Symposium On Combustion Processes	3-6 September 2017, Rynia, Poland	IIT Madras
60.	Anbarasu K. G.	ME14D004	International Symposium on Advanced Abrasive Technology- ISAAT 2017	3-6 December 2017, Okinawa Japan	IIT Madras
61.	Aniraj C. R.	ME13D207			
62.	Jayakrishnan R.	ME14D068	ICNAAM-2017	25-30 September 2017, Thessaloniki, Greece	IIT Madras
63.	Neeraj Paul M.	ME14D031			
64.	Murugesu Pandian M.	ME14D080	SAE 2017 International Powertrains, Fuels and Lubricants Meeting	16-19 October 2017, Beijing, China	IIT Madras
65.	Pankaj Dhaka	ME14D408	International Mechanical Engineering Congress and Exposition-IMECE'17	3-9 November 2017, Tampa, USA	IIT Madras
66.	Saroj Ray	ME15D418			
67.	S. Muthu Kumaran	ME15D210	11th Asia-Pacific Conference on Combustion	10-14 December 2017, Sydney, Australia	IIT Madras
68.	Rakesh Ranga H. R.	ME16S010			
69.	Saurabh Kumar Gupta	ME15S059	19th Annual Conference of ILASS Asia (ILASS-Asia-2017)	18-21 October, 2017, Seogwipo Kal, Jeju Island, Korea	IIT Madras
70.	Naresh K.	ME14D212	26th Baltic International Conference	26-27 October 2017, Kaunas, Lithuania	IIT Madras
71.	Gokulraj K. P.	ME14S057	COBEE 2018	4-10 February 2018, Melbourne, Australia	IIT Madras
72.	Ch V. H. Gayatri	ME15S006	International Conference on Kinematics, Mechanics of Rigid Bodies, and Materials 2017	16-17 December 2017, Royal Ambarrukmo, Jl. Laksda Adisucipto No.81, Caturtunggal, Kec. Depok, Kabupaten Sleman, Daerah Ist	IIT Madras
73.	Suman Deb	ME13D214	TMS 2018 Annual Meeting and Exhibition	11-15 March 2018, Phoenix Convention Center, Phoenix, Arizona, USA	IIT Madras
74.	Mathew John	ME15D064	International Conference on Composite Materials and Material Engineering (ICCMME-2018)	26-28 January 2018, NUS, Singapore	IIT Madras

Sl. No.	Students/ Scholars	Roll No.	Conference/Seminar/Symposia/ Workshop	Date and Venue	Financial Assistance from
75.	Shashwat Jain	ME15S086	10 th International Conference on Boiling and Condensation Heat Transfer (ICBCHT2018)	12-15 March 2018, Nagasaki, Japan	IIT Madras
76.	Durga Prasad G.	ME14D059	16 th European Mechanics of Materials Conference (EMMC)	26-28 March 2018, Nantes, France	IIT Madras
77.	Sumith S.	ME14D107			
78.	Takawale Anand Sudhakar	ME15S036	10 th International Conference on Boiling and Condensation Heat Transfer (ICBCHT2018)	12-15 March 2018, Nagasaki, Japan	IIT Madras
79.	Srikanth Dharwada	ME16S007	Bioinspiration, Biomimetics, and Bioreplication VIII	4-8 March 2018 Denver, CO, USA	IIT Madras
80.	Sreeraj K.	ME15D018	6 th European Conference on Tribology (ECOTRIB 2017)	7-9 June 2017 Ljubljana, Slovenia	IIT Madras
81.	Raja P.	ME13D045			
82.	Kunal Bose Kumar	ME16S002	ICIT 2017	6-9 December 2017, Kolkata	IIT Madras
India					
1.	N. G. Peter Singh	ME14D032			
2.	Sujit Mulay	ME14D029			
3.	M. Baburaj	ME12D030			
4.	Umashankar	ME12D055			
5.	V. S. Hari Krishnan	ME16D007	Conference on Precision Engineering (COPEN) 2017	6-9 December 2017, IIT Madras	IIT Madras
6.	Vineet Paliwal	ME14D205			
7.	Yugandhar Arcot	ME15D021			
8.	Debotosh Poddar	ME16M021			

Students/Scholars who won Outside Prizes and Awards

Sl. No.	Name	Roll No.	Prize	Awarded by
1.	Shruthi Gopinath	ME15M012	Eaton Pratibha Excellence Award	Eaton Corporation
2.	Manish Prajapat	ME13B044	Best Paper award	3 rd Indian Conference on Applied Mechanics (INCAM 2017) organised at Motilal Nehru National Institute of Technology, Allahabad
3.	Vishwajeet Sikchi	ME13B075		
4.	Avinash Kumar	ME17M033	Best Paper (Oral Presentation)	NDE-2017
5.	Subham Kale	ME12B120	Best M.Tech Thesis Award	Prof Singaperumal Endowment

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl. No.	Name	Roll No.	Prize	Donor
1	Chinmay Jaha	ME13B019	President of India Prize Bharat Ratna M Visvesvaraya Memorial Prize, Banco Foundation Prize	Government of India
2	Manish Kumar Prajapat	ME13B044	Sivasailam Merit Prize	Sivasailam Family
3	Dixit Yash Raghunandan	ME13B024	Vaidy Krishnan Memorial Prize	Vaidy Krishnan
4	Sreedath Panat	ME12B165	Prof. G. V. N. Rayudu (IIT Madras) prize	Prof. G. V. N. Rayudu
5	Ayyappadas P.	ME15M002	Prof. B. Sengupto Prize and Prof. Ramamohana Rao Memorial Prize	Prof. B. Sengupto Prize and Prof. Ramamohana Rao
6	Amith Muraledharan	ME15M102	Prof. B Sengupto Prize and Dr. S. Vaidyanathan Memorial Prize and S. Anantharamkrishnan Merit Prize	Prof. B. Sengupto Prize and Prof. Ramamohana Rao

Sl. No.	Name	Roll No.	Prize	Donor
7	Elangovan S. P.	ME15M021	Giri Brothers Prize	Giri Brother
8	P. Rishikesh Menon	ME15M065	Mico-Bosch Prize	Mico-Bosch
9	Aravindhnan S.	ME15S004	Bhagyalakshmi and Krishna Ayengar Award for best M.S. Thesis on Renewable Energy, 2017	Bhagyalakshmi and Krishna Ayengar

4.13.3. Faculty and their activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
Dr. Ramesh Babu N. (HEAD)	Manufacturing engineering—advanced machining processes, process modeling, precision machine tool development
Dr. Arunn Narasimhan	Heat transfer and fluid flow in biological systems, heat transfer and fluid flow in porous medium, phase change materials, convection heat transfer, fluid mechanics
Dr. Babu Viswanathan	CFD, high-speed reacting flows, high-performance computing
Dr. Chakravarthy Balaji	Fundamental heat transfer, optimisation of thermal systems, inverse problems in heat transfer, satellite meteorology, numerical weather prediction
Dr. Chandramouli P.	Nonlinear dynamics, acoustics and noise control
Dr. Dhiman Chatterjee	Fluid mechanics, turbomachines, cavitation
Dr. Gnanamoorthy R.	Advanced materials and product design, design with polymer and nanocomposites, machine element and special purpose test machine design, damage tolerant and tribo design, behavior of implant materials, and surface engineering
Dr. Krishnan Balasubramaniam	Nondestructive evaluation, materials characterization, online measurements
Dr. Krishna Kannan	Continuum mechanics, thermodynamics, constitutive modelling of polymeric materials
Dr. Mani A.	Refrigeration, desalination, solar energy
Dr. Maiya, M. P.	Sorption technology, metal hydride systems, hybrid air conditioning
Dr. Mallikarjuna J. M.	In-cylinder flow studies in engines, HCCI and GDI engines, alternate fuels
Dr. Prasad, B.V.S.S.S.	Blade cooling, thermal hydraulics, computational fluid dynamics (CFD)
Dr. Raghavan V	Combustion modeling, droplet combustion, laminar flames
Dr. Raghu Prakash, V.	Fatigue and fracture mechanics, random load life prediction, product design
Dr. Raju Sethuraman	Computational solid mechanics, fatigue and fracture of materials
Dr. Ramesh A.	I.C. engine combustion and emissions, electronic engine management, alternative fuels
Dr. Sarit Kumar Das	Heat exchangers, two-phase flow, nano fluids, jet oscillations, nuclear heat transfer
Dr. Samuel, G. L.	Machining, metrology and computer-aided inspection, micromachining
Dr. Seshadri Sekhar, A.	Rotor dynamics, condition monitoring, tribology
Dr. Shaligram Tiwari	Thermocapillary convection, heat and mass transfer
Dr. Shankar Krishnapillai	Structural vibrations, design optimization, system identification
Dr. Srinivasa Reddy, K.	Renewable energies, solar energy, energy conservation, energy environment, heat transfer in two-phase systems
Dr. Srinivasan, K	Jet flow and noise, active and passive flow control, measurement and instrumentation
Dr. Sujatha, C.	Vehicle dynamics, machinery diagnostics, signal analysis
Dr. Sundararajan, T.	Droplet combustion, supersonic reacting jet flows, CFD
Dr. Venkatrathnam, G.	Refrigerant mixtures, new processes that work with refrigerant mixtures, improvement of performance of vapour compression refrigerators
Dr. Vijayaraghavan L.	Machining, CAD, surface engineering, grinding
Associate Professors	
Dr. Abhijit Sarkar	Vibration, acoustics, computational methods
Dr. Amitava Ghosh	Machining and grinding of advantage materials, development of abrasives
Dr. Arvind Pattamatta	Micro/nano scale energy transport, computational heat transfer, mesoscopic modeling, phase change heat transfer, turbulence modeling
Dr. Ashis Kumar Sen	Microfluidics, microsystems, thermo-fluids
Dr. Balaji Srinivasan	Fluid dynamics, turbulence in compressible and hypersonic flows, computation of rarefied flows, numerical analysis and high performance computing
Dr. Manivannan P. V.	Instrumentation and controls, mechatronic system design, microprocessor

Name and Qualifications	Major Areas of Specialisation
Dr. Narasimhan Swaminathan	Computational materials science and mechanics, radiation damage in materials, multiscale modeling of complex phenomenon in nuclear and fuel cell materials, finite element method, continuum mechanics, multiscale modeling, radiation damage in materials, computational materials science
Dr. Parag Ravindran	Viscoelastic fluids constitutive modeling
Dr. Prabhu Rajagopal	Ultrasonic waves for nondestructive evaluation, health monitoring and process control, computational methods for modelling elastic wave phenomena
Dr. Sathyan Subbiah	Novel applications of machining, diamond turning, layered material exfoliation, surface texturing
Dr. Shamit Bakshi	CFD in I.C. engines, liquid atomisation and spray systems, fuel nozzle modeling
Dr. Somashekhar S. Hiremath	Micromachining, mechatronic system design, oil hydraulics, system simulation and modelling, finite element method (FEM)
Dr. Sujatha Srinivasan	Biomechanics, mechanisms, assistive devices
Dr. Sushanta Kumar Panigrahi	Friction stir processing and welding, superplasticity, advanced metal forming techniques for producing bulk nanostructured/UFG metals and alloys, thermo-mechanical processing of light weight structural metallic materials
Assistant Professor	
Dr. Anand T. N. C.	CFD simulations of I.C. engines processes, laser-based diagnostics of sprays and combustion
Dr. Anand, K.	Low-temperature combustion engines, surrogate modelling of automotive fuels, engine emission reduction through fuel modifications
Dr. Anil Kumar Meena	Casting processes, cast irons and steels manufacturing, microstructure and properties of ADI, dry and near-dry machining process
Dr. Arunachalam N.	Sustainable manufacturing, Diagnostics, Prognostics and health management of machine tools, Smart machine tools
Dr. Hariharan K.	Sheet metal forming, plasticity, fatigue and mechanical behaviour of materials
Dr. Kameswararao Anupidi	Fluid mechanics, computational fluid dynamics, bio-fluid dynamics, turbulence modelling
Dr. Krithika Narayanaswamy	Thermodynamics, combustion concepts and applications, numerical methods for thermal engineering
Dr. Manoj Pandey	Finite element analysis, dynamics and MEMS
Dr. Mayank Mittal	IC engines, optical diagnostics, fluid mechanics
Dr. Pallab Sinha Mahapatra	Surface engineering and wettability patterning, open surface microfluidics, multiphase flow, single and multiphase heat transfer
Dr. Piyush Shakya	condition monitoring, fault diagnosis, and prognosis
Dr. Ramkumar Penchalliah	Tribology, engine tribology, coatings, bio-implants, condition monitoring, WTG bearing failures, wear modelling and nanolubrication
Dr. Ratna Kumar Annabattula	Finite element analysis, granular mechanics, buckle-driven de-lamination, fusion materials, mechanics of micro-systems
Dr. Ravikiran Sangras	Experimental fluid mechanics, combustion, turbulent flows
Dr. Sateesh Gedupudi	Heat exchangers, two phase flow, nano fluids, jet oscillations, nuclear heat transfer
Dr. Shyama Prasad Das	Unsteady hydro and aerodynamics, turbomachines, interfacial hydrodynamics and transport
Dr. Sivasrinivasu Devadula	Manufacturing engineering
Dr. Soundarapandian S.	Additive manufacturing, computational modeling and simulation
Dr. Sourav Ratshit	Laser Processing
Dr. Srikrishna Sahu	Spray dynamics, two-phase flows, optical diagnostics
Dr. Sundararajan Natarajan	Computational mechanics, moving boundary problems, composite mechanics
Dr. Varunkumar S.	Thermo-chemical conversion of biomass and coal for energy and fuels and modeling instability in solid rocket motors
Dr. Vishal V. R. Nandigana	Microfluidics and nanofluidics, nano manufacturing, battery synthesis, MEMS, NEMS
Dr. Vishwanath K.	Turbomachinery noise
Emeritus Professor/Visiting Faculty	
Dr. M. S. Shunmugam (Emeritus Professor)	Metrology, manufacturing – gear, BTA machining, reaming, centreless grinding, EDM, friction welding, manufacturing automation and robotics, computer application in manufacturing – process planning, inspection planning, quality control
Dr. Hari T. Santhanam (Professor of Practice)	Advanced manufacturing and automation

Short-term Courses/Workshops/Seminars/Symposia/Conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conferences			
1.	Dr. N.Arunachalam, Dr. Sivasrinivasu Devadula	International Conference on Manufacturing Technology and Simulation	7-8 July 2017, ICSR, IIT Madras
2.	Prof. N. Ramesh Babu and Dr. G. L. Samuel	Conference on Precision Engineering (COPEN) 2017	6-9 December 2017, IIT Madras, Chennai
3.	Dr. Prabhu Rajagopal and Dr. Paritosh Nanekar	NDE 2017	14-15 December, 2017, Chennai
4.	M.P. Maiya, Dr. Jeevan Jaidi and Dr. Raja Banerjee	24th National and 2nd International ISHMT-ASTFE, Heat and Mass Transfer Conference (IHMTTC-2017)	27-30 December, 2017, Hyderabad
Symposia			
1.	Dr. Vishal Nandigana and Dr. C. Balaji	Asian Symposium on Computational Heat Transfer and Fluid Flow (ASCHT 2017)	11-13 December, 2017, IIT Madras
2.	Dr. Pallab Sinha Mahapatra	Liquid Manipulation Over Surfaces	2-4 February 2018, Humboldt Kolleg Kolkata
Workshops			
1.	Dr. C. Sujatha	Basics of Vibration Theory	10-11 January 2018, Chennai
2.	Dr. Varunkumar S.	After Burner Screech - New Directions of Research	23-24 February 2018, DRDL, Hyderabad
3.	Prof. S. P. Dhanavel and Dr. Parag Ravindran	Self Awareness and Higher Goals in Education 2017	29 May-2 June 2017, Chennai, IIT Madras
4.	Dr. K. S. Reddy	UK-INDIA Workshop on Transferring Knowledge on Dairy Production Technologies between the UK and India	26-28 July 2017, University of Exeter, UK
5.	Dr. Soundarapandian	Next generation 3D printing	22-23 February 2018, ICSR, IIT Madras
Short-term Course			
1.	Prof. L. Vijayaraghavan and Dr. S. Soundarapandian	Modeling, Simulation and Experimental Approaches of Unconventional Manufacturing Techniques	13-18 March 2017, ICSR, IIT Madras
2.	Dr. P. Chandramouli	Vibration Fundamentals and Application to Compressor Systems	31 May-2 June 2017, Emerson Innovation Centre, Pune
3.	Dr. Sourav Rakshit, Mr. Srinivas Akella	Robot Motion Planning	31 July-4 August 2017, IIT Madras
4.	Dr. V. Raghavan	GIAN course: Combustion in Engines	4-11 September 2017, IIT Madras
5.	Dr. M. P. Maiya	Refrigeration Technology with Natural Refrigerants, Specialization on R744 (CO ₂)	9-13 October 2017, IIT Madras
6.	Dr. Parag Ravindran, Dr. Ratna Kumar Annabattula	GIAN Course: Continuum Mechanics of Dislocations Leading to Plasticity	18-29 December 2017, IIT Madras
7.		Short-Term Training Program on Design and Development of Air Conditioning Systems	1-5 January 2018, College of Engineering, Pune
8.	Prof. M. P. Maiya	ACREX 2018	22 February 2018, BIEC Bengaluru, Ozone Cell
9.	J. Murali Krishnan and Parag Ravindran	AICTE STC: Rheology of Bituminous Binders	26-31 March 2018, IIT Madras

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Name	Title	Institution	Period
Workshops				
1.	Dr. M.P. Maiya	International Workshop on HVAC&R	Loyola-ICAM College of Engineering and Technology - (LICET), Chennai	17-19 September 2017
2.	Prof. G. Venkatarahnam	Workshop on Cryogenic Refrigerators and Liquefiers	Daejeon, South Korea	13-17 October 2017
3.	Dr. Sujatha Srinivasan	Gait Analysis and Rehabilitation	CEG, Anna University, India	14-17 October 2017
4.	Dr. M. P. Maiya	Winter school on Advances in Refrigeration and Air Conditioning (Keynote lecture: Trans-critical Refrigeration Systems)	Pondicherry Engineering College, Puducherry	11-15 December 2017
Seminars				
1.	Dr. Prabhu Rajagopal	Advances in Robotics	IIT Delhi	29 June 2017
2.	Dr. Sujatha Srinivasan	Integration of Biomechanics in Healthcare: Addressing India's Unmet Needs	MGM Centre for Human Movement Science, Navi Mumbai	5-7 May 2017
3.	Dr. P. Ramkumar	3rd Indian Conference on Applied Mechanics (INCAM 2017)	MNNIT, Allahabad	5-7 July 2017
4.	Dr. N. Arunachalam	Siemens Education Day	India	4 August 2017
5.		MI India First Workshop on Affordable Heating and Cooling of Buildings	Jacaranda II, India Habitat Centre, Lodhi Road, New Delhi	1 August 2017 (one day)
6.	Dr. M. P. Maiya	ACRE HEALTH 2017	Feathers – A Radha Hotel, Chennai, organised by SHRAE Chennai Chapter and Indian Medical Association	15 September 2017
Symposia				
1.	Dr. Ratna Kumar Annabattula	Second Solid Mechanics Symposium	IIT Hyderabad	19-20 July 2017
2.	Dr. Krishnan Balasubramanian	Advances in Robotics 2017	Delhi	29 July 2017
3.		Clinical Biomechanics	MGM Centre for Human Movement Science, Navi Mumbai	5-6 May 2017
4.	Dr. Sujatha Srinivasan	Global Research, Innovation, and Education in Assistive Technology (GREAT) Summit	Geneva, Switzerland	2-4 August 2017
5.	Dr. Vishal Nandigana	JFM Symposia: From Fundamentals to Applied Fluid Mechanics	IIT Madras	14-15 December 2017
6.	Dr. Shyama Prasad Das	JFM Symposium	IIT Madras	15 December 2017
Conferences				
1.	Prof. L. Vijayaraghavan	International Conference	Sri Sairam Institute of Technology	31 March 2017
2.	Dr. M. P. Maiya	Natural Refrigerants in RAC and Cold Chain Sector in India	India-EU Green Cooling Conference 2017 Kigali Amendment to the Montreal Protocol: Eco-friendly Refrigeration and Air-conditioning and Cold Chain in India	27 April 2017
3.	Prof. A. Mani	International Conference on Polygeneration 2017	Cuernavaca, Mexico	23-26 May 2017

Sl. No.	Name	Title	Institution	Period
4.	Dr. Prabhu Rajagopal	Progress in Electromagnetics Research Symposium	St. Petersburg, Russia	22-25 May 2017
5.	Dr. Krishnan Balasubramanian	World Congress on Condition Monitoring	London, UK	14-16 June 2017
6.	M. Prakash Maiya	International Conference on Polygeneration	Cuernavaca, Mexico	23-26 May 2017
7.	Dr. Sushanta Kumar Panigrahi	International Conference on Recent Advances in Materials, Mechanical and Civil Engineering	Hyderabad, India	1-2 July 2017
8		24th National and 2nd International ISHMT-ASTFE Heat And Mass Transfer Conference (IHMT-2017)	Hyderabad, India	27-30 December 2017
9	Dr. K. S. Reddy	Solar World Congress (SWC 2017)	Abu Dhabi, UAE	29 October-2 November 2017
10		13th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics	Portoroz, Slovenia	17-19 July 2017
11	Dr. K. S. Reddy	16th International Conference on Sustainable Energy Technologies – SET 2017	Bologna, Italy	17-20 July 2017
12.	Dr. P. Ramkumar	6th European Conference on TRIBology	Ljubljana, Slovenia	7-9 June 2017
13.	Dr. Vishal Nandigana	19th International Conference on Microfluidics and Nanofluidics	Prague, Czech Republic	8-13 July 2017
14.	Dr. Sujatha Srinivasan	ISB 2017 World Congress of the International Society of Biomechanics	Brisbane, Australia	23-27 July 2017
15.	Dr. Abhijit Sarkar	24th International Congress on Sound and Vibration	London, United Kingdom	23-27 July 2017
16.	Dr. N. Arunachalam	Indo-Global Skills Summit and Expo 2017	India	22 July 2017
17.	Dr. Raghu Prakash V.	FDMD3 Symposium	Italy	17-24 September 2017
18.	Dr. Ratna Kumar Annabattula	International Symposium on Fusion Nuclear Technology (ISFNT-2017)	Kyoto, Japan	25-29 September 2017
19.	Dr. R. Gnanamoorthy	6th International GIGAKU Conference	Nagaoka, Japan	5-6 October 2017
20.	Dr. K. Hariharan	IUMRS-ICA	Taipei, Taiwan	5-9 November 2017
21.	Dr. Ratna Kumar Annabattula	International Workshop on Mechanics of Energy Materials (IWMEM-2017)	Suzhou, China	8-11 November 2017
22.	Dr. Pallab Sinha Mahapatra	APS DFD	Denver, USA	19-21 November 2017
23.	Dr. Sourav Rakshit	13th International Conference on Vibration Problems	Guwahati	29 November-2 December 2017
24.	Dr. Ramkumar P.	9th International Conference on Industrial Tribology	Kolkata	6-9 December 2017
25.	Dr. G. L. Samuel	Conference on Precision Engineering (COPEN) 2017	IIT Madras	6-9 December 2017
26.	Dr. Amitava Ghosh	COPEN-10, 2017	IIT Madras	7-9 December 2017
27.	Dr. S. Varunkumar	Eleventh Asia-Pacific Conference on Combustion	University of UNSW, Sydney, Australia	10-14 December 2017
28.	Dr. V. Raghavan	Asia Pacific Conference on Combustion	Sydney, Australia	10-14 December 2017
29.	Dr. Piyush Shakya	National Symposium on Rotor Dynamics	Patna	11-13 December 2017
30.	Dr. Sourav Rakshit	3rd International and National Conference on Machines and Mechanisms (iNaCoMM 2017)	Mumbai	13-15 December 2017

Sl. No.	Name	Title	Institution	Period
31.	Dr. Prabhu Rajagopal	NDE 2017	Chennai	14-16 December 2017
32.	Dr. V. Raghavan	25 th National Conference on I. C. Engine and Combustion (NCICEC 2013)	NIT, Suratkal	15-17 December 2017
33.	Parag Ravindran	Effect of Elastin Degradation on the Mechanical Response of Aorta (with P. Mythraravuni), Complex Fluids Meeting (CompFlu 2017)	IIT Madras	18-20 December 2017
34.	Dr. Manoj Pandey	International Conference on Composite Material and Structures	Hyderabad	26-29 December 2017
35.	Dr. M. P. Maiya	The 24 th National and 2nd International ISHMT-ASTFE, Heat and Mass Transfer Conference (IHMTTC-2017)	Hyderabad	27-30 December 2017
36.	Dr. Pallab Sinha Mahapatra	INCOM18: 1 st International Conference on Mechanical Engineering	Jadavpur University, Kolkata	2-4 January 2018
37.	Dr. Shyama Prasad Das			
38.	Dr. Vishal Nandigana	APS March Meeting, (Chaos in Nanopores)	Los Angeles, USA	5-9 March 2018
39.	Prof. L. Vijayaraghavan	Proceedings of the ASME, MSEC2017 International Manufacturing Science and Engineering Conference (NAMRC 2017)	University of Southern California, Los Angeles, CA, USA	4-8 June 2017
40.		International Conference on Advances in Materials, Manufacturing and Applied Sciences	Sri Sairam Institute of Technology, Chennai	31 March 2017

Trainings

1.	Dr. Krishnan Balasubramanian	Deshpande Symposium on Innovation and Entrepreneurship	Lowell, USA	12-14 June 2017
2.	Dr. M. Prakash Maiya	Training on Operating CO ₂ system: Indo-Norwegian Project on INDEE–Energy efficient and environmentally friendly refrigeration and air conditioning for supermarkets in India – Phase 1	Norway	21-25 June 2017
3.	Dr. Pallab Sinha Mahapatra	Faculty Development Programme	IIT Madras	6-8 December 2017

Short-term Courses

1.	Dr. Soundarapandian	Mechanical-based UCM	IIT Madras	13 March 2017
2.	Dr. G. L. Samuel	Laser Micro Machining	IIT Madras	14 March 2017
3.	Dr. Somasekhar S. Hiremath	Micro EDM	IIT Madras	14 March 2017
4.	Dr. N. Arunachalam	Process Monitoring and Diagnostics Approaches for Unconventional Manufacturing Process	IIT Madras	14 March 2017
5.	Dr. K. Hariharan	Does Servopress Improve the Formability	IIT Madras	14 March 2017
6.	Dr. Sushanta Kumar Panigrahi	Potential of Unconventional metal forming	IIT Madras	15 March 2017
7.	Dr. P. V. Manivannan	Nano second Laser assisted Micromanufacturing and influence of Laser Induced Plasma Sheilding	IIT Madras	16 March 2017
8.	Dr. Amitava Ghosh	Ultrasonic Assistance in Machining for Higher Productivity	IIT Madras	16 March 2017

Sl. No.	Name	Title	Institution	Period
9.	Dr. L. Vijayaraghavan, Dr. S. Soundarapandian	Abrasive flow Machining	IIT Madras	17 March 2017
10.	Dr. S. Soundarapandian	Electrical Discharge Machining	IIT Madras	18 March 2017
11.	Dr. Pallab Sinha Mahapatra	Summer school and Discussion Meeting on Buoyancy-driven flows	ICTS, Bengaluru	12-15 June 2017
12.	Dr. Vishal Nandigana	QIP/CEP short-term course on Microfluidics	IIT Madras	6-11 November 2017
13.	Dr. M. P. Maiya	AICTE-ISHRAE Faculty Refresher Course on Refrigeration and Air Conditioning	Anna University, Chennai	4-8 December 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1.	Dr. G. L. Samuel	Introduction to Micro and Nano manufacturing	Basaveswar Engg College, Bagalkot, Karnataka	21 April 2017
2.	Dr. Sujatha Srinivasan	Lecture on Assistive Device Design	PEC University of Technology, Chandigarh	28 March 2017
3.	Dr. C. Balaji	The Joy of Teaching and The Joy of Research	VIT Vellore	18 May 2017
4.	Dr. Abhijit Sarkar	Parametric Instability of Asymmetric shafts	University of Swansea, Swansea, United Kingdom	31 July 2017
5.		Development of Solar Thermal Systems for Dairy and Other Process Heat Applications	University of Exeter, UK	26-28 July 2017
6.		Autonomous Smart Integrated Renewable Energy Systems for Sustainable Development	RMK College of Engineering and Technology, Pudukoyal, Chennai	14 July 2017
7.		Emerging Solar Thermal Technologies for Sustainable Energy Supply	Kingston Engineering College, Vellore	1 September 2017
8.	Dr. K.S. Reddy	Integrated Solar PV Hybrid Power Generation System	SKR Engineering College, Chennai	21 September 2017
9.		Numerical Investigation of Concentrated Solar Power Systems for Prediction of Heat Transfer Characteristics	NIT Warangal	21 January 2018
10.		Mathematical Modelling of Solar Energy Systems for Estimation of Convective and Radiation Heat Transfer	IIT Madras	25 January 2018
11.	Dr. Ratna Kumar Annabattula	Bending, Buckling and Curling in Thin Films	Anil Neerukonda Institute of Technology and Science	25 November 2017
12.	Dr. Amitava Ghosh	Precision Manufacturing	IIT Madras	6 December 2017
13.	Dr. Parag Ravindran	TA training	IIT Palakkad	8 January 2018
14.		The Joy of Teaching		14 February 2018
15.	Dr. C. Balaji	Assessment of high heat flux thermal management techniques in electronics cooling using solid liquid phase change material (PCM) based heat sink	Curtin University Perth, Australia	15 February 2018
16.		Energy Saving Concepts in Building Air Conditioning	Department of Mechanical Engineering, Avanthi Institute of Engineering and Technology Vijayanagaram, A.P., India	6 February 2018
17.	Prof. M. P. Maiya	Indoor Thermal Comfort Parameters and Ventilation	IIT Madras Campus Chennai, TN	16 February 2018

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
18.		Design-Development-Demonstration-Development (4-D) of Solar Energy Systems	Vel Tech university, Chennai	24 February 2018
19.	Dr. K.S. Reddy	Challenges and Opportunities in Development of Concentrating Solar Power (CSP) Technology for Sustainable Energy Supply	Saveetha School of Engineering, Chennai	27 February 2018
20.	Prof. L. Vijayaraghavan	Mechanical Micromachining	SRM University, Chennai	21 November 2017

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of Visit	Funding from
1.	Prof. M. P. Maiya	Karunya University, Karunya nagar, Coimbatore	17 March 2017	Lecture on Air – Water Mixtures	IIT Madras
2.	Dr. Arvind Pattamatta	Japan	14 May 2017	Two Month Invitation Fellowship from JSPS to visit Kyushu University	JSPS
3.	Dr. M. Prakash Maiya	Mexico, USA, Norway and Italy	10 May 2017	Conference, personal, Project	Institute, Project and personal
4.	Dr. Ashis Kumar Sen	OIST	10 May 2017	Research collaboration	Japanese collaborator
5.	Dr. Srikrishna Sahu	Germany	12 June 2017	Explore academic collaboration	Project and IAR office
6.	Prof. A. Mani	USA	29 June 2017	Visit to universities	After the conference visit from CPDA
7.	Dr. Krishnan Balasubramanian	France	Nil	Visit Innovation Labs and Companies in France	Project
8.	Dr. Vishal Nandigana	Czech Republic	8 July 2017	Conference	CPDA
9.	Dr. Sujatha Srinivasan	Australia	19-23 July 2017	Conferences	Project
10.	Dr. Abhijit Sarkar	United Kingdom	22 July 2017	Conference and University Visit	CPDA and PCF
11.	Dr. Sateesh Gedupudi	United Kingdom	4 September 2017	Conference	CPDA
12.	Dr. Ratna Kumar Annabattula	Japan	20 September 2017	Conference	Institute (CPDA) + PCF
13.	Dr. Narasimhan Swaminathan	Japan	19 September 2017	Molecular dynamics studies primary damage in β -Li ₂ TiO ₃	CPDA
14.	Dr. R. Gnanamoorthy	Japan	4 October 2017	Academic Interaction	Japanese University
15.	Prof. G. Venkatarathnam	Daejeon, South Korea	13 October 2017	Workshop on Cryogenic refrigerators and liquefiers	IIT Madras
16.	Dr. K. Hariharan	Taiwan	4 November 2017	Conference	New Faculty Grant, ICSR, IIT Madras
17.	Dr. Ratna Kumar Annabattula	China	8 November 2017	International Conference	Institute + PCF
18.	Dr. Pallab Sinha Mahapatra	USA	17 November 2017	Attending conference	CPDA
19.	Dr. Manivannan P. V.	Sri Lanka	6 December 2017	Keynote address as Chief Guest	CPDA
20.	Dr. S. Varunkumar	Australia	8 December 2017	Conference	CPDA
21.	Dr. C. Balaji	Australia	9 February 2018	Research visit to Curtin University	ICSR Project

Sl. No.	Faculty Member	Country Visited	Date	Purpose of Visit	Funding from
22.	Dr. Prasad B. V. S. S. S.	China	17 January 2018	Role of Gas Turbine in the Distributed Power Generation System	Others
23	Dr. Ramkumar P.	Ljubljana, Slovenia	7-9 June 2017	Conference	CPDA
24.	Prof. N. Ramesh Babu	USA	10 June 2017	IITM Foundation Meeting at Santa Clara, USA	Alumni Office

Honours and Awards Obtained by Faculty

Sl. No.	Name	Award	Awarded by	Awarded for	Date of Award
i. Honours/Awards					
1.	Dr. Arvind Pattamatta	JSPS Invitation Fellowship 2017	Japan Society for Promotion of Science (JSPS)	Two months (May-July) to visit Kyushu University	14 May 2017
2.	Dr. Prabhu Rajagopal	Young Scientist Award 2017	Institute of Smart Structures and Systems	Discovery of new feature- guided waves, robotic NDE	7 June 2017
3.	Dr. Ashis Kumar Sen	IRDA Award-Junior Level, IIT Madras, 2017	IITM	Excellence in Research	18 May 2017
4.	Dr. Sujatha Srinivasan	Keshav-Rangnath Excellence in Research Award	Dr. Prakash Kesavaiah, IITM Distinguished Alumnus	Guiding Ph.D. student's research; award given jointly to scholar and guide	22 July 2017
5.		Innovation Award	World Society for Sustainable Energy Technologies (WSSET)	Recognition of technology development on water treatment and desalination- development of solar energy systems for sea water desalination and industrial effluent/wastewater treatment	19 July 2017
6.	Dr. K.S. Reddy	Bhagyalakshmi and Krishna Ayengar Award	IIT Madras	For having guided Best M.S. Thesis on Renewable Energy	21 July 2017
7.		Shri J. C. Bose Patent Award		Recognition of work titled, Black Water Treatment Using Green Energy-A Closed Loop Sanitation System	22 July 2017
8.	Dr. R. Gnanamoorthy	FNAE	INAE	Research Contribution	8 September 2017
9.	Dr. Prabhu Rajagopal	'Employees Choice Award' at the 1 st Nationwide Accenture Innovation Challenge	Accenture	Developing a 'Compact bio-inspired robot for septic and sewage line cleaning and inspection' to help avoid manual sewer line operations	27 November 2017
10.	Dr. Prabhu Rajagopal and Prof. Krishnan Balasubramanian	Best Paper (Oral Presentation) at the Indian Society for NDT's prestigious annual National Seminar on NDE - 2017	ISNT	Paper: Robotic inline inspection and leak detection system for oil and gas pipelines	16 December 2017
11.	Dr. A. Ramesh	Lifetime Achievement Award	SAEINDIA	In appreciation for Leadership and Extraordinary Contributions	7 December 2017
12.	Prof. Krishnan Balasubramanian	Abdul Kalam Technology Innovation National Fellowship	INAE	Fellowship for three years	1 January 2018

Sl. No.	Name	Award	Awarded by	Awarded for	Date of Award
13.	Dr. C. Balaji	Member, Sectional Committee IX	INAE	2018-2020	1 January 2018
14.	Dr. Vishal Nandigana	Bharat Gaurav Award	IIFS	Contributions in the field of nanotechnology	26 January 2018
15.	Prof. N. Ramesh Babu	Member of Committee	National Innovative Manufacturing Policy in India	Honour	July 2018

Fellowships of Academies and Professional Societies

Sl. No.	Faculty Member	Year of admission
1.	Dr. M.P. Maiya	Dr. Simarpreet Singh (Post Doctoral Fellow) 2017
2.	Dr. K. S. Reddy	Member, TAG for Centre for Solar Energy Materials, ARCI, Hyderabad, 2017-20
3.	Expert Member, RAC, National Institute of Solar Energy, 2017	

Journal Editorial Boards

Sl. No.	Faculty Member	Position	Journal Name
1.	Dr. K. S. Reddy	Editorial Member	Future Cities and Environment

4.13.4. Design and Development Activities

Brief and Specific Details of Process/Instruments/Equipment/Software Designed and Developed

- Dr. Vishal Nandigana: Developed a Variational Nonequilibrium oscillator model
Dr. Amitava Ghosh: Active brazing of CBN and diamond with specially formulated filler
- Dr. Vishal Nandigana: Developed a software to understand electro-kinetic transport in Nano channels using open foam
- Dr. Sushanta Kumar Panigrahi: (1) High precision metal forming unit
(2) Compression Testing unit

New Facilities added or Major Equipment Procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1.	Laser Ultrasonic Receiver System	45
2.	Set up for laser micro-machining was installed and commissioned	141
3.	Data logger	2.4
4.	MSc Actran for Vibroacoustics	7.5
5.	Laser Ultrasonic Receiver System	45
6.	Dr. M. P. Maiya CO ₂ Refrigeration System	100
7.	Optical table	4.5
8.	Boston computers, high-performance machines	230
9.	Zwick 100 kN UTM	520
10.	1000 kgf electrodynamic shaker	29
11.	Boston high-performance computing cluster	26
12.	High-precision metal forming unit	26
13.	Pixel fly PIV camera	5.5
14.	2W CW LASER	2

Patents

Patents Filed

Sl. No.	Faculty Member	Topic of patent
1.	Prof. C. Balaji	Heat sinks
2.	Dr. Ashis Kumar Sen	MicroFACS for detection and isolation of target cells

Sl. No.	Faculty Member	Topic of patent
3.	Dr. Sujatha Srinivasan	Easy to use portable manual standing wheel chair with safety features and for outdoor use
4.	Dr. Sujatha Srinivasan	Supportive walker with integrated seating mechanism, Indian patent application no. 201741019287 filed 1 June 2017 (with Vivek Sarada and Swostik Sourav Dash)
5.	Dr. Soundarapandian	Laser-assisted machining (LAM) of non-monolithic composite bone material
6.	Dr. N. Arunachalam	IDF 1542-Development of a method for realizing highly adhesive CVD grown boron doped diamond graded layer on WC-Co for cutting tools applications
7.	Dr. Prabhu Rajagopal	A spherical robot for internal inspection and survey of fluid filled pipelines using visual and acoustic sensors
8.	Dr. Ramkumar P.	Dynamic load sliding contact tribometer and method
9.		Method of designing a high precision machine tool
10.	Dr. N. Ramesh Babu	Method for reducing thermal drift of wheel spindle in grinding machine
11.		Method of characterising a machine tool

Patents awarded

Sl. No.	Faculty Member	Topic of Patent
1.	Dr Sujatha Srinivasan (with Ganesh Bapat (ME12D074) and Muthuvisvashwaran–Project Associate)	Design patent for lever-operated knee joint for orthosis and prosthesis
2.	Prof. C. Balaji	Cylindrical heat sink with air and n-eicosane subject to rotation (201741018559)
3.	Dr. Sujatha Srinivasan	Portable manual standing wheelchair design patent no. 294291, 31 May 2017, India
4.	Dr. Prabhu Rajagopal	A spherical robot for internal inspection and survey of fluid filled pipelines using visual and acoustic sensors
5.	Dr. Sujatha Srinivasan	Lever operated knee joint for orthosis and prosthesis

4.13.5. Research and Consultancy

Sponsored Research Projects

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
1.	Dynamic downscaling to study climate change impacts on water resources in India	Two years	Ministry of Water Resources	44.74592	No
2.	Development, commercialization and deployment of complete mobility solution (indoor and outdoor) for people with locomotor disability	Two years	IMPRINT	185.74	No
3.	User trials for prosthetic knee	One year	SBMT	44.40	No
4.	Dr. Arvind Pattamatta: Experimental and numerical studies on improvised combustor liner cooling methodology	2017-2021	COPT, DRDO	96.30	Prof. C. Balaji
5.	Piyush Shakya: Severity quantification of defects in rolling elements bearings	3 years	Science and Engineering Research Board	37.28	Nil
6.	Abhijit Sarkar: Dynamic analysis of tip-shrouded turbine blades	30 May 2017-29 November 2019	DRDO	32.386	Prof. A. S. Sekhar
7.	Vishal Nandigana: NFIG	2017-2020	IIT Madras	30	Nil
8.	Dr. Shyama Prasad Das: CoPT (eight projects, two as PI)	Three years	DRDO	308.35	Prof. B. V. S. S. Prasad
9.	Dr. Chandramouli P: Seismic and mechanical test of 245 kV CVT	June-September 2017	GE Alstom India Limited	3.68	Dr. Shankar Krishnapillai
10.	Dr. Prabhu Rajagopal: CRV for sewerline inspection	2017-2018	SRP, IIT Madras	3	Dr. P. Chandramouli
11.	Dr. Ashis Kumar Sen: Development of smartphone integrated generic microfluidic devices for rapid, portable and affordable	2017-2020	MHRD	101	Dr. T. S. Chandra

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
12.	Dr. Srikrishna Sahu: Experimental investigation of liquid atomization in slinger combustor for small gas turbine engines	2017-2020	CoPT	222	Prof. S. R. Chakravarthy (Aerospace) Dr. T. M. Muruganandam (Aerospace)
13.	Dr. Sushanta Kumar Panigrahi: Development and microformability evaluation of ultrafine grained materials (UFG) used for aerospace applications	Three years (25 May 2017-25 May 2020)	ARDB, DRDO	32.52	Prof M. S. Shunmugam
14.	Design validation for TTD Ammavari potu kitchen exhaust project (Consultancy project)	One week	Voltas Limited, Chennai	0.11	Dr. M. P. Maiya
15.	Dr. M. P. Maiya Energy efficient and environmentally friendly refrigeration and air conditioning for supermarkets in India (INDEE) – Phase 1	Two years	NTNU Norway	40	No
16.	Development of a computational tool for acoustic characterisation of afterburner liners	15 November 2017-14 November 2018	GTRE, DRDO	9.078	No
17.	Design, drawing and specification for budgetary estimation of vapor extraction system at TW sunken pump-house at IOCL Coimbatore Terminal	November-December 2017	IOCL, Chennai	88.5	No
18.	Improving tribological performance of piston ring cylinder liner system using DLC-coated textured surface	17-20 December 2017	DST	49.896	Dr. Ramkumar P
19.	Design and development of track system for FICV	26 February 2018-23 August 2019	Ordnance Factory Medak	48.3	Prof. C. Sujatha (PI), Prof. Shankar Krishnapillai (Co-PI), Dr. Ratna Kumar Annabattula (Co-PI)
20.	Seismic test on 132/110 kV current transformer with structure	1 February-30 April 2018	Electric Power Equipment Co., Bangalore	3.42	Prof. C. Sujatha (PI), Dr. Krishna Kannan
21.	Developing novel multilayer coating of nano silicon nitride and zirconium with surface texture for hip implants to improve biotribological performance and lifespan	January 2018-January 2021	Approved by DST under the AMT Scheme	50	Dr. P. Ramkumar (PI)
22.	Indo-US joint center grant #USSTF/JC-042/2017: Nanoscale Transport and Biological Interfaces	Three months	DST	48.80	Dr. Vishal Nandigana
23.	Indo-Canadian ICIMPACT project on solar energy powered net-zero energy smart buildings	2017-2019	ICIMPAC-DST	27.37	
24.	UKIERI project on CPV assisted tandem assisted artificial photosynthetic device for effective solar to chemical conversion	2017-2020	UKIERI-DST	11.59	
25.	UK-ESRC impact acceleration project on transferring knowledge on dairy production technologies between the UK and India	2017-2018	ESRC, UK	30	Dr. K. S. Reddy
26.	UK-EPSCGCS project on Nano structured surfaces for high temperature solar thermal energy converters (Nano High TEC)	2016-2017	UK-EPSCGCS	10	
27.	UK-ESRC impact acceleration project on knowledge transfer on the sustainability of innovative wastewater treatment technologies to India	2017	ESRC, UK	6.90	

Industrial consultancy projects (ongoing and new)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	Sateesh Gedupudi	Software Development for Evaluating the Thermal Performance of a Gas to Gas Heater	BHEL	7.20

RBIC projects

Sl. No.	Faculty Name	Title	Industry	Amount (Rs. in lakh)
1.	Dr. Ramkumar P.	Failure Analysis of Low Torque Pinion of Steering Gear	Rane (Madras) Limited	6.49
2.	Dr. Ramkumar P.	Sliding Wear Performance of Polymer Composite Materials for Excavator Bucket	Caterpillar	1.18
3.	Dr. Ramkumar P.	To Find Coefficient of Friction for Epoxy Concrete and Vitrified Tile Floors	Ford (India) Ltd	0.35

Faculty Members participation with other institution under MoU

Sl. No.	Name	Participation details	University/Institution
1.	Dr. Arvind Pattamatta	Joint Ph.D. guidance with Prof. Ramesh Narayanaswamy	Curtin University
2.	Dr. Hariharan	Meomorandum of Agreement between Prof. Han (SNU) and Hariharan (IIT Madras)	Innovative Process Design Center for Strategic Structural Materials, Seoul National University
3.	Dr. Prabhu Rajagopal	MoU for Academic Exchange	University of Nairobi, Kenya
4.	Dr. M. Prakash Maiya	Student Exchange and Co-guidance of doctoral student	Norwegian University of Science and Technology (NTNU), Norway
5.	Dr. Ashis Kumar Sen	Meetings	OIST, Japan
6.	Dr. Srikrishna Sahu	Meetings	University of Magdeburg and RWTH Aachen
7.	Dr. Sujatha Srinivasan	MoU signed for testing of Assistive Devices	CMC Vellore and MGM Institute of Health Sciences, Navi Mumbai
8.	Dr. Sujatha Srinivasan	User testing	Christian Medical College and Hospital, Vellore, Tamil Nadu
9.	Dr. Sujatha Srinivasan	Joint Development Agreement signed	Neo Motion Assistive Solutions Private Limited
10.	Dr. R. Gnanamoorthy	Participated in Student Exchange and Joint Degree Program Meetings	Nagaoka Univ of Technology, Japan
11.	Dr. K. S. Reddy	Student Exchange and Co-guidance of doctoral student	University of Exeter, UK

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date of Visit	Purpose of visit
1.	Prof. Srinath Ekkad, Rolls-Royce Professor, Mechanical Engineering	27 April 2017	To explore collaboration possibilities
2.	Dr. Guru Ghosh, VP for International Programs and Outreach		
3.	Mr. Gene Ball, Director of Finance, VP for International Programs and Outreach		
4.	Mr. Dale Pike, Executive Director, Technology-enhanced Learning and Online Strategies		
5.	Shri V. Shankar, Founder, CAMS Private Limited, Chennai	18 April 2017	Visited as distinguished alumnus
6.	Shri Satish Pai, Managing Director, Hindalco Industries Limited, Mumbai		
7.	Dr. Pradip Dutta, Professor, Department of Mechanical Engineering, Indian Institute of Science, Bangalore		
8.	Dr. Madhavan, President, Institute for Policy Research Studies, New Delhi		

Sl. No.	Name and Designation	Date of Visit	Purpose of visit
9.	Prof. Malcolm Lawes	3 September 2017	To deliver GIAN course lectures and to give a seminar in NCCRD
10.	Gopinath K., Group Technical Manager HCL	6 October 2017	Projects HCL in looking at for Internship
11.	Prof. Armin Hafner, Dr. Krzysztof Banasiak and Ms. Stefanie Blust	8 October 2017	(i) Project Work and GIAN Course (ii) Project work
12.	1. Prof. Daisuke Nakamura, Japan 2. Dr. Ramagopal Sarepaka, OPTICA Bangalore 3. Prof. G. K. Ananthasuresh, IISc Bangalore 4. Prof. Surender K. Marya, France 5. Dr. K. (Subbu) Subramanian. USA 6. Prof. V Radhakrishnan, former professor, IIT Madras 7. Dr. Ravi Bathe, ARCI 8. DR. Ramesh Kuppasamy, S. Africa 9. Prof. KP Rajurkar, USA 10. Prof. M. Rahaman, Singapore and 11. Dr. Prasada Raju	6 December 2017	Workshop and conference
13.	Pierre Calmon, Head, NDE Division, French Atomic Energy Agency	17 December 2017	Visit
14.	Prof. Amit Acharya, Professor at CMU, USA	18 December 2017	GIAN Course
15.	Prof. Emil Hopfinger, LEGI, Grenoble	15 January 2018	Scientific discussions
16.	Dr. R. Chidambaram, Principal Scientific Advisor	9 February 2018	Visit to Machine Tool Laboratory and Next Generation Precision Grinder
17.	Prof. Narendra Dahotre	22 February 2018	Research collaborations in 3D printing

4.13.6. Other Activities of the Department/Centre

- M. P. Maiya: Distinguished Lecture at Vishvesvarayya Seminar Hall, Civil Engineering Department, BSB, IIT Madras
- Topic : Active and Passive Beams on 13 March 2017
- Prof C. Balaji: Research advisory council on NCMRWF, Ministry of Earth Sciences, Government of India.
- M.Tech Automotive online programme started during March 2017 and 29 students joined the programme.
- Clean Energy Yatra: Our Mechanical Engineering students went to Pichavaram Mangroves, Kamuthi Solar Power Plant, Kayathar Wind Farms from 6-10 April 2017.

Faculty Visits in India and Abroad

Sl. No	Name	Purpose of Visit	Date and Venue
1.	Dr. Arvind Pattamatta	JSPS fellowship	University of Tokyo, Kyoto University, Nagasaki University, Saga University, 19 June 2017
2.	Dr. Prabhu Rajagopal	Invited Talk	IIT Delhi
3.	Dr. M. Prakash Maiya	Project Discussion	SINTEF and NTNU, Norway, 21 June 2017
4.	Dr. G. L. Samuel	Ph.D. viva	JNTU Hyderabad, 17 June 2017
5.	Dr. P. Chandramouli	Viva Voce	Indian Institute of Science, 22 June 2017
6.	Prof. C. Balaji	RAC Meeting	NCMRWF, Ministry of Earth Sciences, 28 June 2017
7.	Dr. Sushanta Kumar Panigrahi	For conducting PhD viva-voce examination	NIT Tiruchirappalli, 6 May 2017
8.	Dr. Sujatha Srinivasan	Invited to present work being done at R2D2	Bhagawan Mahaveer Viklang Sahayta Samiti (Jaipur Foot Organisation), 17 June 2017

Sl. No	Name	Purpose of Visit	Date and Venue
9.	Dr. M. P. Maiya	Inter-Disciplinary Center For Energy Research	IISC, Bangalore
10.	Dr. Soundarapandian	Cheif Guest, Physical Education Activities	Thiyagarajar College of Engineering, 24 August 2017
11.	Dr. Sujatha Srinivasan	Mobility India, Bangalore	Annual General Body Meeting, now elected member of governing body, 9 October 2017
12.	Dr. S. Soundarapandian	Anna University Guindy	Guest lecture, 13 October 2017
13.	Dr. R. Gnanamoorthy	Nagaoka University of Technology	Joint Research Initiatives, 7 October 2017
14.	Dr. M. P. Maiya	VIT-AP Amaravathi	BoS, 20 October 2017
15.	Dr. S. Soundarapandian	Guest lecture	SRM University, 21 November 2017
16.	Dr. Ratna Kumar Annabattula	Delivered an invited lecture	Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam 25 November 2017
17.	Dr. Ramkumar P.	Guest Lecture: Investigation of Wear Prediction on Off Highway Truck Body, in Caterpillar Inc, Chennai	Caterpillar, Chennai, 30 November 2017
18.	Prof. Mani A.	Giving Guest lecture on Solar vapour jet refrigeration system	Pondicherry Engineering College, Pondicherry, 8 December 2017
19.	Dr. S Soundarapandian	Guest lecture	Anna University, 13 December 2017
20.	Dr. GL Samuel	PhD Viva	JNTU Hyderabad, 13 December 2017
21.	Dr. C. Sujatha	To deliver a lecture at a short term course	Hindustan University, Chennai, India, 22 January 2018
22.		As part of Interview Committee for recruiting Innovation Associates/ Innovation Fellows	National Innovation Foundation, Ahmedabad, 30 January 2018
23.	Dr. Chandramouli P	Lectures for NVH Workshop	BITS Pilani, 14 February 2018
24.	Dr. L. Vijayaraghavan	Governing Council meeting of the College	PSG College of Technology, 12 March 2018
25.		Governing Council meeting of the College	PSG College of Technology, 13 July 2017
26.		Board of Governor's Meeting	College of Engineering, Perumon, Kollam, 20 July 2017
27.		Board of Governor's Meeting	College of Engineering, Perumon, Kollam, 27 October 2017
28.		Board of Studies meeting	Rajalakshmi Engineering College, Chennai
29.		PhD examiner	PSG College of Technology, Coimbatore
30.		PhD Viva Examiner	NIT Warangal
31.		Faculty Review promotion meeting	SRM University, Chennai
32.		PhD Viva examiner	IIT Delhi
33.		Faculty selection committee	Vel Tech University
34.		PhD Viva voce	SLIT, Longow, Punjab
35.		PhD Viva voce	JNTU Annapur
36.		PhD final Viva voce Examination	IIT Guwahati, 17 January 2018

4.14. Department of Metallurgical and Materials Engineering

4.14.1 Introduction

One of the oldest departments of IIT Madras, the Department of Metallurgical and Materials Engineering (MME) was established in 1959 as Department of Metallurgy. It was renamed as Department of Metallurgical and Materials Engineering in 2003. Actively engaged in research, education and industrial consultancy, the department offers B.Tech., M.Tech., M.S. and Ph.D. degree courses. Its teaching, research and consultancy activities cover a broad spectrum ranging from conventional metallurgy to frontiers of materials science and engineering. The department is respected for its strong linkages with industry and expertise in industrial

metallurgy. Over the years, it has hosted excellent research infrastructure in the broad areas of material science and engineering, such as materials processing (forming, joining, casting, particulate processing, nanostructured materials), characterisation (X-ray diffraction, electron microscopy, thermal analysis), mechanical testing, environmental degradation/corrosion, surface engineering, computational materials science and electronic materials. The department continues to strive for excellence and realising its vision of becoming a pioneering department in the areas of material science and engineering, while consolidating its strength in traditional areas of metallurgical engineering.

4.14.2. Academic Programmes

New Courses Introduced

1	MM 6030	Structure and Properties of Grain Boundaries
2	MM 3015	Processing Lab
3	MM 3041	Deformation Processing and Forming
4	MM 5006	Biomimetic Materials and Processing
5	MM 5741	Gian 161003I17: Non-ferrous Welding Metallurgy
6	MM 5742	Gian 161003I18: Ferrous Welding Metallurgy

Students on roll as of September 2017+M.S. and Ph.D Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
B.Tech.	36	30	30	30	17	143
Dual Degree	13	10	9	14	22	68
M.Tech.	31	21	2	-	-	54
M.S.	7	3	-	3	-	13
Ph.D.	31	26	18	22	26	123
Total	118	90	59	69	65	401

Student/Scholar who Attended conferences/seminars and symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue
1	Vishnu Teja Mantripragada		4 th World Congress on Integrated Computational Materials Engineering (ICME 2017)	21-25 May 2017, USA
2	Amit Kumar Amarnath Kuril		3 rd Young Welding Professionals International Conference (YPIC 2017)	16-18 August 2017, Germany
3	G. P. Rajeev		YPIC 2017	16-18 August 2017, Germany
4	Pamidi Venkateswarlu		10 th International Conference on Porous Metals and Metallic Foams	20-21 August 2017, Nanjing, China
5	Piu Rajak		XVI International Conference on Electron Microscopy	10-13 September 2017, Warsaw, Poland
6	U. Arvind		12 th International Conference on Technology of Plasticity	17-22 September 2017, Cambridge, UK

Sl. No.	Student/Scholar	Roll No.	Conference/Seminar/Symposia/Workshop	Date and Venue
7	Sonia Sarma	MM13D017	Poster presentation: Physical synthesis and jetting behavior of metal oxide based inks for printed electronics	22-26 May 2017, EMRS 2017, Strausbourg
8	Sonia Sarma	MM13D017	Oral presentation: Transparent conducting electrodes by combined spin coating and thermal evaporation	23-28 June 2017, Singapore
9	Deepu Mathew John	MM14D027	Oral Presentation: An attempt to integrate software tools at microscale and above towards an ICME approach	21-25 May 2017, ICME 2017, USA
10	N. Srinivasan		16th International Conference on Fracture and Damage Mechanics	18-20 July 2017, Florence, Italy
11	M. Vishnu Teja	MM13D027	Study of transient behavior of slag layer in bottom purged ladle	21-25 May 2017, ICME 2017, USA
1	R. Jeyaraam		National Conference on Microstructural Engineering 2017	20-21 August 2017, IIT Bombay
2	Darshan Chalapathi		National Conference on Microstructural Engineering 2017	20-21 August 2017, IIT Bombay
3	Arivazhagan		Investigation of Drug Carrier Activity of Boron Nitride Nanoparticles in Cancer Therapy, International Conference on Advanced Nanomaterials and Nanotechnology (ICANN 2017)	18-21 December 2017, Guwahati
4	B. Khadambari		National Symposium on Nano Science and Nano Technology (NSNST) 2017	2-4 July 2017
5	Pritam Banerjee		International Conference on Electron Microscopy and Allied Techniques and XXXVIII Annual Meeting of EMSI (EMSI 2017)	17-19 July 2017
6	Shalini Sikdar		Synthesis and Characterization of Titania/Tin Sulphide (TiO ₂ /SnS ₂) Core-Shell Nanostructures, ICANN 2017	18-21 December 2017, Guwahati
7	Annu Sharma		Synthesis of a Phase-pure, Nanocrystalline (PbSrCa)0.33TiO ₃ Perovskite from Nitrate Precursors by Reverse Co-precipitation and the Effect of Molarity, ICANN 2017	18-21 December 2017, Guwahati
8	Nandhini		Exploring Functional Properties of Nanocrystalline Multicomponent Transition Metal Oxide Systems, ICANN 2017	18-21 December 2017, Guwahati
9	B. Khadambari		Fabrication and Characterisation of Kesterite Cu _{2-x} Zn ₁₋₃ SnS ₄ Thin Films by Solution-based Processing Technique for Photovoltaic Solar Energy Applications, ICANN 2017	18-21 December 2017, Guwahati
10	R. Jayasree	MM11D018	Oral presentation: Macroporous hydroxyapatite self-setting foams for bone regeneration	15 February 2017, Hindustan University, Chennai
11	Krishna Kumar	MM14D404	Characterisation of bimetallic nanoparticles using electron microscopy	17-19 July 2017, EMSI 2017
12	Anirban Chakraborty	MM16S006	Kinetics of electroless Ni-P thin films on activated glass and SS316 substrates	11-14 November 2017, NMD-ATM 2017

Students/Scholars who won outside prizes and awards

Sl. No.	Student/Scholar	Roll No.	Prize	Awarded by
1	A. Sandeep Kranthi Kiran		Admission to Joint Ph.D. (Full Time) Programme	NUS-IIT Madras
2	R. Jeyaraam		Sweta Mulki Poster Award	IIT Bombay and Indian Institute of Metals Mumbai
3	B. Khadambari		Student Travel Award for best poster: Fabrication and characterisation of kesterite Cu _{2-x} Zn ₁₋₃ SnS ₄ thin films by solution-based processing technique for photovoltaic solar energy applications	6-10 December 2017, Hawaii, USA

Sl. No.	Student/Scholar	Roll No.	Prize	Awarded by
4	Ajay Kumar		Paper presented in international conference	12-15 December 2017, Naples, Italy, EFC2017
5	Sonia Sharma	MM13D017	Best poster award in Symposium T, E-MRS	22-26 May 2017, EMRS 2017, Strausbourg
6	Piu Rajak	MM13D301	EMSI scholarship for participation in international microscopy conference	Electron Microscope Society of India

Students/Scholars who won Institute Convocation/Institute Day Prize

Sl. No.	Student/Scholar	Roll No.	Prizes
1	K. Madhumathi, R. Viswanathan and S. Soumya	MM12D005, MM12D028, MM12D030	Institute Research Award
2	Mangesh Balakrishnan, Mayur Vaidya, Sonia Sarma, T. Hanas	MM10D010, MM13D003, MM12D022, MM13D017, MM13D009	Best paper awards for the papers published by our PhD scholars in 2016
3	A. Ganesh (AIR = 2), Venkatesh (AIR = 9), Gautham (AIR = 12) Hariharan (AIR = 39), Akshay Kumar (AIR = 55)	MM13B039, MM13B035, MM13B040, MM13B041, MM13B034	GATE 2017 toppers
4	Rohith Pinnamaraju	MM13B029	Dr Dhandapani Memorial Prize
5	Asmita Jana	MM12B006	S. Anantharamakrishnan Memorial Prize
6	Rajath Alexander	MM15M016	Sudharshan Bhat Memorial Prize
7	Rama Srinivas	MM12B032	Bhagyalakshmi and Krishna Ayengar Award
8	Daria S. Nair	MM15B009	Women of Mettle Scholarship Programme – conducted by Tata Steel
9	N. Maheshawari	MM15D013	CALPHAD Best Paper Award

4.14.3. Faculty and their activities

Faculty

Professors	
S. Ganesh Sundara Raman, Ph.D. (IIT Madras), (Head)	Fatigue and fracture of metallic materials and their weldments, fretting fatigue, fretting wear, high-temperature deformation, coatings, thermal spray processing, surface engineering
M. Balasubramanian, Ph.D.(IIT Madras)	Advanced ceramics and composites, nanocomposites processing, materials Characterization
S.S. Bhattacharya, Ph.D. (IIT Madras)	Nanocrystalline materials—synthesis, consolidation, characterisation and property evaluation, superplasticity of materials (analytical and experimental), superplastic forming, advanced materials testing
K.C. Hari Kumar, Ph.D. (IIT Delhi)	Computational thermodynamics and kinetics; ab initio calculations of thermochemical and thermophysical properties
M. Kamaraj, Ph.D. (IIT Madras)	High-temperature deformation studies on steels/super alloys, hot-corrosion studies, surface technology, development of wear surfacing materials, tribological studies on weld deposits/coatings/composites, failure analysis
B.S. Murty, Ph.D. (IISc, Bengaluru)	Nanocrystalline materials, bulk metallic glasses, high-entropy alloys, composites, phase transformations, electron microscopy, atom probe tomography
G. Phanikumar, Ph.D. (IISc, Bengaluru)	Solidification using electromagnetic levitation and melt spinning, transport phenomena in manufacturing processes, microstructure simulation and characterization
Prathap Haridoss, Ph.D. (University of Wisconsin-Madison)	Production and characterisation of carbon nanotubes; synthesis of CdS nanocrystals; CO-tolerant PEM fuel cell catalysts

Ranjit Bauri, Ph.D. (IISc, Bengaluru)	Metal matrix composites, aluminium alloys, solid oxide fuel cells
N.V. Ravi Kumar, Ph.D.(MPI-Stuttgart)	Polymer-derived ceramics, silicon carbide/silicon nitride ceramics, high-temperature mechanical properties, object-oriented finite element programming for prediction of macroscopic properties
V. Sampath, Ph.D. (IISc, Bengaluru)	Shape memory alloys/smart materials, composite materials, powder metallurgy, structure–property correlations in materials
T.S. Sampath Kumar, Ph.D.(IISc, Bengaluru)	Nanostructured biomaterials, antimicrobial ceramics and delivery systems, value- added biomaterials from natural wastes
S. Sankaran, Ph.D. (IIT Kanpur)	Mechanical behaviour of materials, electron microscopy, structure–property correlations
V. Subramanya Sarma, Ph.D.(IIT Madras)	Materials processing, development, characterisation and microstructure, mechanical property correlations in engineering materials
G. Sundararajan, Ph.D.(Ohio State University)	Tribological behaviour of materials, indentation behaviour of materials, coatings on materials, deformation and fracture behaviour of materials
Uday Chakkingal, Ph.D.(Rensselaer Polytechnic Institute)	Metal forming and material processing, severe plastic deformation processes, aluminium alloys, fatigue

Associate Professors

G.D. Janki Ram, Ph.D. (IIT Madras)	Welding, additive manufacturing, failure analysis
K. Ravi Sankar, Ph.D. (IISc, Bengaluru)	High-temperature deformation, super plasticity, nanocrystalline materials, size effects in plastic deformation
Somnath Bhattacharyya, Ph.D. (University of Stuttgart, Germany)	Studying correlation of the structure and chemistry of materials at atomic scale with physical properties using transmission electron microscopy, development of new methodology related to TEM/STEM to study materials, studying nano-bio conjugation using electron probe
Srinivasa Rao Bakshi, Ph.D.(Florida International University, Miami, USA)	Thermal spraying, carbon nanotube-reinforced composites, microstructure property correlations at different length scales, nuclear materials

Assistant Professors

Ajay Kumar Shukla, Ph.D.(IIT Kanpur)	Process modeling, control and optimisation of iron and steel making, computational thermodynamics and its application to high-temperature metallurgical processes, heat and mass transfer
Anand K. Kanjarla, Ph.D. (Katholieke Universiteit Leuven (KUL), Belgium)	Microstructural approach to mechanics of materials, finite element method and fast Fourier transform approach to crystal plasticity (CPFEM and CPFEM), plastic anisotropy and crystallographic texture, microstructure evolution in irradiated systems
Lakshman Neelakantan, Ph.D. (MPIE Dusseldorf and RUB, Bochum, Germany)	Corrosion characteristics, smart coating for corrosion protection, electro-dissolution, planarisation and deposition
Manas Mukherjee, Ph.D. (Technical University Berlin, Germany)	Metal foam production and characterisation, physics of foaming, X-ray tomography, solidification
Murugaiyan Amirthalingam, Ph.D. (Delft University of Technology, Netherlands)	Welding metallurgy, welding processes development, steels product development, in situ 3D synchrotron X-ray diffraction and additive manufacturing
Parasuraman Swaminathan, Ph.D. (University of Illinois, Urbana-Champaign, USA)	Printed electronics, vapour-deposited thin films and nanoparticles, optical and electrical properties of doped metal oxides, photovoltaics
Sabita Sarkar, Ph.D. (IISc, Bengaluru)	Process modelling/design of metallurgical and chemical processes, modeling and simulation of flows through packed beds, fluidised beds, heat and mass transfer, granular flows, multi-phase flows, reacting flows
Satyesh Kumar Yadav, Ph.D. (University of Connecticut, USA)	Physics and chemistry of materials from first-principles electronic structure modelling, first-principles thermodynamics, modeling of materials using quantum mechanics derived potentials, understanding structure, property, and processing relation of materials
Sreeram K. Kalpathy, Ph.D. (University of Minnesota)	Soft matter: colloid and polymer science, interfacial fluid mechanics, physical chemistry of surfaces, coating and printing methods

Tiju Thomos, Ph.D. (Cornell University, USA)	Energy materials, environmental remediation materials [nitrides, oxynitrides, oxides (in nano, meso and bulk forms)], photofunctional materials (for solar cells, photocatalytic applications), optical materials and devices, surfaces, interfaces and transformation of nanostructures, green approaches to functional nanomaterials
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Visiting Faculty

M. Sundararaman, Ph.D. (University of Mumbai)	Phase transformation and structure property correlation in metallic materials, ordered-disordered transformation under equilibrium and non-equilibrium conditions, micromechanics of plasticity, material characterisation, physical metallurgy of super alloys, defect analysis using microscopy
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S. Venugopal, Ph.D. (University of Madras)	Metal working, irradiation experiments, tribology, post-irradiation examination, in-service inspection of nuclear plant components
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Steel Chair Professor

Santanu Kumar Ray, Ph.D. (IIT Kharagpur)	R&D in steel making, continuous casting of steels
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AICTE-INAE Distinguished Professor

R. Natarajan, B.Tech (IIT Madras), Vice President (TII), Chennai	R&D in steel technology for tubular products
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Adjunct Faculty

R. Gopalan, Ph.D. (IIT Madras), Associate Director and Head, Centre for Automotive Energy Materials, ARCI, IITM Research Park	Magnetic materials, thermo-electric materials, fuel cells
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Raju Ramanujan, Ph.D. (CMU), Professor, NTU, Singapore	Nano functional materials
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T. Venugopalan, Ph.D. (NIT, Rourkela)	R&D in steel technology
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Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conferences			
1	Murugaiyan Amirthalingam	Post-Conference Tutorial	10-11 December 2017
2	Murugaiyan Amirthalingam	Institute Open House	5-6 January 2018
Workshops			
1	Murugaiyan Amirthalingam	Organised Brahm Prakash Memorial Quiz for XI class school students	5 August 2017, IIT Madras
2	B. S. Murty and Murugaiyan Amirthalingam	Metallurgy for Non-Metallurgists for executives of Titan Industries	7-8 July 2017, Titan Industries, Hosur
3	B. S. Murty	Convener, Workshop on Atom Probe Tomography	20 July 2017, IIT Madras
4	B. S. Murty	Chairman, International Workshop on High Entropy Materials	11-12 March 2017, University of Hyderabad
5	B. S. Murty	In-House Symposium (IHS-2017)	29-30 July 2017
Short-term courses			
1	S. S. Bhattacharya	Chaired a session, Synthesis and Processing Challenges, in International Workshop on High Entropy Materials	11-12 March 2017, University of Hyderabad
2	Murugaiyan Amirthalingam	Chaired a technical session at 1 st International Conference on Advances in Metallurgy, Materials and Manufacturing (ICAMMM 2017)	GCE Salem

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty	Title	Institution	Period
Workshop				
1	V. Sampath	Faculty development programme on Robotics and Automation	TKM College, Kollam	8-12 January 2018
Seminar				
1	B. S. Murty	Review of IISc Bangalore	IISc Bangalore	15-17 May 2017
Symposia				
1	B. S. Murty	RC Meeting	DMRL Meeting, Hyderabad	13 April 2017
2	G. D. Janaki Ram	Attended a discussion meeting for finalising inspection and testing requirements for cast bronze panels	Delhi	25 August 2017
3	B. S. Murty	INAE Council meeting	New Delhi	25 August 2017
4	B. S. Murty	BRNS meeting	BARC, Mumbai	4 September 2017
Conferences				
1	M. Balasubramanian	CSIR-National Institute for Interdisciplinary Science and Technology	Thiruvananthapuram	18 September 2017
2	V. Sampath	Colloquium on Smart Materials and Structures	Kottayam, Kerala	24-26 November 2017
3	Ajay Kumar Shukla	3rd International Conference on Science and Technology of Ironmaking and Steelmaking	IIT Kanpur	11-13 December 2017
4	Srinivas Rao Bakshi	Cold Spray Action Team Meeting (CSAT-2017)	Northeastern University, Boston, USA	14-15 June 2017
5	Murugaiyan Amirthalingam	Annual Assembly of International Institute of Welding (IIW)	Shanghai, China	24 June-1 July 2017
6	B.S. Murty	EMSI 2017	Confluence, Mamallapuram	17 July 2017
7	S. S. Bhattacharya	International Conference on Advanced Nanomaterials and Nanotechnology	ICANN 2017, Guwahati	18-21 December 2017
8	Uday Chakkingal	International Conference on Nanomaterials by Severe Plastic Deformation	Sydney, Australia	2-7 July 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty	Topic of Lecture	Institution	Date
1	G. D. Janaki Ram	New approaches in welding engineering	SSN, Chennai	7 April 2017
2	S. Ganesh Sundara Raman	Fatigue of Materials (Faculty development programme on Mechanical Behavior of Structural Materials)	SRM	13 May 2017
3	G. D. Janaki Ram	Challenges in joining of advanced materials	NFC, Hyderabad	26 May 2017
4	Murugaiyan Amirthalingam	Residual stresses in welding- Fundamentals and advanced characterisation methods, AICTE	CIT	27 May 2017
5	V. Subramanya Sarma	Influence of the mode of deformation on recrystallisation kinetics in Ni through experiments, theory, and phase field model	IIT Bombay	20-21 August 2017
6	Anand Krishna Kanjarla	Modelling mechanical response of irradiated fcc polycrystals	IIT Bombay	20-21 August 2017
7	V. Subramanya Sarma	Crystallographic textures and electron back scatter diffraction	JSW, Salem	29-30 August 2017
8	B. S. Murty	Probing materials at the atomic scale	NITK Surathkal	22 September 2017
9	Dr. Somnath Bhattacharyya	Influence of supporting amorphous carbon film thickness on measured strain variation within a nanoparticle	Institute of Nano Science and Technology, Mohali	1 December 2017
10	Uday Chakkingal	Improvement in properties of a magnesium alloy by severe plastic deformation	NIT Karnataka, Surathkal	22 January 2018

Sl. No.	Faculty	Topic of Lecture	Institution	Date
11	Sreeram K. Kalpathy	Transport phenomena in liquid and colloidal materials-based coating processes	VJCET, Kerala	21 February 2017
12	Sreeram K. Kalpathy	Some metallurgical properties of a laser-deposited nickel-titanium shape memory alloy	VJCET, Kerala	21 February 2017
13	Tiju Thomas	Science and engineering of nitrides and nanostructures	Guindy College of Engineering, Chennai	13 March 2017
14	Tiju Thomas	(a) Science and engineering of nitrides and nanostructures (b) Scientific Café for building intra- and inter-institutional knowledge networks	Sri Ramakrishna Engineering College, Coimbatore	17 February 2017
15	Murugaiyan Amirthalingam	Indian Welding Society Day Celebrations titled, Hot cracking during welding of advanced high strength steels	Hotel Ambica Empire, Chennai	14 March 2017
16	Murugaiyan Amirthalingam	Keynote lecture on Hot cracking during welding	ICAMMM 2017, Salem	6 March 2017
17	M. Kamaraj	Advanced coating technologies for manufacturing of high-temperature parts at a one-day workshop on advanced manufacturing technologies	VIT University, Vellore	4 March 2017
18	Parasuraman Swaminathan	Challenges in electronic device fabrication	VIT, Vellore	28 February 2017
19	Parasuraman Swaminathan	Printed electronics	NIT, Trichy	26 March 2017
20	M. Balasurbamanian	Engineering applications of composite materials	International Symposium on Advanced Materials for Engineering Applications, NIE Mysuru	25 March 2017
21	Uday Chakkingal	Introduction to sheet metal forming	Anna University	9 March 2017
22	Uday Chakkingal	Some applications of severe plastic deformation in aluminium alloys	NIIST, Trivandrum	
23	S. Ganesh Sundara Raman	Fatigue testing – An overview	Anna University	25 February 2017
24	T. S. Sampath Kumar	Nanotechnology advances in biomaterials	Anna University	22-24 March 2017
25	T. S. Sampath Kumar	Nanostructured metallic implants by severe plastic deformation techniques	Univ. of Madras	7-8 February 2017
26	Sreeram K. Kalpathy	Basics of asymptotic analysis and self-similarity	IIT Madras	30 March 2018
27	Sreeram K. Kalpathy	Stability of thin film flows bounded by surfaces with wettability contrasts	IIT Madras	30 March 2018
28	V. Sampath	Introduction to shape memory alloys and their characterisation	SRM University, Katankulathur	15 March 2018
29	V. Sampath	Role of shape memory alloys in robotics/mechatronics	SRM University, Katankulathur	15 March 2018
30	S. S. Bhattacharya	Nanocrystalline and nanostructured materials: synthesis and consolidation	M.S. Ramaiah Institute of Technology (MSRIT), Bengaluru	28 February 2018
31	S. S. Bhattacharya	Multicomponent equimolar nanocrystalline ceramics	M.S. Ramaiah Institute of Technology (MSRIT), Bengaluru	28 February 2018

Sl. No.	Faculty	Topic of Lecture	Institution	Date
32	Sreeram K. Kalpathy	Mechanical evaluation of reversion heat treatment of thermally embrittled duplex stainless steels	NIT Karnataka	6 February 2018
33	M. Balasubramanian	Processing and structure-property relationships of nanocrystalline silicon carbide	IIT Kharagpur	23 February 2018
34	Satyesh Kumar Yadav	Role of first-principles electronic structure modeling in materials simulation at inter-IIM (IIT Madras and IGCAR Chapters)	IIT Madras	3 March 2018
35	Parasuraman Swaminathan	Printed oxide electronics: A summary of our efforts at IIT Madras	NIT Rourkela	27 November 2017

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit
1	B. S. Murty	USA	26-27 April 2017	Nominating Committee Meeting, ASM International, Cleveland
2	B. S. Murty	USA	28 April 2017	Visit and discussion with faculty of University of California, Berkley
3	Prathap Haridoss	Sweden	7-13 May 2017	MIELES Workshop and study visit at KTH Royal Institute of Technology, Stockholm, Sweden
4	V. Sampath	Russia	20 May-4 June 2017	Joint RFBR-DST, Kotelnikov Institute of Radio Engineering and Electronics of Russian Academy of Sciences, Russia
5	N. V. Ravi Kumar	Austria	29 May-2 June 2017	Austria Zwick Roell Forum for High Temperature Testing Furstenfeld, Austria
6	Sabita Sarkar	Norway	30 May-1 June 2017	12th International Conference on Computational Fluid Dynamics in Oil and Gas, Trondheim, Norway
7	Anand Krishna Kanjarla	Belgium	20-22 September 2017	Oral presentation: Dislocation and defect density based modeling of deformation behavior of irradiated fcc polycrystals
8	B. S. Murty	Austria	27 August-1 September 2017	Keynote lecture and chairing a session at 16th International Conference on Rapidly Quenched and Metastable Materials (RQ16)
10	Murugaiyan Amirthalingam	France	28 November-5 December 2017	Experiments in European Synchrotron Radiation Facility (ESRF), Grenoble, France
11	M. Kamaraj	Germany	8-20 January 2018	International Workshop on Mathematical Modeling of Complex System, Koblenz, Germany
12	Parasuraman	Singapore	18-23 June 2017	ICMAT 2017
13	Murugaiyan Amirthalingam	China	24 June-1 July 2017	Present three technical papers in the Annual Assembly of International Institute of Welding (IIW)
14	B. S. Murty	Australia	19-21 June 2017	Receive Honorary PhD from Deakin University
15	Uday Chakkingal	Australia	2-7 July 2017	Present invited paper at International Conference on Nanomaterials by Severe Plastic Deformation. Also chaired a session-NanoSPD7
16	V. Sampath	USA	9-14 July 2017	Papers presented at ICOMAT 2017
17	G. Sundararajan	USA	11-15 March 2018	2018 TMS Annual Meeting and Exhibition
18	M. Kamaraj	Japan	28-30 March 2018	Part of Re-Inventing Japan Project (India) and academic collaboration between IIT Madras and Nagaoka University of Technology

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Member	Award	Awarded by	Awarded for	Date of award
i. Honours					
1	T. S. Sampath Kumar	TEQIP-sponsored national workshop on Materials for Bio-Medical and Speciality Applications	NIT Surathakal	Guest of Honour at the inauguration ceremony	23-24 January 2017
2	T.S. Sampath Kumar	National Seminar on Advanced Biomaterials and Applications	Hindustan University, Chennai	Inaugural lecture on Naturally derived Bioceramics – Processing and Applications	15 February 2017
3	Murugaiyan Amirthalingam	IWS Day Celebration	Hotel Ambica Empire, Chennai	Chief Guest	14 March 2017
4	Murugaiyan Amirthalingam	Member, National Committee	Mumbai	Confederation of Indian Industries (CII) Committee on Welding	22 March 2017
ii. Award					
1	V. Subramanya Sarma	Best reviewer award	Indian Institute of Metals	Best reviewer for Transactions of IIM	14 November 2017

Fellowships of Academies and Professional Societies

Sl. No.	Faculty Member	Year of admission
Fellow of the Indian Institute of Metals	Santanu Kumar Ray (Steel Chair Professor)	2017

Journal Editorial Boards

Sl. No.	Faculty Member	Position (Editor/Member)	Journal Name
1.	B. S. Murty	Chief Editor	Transactions of The Indian Institute of Metals
2.	Murugaiyan Amirthalingam	Corresponding editor and Principal reviewer	Welding in the World, Springer, International Institute of Welding
3.	N. V. Ravi Kumar	Editor	Surface Innovations
4.	Somnath Bhattacharyya	Editor	Scientific Reports
5.	Somnath Bhattacharyya	Editor	Indian Journal of Materials Science
6.	T. S. Sampath Kumar	Member	Biomaterials and Tissue Technology
7.	S. Ganesh Sundara Raman	Editor	Transactions of The Indian Institute of Metals
8.	Murugaiyan Amirthalingam	Editor	Transactions of The Indian Institute of Metals
9.	V. Subramanya Sarma	Key reader	Metallurgical and Materials Transactions A

4.14.4. Design and Development Activities

New facilities added or Major Equipment Procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1	Universal Vareststraint testing machine	7.87
2	National Atom Probe Facility	3970



Local Electrode Atom Probe (LEAP 5000XR)



Helios Focused Ion Beam Facility

Patents

Patents Filed

Sl. No.	Faculty Member	Topic of patent
1	Manas Mukherjee	An apparatus for producing material foam from a material and methods thereof
2	Tiju Thomas	Digestively-ripened seed/nucleus-driven rapid and high-yield synthesis of monodispersed ceramic/compound semiconductor nanoparticles
3	Tiju Thomas	Hydrogen generation from waste water via galvanic corrosion of in-situ formed aluminum amalgam

4.14.5. Research and Consultancy

Sponsored Research Projects

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
New Projects					
1	Development of hot stamping process with low spring back for advanced high strength steels	11 May 2017-10 May 2020	Department of Science and Technology (DST)	34.23	Uday Chakkingal and Murugaiyan Amirthalingam
2	Microwave-assisted reduction of iron ore/slimes: An innovative and cost-effective approach for steel production	30 December 2017-29 December 2020	Impacting Research and Technology (IMPRINT)	331.8	Ajay Kumar Shukla
3	JC Bose Fellowship	1 April 2016-31 December 2018	DST	50	G. Sundararajan
4	Stress-rupture property evaluation of advanced superalloys for small turbo fan engine (STFE) technologies	30 May 2017-29 May 2021	Defence Research and Development Organisation (DRDO)	435.61	Kottada Ravi Sankar
5	High-temperature erosion damage characterisation of downstream components by particle erosion testing	30 May 2017-29 May 2021	DRDO	115.29	Srinivasa Rao Bakshi, M. Kamaraj, S. R. Chakravarthy, B. V. S. S. S. Prasad
6	Characterisation of selective laser melted Inconel 718 and Ti-6Al-4V	30 May 2017-29 May 2020	DRDO	161.53	G. D. Janaki Ram, Kottada Ravi Sankar, V. Subramanya Sarma, S. Ganesh Sundararaman, B. V. S. S. S. Prasad and S. R. Chakravarthy
7	Development and characterisation of novel materials for capacitor-based energy storage devices	28 June 2017-27 June 2020	DST	35.6	N. V. Ravi Kumar
8	High-temperature fretting fatigue behaviour of aero-engine materials	--	Aeronautics Research & Development Board	135.33	S. Ganesh Sundararaman and H. S. N. Murthy
9	Laser peening of nickel-based super alloys	24 August 2017-23 August 2019	DST	19.2	S. Ganesh Sundararaman
10	Development of oxide dispersion strengthened high-entropy alloys	7 September 2017-6 September 2019	DST	19.2	B. Srinivasa Murthy

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
11	First principles study of structural, electronic, magnetic, mechanical and optical properties of perovskite structured materials for solar energy applications - National Post Doctoral Fellowship (NPDF)	14 September 2017-13 September 2019	DST	19.2	Tiju Thomas
12	Exfoliated hexagonal boron nitride and graphene layers-based polymer composite coating: synthesis, characterisation and its application towards corrosion protection of metals	18 September 2017-17 September 2019	DST	19.2	M. Kamaraj
13	Synthesis and characterisation of crystal axis oriented nanotube arrays for energy applications – NPDF	15 September 2017-14 September 2019	DST	19.2	Lakshman Neelakantan
14	Establishing novel erosive wear test facility for testing of materials used in hydro-turbine components	1 April 2017-31 March 2019	Central Power Research Institute	125	M. Kamaraj and Dhiman Chatterjee
15	The effect of 'si' addition on microstructure and mechanical properties of oxide dispersion strengthened reduced activation ferritic (ODS RAF) alloys fabricated by mechanical alloying (MA) and consecutive spark plasma sintering (SPS)-NPDF	5 October 2017-4 October 2019	DST	19.2	B. Srinivasa Murthy
16	Development of liquid metal processing route for closed cell magnesium foam - DST SERB	8 August 2017-7 August 2020	DST	16.21	Manas Mukherjee
17	Advanced manufacturing of new high-entropy alloys – DST AISRF	23 October 2017- 22 October 2020	DST	40.85	B. Srinivasa Murthy
18	Centre of Excellence in Advanced Materials and Manufacturing (CoE)	28 November 2017-27 November 2020	Deakin University	175	B. Srinivasa Murthy
19	High-strength, wear and corrosion resistant steel for high-speed rail and elastic clip	11 December 2017-10 December 2020	IMPRINT	137.4	S. Sankaran and Somnath Bhattacharyya
20	Multicomponent entropy stabilised oxides: Synthesis, processing and characterisation of a new class of ceramic materials	7 August 2017-6 August 2020	DST	29.06	S. S. Bhattacharya
21	Non-destructive, atomically resolved off-stoichiometry determination within nanostructures using intensity distribution of scanning transmission electron microscopic (STEM) images	21 March 2018-20 March 2021	DST	33.22	Somnath Bhattacharyya
22	In-situ experimental and numerical studies of abnormal grain growth and twinning during annealing of cold worked nickel	20 March 2018-19 March 2021	DST	82.59	V. Subramanya Sarma and Srikanth Vedantam

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
Ongoing					
1	Development of a novel electrolyte-free single layer solid oxide fuel cell	31 March 2017-30 March 2020	DST	43.66	Ranjit Bauri
2	Engineering weld microstructures against hydrogen embrittlement	31 March 2017-30 March 2020	DST	85.49	Murugaiyan Amirthalingam, G. D. Janaki Ram, N. V. Ravi Kumar
3	Microwave assisted reduction of iron ore/slimes: An innovative and cost-effective approach for steel production	30 December 2017-29 December 2020	IMPRINT	331.8	Ajay Kumar Shukla
4	Development of hot stamping process with low spring back for advanced high-strength steels	11 May 2017-10 May 2020	DST	34.23	Uday Chakkingal and Murugaiyan Amirthalingam
5	Laser peening of nickel based super alloys	24 August 2017-23 August 2019	DST	19.2	S. Ganesh Sundararaman
6	Development of oxide dispersion strengthened high entropy alloys	7 September 2017-6 September 2019	DST	19.2	B. Srinivasa Murthy
7	First principles study of structural, electronic, magnetic, mechanical and optical properties of perovskite structured materials for solar energy applications – NPDF	14 September 2017-13 September 2019	DST	19.2	Tiju Thomas
8	Exfoliated hexagonal boron nitride and graphene layers-based polymer composite coating: synthesis, characterization and its application towards corrosion protection of metals	18 September 2017-17 September 2019	DST	19.2	M. Kamaraj
9	Synthesis and characterization of crystal axis oriented nanotube arrays for energy applications – NPDF	15 September 2017-14 September 2019	DST	19.2	Lakshman Neelakantan
10	Establishing novel erosive wear test facility for testing of materials used in hydro-turbine components	1 April 2017-31 March 2019	Central Power Research Institute	125	M. Kamaraj and Dhiman Chatterjee
11	The effect of 'si' addition on microstructure and mechanical properties of oxide dispersion strengthened reduced activation ferritic (ODS RAF) alloys fabricated by mechanical alloying (MA) and consecutive spark plasma sintering (SPS)- NPDF	5 October 2017-4 October 2019	DST	19.2	B. Srinivasa Murthy
12	Development of liquid metal processing route for closed cell magnesium foam	8 August 2017-7 August 2020	DST	16.21	Manas Mukherjee
13	Advanced manufacturing of new high entropy alloys	23 October 2017-22 October 2020	DST	40.85	B. Srinivasa Murthy
14	Centre of excellence in Advanced Materials and Manufacturing (CoE)	28 November 2017-27 November 2020	Deakin University	175	B. Srinivasa Murthy

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
15	High strength, wear and corrosion resistant steel for high speed rail and elastic clip	11 December 2017-10 December 2020	IMPRINT	137.4	S. Sankaran and Somnath Bhattacharyya
16	Multicomponent entropy stabilised oxides: Synthesis, processing and characterisation of a new class of ceramic materials	7 August 2017-6 August 2020	DST	29.06	S. S. Bhattacharya
17	Ordered patterns of colloids and polymers on porous substrates: Deposition, characterization and modelling	11 January 2017-10 January 2020	DST	45.29	Sreeram K. Kalpathy
18	Studying structure and chemistry within and at the interfaces of nano lamella in cold rolled Ti-alloys using transmission electron microscopy to determine reason behind its superior strength	21 February 2017-20 February 2019	DST	6.3	Somnath Bhattacharyya
19	Agarose-based wound dressings	22 August 2016-21 August 2019	DST	43.52	T. S. Sampath Kumar
20	Cold spray technology development for repair and coating of aircraft engine components	27 October 2016-26 October 2019	Uchhatar Avishkar Yojana - IIT Madras	520	M. Kamaraj and Srinivasa Rao Bakshi
21	Weld repair of XH43 and XH67 superalloy castings	7 June 2016-30 September 2018	Indian Space Research Organisation	27.69	G. D. Janaki Ram, Murugaiyan Amirthalingam, Kottada Ravi Sankar and V. Subramanya Sarma
22	Assured opportunity for research career fellowship	1 January 2015-11 August 2019	DST	24.26	Tiju Thomas
23	Performance of coatings under fretting wear conditions	13 November 2015-12 November 2018	Aeronautics Research and Development Board	103.47	S. Ganesh Sundararaman and M. Kamaraj
24	Development of W-Cu functionally graded nanocrystalline material for the first wall component in nuclear fusion power reactor	1 April 2016-31 March 2018	Board of Research in Nuclear Sciences	53.02	B. Srinivasa Murthy and Srinivasa Rao Bakshi
25	Development of high entropy alloy (HEA) coatings as potential bond-coat materials for high temperature turbine engine applications (GTMAP)	12 February 2016-11 February 2020	Aeronautics Research and Development Board	275.16	Kottada Ravi Sankar
26	Use of second phase material to enhance the stability of metallic coatings	30 March 2015-29 September 2018	Naval Research Board	19.2	Parasuraman Swaminathan
27	Processing of and characterisation of quenched and partitioned steels	13 April 2015-12 April 2018	Council of Scientific and Industrial Research	8	S. Sankaran and K. C. Harikumar
28	Development of lightweight high strength Al-Mg alloy foams	7 March 2016-31 December 2018	Naval Research Board	33	Manas Mukherjee and Kottada Ravi Sankar
29	Effect of retained austenite on rolling contact fatigue life AISI 52100 bearing steel	7 July 2014-6 July 2018	DST	39.76	M. Kamaraj and A. Seshadri Sekhar

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
30	Effect of thermo-mechanical processing on the microstructure, texture and anisotropy evolution in various Ti alloy being used in various launch vehicle programmes of ISRO	1 March 2016-28 February 2019	Indian Space Research Organisation	25.78	Anand Krishna Kanjarla
31	Morphology transitions in nanostructures of transition/rare earth metal compounds and their applications	26 June 2016-25 June 2019	DST	24.14	Tiju Thomas and M. Kamaraj
32	In-vitro degradation and cytotoxicity studies of surface modified PEO/Chitosan/TiO ₂ coated magnesium alloys for orthopaedic applications	18/05/16 17/05/18	DST	19.2	T. S. Sampath Kumar
33	Centre of Excellence in Iron and Steel Technology (COEXIST)	9 May 2017-8 May 2022	Minsitry of Steel	3555	Uday Chakkingal, Anand Krishna Kanjarla, S. Ganesh Sundara Raman, K. C. Harikumar, G. D. Janaki Ram, Kamaraj M, Lakshman Neelakantan, B. S. Murty, Murugaiyan Amirthalingam, G. Phanikumar, Ranjit Bauri, K. Ravi Sankar, S. Sankaran, Srinivasa Rao Baksi, Subramanya Sarma, G. Sundararajan
34	New family of Fe-containing magnetic shape memory alloys with giant reversible strain	12 September 2016-11 September 2018	DST	26.56	V. Sampath
35	National Facility for the Atomic Scale Materials Characterization using Remote Operatable Atom Probe Tomography (NFAPT)	31 March 2017-30 March 2020	DST	2570	B. Srinivasa Murthy
36	Development of fluidised bed reduction roasting process for slimes and low-grade iron ores by utilising thermal grade coal for improving their magnetic susceptibility properties and maximising the iron recovery	18 November 2016-17 November 2020	Ministry of Steel	51	Sabita Sarkar, B. V. S. S. S. Prasad, Srikrishna Sahu and K. C. Harikumar
37	Studies on functional fatigue behaviour of shape memory alloys for actuator and sensor applications	20 February 2017-19 February 2020	DST	48.16	V. Sampath
38	JC Bose Fellowship	1 April 2016-31 December 2018	DST	50	G. Sundararajan
39	Stress-rupture property evaluation of advanced superalloys for small turbo fan engine (STFE) technologies	30 May 2017-29 May 2021	DRDO	435.61	Kottada Ravi Sankar
40	High-temperature erosion damage characterisation of downstream components by particle erosion testing	30 May 2017-29 May 2020	DRDO	115.29	Srinivasa Rao Bakshi, M. Kamaraj, S. R. Chakravarthy and B. V. S. S. S. Prasad

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
41	Characterisation of selective laser melted Inconel 718 and Ti-6Al-4V	30 May 2017-29 May 2020	DRDO	161.53	G. D. Janaki Ram, Kottada Ravi Sankar, V. Subramanya Sarma, S. Ganesh Sundararaman, B. V. S. S. S. Prasad and S. R. Chakravarthy
42	Development and characterisation of novel materials for capacitor-based energy storage devices	28 June 2017-27 June 2020	DST	35.6	N. V. Ravi Kumar
43	Non-destructive, atomically resolved off-stoichiometry determination within nanostructures using intensity distribution of scanning transmission electron microscopic (STEM) images	21 March 2018-20 March 2021	DST	33.22	Somnath Bhattacharyya
44	In-situ experimental and numerical studies of abnormal grain growth and twinning during annealing of cold worked nickel	20 March 2018-19 March 2021	DST	82.59	V. Subramanya Sarma and Srikanth Vedantam

Industrial Consultancy projects

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
New projects				
1	Kamaraj M. and Ramanathan S.	Investigating the root cause analysis for Muck receipt during Pigging operations in Chennai ATFPL and suggesting remedial measures	Indian Oil Corporation Limited	7.3
2	G. D. Janaki Ram	Analysis of compressor shaft failures	Hanon Automative Systems India Private Limited	3.91
3	Lakshman Neelakantan and G. D. Janaki Ram	Investigation on the corrosion issue of 30 ft Sardar Vallabhbhai Patel bronze statue: An XRD analysis	Common Code	0
4	Murugaian Amirthalingam and B. Srinivasa Murthy	Technical consultancy on non-ferrous physical metallurgy and failure analysis	Common Code	3,84
	Uday Chakkingal and S. Venugopal	Aluminium watch case manufacturing project	Titan Company Limited	10.74
5	Srinivasa Rao Bakshi	Characterisation of materials	Common Code	0
6	Uday Chakkingal, B. Srinivasa Murthy, and S. Venugopal	Identifying process adopted for manufacturing wind turbine shaft	Siemens Gamesa Renewable Energy	3.54
7	Uday Chakkingal	Identification of manufacturing process for manufacturing wind turbine main shaft	Acciona Wind Power India Private Limited	4.72
8	M. Kamaraj	Materials testing, characterisation and analysis	Common Code	0.94
Ongoing projects				
1	Lakshman Neelakantan	Investigation on the corrosion issue of 30ft Sardar Vallabhbhai Patel bronze statue: An XRD analysis	Common Code	0
2	S. Sankaran	Rolling mill facility at MFL	Common Code	15
3	S. Sankaran	Central electron microscopy facility	Common Code	5
4	M. Kamaraj	Thermo-mechanical simulation facility	Common Code	5

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
5	Srinivasa Rao Bakshi	Characterisation of materials	Common Code	0
6	Srinivasa Rao Bakshi	Characterisation and analysis of the materials	Renault Nissan Technology and Business Centre India Private Limited (RNTBCI)	11.5
7	Murugaiyan Amirthalingam	Simulation of roll bonding – Al/Mg/Al layered composites using Gleeble	Common Code	0.69
8	M. Kamaraj	Mechanical Testing – II	Common Code	0.41
9	V. Subramanya Sarma	SEM testing and analysis	Common Code	0.84
10	N. V. Ravi Kumar	Technical opinion, analysis of ceramics and ceramic based components	Common Code	0
11	T. S. Sampath Kumar	Medical materials laboratory services	Common Code	0
12	V. Subramanya Sarma	Failure analysis on aluminium ring for Alstom grid	Common Code	0.74
13	Murugaiyan Amirthalingam	Gleeble testing for external agencies	Common Code	0
14	Ranjit Bauri	Processing Al-fly ash metal matrix composites	Common Code	0.14
15	Kottada Ravi Sankar	Elevated temperature testing of metallic alloys	Common Code	0
16	V. Sampath	Material analysis of industrial components in physical metallurgy lab	Common Code	0.17
17	V. Subramanya Sarma	SEM Analysis	Common Code	2.61
18	Murugaiyan Amirthalingam	Technical consultancy on non-ferrous physical metallurgy and failure analysis	Common Code	0
19	N. V. Ravi Kumar	Retained austenite and residual stress analysis of industrial components using XRD	Common Code	0
20	V. Subramanya Sarma	Analysis of materials by scanning electron microscope	Common Code	0.71
21	Ravi Kumar	X-ray diffraction and failure analysis	Common Code	0
22	M. Kamaraj	Materials testing, characterisation and analysis	Common Code	0
23	S. Sankaran	Rolling Mill Facility at MFL	Common Code	15
24	S. Sankaran	Central Electron Microscopy Facility	Common Code	5
25	M. Kamaraj	Thermo-Mechanical Simulation Facility	Common Code	5

RBIC projects

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
New projects				
1	S. Ganesh Sundararaman and H. S. N. Murthy	Effect of fretting damage on the fatigue behaviour of a gas turbine compressor blade alloy	Gas Turbine Research Establishment	9.92
2	Murugaiyan Amirthalingam	Metallurgical evaluations of centrifugally cast Inconel 625 and SS316 tubes	IGP Engineers Private Limited	2.95
3	Kottada Ravi Sankar and M. Kamaraj	Oxidation and hot corrosion studies on GTM - SU - 111 DS alloy	Gas Turbine Research Establishment	9.85
4	Murugaiyan Amirthalingam and G. D. Janaki Ram	Weldability studies of Inconel 617, 304HCu - austenitic stainless steels and P91 steels	Indira Gandhi Centre for Atomic Research	13.07

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
Ongoing				
1	Murugaiyan Amirthalingam	Weldability studies of Inconel 617, 304HCu - austenitic stainless steels and P91 steels	Indira Gandhi Centre for Atomic Research	13.07
2	Murugaiyan Amirthalingam	Metallurgical evaluations of centrifugally cast Inconel 625 and SS316 tubes	IGP Engineers Private Limited	2.95
3	S. Ganesh Sundararaman	Effect of fretting damage on the fatigue behaviour of a gas turbine compressor blade alloy	Gas Turbine Research Establishment	9.92
4	Kottada Ravi Sankar	Oxidation and hot corrosion studies on GTM - SU - 111 DS alloy	Gas Turbine Research Establishment	9.85
5	Gandham Phani Kumar	Modeling of segregation behavior of beta stabilisation elements during solidification of a beta titanium alloy (containing Fe and/or CR) after vacuum arc melting	Defence Research and Development Organisation	11
6	Gandham Phani Kumar	Microstructure modeling during solidification of superalloys during castings and additive manufacturing	GE India Technology Centre Private Limited	6.5
7	B. Srinivasa Murthy	Design and development of high-entropy alloy in the form of MMAW Electrode exhibiting wear & Corrosion Resistance at Elevated Temperatures	EWAC Alloys Limited	10
8	S. Sankaran	Advanced microstructural studies on ultra high strength steels for armour applications	Defence Research and Development Organisation	32.2
9	M. Kamaraj	Alternative gold coating for structures at Tirupati Devasthanam	Tirumala Tirupati Devasthanam	11.73
10	B. Srinivasa Murthy	Bulk metallic glasses	Titan Company Limited	28.75
11	Anand Krishna Kanjarla	On the multiscale modelling of texture and anisotropy development during thermo-mechanical processing of duplex stainless steels	AB Sandvik Materials Technology	36.72
12	Sabita Sarkar	Development of reduction roasting technology using iron ore and coking coal to maximise iron recovery	JSW Steel Limited	22.8

Retainer Consultancy

Sl.No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1	G. D. Janaki Ram	Statue of Unity Project	L&T Construction, Buildings & Factories	13.8

Distinguished Visitors to the Department

Sl. No.	Name and Designation	Date	Purpose
1	Dr. Eng. Mohamed Gebreil	3 May 2017	IIM Talk: New generation of low-cost metallic bio-implants
2	Dr. Sathish K. Sukumaran, Associate Professor, Yamagata University, Japan	5 January 2018	Interaction meeting with faculty members
3	Team members from Nippon Steel and Sumikin Research Institute Corporation (NSRI), Japan	22 January 2018	Interaction meeting with faculty members
4	A team from Deakin University (Deakin-IITM-CoE)	23 February 2018	Interaction meeting

Sl. No.	Name and Designation	Date	Purpose
5	Dr. Chandra Sekhar Tiwary, Rice University, Houston, Texas, USA	2 August 2017	IIM Talk: Engineering at atomic scale to build ultra-low density 3D architectures
6	Gaurav Mohanty, Empa-Swiss Federal Laboratories for Materials Science and Technology	4 August 2017	IIM Talk: In-situ extreme nanomechanics for combinatorial materials design
7	Chenna Rao Borra, TU Delft, Delft, The Netherlands	7 August 2017	IIM Talk: Recovery of rare earths and other major metals from bauxite residue (red mud)
8	Dr . M. Venkatraman, Chief Technical Officer, Kalyani Carpenter Special Steels, Pune	10 August 2017	IIM Talk: Future job prospects for engineers in the rapidly changing industrial environment
9	Prof. Veena Sahajwalla, Director, University of New South Wales, Australia	17 August 2017	IIM Talk: Green steel-From rubbish to raw materials: tyres to steel landfills to resources - the revolution in recycling science
10	Prof. Ravi Ravindran, Director of the Centre for Near-net-shape Processing of Materials (CNPM), Ryerson University, Toronto, Canada	23 August 2017	IIM Talk: In-situ analysis of incipient melting of Al casting alloys
11	Dr. M. Manoharan, Japan Advanced Institute of Science and Technology, Japan	24 August 2017	IIM Talk: Single-molecule graphene sensors and silicon single-dopants devices: role of first-principles simulations
12	Prof. M. Akbar Rhamdhani, Swinburne University of Technology, Melbourne 3122 Australia	24 August 2017	IIM Talk: Towards cleaner and sustainable e-waste recycling process
13	Prof. Rajesh Prasad, Department of Applied Mechanics, IIT Delhi	11 September 2017	IIM Talk: Edge dislocations: non-unique half planes and helicoidal surfaces
14	Dr. Helder Marchetto, ELMITEC Elektronen mikroskopie GmbH, Clausthal-Zellerfeld, Germany	20 September 2017	IIM Talk: Introduction and applications of low electron energy microscopy (LEEM) and photo emission electron microscopy (PEEM)
15	Mr. Ganesan "Sonny" Sundaresan, CEO, Sundaresan Consulting Services, LLC	21 September 2017	IIM Talk: To be, or not to be "a successful" (with Materials Engineering and Metallurgical Engineering Foundation) - a case histories approach
16	Prof. S. S. Babu, The University of Tennessee, Knoxville and Manufacturing Demonstration Facility, Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA	12 December 2017	Towards robust process controls and qualification of additively manufactured metallic components with tailored microstructures and properties
17	Dr. Ramesh K. Guduru, Department of Mechanical Engineering, Lamar University, USA	18 December 2017	Multivalent aqueous electrolytes for supercapacitor applications: charge storage in faradaic and non-faradaic electrodes
18	Dr. Victor Koledov, Kotelnikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences (Kotelnikov IRE RAS), Russia	19 December 2017	New functional materials for nanotechnology, biomedicine and energetics
19	Dr. Svetlana von Gratowski, Scientist, Kotelnikov Institute of Radio Engineering and Electronics, Russia	20 December 2017	Mechanical bottom-up nano-assembling and nano-manipulation using shape memory alloy nano-gripper
20	Prof. Krishna Rajan, Erich Bloch Chair State University of New York, USA	22 December 2017	Discovering the science of materials through the science of data
21	Prof. R. V. Ramanujan, School of Materials Science and Engineering, Nanyang Technological University, Singapore	5 January 2018	Mechanochemical synthesis of Dy substituted Nd ₂ (Fe,Co) ₁₄ B magnetic nanoparticles and additively manufactured functionally graded FeNi based high entropy magnetic alloys
22	Prof. Roshan, Maynard Steel Casting Company, Milwaukee, Wisconsin, USA	9 January 2018	Potential areas of education and research in metal casting
23	Dr. R. Lakshmi Narayan, Post-Doctoral Associate, Department of Materials Science and Engineering, Carnegie Mellon University, USA	18 January 2018	Understanding the nature of plasticity in metallic glass at different length scales

Sl. No.	Name and Designation	Date	Purpose
24	Prof. Carlos Teijeiro Barjas, Ruhr-Universität Bochum, Germany	29 January 2018	Introduction to parallel programming with applications to materials science
25	Prof. Jaroslaw Drellich, Department of Materials Science and Engineering, Michigan Technological University, USA	1 February 2017	IIM Talk: Charge heterogeneity of surfaces: Why do we need to study it?
26	Prof. M. Roshan	9 February 2017	IIM Talk: Experience of an IIT professor with metal casting industry of USA
27	Dr. R. V. Ramanujan, Nanyang Technological University, Singapore	15 February 2017	IIM Talk: Affordable, high performance magnetic cooling
28	Prof. Horst Hahn, KIT, Germany	7 March 2017	IIM Talk: Design of materials properties by microstructure and external fields
29	Dr. Julia Ivanisenjko, KIT, Germany	9 March 2017	IIM Talk: Application of severe plastic deformation for the processing of high entropy alloys
30	Dr. Daniel Miracle, AF Research Laboratory, Materials and Manufacturing Directorate, OH USA	15 March 2017	IIM Talk: New strategies and tests to accelerate discovery and development of multi-principal element structural alloys
31	Prof. Gunter Motz, University of Bayreuth, Ceramic Materials Engg (CME), D-95440 Bayreuth, Germany	10 February 2018	Advanced silazane based polymer and ceramic coatings
32	Dr. Niyanth Sridharan, R&D Scientist, Oak Ridge National Laboratory, USA	13 February 2018	A fundamental understanding of microstructure evolution during solid state and fusion based additive manufacturing (AM) of dissimilar metals-A personal anecdote
33	Prof. Dr. Gerhard Wilde, Institute of Materials Physics, University of Munster, Wilhelm-Klemm-Str. 10, 48149, Munster, Germany	19 February 2018	Shear bands in metallic glasses: atomic transport, propagation and relaxation behavior
34	Prof. Christopher Berndt, Swinburne University, Melbourne, Australia	16 March 2017	IIM Talk: Challenges for thermal spray: what do we do next?



4.15. Department of Ocean Engineering

4.15.1. Introduction

The Ministry of Education and Social Welfare, as per the decision of Council of Indian Institute of Technology, established the Ocean Engineering Center of IIT Madras in 1977 based on the recommendation of the committee headed by Dr. Y. Nayudamma. The objective was to make the department act as a Centre of Excellence for advancing the frontiers of science, provide breakthrough technology and develop education and training programmes in the field of Ocean Engineering. A national advisory committee consisting of representatives of the then Ministry of Education, CSIR, UGC, DST, ONGC, EIL, other IITs and user industries with the Director, IIT Madras as the chairman

monitored the progress of the department over the years. A review committee headed by Prof. M. G. K. Menon also reviewed the progress of the department in 1982, and its recommendation has since been implemented.

4.15.2. Academic Programmes

B.Tech and M.Tech (Dual Degree) in Naval Architecture and Ocean Engineering, and Naval Architecture and Applied Mechanics; M.Tech in Ocean Engineering, Ocean Technology – UoP (MoES), Offshore Structural Engineering – UoP (L&T), M.Tech in Petroleum Engineering, and M.S. and PhD in Ocean Engineering and Petroleum Engineering

New courses introduced

Sl. No.	Course No.	Title
1	PE 5020	Environmental Impacts of Petroleum Exploration and Production
2	OE5650	Marine Corrosion Engineering

Students on roll as of September 2017+M.S. and Ph.D Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
B.Tech.	32	35	28	32	35	162
Dual Degree	15	18	13	13	24	83
M.Tech.	52	40				92
M.S.	11	7	15	9		42
Ph.D.	23	20	41	32	49	165
Total						544

Students/Scholars who Attended conferences/seminars and symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
Abroad					
1	Sanjay Kumar Sahoo	OE12D029		19-22 June 2017,	Institute Research fund
2	Anuj Kulshethra	OE11D025	OCEANS 2017	Aberdeen, Scotland, UK	
3	Devi K.	OE13D207	The European Conference on Sustainability, Energy and the Environment (2017)	7-9 July 2017, Brighton, United Kingdom	IIT Madras
4	Dinesh Kumar, E.	OE13D028	The 14th International Conference for Mesoscopic Methods in Engineering and Science (ICMMES)	17-21 July 2017, Nantes, Germany	
5	Dinesh Kumar, E.	OE13D028	26th International Conference on Discrete Simulation of Fluid Dynamics (DSFD2017)	Erlangen, Germany, 10-14 July 2017	
6	Aravind George	OE15S200	12th European Wave and Tidal Energy Conference	27 August-2 September 2017, Cork, Ireland	IIT Madras
7	Ranjith	OE15S015	12th European Wave and Tidal Energy Conference	27 August-2 September 2017, Cork, Ireland	IIT Madras

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/Symposia/ Workshops	Date and Venue	Financial Assistance from
8.	Tapas K. Das	OE15D016	12 th European Wave and Tidal Energy Conference	27 August-2 September 2017, Cork, Ireland	IIT Madras
9.	Nasiha J.	OE13D041	SPSoc 2017 (Remote Sensing and Photogrametry Society 2017)	5-8 September, 2017, Imperial College, London, UK	Alumni fund
10.	Devi K.	OE13D207	AAPG/SEG International Conference and Exhibition (2017)	15-18 October 2017, London, England	IIT Madras
11.	Dhairyasheel Deshmukh	OE15S025	APS-Division of Fluid Dynamics 2017 Conference	19-21 November 2017, Denver, Colorado, USA	IIT Madras
India					
1	Dinesh Kumar, E.	OE13D028	ICMMES	17-21 July 2017, Nantes, Germany	
2	Dinesh Kumar, E.	OE13D028	26 th International Conference on Discrete Simulation of Fluid Dynamics (DSFD2017)	10-14 July 2017, Erlangen, Germany	
3	Srineesh Vijaya Kumar, Danish D. R., Manoj Kumar G., Vishnu Prasad S. and Anmol Srivastava	OE13D202 OE15D002 OE14D210 NA13B046 1880AA	UNLEASH	August 2017, Denmark	
4.	Aravind George	OE15S200	ASME GTINDIA Conference 2017	7-8 December 2017, Bengaluru	IIT Madras
5.	Dhairyasheel Deshmukh	OE15S025	ASME GTINDIA Conference 2017	7-8 December 2017, Bengaluru	IIT Madras
6.	T. Karthikeyan	OE14D009	ASME GTINDIA Conference 2017	7-8 December 2017, Bengaluru	IIT Madras
7.	Tapas K. Das	OE15D016	International Conference on Ship and Offshore Technology India 2017	7-8 December 2017, IIT Kharagpur	IIT Madras
8.	Tapas K. Das	OE15D016	4 th International Conference in Ocean Engineering (ICOE 2018)	18-21 February 2018, Chennai	IIT Madras
9.	R Suchithra	OE15D014	ICOE 2018	18-21 February 2018, Chennai	IIT Madras
10	Devi K	OE13D207	ICOE 2018	18-21 February 2018, Chennai	IIT Madras
11	Rashmita Sahoo	OE15D005	OWT-2018 (Optical and Wireless Technologies 2018)	10-11 February 2018, Jaipur	Institute Research Fund
12	Sanjay Kumar Sahoo	OE12D029	ICONS-2018 (International Conference on Sonar Systems and Sensors)	22-24 February, 2018, Kochi	Institute Research Fund
13.	Francis Amal Varghese	OE17D022	National Conference on Multidisciplinary Design, Analysis, And Optimization (NCMDAO 2018)	23-24 March 2018, Bengaluru	IIT Madras

Students/Scholars who won Outside Prizes and Awards

Sl.No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
1.	Tapas K. Das	OE15D016	World IP Day award winner	
2.	Khalde Chirag Madhusudhan	OE16D018	World IP Day award winner	IC&SR IIT Madras

Sl.No.	Student/Scholar	Roll No.	Name of Prize	Prize awarded by
3.	P. A. Kiran	OE14D024	Best Paper Award for paper co-authored with guide Prof. Srinivasan Chandrasekaran, Mathieu stability of offshore buoyant leg storage and regasification platform. The paper was a result of innovative research on new-generation offshore platforms for ultra-deep waters.	19th International Conference on Coastal and Ocean Engineering, organised by WASET in Paris, France, 21-22 September 2017
4.	R. Manikandan, PhD	OE11D004	Scholarship for his work related to offshore wind turbines. Guide: Dr. Nilanjan Saha	ASME Turbine section (2017-2018 ASME IGTI Student Scholarship)
5.	A. Aishwarya	OE15S044	Pratibha: The Eaton Excellence Award. Guide: Prof. V. Anantha Subramanian	The scholarship recognises exceptional women engineering students.
6.	Ms. P. Sivaselvi	OE15S008	A stipend award of \$750. Guide: Dr. Tarun K. Chandrayadula	Committee for International Research and Education (CIRE) of the Acoustical Society of America (ASA)
7.	R. Ravindar	OE13D208	Springer Outstanding Student Paper Award (2nd prize) for Comparative study of breaking wave forces on a quasi-prototype recurved seawall	ICOE 2018, IIT Madras

Student/Scholar who won Institute Convocation/Institute Day Prize

Sl.No.	Student/Scholar	Roll No.	Prize
1	John Ashlin S.	OE14D200	Institute Research Award 2018

4.15.3. Faculty and their activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
Prof. S. A. Sannasiraj (Head)	Breaking wave impact on piles and vertical wall, wave data assimilation, nonlinear free surface wave simulation using FEM, SPH and LBM
Prof. S. K . Bhattacharya	Ship and offshore structures, structural dynamics, fluid-structure interaction, finite element method, dynamics of floating bodies, ocean acoustics, controllability of marine vehicles
Prof. V. Sundar	Coastal engineering, harbour engineering and fluid flow problems
Prof. R. Sundaravadivelu	Computer-aided analysis, design and experimental studies of coastal and offshore structures, port and harbour structures
Prof. V. Anantha Subramanian	Computer-aided design, propulsion hydrodynamics, experimental hydrodynamics, computational fluid dynamics applications and design
Prof. K. Murali	Numerical modelling of coastal hydrodynamics, sediment transport and pollutant transport, CFD modelling for pollutant transport, CFD application to ship and underwater hydrodynamics
Prof. S. Surendran	Ship motion analysis and control, ship structures and alternate materials for ship construction
Prof. P. Krishnankutty	Ship maneuvering and motions, ocean wave-structure interaction, ship-to-ship hydrodynamic interaction, high-speed vessel passenger comfort, HSV wave wash
Prof. S. Nallayarasu	Analysis and design of offshore structures, wave structure interaction, hydrodynamic response of spar hulls, damping elements in floating systems
Prof. S. Chandrasekaran	Nonlinear dynamic analysis of offshore compliant structures, earthquake-resistant analysis and design of structures, modal pushover analysis of framed structures, base isolated structures, semi-active damping devices for response control of structures, seismic analysis of offshore structures, shell structures under shock and impact loads
Prof. P. Shanmugam	Oceanography, coastal zone management ocean optics and acoustics imaging radiative transfer modelling and algorithm development

Name and Qualifications	Major Areas of Specialisation
Prof. R. Panneer Selvam	Stochastic modelling and simulation analysis, system identification, nonlinear dynamical fluid structure systems-applications in ocean and wind engineering
Prof. G. Suresh Kumar	Flow through fractured reservoirs, enhanced oil recovery, groundwater contaminant transport
Prof. Palaniswamy Ananthkrishnan	Ship hydrodynamics: resistance and seakeeping biomimetic propulsion and control of marine vehicles finite-difference analysis of nonlinear wave hydrodynamics
Associate Professors	
Dr. Rajesh R. Nair	Multi-attribute seismic inversion for oil and gas exploration, oil and gas field development, petroleum geomechanics, laser Doppler vibrometer and hydrofracking measurements on shale rock, coal bed methane characterisation and micro seismics
Dr. Rajiv Sharma	Design of deep water drilling solutions and floating structures, computer-aided geometric design, computational geometry, visualisation, and their applications in design, robotics and manufacturing; dynamic data driven forecasting systems; and participatory/democratic economy
Dr. Jitendra Sangwai	Enhanced oil recovery, flow assurance, nanotech applications for O&G, gas hydrates in bulk and porous media, rheology of complex fluids, drilling fluids, polymer science, PVT studies
Dr. Abdus Samad	Marine energy, turbomachinery design and optimisation, surrogate-based optimisation methods
Dr. Nilanjan Saha	Offshore wind and wave energy, dynamics of offshore structures, extreme value statistics and fatigue, nonlinear methods in ocean engineering, offshore soil-structure interaction, stochastic processes, filtering and identification
Assistant Professors	
Dr. Deepak Kumar	Structural dynamics, random vibration, nonlinear dynamics, stochastic control and stability, time-frequency domain analysis, structural dynamics experiments
Dr. V. Sriram	Numerical modeling/computational hydrodynamics meshfree methods, hydro-elasticity, violent wave-current-structure interactions, experimental wave generation and extreme wave interactions
Dr. Tarun K. Chandrayadula	Signal processing and propagation modelling
Dr. R. Vijay Kumar	Marine hydrodynamics, warship design, submarine design
Dr. Suresh Rajendran	Numerical modelling of fluid-structure interaction, nonlinear ship dynamics and hydrodynamics, hydroelasticity, maneuvering in waves, parametric rolling of ships

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conference			
1.	Prof. K. Murali, Dr Abdus Samad, Dr Nilanjan Saha, Dr V. Sriram	4th International Conference in Ocean Engineering (ICOE2018)	18-21 February 2018
Workshops			
1	Prof. S. A. Sannasiraj and Prof. V. Sundar	Indo-German workshop on Urban Resilience: Coastal Hazards and Coastal Water Management, Vulnerability and Sustainability	23-26 October 2017, IC&SR, IIT Madras
2.	Dr. Rajesh Nair	International Workshop on Petroleum Modeling I	4 December 2017
3.	Dr R. Sundaravadivelu	Workshop on Modernization of Ports	16-17 February 2018, DOE Seminar Hall
4.	Dr S. A. Sannasiraj and Dr. V. Sundar	Indo-UK Workshop on Recent Advances in Wave-Structure Interaction, jointly with City, University of London	17 February 2018
5.	Dr V. Sriram and Prof. K. Murali	Indo-UK workshop organised by IIT Madras and City, University of London, UK on Recent Advances in Wave Structures Interaction	18 February 2018

Sl. No.	Coordinator(s)	Title	Period
6	Dr Abdus Samad and Dr Nilanjan Saha	Indo-Korea joint workshop on Wave and OTEC	22-23 February 2018
7	Dr. V. Sundar, Dr. S.A. Sannasiraj and Dr. K. Murali	First National Workshop on Coastal Management Information System (WCMIS 2018)	27 February 2018
8.	Prof. P. Shanmugam	National Workshop and Training on Hyperspectral Remote Sensing of Inland and Coastal waters	8-12 March 2018
Short-term Course			
1	P. Krishnankutty and V. Anantha Subramanian	Experimental Ship Hydrodynamics	30 October-10 November 2017
2	Dr. Abdus Samad and Dr. Jitendra Sangwai	Advances in Oil and Gas, Petroleum Engineering	29 January-3 February 2018
3.	Dr. Jitendra Sangwai	GIAN course of Petroleum Reservoir Characterization	26 February-4 March 2018
Trainings			
1.	Dr. S. Nallayarasu	A three-day training programme for STAR CCM + SOFTWARE	6-8 September 2017
2.	Dr. S. Surendran	Paramarine software package for Ship design, training for UG students	9-10 February 2018, DOE DCF

Short-term courses/workshops/seminars/symposia/conferences/trainings Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty Member	Title	Institution	Period
Workshop				
1	Dr. Jitendra Sangwai and Dr. Rajiv Sharma	Workshop on A-Z of Natural Gas and LNG	PLL Terminal, Kochi	28-30 November 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No	Faculty Member	Topic of Lecture	Institution	Date
1.	Dr. Abdus Samad	Wave Energy Turbines	NIOT, Chennai	13 November 2017
2.	Dr. Jitendra Sangwai	Enhanced Oil Recovery	NUS Singapore	19 March 2018
3.	Dr. Abdus Samad	PETRAMET 2018	AMET University, Chennai	20-21 March 2018

Visits Abroad by Faculty

Sl. No.	Faculty Member	Country Visited	Date	Purpose of Visit	Funding from
1.	Prof. S. Nallayarsu	Kuala Lumpur	5-6 May and 23 June 2017	Meeting with client	Sapura Energy Bhd
2.	Prof. S. Nallayarsu	Norway	25-30 June 2017	OMAE Conference	IIT Madras
3.	Dr. R. Panneer Selvam	Trondheim, Norway	25-30 June 2017	36th International Conference on Ocean Offshore and Arctic Engineering (OMAE 2017)	
4.	Dr. S. Nallayarasu				
5.	Dr. Nilanjan Saha				
6.	Dr. Abdus Samad	Helsinki, Finland	12-15 June 2017	Madhan Kumar, Gwon Woo Nam, Seung Jin Oh, Jeonghwa Seo, Abdus Samad, Shin Hyung Rhee; Optimization of a horizontal axis tidal stream turbine using an opensource code; 5th International Symposium on Marine Propulsors	
7.	Dr. V. Sriram	San Franscisco California USA	25-30 June 2017	ISOPE 2017	

Sl. No.	Faculty Member	Country Visited	Date	Purpose of Visit	Funding from
8.	Dr. V. Sriram UGC-DAAD Exchange RWTH	Aachen, Germany	June-July 2017	UGC-DAAD Exchange	
9.	Dr. K. Murali	United Kingdom	24-26 July 2017	Workshop, University of Southampton, UK	
10.	Dr. V. Sundar	University College Cork, Cork, Ireland	27 August-1 September 2017	12th EWTEC 2017	
11.	Prof. P. Shanmugam	Imperial College, London, UK	5-8 September 2017	RSPSoc 2017 (Remote Sensing and Photogrammetry Society 2017)	
12.	Dr. R. Panneer Selvam	Shenzhen China	11-13 September 2017	Presented paper at International Conference on Ships and Offshore Structure ICSOS 2017	
13.	Dr. R. Panneer Selvam	Anchorage, Alaska, USA	18-21 September 2017	Presented paper at OCEANS 2017	
14.	Dr. Rajesh Nair	Tampere, Finland	October 2017	Paper: Towards excellence in engineering curricula for dual education, Erasmus+ (European Union) Project meeting	Project
15.	Dr. R. Panneer Selvam	Tampa Convention Center, Florida	3-9 November 2017	Presented paper at the International Mechanical Engineering Congress and Exposition, IMECE 2017	
16.	Dr. Nilanjan Saha	Mediterranean University of Reggio Calabria	13 November 2017-12 January 2018	Visiting Professorship at Natural Ocean Engineering Lab	
17.	Dr. V. Sundar	Australia	26-30 November 2017	Swinburne-IIT Madras Research Workshop	
18.	Dr. S. A. Sannasiraj	Australia	26-30 November 2017	Swinburne-IIT Madras Research Workshop	
19.	Dr. Tarun K. Chandrayadula	New Orleans, USA	4-8 December 2017	Presented paper at 174th Meeting of the Acoustical Society of America	
20.	Dr. V. Sundar	Houston, USA	7-12 December 2017	Brief visit, Rice University	
21.	Dr. R. Panneer Selvam	Norway Trondheim, Norway	13-15 December 2017	Brief visit, Progress Review Meeting, DST and Research Council	
22.	Dr. S. A. Sannasiraj	Maldives	18-19 December 2017	Kulhudhuffushi Harbour Expansion Project meeting with Ministry of Housing Infrastructure, Maldives	
23.	Dr. V. Sundar	Texas A&M University and University of Texas	1-14 January 2018	Brief visit	
24.	Dr. V. Sriram	Mauritius	16-18 January 2018	Project meeting and presentation	Project
25.	Dr. Jitendra Sangwai	Singapore	March 2018	Seminar	Project
26.	Dr. Jitendra Sangwai	Malaysia	March 2018	Conference	CPDA
27.	Dr. Rajesh Nair	Pavia, Italy	March 2018	Paper: Towards excellence in engineering curricula for dual education, Erasmus+ (European Union) Project meeting	Project

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Member	Award	Awarded by	Awarded for	Date of Award
Honours					
1.	Prof. P. Shanmugam	National Geospatial Chair Professorship	Department of Science and Technology (DST), Government of India	Paper: Developing geospatial technology in India enhancing geospatial technology for coastal vulnerability assessment	October 2017
2.	Prof. P. Shanmugam	Ocean-Star Professor	The State Key Laboratory of Satellite Ocean Environment Dynamics (SOED), Second Institute of Oceanography, China	Paper: Carrying out and enhancing research in the area of satellite ocean environment dynamics	May-June 2018
ii. Awards					
	Dr. Jitendra Sangwai	Early and Mid-Career Research (EMCR) Fellowship Award	Indian National Science Academy and DST	Research and Development	May-July 2017
2	Dr. Jitendra Sangwai	Institute Research and Development Award 2017	IIT Madras	Research and Development	April 2017
3	Dr. Jitendra Sangwai	Selected for SPE's Regional Distinguished Achievement Award for Petroleum Engineering Faculty, SPE South Asia and the Pacific Region from the Society of Petroleum Engineers (SPE) International, Richardson, TX, USA	2017 Asia Pacific Oil & Gas Conference and Exhibition (APOGCE), Bali, Indonesia	Petroleum Engineering Faculty	17 October 2017

Fellowships of Academies and Professional Societies

Sl. No.	Faculty Member	Year of admission
1.	Prof. S. Nallayarasu, Member, School Board of Naval Architecture and Ocean Engineering, Indian Maritime University	Three-year term from April 2017
2.	Prof. V. Anantha Subramanian, Member, School Board, Indian Maritime University - Syllabus review meeting school board of Naval Architecture and Ocean Engineering	Visakhapatnam, 21 April 2017
3.	Dr. R. Sundaravadivelu, Member, Research Council (nominated by Director General, CSIR)	Three-year term starting from the month of September 2017

Journal Editorial Boards

Sl. No.	Faculty Member	Position (Editor/Member)	Journal Name
1.	Dr. Abdus Samad	Guest Editor	Hindawi, Mathematical Problems in Engineering (Special Issue)
2.	Prof. V. Anantha Subramanian	Editorial Board member	IIRE Journal of Maritime Research and Development, MASSA Maritime Academy, Chennai
3.	Dr. Jitendra Sangwai	Editorial Advisory Board (EAB) member	Journal of Chemical and Engineering Data (published by American Chemical Society, ACS)
4.	Dr. Nilanjan Saha	Associate Editor	ASME Journal of Offshore Mechanics and Arctic Engineering (JOMAE)
5.	Dr. Jitendra Sangwai	Editorial Board member	Open Petroleum Engineering Journal
6.	Prof S. Surendran	Editorial Board member	International Journal of Ships and Offshore Structures, Taylor & Francis

4.15.4. Design and Development Activities

Brief and specific details of process/instruments/equipment/software designed and developed

Mechanical-Based Wave Energy Absorption Systems: A 25 W prototype to convert the bi-directional wave motion into unidirectional rotation of a generator

New Facilities added or Major Equipment Procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1.	Volume scattering meter (Laser)	58
2.	Horizontal Planar Motion Mechanism added to the Towing Tank Facility	40 (NRB funded)

4.15.5. Research and Consultancy

Sponsored Research Projects (Ongoing and New)

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
1.	Feasibility study of Submarine Laser Communication		Defence Electronics Application Laboratory, DRDO	290	Dr. S. Shanmugam
2.	Nonlinear extreme wave and floating body interactions with deformable structure		DST-UKIERI	29.7448	Dr. V. Sriram, Dr.V. Sundar, Dr. K. Murali, Dr. S. A. Sannasiraj
3.	Dynamic response analysis for the installation of offshore hybrid concrete jacket based support structure for wind energy (DRACONJACK)		DST-DAAD	23.56	Dr. V. Sriram
4.	Assessment of sea surface solar radiation and pCO ₂ fluxes in coastal and estuarine waters using OCM-2/ OCM-3 data	2017-2021	IITM-ISRO Cell	25.56	Dr. P. Shanmugam
5.	Development of a strategy for optimal power production from 100 kW class horizontal axis tidal turbines	2018 - 2021	DST-KNRF	31.85	Dr. Abdus Samad
6.	An automated optimization framework for turbomachinery design	2017-2019	GTRE- DRDO	33.65	Dr. Abdus Samad and Dr. BVSS Prasad
7.	Design and testing of an impulse turbine for wave energy conversion	2016-2018	Ministry of Earth Sciences	35.04	Dr. Abdus Samad
8.	Experimental study of shallow water effects on surface ship controllability	July 2014- May 2018	Naval Research Board	93.0	Dr. P. Krishnankutty and Dr. V. Anantha Subramanian
9.	Development of smoothed particle hydrodynamics (SPH) capability for naval applications	2018-2021	Naval Research Board	21.49	Dr. Nilanjan Saha
10.	Root cause analysis for subsidence/ uplift observed at North Heera field in Western Offshore by developing suitable geomechanical model	2017-2018	PAN IIT-ONGC	74.97	Dr. Rajesh Nair
11.	Towards excellence in engineering curricula for dual education	2017-2020	European Union	54.25	Dr. Rajesh Nair
12.	Vortex-induced vibration of slender cylindrical structures and cables under wave and current	2016 - 2019	Naval Research Board	51	Prof. S. Nallayarasu and Prof. S. K. Bhattacharyya

Industrial Consultancy projects (ongoing and new)

Sl. No	Faculty Member	Title	Industry	Amount (in lakh)
1.	Prof. S. Nallayarasu	Design of Piling Gantry for BCB-III	Unison Engineering and Construction Private Limited	4.6
2.	Prof. K. Murali	New disposal with two taxi tracks at INS BAAZ CandBill Pay	Garrison Engineer GARR	11.5
3.	Prof. K. Murali	Coastal Marine Construction Engineering Limited	CDAS	9.24
4.	Prof. S. Nallayarasu	Pre-bid structural design for ONGC R-12 and R-series 5 Flat Form and Pipelines Project and basin field 3 platform	Supura Energy Bhd	14.3
5.	Prof. R. Sundaravadivelu	PMC services for execution, including retro fitting of the work in connection with the changing of finding system of land in jetty at Haldia Port	Haldia Port	41.86
6.	Prof. R. Sundaravadivelu	Condition assessment study of NDCT'S Stage-I, NTPC, Simhadri	NTPC, Simhadri	11.5
7.	Prof. R. Sundaravadivelu	Structural audit/inspection survey's health checkup for nine LL cranes in north and south yards	Mazagon Dock Ship Builders India Ltd Mumbai	41.91
8.	Prof. R. Sundaravadivelu	Vetting and approval of designs and approval of GFC drawings by EPC contractor of multipurpose cargo berth, Pradip Port Trust	Pradip Port Trust	9.31
9.	Prof. S. Nallayarasu	Primary design of FSRU Terminal jetty in Bangladesh	Supura Energy Bhd	3.25
10.	Prof. R. Sundaravadivelu	Preparation of feasibility study and (DPR) for upgradation of berths VOC – I, II, III, IV, berth V, VI, VII, VIII, IX, NCB – I and NCB –II at V.O.Chidambaranar Port	V.O.Chidambaranar Port Trust	1,250
11.	Prof. R. Sundaravadivelu	Proof-checking consultant for detailed design of 14th and 16th berths for multipurpose cargo, Kandla Port	Kandla Port	11.5
12.	Prof. S. Nallayarasu	Preparation of detailed feasibility report (DFR) for conversion of car berth	IndianOil Corporation limited	23
13.	Prof. S. Nallayarasu	Preparation of detailed design earth retaining structure at shallow water berth	Jahwarlal Nehru Port Trust	11.5
14.	Prof. S. Nallayarasu	Design of Steel Fontoon a North Cargo berth	Unison Engineering and Construction Pvt Ltd	1.15
15.	Prof. R. Sundaravadivelu	Independent engineering assessment on design for LiDAR structure of Gulf of Khambhat of Gujarat Coast	Gujarat coast	1.15
16.	Prof. R. Sundaravadivelu	Preparation of design and detailed drawing of north and south break water in Cuddalore Port	Cuddalore	8.62
17.	Dr. K. Murali	Technical advisory for estimation of design forces and anchor design for design for chains of MBL HCC debris barrier		1.15
18.	Dr. Nilanjan Saha	Scientific and technical expertise service		3.45
19.	Dr. V. Sundar, Dr. S. A. Sannasiraj and Dr. K. Murali	Preparation of DPR and detailed engineering for project, Trident Mauritius	Mauritius	76.70
20.	Dr. V. Sriram	Dynamic response analysis for the installation of offshore hybrid concrete jacket-based support structure for wind energy		23.56
21.	Dr. V. Sriram	Nonlinear interaction between extreme waves and floating bodies with deformable structures		29.74
22.	Dr. R. Sundaravadivelu	Providing solution of sand problem at NTF-1 offshore platform against tender no. Q16rs17003, Mumbai Port	Mumbai Port	1.38

Sl. No	Faculty Member	Title	Industry	Amount (in lakh)
23.	Dr. R. Sundaravadivelu	Preparation of a design estimate and technical assistance for development of NCB – II, VOC Port, Tutirorn	VOC Port, Tutirorn	27.6
24.	Dr. R. Sundaravadivelu	Study to determine the eastern waterfront of Mumbai as “non sea“ in the form of bay “or Greek”, Mumbai Port	Mumbai Port	72.86
26.	Dr. R. Sundaravadivelu	Construction of Indian Coast Guard jetty, Visakhapatnam Port Trust	Visakhapatnam Port Trust	126.5
27.	Dr. V. Sundar, Dr. K. Murali and Dr. S. A. Sannasiraj	Consultancy studies for interconnection of pipelines hydraulic design of out false system hydrodynamic and siltation studies and mathematical model study for provision of SWID system for expansion of SDSTPS of APPDCL for additional 1x800 MW	Nellore	28.67
28.	Dr. Tarun K. Chandrayadula	Mode observations during the Philippine Sea deep water experiments		27.07
29.	Dr. V. Sundar	Conducting mathematical modal studies fro revalidating the CWPRS studies, including data collection for the development of an outer harbor, Cochin Port	Cochin Port	97.32
30.	Dr. V. Sundar	Extended monitoring study feasibility study for silt trap dredging, dyke at Nayachar Island and reclamation of western bank, Saugor Island	Saugor Island	259.9
31.	Dr. S. Nallayarasu	Proof-checking of international cruise Terminal building and bert facilities at Ballard Pier Extension, Mumbai Port Trust	Mumbai Port Trust	30
32.	Dr. R. Sundaravadivelu	Extension of Dry Rock-II at Marine Dockyard including supply installation and commissioning of dry dock pumps, Andaman Lakshadweep Harbour Works, Port Blair	Andaman Lakshadweep Harbour Works, Port Blair	14.16
33.	Dr. R. Sundaravadivelu	Preparation of tender document, tender schedule drawing and designing self-propelled barge for ferrying in Chilika Lagoon	Chilika Lagoon	5.90
34.	Dr. K. Murali	Consultancy for Infra Structure development of VOTR Port, Dighipur	VOTR Port, Dighipur	139.15
35.	Dr. R. Sundaravadivelu	Preparation of DPR for the work: 1) Ro-Pax jetty of allied infrastructure connecting Kaninali2) Ro-Pax jetty of allied infrastructure connecting Balugaon		70.80
36.	Dr. Anantha Subramanian	Mathematical and physical modelling for a vessel maneuvering, L&T Limited	L&T Limited	135.70
37.	Dr. K. Murali	Chola MS particle size distribution in marine waters		7.72
38.	Dr. S. Nallayarasu	The proof checking services of EPC of Marine Facility, Gopalpur Port, Odisha	Gopalpur Port, Odisha	53.10
39.	Dr. R. Sundaravadivelu	Consultancy for building rehabilitation at HPCL of PMC Work		5.54
40.	Dr. R. Sundaravadivelu	Preparation of DPR for the construction of a 200 m RCC coastal berth at Beypore Port, Kozhikode	Beypore Port, Kozhikode	23.60
41.	Dr. R. Sundaravadivelu and Dr. K. Murali	Setting up slipway facilities at ICGS Ratnagiri	ICGS Ratngiri	343.38
42.	Dr. Anantha Subramanian and Dr. P. Krishnankutty	Drag Test -95 KGF MBS and 16mm IHM		7.08

Sl. No	Faculty Member	Title	Industry	Amount (in lakh)
43.	Dr. S. Nallayarasu	Provision of additional liquid cargo jetty detailed design and engineering		40.35
44.	Dr. R. Sundaravadivelu	Reconstruction of N1 and N2 jetty at Vishakhapatnam Naval Project	Vishakhapatnam Port Trust	5.34
45.	Dr. Nilanjan Saha	Expertise consultancy services for outer terminal II at HDC Kolkata Haldia	Kolkata Haldia Port	2.84
46.	Dr. S. Nallayarasu	Study on Risk Analysis of three MLT-1, MLT-II and IOCL Captive Jetty, Kamarjar Port Limited	Kamarjar Port Limited	5.90
47.	Dr. V. Sundar and Dr. S. A. Sannasiraj	Consultancy services for preparation of CPR for proposal naval jetty at Chennai		15.34
48.	Dr. Anantha Subramanian	Model test on the ICT Western Marine Shipyard Limited	Marine Shipyard Limited	7.12
49.	Dr. R. Sundaravadivelu	Dredging the bar mouth of Vellar river, Cuddalore		6.25
50.	Dr. R. Sundaravadivelu	Dredging the bar mouth of Nagapattinam Fishing Harbour in	Nagapattinam Fishing Harbour	1.85
51.	Prof. Abdus Samad	A Turbine Test Facility		2.30
52.	Dr. K. Murali, Dr. V. Sundar and Dr. S. A. Sannasiraj	Geophysical and geotechnical investigations of port basin and approach channel, Paradip Port Trust	Paradip Port Trust	430
53.	Dr. S. Nallayarasu	Proof-checking services for EPC of construction of jetty and retraining wall of 2X660 MW Maitree STPP Rampal Bangladesh Afcons Infrastructure Limited	Afcons Infrastructure Limited	30.07
54.	Dr. R. Sundaravadivelu	Preparation of DPR for projects to be taken up under Sagarmala Scheme	Sagarmala Scheme	29.50
55.	Dr. S. Nallayarasu	Prebid structural engineering for 3 WHP jacket and drilling deck block SA Ishareen Field Project for North Oil Company-Sapura Energy Bhd	Sapura Energy Bhd	12.81
56.	Dr. Abdus Samad and Dr. S. A. Sannasiraj	A wave energy system test for Indian coastal villages	DST	121.9
57.	Dr. Abdus Samad and Dr. Nithya Venkateshan (VIT)	Development of a strategy for optimal power production from 100 kW class horizontal axis tidal turbine, Co-PI Dr Nithya Venkateshan (VIT), Indo-Korea (DST- KNRF) project	DST	100
58.	Dr. K. Murali	Treated efficient conveyance project in Kolat Estuary and Open Sea, Gujarat		23.60
59.	Dr. R. Sundaravadivelu	Development of fishing harbour at Manakudi	Manakudi Harbour, Kanyakumari	60
60.	Dr. R. Sundaravadivelu	Development of EOC Berth Port I and II		64.90
61.	Dr. S. Nallayarasu	Verification of 42 Oil Crossing at R. K. Nagar and Baliagi Nagar	Chennai Petroleum Corp Limited	7.50
62.	Dr. Anantha Subramanian	Model testing of 12 track Ro-Ro ferry craft		8.26
63.	Dr. V. Sundar and Dr. K. Murali	Extended monitoring study feasibility study for silt trap dedging dyke at Nagachara Island and Reclamation of western bank of Saugor Island	Kolkata Port Trust	259.9
64.	Dr. S. Nallayarasu	Provision of additional liquid cargo jetty, detailed design and engineering	Jawaharlal Nehru Port Trust	40.35
65.	Dr. R. Sundaravadivelu	Preparation of DPR additional innovative project under Sagarmala	Sagarmala	8.85
66.	Dr. V. Sundar, Dr. S. A. Sannasiraj and Dr. K. Murali	Study for removal of lock at HDC and extended monitoring study of shipping channel leading to HDC by IIT Madras (Phase-III), Kolkata Port Trust Hydraulic Study Department	Kolkata Port Trust	3428

Sl. No	Faculty Member	Title	Industry	Amount (in lakh)
67.	Dr. Anantha Subramanian	Model Test on the 6.5M RIB Vessel	Mahindra Marine Private Limited	7.08
68.	Dr. V. Sundar	Retrofitting of jetty structure and installation of new finders of Haldia, Haldia Dock Complex	Haldia Port	41.86
69.	Dr. V. Sundar	Monitoring of maintenance dredging at outer channel and inner harbour area and bathymetry surveys at Channels of Cochin Port	Cochin Port Trust	1,61,42,400
70.	Dr. K. Murali	Geophysical and geotechnical experiments of Port Basin and Approval Channel, Pradip Port Trust	Pradip Port Trust	430
71.	Dr. S.A. Sannasiraj and Dr. K. Murali	Providing architectural and MEP survey for project Trident Mauritius, Gurugram		19.41
72.	Dr. P. Shanmugam	Surface solar radiation and pCO ₂ fluxes in coastal and estuarine waters using OCM-2/OCM-2 data with implications for climate change		25.5
73.	Dr. K. Murali	Numerical modelling study on shoreline status factor and sedimentation and dredge disposal		22
74.	Dr. S. Surendran	Conceptual design and vetting drawing of six FROP boat ambulance	NHM, Bhubaneswar	6 (excluding GST)
75.	Dr. S. Surendran	Approval of drawings for 8.2m FRP boats	M/S Mecham Private Limited, Bhubaneswar	0.70 (including GST)
76.	Dr. S. Surendran	Drawing approval of 7m steel crafts	M/S Mecham Private Limited, Bhubaneswar	1.72 (inclusive of tax; completed in 2017)
77.	Dr. S. Surendran	Fabrication of 60 floating jetties with walkway	NHM, Bhubaneswar	5 (excluding GST)
78.	Prof. S. Nallayarsu	Pre-bid design of multipurpose berth at Gopalpur	Afcons Infrastructure Limited	8
79.	Prof. S. Nallayarsu	Design of offshore wind farm structures	Sapurakencana petroleum	11
80.	Prof. S. Nallayarsu	Proof checking of International Cruise Terminal building and berth facilities at Ballard Pier Extension	Mumbai Port Trust	10
81.	Prof. S. Nallayarsu	Foundation design for construction of four ETP-cum WIP	Petro6 Engineers & Consultants Private Limited	10
82.	Prof. S. Nallayarsu	Study on risk analysis of three MLT-I, MLT-II and IOCL Captive Jetty	Kamarajar Port Limited	5
83.	Prof. S. Nallayarsu	Prebid structural engineering for 3 WHP jacket and drilling deck- Block 5 Alshaheen Field Project	Sapura Energy Bhd	12.5
84.	Prof. S. Nallayarsu	Study for strengthening of coal berths 1 and 2, Kamarajar Port Limited	Kamarajar Port Limited	20
85.	Prof. S. Nallayarsu	Preparation of detailed feasibility report (DFR) for conversion of car berth	Indian Oil Corporation Limited	20
86.	Prof. S. Nallayarsu	Preparation of detailed design earth retaining structure at shallow water berth	Jawaharlal Nehru Port Trust	10
87.	Prof. S. Nallayarsu	Preliminary design of FSRU terminal jetty in Bangladesh	Sapura Energy Bhd	1
88.	Prof. S. Nallayarsu	Pre-bid structural design for ONGC R-12 & R-Series 5 platform and pipelines project and Bassein Field	Sapura Energy Bhd	19
89.	Prof. S. Nallayarsu	Preparation of detailed design of boat landing at Nhava Island	Jawaharlal Nehru Port Trust	12

Sl. No	Faculty Member	Title	Industry	Amount (in lakh)
90.	Prof. S. Nallayarsu	Preparation of detailed design sea wall and coastal protection works, Elephanta Island	Jawaharlal Nehru Port Trust	5
91.	Prof. S. Nallayarsu	Design of piling Gantry for BCB III	Unison Engineering and Construction Private Limited	4
92.	Prof. S. Nallayarsu	Verification of 42" oil pipeline crossing a RK Nagar and Balaji Nagar	Chennai Petroleum Corporation Limited	7.5
93.	Prof. S. Nallayarsu	Reassessment of Container berth for 12,500 TEU Vessels and Fender/Bollard	Jawaharlal Nehru Port Trust	27
94.	Prof. S. Nallayarsu	Proof checking services for EPC of marine facilities at Gopalpur Port	Afcons Infrastructure Limited	45
95.	Prof. S. Nallayarsu	Pre-bid structural design for PRTJN Petron Oil Terminal Facilities	SapuraKencana Petroleum	6.5
96.	Prof. S. Nallayarsu	Construction of fifth oil berth at Jawahar Dweep - Third party inspection	Mumbai port Trust	30
97.	Prof. S. Nallayarsu	Provision of additional liquid cargo jetty-detailed design and engineering	Jawaharlal Nehru Port Trust	67
98.	Prof. S. Nallayarsu and Dr. S. K. Bhattacharyya	Vortex induced vibration of slender cylindrical structures and cables under wave and current 2016-2019	NRB	60

RBIC Projects (ongoing and new)

Sl. No.	Faculty Member	Title	Industry	Amount (Rs. in lakh)
1.	P. Shanmugam	Feasibility study of underwater optical wireless communication	DEAL, DRDO	299
2.	Dr R. Vijayakumar	Design of stren flap for P-17	Indian Navy	29.73 (ongoing)
3.	S. K. Bhattacharyya	Prediction of TBL wall pressure spectra using CFD approach	NPOL	9.69

Faculty Members' Participation with Other Institutions under MoU

Sl. No.	Faculty Member	Participation details	University/Institution
1.	Dr. Jitendra Sangwai	Joint Degree Programme	Curtin University, Australia
2.	Dr. Jitendra Sangwai	MIPP Programme	University of Melbourne, Australia
3.	Dr. Jitendra Sangwai	Joint Degree Programme	NUS Singapore
4.	Dr. Rajesh Nair	Joint Degree Programme	Curtin University, Australia
5.	Prof. S. A. Sannasiraj	Joint Degree Programme	Swinburne University of Technology, Australia

Distinguished Visitors to the Department

Sl.No.	Name and Designation	Date of Visit	Purpose of visit
1.	Shri. M. V. Subbarao, Head, KGD6 Operation	17 May 2017	-
2.	Vice Admiral S. R. Sarma, Director General, Naval Project (Visakhapatnam)	23 June 2017	-
3.	Prof. Ajay Kapoor, Pro-VC International Research, Swinburne University	8 July 17	Discuss the ongoing and future joint PhD programme with OE
4.	Dr. Aditya Nayak, Post-doctoral researcher, Harbor Branch Oceanographic Institute, Florida	10 July 17	Talk on Characterizing coastal flows and in situ particle distributions using particle image velocimetry and digital holography

Sl.No.	Name and Designation	Date of Visit	Purpose of visit
5.	Dr Sumeet S. Aphale, Senior Lecturer, Fraser Noble Building King's College, University of Aberdeen, Scotland, UK	2 August 2017	Discussion on Power takeoff from wave energy devices
6.	Dr. Sreejith Pulloor Kuttanikkad, oil company in Doha, Qatar	22 August 2017	Industrial lecture to petroleum engineering students on the tips for successful career in oil/gas industry-experiences
7.	Prof. R. Ajit Sheno, Director, Southampton Marine and Maritime Institute and the Lloyd's Register/Royal Academy of Engineering Professor of Lightweight Structures University of Southampton, UK	7 September 2017	Invited talk on Global Marine Technology Trends 2030, Seminar Room, Department of Ocean Engineering
8.	Professor Colin Grant, Vice-President International		Roundtable discussions with key academics in Ocean Engineering topics related to robotics and links through the Port-City Universities League
9.	Keith Johnstone, Director of International Relations and Development	7 September 2017	
10.	Mr. Amarjit Singh, Chief Executive Officer, India Business Group		
11.	Mr. G. Ram Kumar, Former Executive Director (Automation), Indian Oil Corporation Limited	12 September 2017	Industrial lecture on Experiences in industry overcoming challenges, 12 September 2017, Seminar Room, Department of Ocean Engineering
12.	Industrial Advisory Panel (IAP) Meeting on NA&OE Programmes 1. Mr. Sunny Thomas, Director (Technical), Cochin Shipyard Limited 2. Dr. Abdul Rahim, Managing Director, Class NK 3. Mr. Biren Kumar Dash, Managing Director, Business Development and Strategy, Sapura Energy Bhd, Kuala	18 September 2017	<ul style="list-style-type: none"> Meeting with faculty members for discussion on curriculum and syllabus, Lab visit Meeting with B.Tech and M.Tech students Panel discussion on curriculum improvement, and Meeting with the IIT Madras Director
13.	Dr Arjun Jagannathan, PhD, at UC San Diego in the Scripps Institution of Oceanography	16 October 2017	Guest Lecture: Low Froude number stratified flow over three dimensional oceanic and mountain ridges, Seminar Room, Department of Ocean Engineering
14.	Mr. Edoardo Patelli, Institute of Risk and Uncertainty, University of Liverpool, UK	17 November 2017	Seminar talk: Simulation framework for dealing with uncertainties application to the vulnerability analysis of coastal critical systems, Department of Ocean Engineering Seminar Hall
15.	Mr. Krish P Thiagarajan, Alston D and Ada Lee Correll, Presidential Chair in Energy Professor, Department of Mechanical Engineering, University of Maine	23 November 2017	Hydrodynamics of a floating offshore wind turbine semi-submersible column with heave plate in waves, Department of Ocean Engineering Seminar Hall
16.	Mr. Krish P. Thiagarajan	24 November 2017	Extreme tensions on mooring lines of a floating offshore wind turbine semi-submersible, Department of Ocean Engineering Seminar Hall
17.	Mr. Krish P. Thiagarajan	27 November 2017	Prediction of mean heading of a FPSO in bi-directional sea states in Department of Ocean Engineering Seminar Hall
18.	Mr. Kris Ravi, President, Kris-Ravi Consultancy LLC, Kingwood, TX	18 December 2017	Short talk: Well integrity is critical to safe and economic energy production, Department of Ocean Engineering Seminar Hall
19.	Dr. Deepak N. Subramani, Ph.d, in Mechanical Engineering and Computation from Massachusetts Institute of Technology, Cambridge, USA	22 January 2018	Seminar: Probabilistic regional ocean predications stochastic fields and optimal planning, Department of Ocean Engineering Seminar Hall
20.	Dr. N.B. Sundarabalan, NASA/GSFC, UMD	January 2018	Enhancing the application of space born sensor for inland and ocean waters Department of Ocean Engineering

4.15.6. Other Activities of the Department/Centre

- Team from IIT is growing an island off the Tamil Nadu coast, The Indian Express, 4 August 2017; Island protection in the National Marine Park, Gulf of Mannar by Prof. S. A. Sannasiraj and Prof. V. Sundar
- IIT Madras turbine may generate power from ocean waves; The Times of India, 22 August 2017; Dr Abdus Samad
- IIT-M working on turbine to harness 40,000 MW power locked in wave energy; <http://energyinfrapost.com/m-working-turbine-harness-40000-mw-power-locked-wave-energy/>; Dr. Abdus Samed
- One step towards harnessing wave energy, by Dr. T. V. Venkateswaran, nrindia.com; Dr. Abdus Samed
- India presses ahead with wave turbine development, <http://tidalenergytoday.com/2017/08/31/india-presses-ahead-with-wave-turbine-development/>; Dr. Abdus Samad
- Appreciation letter issued to Dr. V. Sundar from United State Naval Academy, Annapolis, Maryland on 8 September 2017, recognising his contributions to the journal, Ocean Engineering and ocean engineering in general as Associate Editor.
- Educational visit to the Ocean Engineering Department by The Spectrum Academy Matriculation School, Nammakkal (a team of 62 students of Class IX with eight teachers), 10 August 2017
- Prof. R. Sundaravadivelu designated a senate nominee for the Board of Directors (BoG) in the institute for two years starting 1 January 2018
- Prof. S. A. Sannasiraj nominated as AICTE representative on the Governing Council for ADJ Dharmambal Polytechnic College, Nagapattinam.
- Prof. S. A. Sannasiraj nominated as the Board Member of Mepco Schlenk Engineering College, Sivakasi.
- A new society, Socersociety (Ships Offshore Coastal and Environmental Research Society) formed in the department to provide a forum to engineers and scientists in the area of ocean engineering and naval architecture, with Dr. R. Sundaravadivelu as

founding president. The society is proposed to float an international journal.

- The second edition of the book, Dynamic Analysis and Design of Offshore Structures by Prof. Srinivasan Chandrasekaran, Department of Ocean Engineering, published by Springer, Singapore.

National Technology Centre for Ports, Waterways and Coasts (NTCPWC)

The Centre has invested close to Rs.70 crore in the technology centre, which will come up in IIT Madras' second campus in Thaiyur. Major components of the technology centre are technology development, modelling and software products, bridge simulator and testing facilities with focus on three areas – research and development, manpower training and technical training. The master planning for the centre is completed, and the construction is expected to start by June 2019. The eight major port projects handled by the Ocean Engineering Department of IIT Madras will be moved to **National Technology Centre for Ports, Waterways and Coasts (NTCPWC)** by March 2019.

Results obtained in research work (from M.S. and PhD thesis) of the scholar/faculty (last year sample enclosed from Director's Speech)

Ph.D Scholar Md Hamid Siddique Roll No.OE13D022 guided by Dr. Abdus Samad has optimised centrifugal pump impeller via CFD and surrogate models. The optimised impeller shows 8% improvement in pump head rise

Ph.D Scholar Mr.K.R.Mrinal Roll No. OE13D005 guided by Dr. Abdus Samad Dstudied the performances of centrifugal and progressive cavity pump delivering bentonite based non-Newtonian slurry and the analyzed by experimental and numerical approach. The surrogate models were used for predicting the performances of the pumps and CFD model for prediction, as well as to study the flow physics.

International Collaboration Achievements by the Department

Indo-Korean project: Development of a strategy for optimal power production from 100 kW Class Horizontal Axis Tidal Turbines.

Faculty visit

Sl. No.	Faculty Member	Purpose of Visit	Venue and Date
1	Prof. S. A. Sannasiraj	Attended the Assessment Board meeting of NIOT	INCOIS, Hyderabad, 12 June 2017
2	Prof. S. A. Sannasiraj	Attended Ph.D viva examination board meeting at CEG	Anna University, Chennai, 14 June 2017
3	Dr. Rajiv Sharma	Invited talk on Challenges in Computational Fracture Mechanics	The 3rd Indian Conference on Applied Mechanics (INCAM 2017) MNIT, Allahabad, 6 July 2017
4	Prof. S. A. Sannasiraj	Chaired the Technical Expert committee for Shore Protection projects	Bommayarpalayam and Mamallapuram coast, Project Owner: TN PWD and Department of Fisheries, 17 August 2017
5	Prof. S.A. Sannasiraj	PhD final defense	IIT Bombay, 11 July 17
6	Prof. S. A. Sannasiraj	Workshop Ph.D Viva Voce Examination Attend Ph.D Viva Voce Examination	Digha, West Bengal, 14 September 2017 Madurai, 20 September 2017 NIT Surathkal, 25 September 2017
7	Prof. S. A. Sannasiraj	Meeting to evaluate the field execution projects of NIOT and followed by field visit to Puducherry	9 September 2017, Puducherry
8	Prof. S. A. Sannasiraj	Urban Resilience: Coastal Hazards and Coastal Water Management, Vulnerability and Sustainability IGCS Workshop	23-25 October, Hall I, IC&SR, IIT Madras, Chennai

Activities Initiated

- **Dr. Abdus Samad:** DST-KNRF (Korea) proposal: Development of a strategy for optimal power production from a 100 kW Class Horizontal Axis Tidal Stream Turbines System
- **Dr. S. Nallayarasu:** A new proposal for structure integrity assessment of existing offshore platform, ONGC – Development of software tool and technical assessment

Major infrastructure development made in the Department

Wave energy system: Bidirectional impulse turbine for wave energy conversion at Wave Energy and Fluids Engineering Laboratory (WEFEL).

Visiting Scholar/Student (International) in Ocean Engineering Department

1. Under **PLENOSE** Project:

- Mr. Bright Uchenna Oparaji, University of Liverpool, Institute for Risk and Uncertainty, 1 August-15 September 2017 under the guidance of **Dr. K. Murali**
- Mr. Hugo Martinez, University of Lisbon, 1 July-30 September 2017 under the guidance of **Dr. S. A. Sannasiraj**

- Mr. Rahul Chitteth Ramachandran, OE18F003, from the Instituto Superior Technico Lisboa, Portugal, 15 January-15 April 2018 under the guidance of **Prof. S. A. Sannasiraj**
2. Mr. Daniel Kahu, RWTH Aachen University, University in Aachen, Germany, 24 July-4 December 2017 under the guidance of **Dr. Rajesh R. Nair**
 3. Mr. Fakhurulrahman bin Abd Karim, University of Technology Petronas, Malaysia joined the Department on 3 October 2017. The stay was from 20 September 2017 to 22 April 2018 under the guidance of **Dr. Rajiv Sharma**
 4. Mr. Bright Uchenna Opara, OE18F002, from the Institute for Kish and Uncertainty University of Liverpool to do course work from 11 January 2018 under the guidance of Prof K. Murali, in the Department of Ocean Engineering.
 5. Mr. Karim Raed Ahmed Mohamed Hussain, OE18F004, from Instituto Superior Technico Rua Almirante Barraso Lisbon from 17 January 2018 under the guidance of **Prof V. Sundar**, in the Department of Ocean Engineering

6. Celebration of Ethnic Day on 19 September 2017 by students, faculty and staff members in the department



Workshop on Modernization of Ports, 16-17 February 2018



Indo-UK Workshop, 18 February 2018



Indo-Australian Workshop



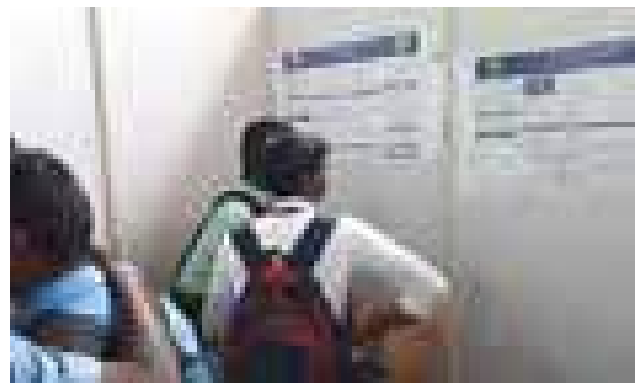
The 4th International Conference in Ocean Engineering (ICOE 2018), 19-21 February 2018



Indo-Korean Workshop, 21-23 February 2018



Chennai Science Festival, Tamil Nadu Council for Science & Technology, Birla Planetarium, 21-24 February 2018



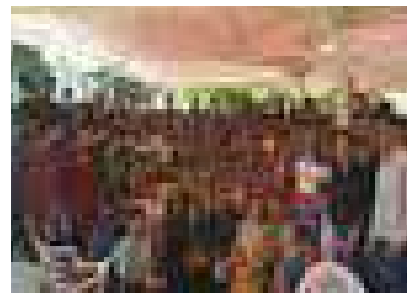
Laying the Foundation Stone for NTCPWC, 26 February 2018



Visit of Honorable Minister Shri Nitin Gadkari, Minister for Road Transport and Highways, and Shipping, to the Department of Ocean Engineering, 26 February 2018



Department Social Event, 25 February 2018



4.16. Department of Physics

4.16.1. Introduction

The Department of Physics at Indian Institute of Technology was established in 1959. The department conducts research in many frontier areas such as experimental solid state physics, optical and laser physics, soft condensed matter physics and various aspects of theoretical and computational physics, ranging from condensed matter to string theory and cosmology.

The Department of Physics offers a vibrant undergraduate programme, B.Tech. (Engineering Physics) in conjunction

with the Department of Electrical Engineering. The department offers three master's programmes, namely Dual Degree (B.S. and M.S.), M.Sc. and M.Tech. in physics. The department also conducts a regular doctoral research (Ph.D.) programme.

4.16.2. Academic Programmes

Engineering Physics (B.Tech), M.Sc., Dual Degree (B.S. and M.S.), M. Tech (Solid State Technology) and Ph.D.

Students on roll as of September 2017+M.S. & Ph.D Admission in January 2018

Programme	Year I	Year II	Year III	Year IV	Year V and others	Total
B.Tech.	27	28	29	31	3	118
Dual Degree	9	11	6	10	10	46
M.Sc.	41	43 + 4	–	–	–	88
M.Tech.	8	6 + 2	–	–	–	16
Ph.D.	27	26	31	20	47+27	178
Total	112	120	66	61	87	446

Student/Scholar who Attended conference/seminar/symposia abroad/India

Sl. No.	Student/Scholar	Roll No.	Conferences/Seminars/symposia/Workshops	Date and Venue	Financial Assistance from
Abroad					
1	Reshmi P. K.	PH14D039	Collaborative visit working on Belle and Belle II experiments	14 April-21 July 2017, Japan	IIT Madras
2	Roshna S. H.	PH15D008	International Conference on Materials for Advanced Technologies	18-23 June 2017, Suntec, Singapore	IIT Madras
3	Lincy Stephen	PH13D006	Poster: A simple Chiral metamaterial for broadband asymmetric transmission of linearly polarized electromagnetic waves; Microwave Frequencies at the META17, 8th International Conference on Metamaterials, Photonic Crystals and Plasmonics	25-28 July 2017, Incheon, Korea	IIT Madras
4	Ravindran Krishnakumar	PH14D008	Collaborative visit to work on the BESIII experiment	12-28 July 2017, IHEP/UCAS, Beijing	IIT Madras
5	M. Nandana Nandakumar	PH13D007	International Conference on Strongly Correlated Electron System SCES-17; poster: Non-fluorine chemical solution deposition of NdBa ₂ Cu ₃ O _{7-δ} films on RABiTS with La ₂ Zr ₂ O ₇ buffer layer	17-21 July 2017, Prague, Czech Republic	IIT Madras
6	Mekha Vimal	PH15D016	International Ultrafast X-ray Summer School	12-17 June 2017, Hamburg, Germany	IIT Madras
7	Karthika C.	PH13D034	15 th Oxford School on Neutron Scattering OSNS 2017	3-15 September 2017, St. Anne's College, University of Oxford, UK	IIT Madras

Sl. No.	Student/ Scholar	Roll No.	Conferences/Seminars/symposia/ Workshops	Date and Venue	Financial Assistance from
8	Atal Bihari Swain	PH13D073	IMF 2017; Pinched hysteresis loop in lead free ceramic BCT- BZT	4-8 September 2017, San Antonio, USA	IIT Madras
9	Arpita Ghosh	PH13D023	Paper: Synergetic effect of nitrogen and boron co-doped highly porous graphene network towards ORR; 232 nd Electrochemical Society (ECS) meeting	1-5 October 2017, National Harbor, MD, USA	IIT Madras
10	Priji C.	PH12D063	Paper: Palladium alloy based nanocomposite as an efficient anode and cathode electrocatalyst for polymer electrolyte membrane fuel cell; ECS Meeting	1-5 October 2017, National Harbor, MD, USA	IIT Madras
11	Garapati Meenakshi Seshadhri	PH15D004	Carried out part of research	Japan Advanced Institute of Science and Technology, Japan, 2 October-31 November 2017	IIT Madras
12	Haripriya G.R.	PH13D004	Manuscript: Disordered double perovskite oxide $\text{Sm}_2\text{FeCnO}_4$; 2017 conference on magnetism and magnetic materials, titled, Magnetization Reversal and Magnetic Anomalies	6-11 November 2017, Pittsburgh, USA	IIT Madras
13	Prabal Sen	PH12D043	Poster presented in the category of "Semiconductor, nanocrystals, plasmonic nanoparticles and metal-hybrid structure" titled, Enhancement in the emission spectra of gold nanoparticle incorporated indium oxide hybrid nanocomposite film; MRS Fall 2017 Technical Committee	26 November-1 December 2017, Boston, Massachusetts, USA	IIT Madras
14	Garapati Meenakshi Seshadhri	PH15D004	Carried out a part of research at Japan Advanced Institute of Science and Technology (JAIST)	1 November-31 December 2017, Japan	IIT Madras
15	Ajay Priya	PH15D302	Carried out a part of research at JAIST	1 November-31 December 2017, Japan	IIT Madras
16	Krishnakumar Ravindran	PH14D008	Participated in running of the BESIII experiment	16-31 December 2017, Institute of High Energy Physics Beijing, China	IIT Madras
17	Resmi P. K.	PH14D039	Visited and participated in the commissioning and running of the Belle II experiment and collaboration on analysis of data from the Belle experiment at Institute for the Physics and Mathematics of the Universe (IPMU) and High Energy Accelerator Research Organization (KEK)	19 January-31 March 2018, Japan	IIT Madras
18	Hisay Lama	PH14D007	Visited the laboratory (on doctoral exchange program) for the project, Effect of finite thickness of hydrogels substrate on particle self-assembly	Laboratoire De Physique des Solides, Campus Universitaire d'Orsay, 8 January-7 May 2018	IIT Madras
19	Sachin Krishnan T. V.	PH13D074	Presented poster: Interplay of curvature sensing and generation mediated by peripheral membrane proteins, 62 nd Annual Meeting of the Biophysical Society	San Francisco, USA, 17-21 February 2018	IIT Madras

Sl. No.	Student/ Scholar	Roll No.	Conferences/Seminars/symposia/ Workshops	Date and Venue	Financial Assistance from
20	Debika Chowdhury	PH13D028	YKIS2018 Symposium (as a part of long-term workshop on Gravity and Cosmology 2018); poster: Primordial magnetic fields in bouncing universes	Yukawa Institute for Theoretical Physics, Kyoto University, Japan, 19-23 February 2018	IIT Madras
21	Biporjoy Sarkar	PH13D083	Talk: Strain-induced electrical charge transport in PEDOT: PSS thin films: role of wrinkles and cracks	5-9 March 2018, American Physical Society, Los Angeles, California	IIT Madras
22	Muhammad Alibord	PH15D043	Visited CERN for the research and experimental work	24 March-26 May 2018, European Organization for Nuclear Research	IIT Madras
23	Swati Dhua	PH15D014	Visited CERN for the research and experimental work	25-28 March 2018, Advanced Energy Materials Congress, Stockholm, Sweden	IIT Madras
24	Subish John	PH14D015	Presentation: Reduced graphene oxide-CuO nanowires with enhanced photocurrent activity	25-28 March 2018, Advanced Energy Materials Congress, Stockholm, Sweden	IIT Madras
India					
25	Nirmalya Kajuri	Institute PDF	Essay competition: The time measurement problem in quantum cosmology	Gravity Research Foundation	IIT Madras
26	B. Srinivas	PH14D028	8th Bangalore School on Statistical Physics – VIII	28 June-14 July 2017, International Centre for Theoretical Sciences (ICTS), Bengaluru	IIT Madras
27	Mrinal Sarkar	PH13D203	8th Bangalore School on Statistical Physics – VIII	28 June-14 July 2017, ICTS, Bengaluru	IIT Madras
28	Dipanwita Ghoshal	PH15D040	8th Bangalore school on Statistical Physics–VIII	28 June-14 July 2017, ICTS, Bengaluru	IIT Madras
29	Akshay Kumar Budumuru	PH15D401	Mn-substituted olivine phosphate Nanowires as high-rate capability cathode for lithium in battery	17-19 July 2017, Electron Microscopy Society of India (EMSI), Mamallapuram, Chennai	IIT Madras
30	Subhajit Nandy	PH15D013	Ferroelectric and Photovoltaic studies in Polycrystalline BiFeO ₃ Thin Films	17-19 July 2017, EMSI, Chennai	IIT Madras
31	Rohini M. S.	PH16D006	Magnetic properties of 2D-MoS ₂ Nanosheets	17-19 July 2017, EMSI, Chennai	IIT Madras
32	Md. Mahabul Islam	PH14D036	Magnetic properties of 2D-MoS ₂ Nanosheets	17-19 July 2017, EMSI, Chennai	IIT Madras
33	Pratheesh Kumar V. C.	PH13D041	Paper: Interferometric techniques for high-precision meteorological applications; International Topical Meeting on Applied and Adaptive Optics	11-13 August 2017, Valiyamula, Trivandrum	IIT Madras
34	Ashok Jayaram K.	PH15D042	Attended the consortium research lecture module: Superconductivity of elements in the periodic table, present and future	28 August-1 September 2017, UGC-DAE, CSR, Indore	IIT Madras
35	Sreejith P. K.	PH15D036	Attended the consortium research lecture module: Superconductivity of elements in the periodic table, present and future	28 August-1 September 2017, UGC-DAE, CSR, Indore	IIT Madras
36	G. Prakash Mohan	PH14D006	Lab visit for experiments	10-20 September 2017, IIT Guwahati	IIT Madras

Sl. No.	Student/ Scholar	Roll No.	Conferences/Seminars/symposia/ Workshops	Date and Venue	Financial Assistance from
37	Debika Chowdhury	PH13D028	Visited the institute and worked with Prof. Jerome Martin under the aegis of the Centre for Cosmological Studies program	11 September-31 October 2017, Institut d'Astrophysique de Paris, France	IIT Madras
38	Pranjali H. Jadhao	M.Tech.	Presented a pitch talk: Think Nano 2017	14-15 September 2017, Centre for Nano Science and Engineering (CeNSE) Bengaluru	IIT Madras
39	Ramachandra Dhal	PH13D012	Poster: Structure and magnetic property correlation in a novel brownmillerite, $\text{Ca}_2\text{Fe}_{0.875}\text{Cr}_{0.125}\text{GaO}_5$; 24th Congress and General Assembly of the International Union of Crystallography 2017	21-28 August 2017, HICC, Hyderabad	IIT Madras
40	Karthika C	PH13D034	Poster: Structural and magnetic properties of $\text{RFe}_{0.5}\text{Mn}_{0.5}\text{O}_3$ (R = Ho, Eu); 24th Congress and General Assembly of the International Union of Crystallography 2017	21-28 August 2017, HICC, Hyderabad	IIT Madras
41	B. Sharmila S.	PH14D041	Poster: Tomographic approach to an indicator of entanglement; International Conference on Squeezed States and Uncertainty Relations (ICSSUR 2017)	Jeju, Korea	IIT Madras
42	Mrinal Sarkar	PH13D203	Paper: Duality on the two-dimensional Kuramoto Model; International Conference on Recent Advances in Condensed Matter, Physics and Complex Systems	30 October-1 November 2017, Savitribai Phule Pune University, Pune	IIT Madras
43	Anupama Roy	PH13D022	Paper: Microtransitions in 2d load-bearing hierarchical network; International Conference on Recent Advances in Condensed Matter, Physics and Complex Systems	30 October-1 November 2017, Savitribai Phule Pune University, Pune	IIT Madras
44	Joydeep Singh	PH13D079	Paper: Chimera states in coupled map lattice; International Conference on Recent Advances in Condensed Matter, Physics and Complex Systems	30 October-1 November 2017, Pune University, Pune	IIT Madras
45	Lakshmi Kola	PH12D038	Paper: Enhancement of piezoelectric, ferroelectric and dielectric properties I Sn doped BaTiO_3 system; National Conference on Recent Trends in Condensed Matter Physics (RTCMP)	28 October-4 November 2017, Bose Institute, Kolkata	IIT Madras
46	Arnab Pal	PH12D038	Paper: Study on defect dipole induced pyroelectric current in GdMnO_3 ; RTCMP	28 October-4 November 2017, Bose Institute, Kolkata	IIT Madras
47	Subhajit Pal	PH15D041	Paper: Stabilisation of orthorhombic polycrystalline HoMnO_3 thin films on Pt coated Si substrate; RTCMP	28 October-4 November 2017, Bose Institute, Kolkata	IIT Madras
48	Antarjami Sahoo	PH13D021	Poster: Magnetic proximity and enhanced coercivity in manganite/ruthenite superlattice	20-22 November 2017, International iCOLD 2017/IIT Madras	IIT Madras
49	Lakshman Dhal	PH12D037	Talk: Incomplete structural transition in $\text{Nd}_{0.15}\text{Ca}_{0.85}\text{MnO}_3$: A Neutron Diffraction Study	20-22 November 2017, International iCOLD 2017/IIT Madras	IIT Madras

Sl. No.	Student/ Scholar	Roll No.	Conferences/Seminars/symposia/ Workshops	Date and Venue	Financial Assistance from
50	Antarjami Sahoo	PH13D021	Presented paper: Effect of structural reconstruction on interfacial coupling in tetragonal superlattices; 2nd International Conference on Condensed Matter and Applied Physics (ICC 2017)	24-25 November 2017, Bikaner, Rajasthan	IIT Madras
51	Durgesh Kar	PH13D078	Presented paper: The effect of humidity on persistent photocurrent in indium oxide thin film at ICC 2017	24-25 November 2017, Bikaner, Rajasthan	IIT Madras
52	Haripriya G.R.	PH13D004	Presented a paper in poster presentation titled, The effect of A-site substitution on the structure and magnetism of $Sr_{2-x}P_xFeCoO_6$ ($x=0, 1, 2$); ICC 2017	24-25 November 2017, Bikaner, Rajasthan	IIT Madras
53	Athrey C.D.	PH17D022	Presented paper: Gamma ray interaction studies on archaeologically important samples using ^{133}Ba gamma source at National Conference on Radiation Physics (NCRD 2017)	23-24 November 2017, Bengaluru	IIT Madras
54	Shashi B. Mishra	PH13D045	Presented a paper: Layer, site and stoichiometric dependence of CO ₂ adsorption on TiO ₂ (001) surface, International Conference on Clean Energy	27 November-2 December 2017, JNCASR, Bengaluru	IIT Madras
55	Krishna Kumar Ravindran	PH14D008	Poster: Measurement of strong phase difference between D0 and D0 Kskk using quantum correlate decays, BESIII	2-9 October 2017, National Symposium on Particle Detectors and Instrumentation (NSPDI) 2017	IIT Madras
56	Karaparambil Rajan Robin	PH13D005	Poster: Study of neutrino oscillation parameters, Ino-ICAL detector	2-9 October 2017, NSPDI 2017	IIT Madras
57	Resmi P. K.	PH14D039	Presented a poster: Quantum correlated measurements of D0 Ks0 decays and consequences for the determination of r .	2-9 October 2017, NSPDI 2017	IIT Madras
58	B. Srinivas	PH14D028	Poster: Cooperative versus non-cooperative behaviour of a motor protein: new insights from an old theory	29 October-1 November 2017, EMBO Workshop – Frontiers in Cytoskeleton Research/ IISER, Pune	IIT Madras
59	Niharika Rout	PH16D021	Gave a talk in the conference	29 November-3 December 2017, Belle Analysis Workshop/MNIT, Jaipur	IIT Madras
60	Resmi P.K.	PH14D039	Talk: Extraction of CKM angle ϕ_3 with $B \rightarrow D(K\pi\pi)K$ decays via GGSZ formalism	29 November-3 December 2017, Belle Analysis Workshop/MNIT, Jaipur	IIT Madras

Sl. No.	Student/ Scholar	Roll No.	Conferences/Seminars/symposia/ Workshops	Date and Venue	Financial Assistance from
61	Krishnakumar Ravindran	PH14D008	XI SERC School on Experimental High Energy Physics	7-27 November 2017, National Institute of Science Educational and Research (NISER), Bhubaneswar	IIT Madras
	Muhammad Alibordi	PH15D043			
	Niharika Rout	PH16D021			
62	Roby Chacko	PH12D050	Visit to other laboratories	31 November-9 December 2017, TIFR, Mumbai	IIT Madras
63	Malayaja Chutani	PH15D015	Paper: Simplicial characterization of time-series networks; 5th International Conference on Complex Dynamical Systems and Applications	3-6 December 2017, IIT Guwahati	IIT Madras
64	Anupama Roy Soumyajit Saha	PH13D022 PH14D014	Electron Collisions with Atomic Systems	4-22 December 2017, SERC School on Atomic and Molecular Physics, Kolkata	IIT Madras
65	Sutapa Samanta	PH13D052	Paper: Quantum entropy function for G-V invariance	5-10 December 2017, National String Meeting 2017/NISER, Bhubaneswar	IIT Madras
66	Dinesh Kumar	PH12D005	East Asia Symposium on Superconductor Electronics	5-8 December 2017, IIT Delhi	IIT Madras
67	Suraj T. S.	PH14D046	Paper: Electrical Transport Studies in Iridium-doped ZnO thin films; IWPSD 2017 (International Conference on Physics of Semiconductor Devices)	10-15 December 2017, IIT Delhi	IIT Madras
68	Anu B.	PH14D023	Paper: Investigation on mechanism of photoluminescence quenching due to PCBM in P3HT: PCBM blends; IWPSD 2017	11-15 December 2017, IIT Delhi	IIT Madras
69	Subhamoy Sahoo	PH14D202	Paper: Study of absorption spectrum of pentacene using electromodulation; IWPSD 2017	11-15 December 2017, IIT Delhi	IIT Madras
70	Lairenjam Pradipkanti Devi	PH12D036	Paper: Investigation of water adsorption and desorption in chitosan thin films; Compflu@IIT Madras 2017	18-20 December 2017, IIT Madras and IIT Palakkad	IIT Madras
71	Merin Jose	PH17D004	Compflu@IIT Madras 2017	18-20 December 2017, IIT Madras and IIT Palakkad	IIT Madras
72	Suresh G.	PH12D058	Paper: Dielectric and mechanical response of PVDF-PVF blends; Compflu@IIT Madras 2017	18-20 December 2017, IIT Madras and IIT Palakkad	IIT Madras
73	Geethu P. M.	PH13D031	Paper: Structure and dynamics of polymer loaded and ionic liquid MEs; Compflu@IIT Madras 2017	18-20 December 2017, IIT Madras and IIT Palakkad	IIT Madras
74	Mayarani M.	PH14D035	Poster: Evaporative self assembly of soft colloids; Compflu@IIT Madras 2017	18-20 December 2017, IIT Madras and IIT Palakkad	IIT Madras
75	Hisay Lama	PH14D007	Poster: Manipulation of drying induced defects in particulate deposit using an external field; Compflu@IIT Madras 2017	18-20 December 2017, IIT Madras and IIT Palakkad	IIT Madras

Sl. No.	Student/ Scholar	Roll No.	Conferences/Seminars/symposia/ Workshops	Date and Venue	Financial Assistance from
76	Biporjoy Sarkar	PH13D083	Oral presentation: Investigating the wrinkle and crack dependent charge transport phenomena in PEDOT:PSS thin films on stretchable substrates; Compflu@IIT Madras 2017	18-20 December 2017, IIT Madras and IIT Palakkad	IIT Madras
77	Imon Kalyan	PH13D032	Paper: Morphology dependent resonance modes in solvothermally treated TiO ₂ microsphere	18-21 December 2017, ICANN 2017/IIT Guwahati	IIT Madras
78	Sreetama Ghosh	PH14D302	Paper: Highly efficient carbon dioxide capture by ionic functionalized hierarchically porous sulphur doped boron nitride nanosheets	18-21 December 2017, ICANN 2017/IIT Guwahati	IIT Madras
79	Rahul V. R.	PH17D023	Current Trends in Intracellular Transport and Molecular Motors (CTITMM)	21-23 December 2017, IIT Bombay	IIT Madras
80	Shibnath Samanta	PH12D055	Paper: Electrocaloric effect, dielectric, ferroelectric and piezoelectric properties in normal and relaxor phases of La-doped PZT (65/35)	17-19 January 2018, Electronic and Advanced Materials 2018 (IEAM 2018), Doubletree by Hilton in Orlando, Florida, USA	IIT Madras
81	Resmi P. K.	PH14D039	Assessing the prospects for frontier CMB space experiments from India/ ISRO	8-9 January 2018, IUCAA, RRI	IIT Madras
82	Sourav Banerjee	PH13D204	Paper: Highly efficient carbon dioxide capture by ionic functionalized hierarchically porous sulphur doped boron nitride nanosheets	6-8 January 2018, ICANN 2017, IIT Guwahati	IIT Madras
83	Debika Chowdhury	PH13D028	Assessing the prospects for Frontier CMB space experiments from India/ ISRO	8-9 January 2018, IUCAA, RRI, Bengaluru	IIT Madras
84	Saroj Kumar Barik	PH16D056	7th Topical Conference of the Indian Society of Atomic and Molecular Physics/IISER, Tirupati	6-9 January 2018, IIT, Tirupati	IIT Madras
85	Soumyajit Saha	PH14D014	Papers: 1. Shape resonance induced Wigner time delay in atomic photo effect 2. Influence of SOIAC in photo detachment and photoionization time delays near the centrifugal carrier shape resonance; 7th Topical Conference of the Indian Society of Atomic and Molecular Physics/IISER, Tirupati	6-8 January 2018, IIT, Tirupati	IIT Madras
86	Sourav Banerjee	PH13D204	Papers: Effect of inter-channel coupling on angular distribution of photo electronics and one time delay in the auto ionization regions of neon 2S np resonance series; Photoionization dynamics of Ar at C540, 7th Topical Conference of the Indian Society of Atomic and Molecular Physics, IISER Tirupati	6-8 January 2018, IIT, Tirupati	IIT Madras
87	Swati Dhua	PH15D014	International Conference on Material Science and Engineering (CTMSE 2018); presented a paper	18-19 January 2018, S.N. Bose Centre for Basic Sciences, Kolkata	IIT Madras

Sl. No.	Student/ Scholar	Roll No.	Conferences/Seminars/symposia/ Workshops	Date and Venue	Financial Assistance from
88	Akshaya	PH15D002	Presented a poster	29 January-2 February 2018, International Symposium on New Frontiers in quantum correlation (ISNFQCIS), Kolkata	IIT Madras
89	B. Sharmila	PH14D041	Paper: Quantum entanglement indication (pointer)	29 January-2 February 2018, ISNFQCIS, Kolkata	IIT Madras
90	Pradip Laha	PH13D040	Paper: Nonclassical properties of entangled quantum systems	29 January-2 February 2018, ISNFQCIS, Kolkata	IIT Madras
91	Ranjana Rani Das	PH13D042	Indo-US symposium on Recent Advances in Magnetism and Spintronics	5-6 February 2018, IIT Bombay	IIT Madras
92	Karthika C.	PH13D034	Indo-US Symposium on Recent Advances in Magnetism and Spintronics	5-6 February 2018, IIT Bombay	IIT Madras
93	Karthika C.	PH13D034	Visited laboratory in BARC	8-10 February 2018, BARC, Mumbai	IIT Madras
94	Debika Chowdhury	PH13D028	From reionization to large scale structure – a multiwavelength approach	IUCAA, Pune, 11-17 February 2018	IIT Madras
95	Nithin Thomas	PH17D002	Visited for collaboration with Dr. Arnab Sen, Assisant Professor, IACS, Kolkata	IACS, Kolkata, 11-17 February 2018	IIT Madras
96	B. Srinivas	PH14D028	5th Indian Statistical Physics Community Meeting; presented a poster	16-18 February 2018, ICTS, Bengaluru	IIT Madras
97	Sreetama Ghosh	PH14D302	Poster: Carbon dioxide adsorption of zinc oxide nanoparticles synthesized by wire explosion techniques; NPERSC'18	24-25 February 2018, ICSR, IIT Madras	IIT Madras
98	Soumyajit Saha	PH14D014	Recent developments in ultrafast phenomena	2-13 March 2018, IIT, Tirupati	IIT Madras
99	Meenakshi Seshadr	PH15D004	Battery technology and electric mobility	8-9 March 2018, Bengaluru	IIT Madras
100	Anu B. and Subhamoy Sahoo	PH14D023 and PH14D202	IUAC-International School on Accelerators	7-9 March 2018, IUAC, Delhi	IIT Madras
101	Arun Stanley	PH15D019	CNT workshop on Effective field theory of hadrons vacuum to medium	12-17 March 2018, VECC, Kolkata	IIT Madras
102	Shibnath Samanta	PH12D055	Paper: Effect of successive multiple doping of La, Nb and Fe on structure and lattice vibration of MPB PZT, ICCMEMS 2018	15-17 March 2018, Lovely Professional University, Jalandhar, Punjab	IIT Madras
103	Madhuparna Karmakar	PH17IPF02	Seminar talk, Tata Institute of Fundamental Research, Hyderabad	7-10 February 2018, TIFR Hyderabad	IIT Madras

Student/Scholar who Attended conference//seminar and symposia abroad/India

Sl.No.	Student/Scholar	Roll No.	Prize	Prize awarded by
1	Pius Augustine; Dr. M. S. Ramachandra Rao (Guide)		Best poster award for Effect of Sr ²⁺ doping on the functional response of (1-x) PMN _x PT relaxor ceramics, advanced ceramics and nanohybrids for energy, environment and health, Symposium Section of the 9th International Conference on Materials for Advanced Technologies (ICMAT-2017)	Suntech Convention Centre, Singapore
2	Hisayama; Dr. Dillip K. Satapathy (Guide)	PH14D007	Raman-Charpak Fellowship 2017	Indo-French Center for the Promotion of Advanced Research (CEFIPRA)
3	Dr. Ananda Theertha Suresh	Alumni	Paul Baran Young Scholar Award	Marconi Society 2017
4	Dr. Shruti Dogra (Post-Doctoral Fellow)	PH17IPF01	Best Contributed Talk Award	International Symposium on New Frontiers in Quantum Correlations (ISNFQC18), 29 January 29-2 February 2018, Kolkata
5	Shibnath Samanta	PH12D055	Best Oral Presentation award	6th International Symposium on Integrated Functionalities (ISIF) 2017- Material Research Society of India (MRSI)
6	Sreetama Ghosh	PH14D302	Best Poster Award	Second National Power Engineering Research Scholar Conference, NPERSC 2018, 24 February 2018
7	Tushar Sakorikar; Dr. Manu Jaiswal (Guide)	EE15D302	Carl Storm International Diversity fellowship	Gordon Research Conference

4.16.3. Faculty and their Activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professors	
Dr. Ramachandra Rao M.S. (Head)	Correlation effect in metal oxide and doped diamond, electrical, optical and magnetic properties of metal oxide thin films and nanostructures and photovoltaic materials
Dr. Arul Lakshminarayan	Quantum information, complex quantum systems, mathematical physics
Dr. Ganesan A. R.	Applied optics, holography, adaptive optics
Dr. Harish Kumar N.	Superconductivity, spintronics, novel magnetic materials
Dr. James Frederick Libby	Experimental particle physics: flavour and neutrino experiments
Dr. Jatindra Kumar Rath	Photovoltaics, nanomaterials, CVD
Dr. Kasiviswanathan S.	Near- and far-field response of plasmonic structures, films of transparent oxide and ternary semiconductors, systems exhibiting quantum coherence
Dr. Lakshmi Bala S.	Classical and quantum dynamical systems, nonlinear dynamics and chaos, chaos in gauge theories, quantum information theory
Dr. Markandeyulu G.	Magnetism, magnetic materials
Dr. Neelima M. Gupte	Nonlinear dynamics, statistical physics
Dr. Prem B. Bisht	Ultrafast laser spectroscopy, fluorescence microscopy
Dr. Ramaprabhu S.	Nanomaterials, fuel cells, Li battery
Dr. Sankaranarayanan V.	Low-temperature physics and cryogenics, magnetocaloric effect, superconductivity
Dr. Santhosh P. N.	Multiferroics, layered oxide materials, CuO-based nanomaterials
Dr. Satyanarayana M. V.	Quantum optics, laser physics, photonics
Dr. Sethupathi K.	Experimental condensed matter physics, magnetic oxide materials and cryogenic insulation

Name and Qualifications	Major Areas of Specialisation
Dr. Srinivas Veeturi	Magnetic materials
Dr. Sriramkumar L.	Semi-classical and quantum gravity, inflationary cosmology and the cosmic microwave background, alternatives to inflation
Dr. Subrahmanyam A.	Photovoltaics, photocatalysis, electrochromics, bio-medical engineering, surface engineering
Dr. Subramanian V.	Microwave techniques, propagation and devices, dielectrics and multiferroics
Dr. Sunil Kumar P. B.	Soft condensed matter physics, biological physics and computational physics
Dr. Suresh Govindarajan	String theory
Dr. Vijayan C.	Nanophotonics, light-matter interaction
Associate Professors	
Dr. Aravind G.	Autoionisation and autodetachment resonances in atomic, molecular and cluster systems
Dr. Krishnamurthy C. V.	Non-destructive evaluation, microstructural modelling, light scattering
Dr. Mahaveer Kumar Jain	Semiconductors, photovoltaics, chemical sensors
Dr. Manoj Gopalakrishnan	Theoretical biological physics, stochastic processes, statistical mechanics
Dr. Murugavel P.	Ferroelectrics, dielectrics and multifunctional oxides for multiferroic and photovoltaic studies
Dr. Nirmala R.	Intermetallics
Dr. Pattabiraman M.	Experimental atomic physics, quantum optics, magnetometry
Dr. Prafulla Kumar Behera	Collider experiments and atmospheric neutrino experiment
Dr. Prahallad Padhan	Magnetic materials and heterostructures, spintronic devices, electronic and magnetic properties of novel materials in nanostructure form
Dr. Prasanta K. Tripathy	String theory, high energy physics
Dr. Rajesh Narayanan	Condensed matter theory, strongly correlated systems, disordered systems
Dr. Ranjit Kumar Nanda B.	Magnetism in strongly correlated systems, graphene with defects and functionalisation, CO ₂ reduction
Dr. Somnath Chanda Roy	Experimental materials science, nanomaterials and thin films, nanotechnology for energy and environment
Dr. Sudakar Chandran	Materials for energy applications, defect-structure property correlations, multifunctional materials
Assistant Professors	
Dr. Abhishek Misra	Transport in Van der Waals materials
Dr. Aditi Sinha	Soft condensed matter, non-equilibrium statistical physics
Dr. Ashwin Joy	Condensed matter physics
Dr. Ayan Mukhopadhyay	Theoretical physics, quantum field theory and string theory, quantum many-body systems
Dr. Basudev Roy	Experimental soft matter, optical tweezers
Dr. Chandra Kant Mishra	Gravitational waves
Dr. Dawood Kothawala	Semi-classical gravity, quantum mechanics of black holes, QFT with minimal length scale
Dr. Dillip Kumar Satapathy	Structure and mechanics of polymer films, directed self-assembly of microemulsions and colloids, X-ray and neutron characterisation of materials
Dr. Jayeeta Bhattacharyya	Semiconductors, optical spectroscopy, THz spectroscopy
Dr. Manu Jaiswal	Elastic, electronic properties of graphene and other 2d-systems, applications of graphene for solar energy, sensing and filtration, conducting polymers and other carbon-based systems
Dr. Panchanana Khuntia	Experimental condensed matter physics
Dr. Prabha Mandayam	Quantum information and computing, quantum optics
Dr. Prabhat Ranjan Pujahari	Experimental high energy physics
Dr. Shanthanu Mukherjee	Condensed matter theory
Dr. Sivarama Krishnan	Femtosecond dynamics, photonics, quantum dynamics
Dr. Sunethra Ramanan	Nuclear structure, renormalisation group, effective field theories
Dr. Vaibhav Madhok	Quantum information theory, chaos and complex systems
Dr. Yasir Iqbal	Theoretical condensed matter
Visiting Faculty	
Dr. Vidya Praveen Bhallamudi	Condensed matter physics magnetism, magnetic resonance, optics

Short-term courses/workshops/seminars/symposia/conferences Organised by the Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Conferences			
1	Dr. Prafulla Kumar Behera	India CMS Collaboration (70 participants from collaborating institutes attended the meeting)	4-6 August 2017
2	Dr. M. S. Ramachandra Rao	International Conference on Laser Deposition (iCOLD2017) (four keynote lectures, a special evening lecture, 12 invited plenary talks, 30 invited talks, 13 oral presentations by senior research scholars and 77 poster presentations, besides five corporate talks)	20 November 2017
Seminar			
1	Dr. C. Vijayan and Dr. N. Harish Kumar	IAPT Convention, IIT Madras (Prof. R. Srinivasan, former Deputy Director, IIT Madras delivered the keynote address; the programme included physics demonstrations, stage show, invited lectures and oral presentations)	22-23 September 2017
Symposium			
1	Department of Physics, IIT Madras	Physics In-House Symposium 2017	3-4 November 2017
Workshops			
1	Dr. N. Harish Kumar	Physics demo for school teachers from Chennai schools at Department of Physics, IIT Madras	24 June 2017
2	Dr. Mahaveer Jain and Dr. Manu Jaiswal	A report on the outreach lab physics demo-cum-quiz programme held at Vana Vani school (40 students from 10 schools participated in the event)	28 July 2017
3	M. Satyanarayana and C. V. Krishnamurthy	Workshop on Physics Education and Research (WPER2017), financially supported by Centre for Continuing Education, Office of International Alumni Relations and the Department of Physics	18-23 December 2017
4	Dr. A. Subrahmanyam, Dr. Sudakar Chandran and Dr. J. K. Rath	One-day workshop on Photovoltaics (fundamentals, device characterisation, simulation and emerging concepts)	10 March 18

Short-term courses/workshops/seminars/symposia/conferences/training Attended by the Faculty Members in Academic Institutions and Public sector Undertakings

Sl. No.	Faculty Member	Title	Institution	Period
Workshops				
1	Dr. R. Nirmala	Talk: Magnetism of small particles (a one-day workshop on nanomagnetism)	VIT University, Vellore	25 October 2017
2	J. Libby	Belle Analysis Workshop	MNIT, Jaipur	29 November-3 December 2017
3	Dr. Prafulla K. Behera	Talk: Effect of variations in the gas mixture compositions on the timing and charge of glass RPC	Oral presentation at RPC 2018 - The XIV Workshop on Resistive Plate Chambers And Related Detectors, Puerto Vallarta, Jalisco State, Mexico	19-23 February 2018
4	Dr. Sunethra Ramanan	Co-organised school, CNT workshop on Effective field theory of hadrons: vacuum to medium	VECC, Kolkata	12-17 March 2018
5	Dr. Sivarama Krishnan	Invited talk: Accelerator-based photon sources as a versatile tool to probe matter workshop	IISc, Bengaluru	28 March 2018
Seminars				
1	Dr. M. S. Ramachandra Rao	Electrical, spectroscopic and mechanical properties of thin films, nanostructures and advanced materials	IIT Indore	18 July 2017

Sl. No.	Faculty Member	Title	Institution	Period
2	Dr. Jim Libby	Plenary talk: Candles of darkness: Dark matter and the search for physics beyond the standard model discussion meeting	ICTS, Bengaluru	5-9 June 2017
3	Dr. Ramaprabhu S.	Talk: Developing scientific attitude among students through science teaching, Teaching of Science Curriculum Seminar, State Council of Education Research and Training	Anna University, Chennai	21 July 2017
4	Dr. Ramaprabhu S.	Invited talk: Synthesis and energy applications of advanced carbon-based functional materials through strategic functionalisation	Jawaharlal Nehru Technical University, Hyderabad	29 July 2017
5	Dr. Manu Jaiswal	Invited talk: Substrate regulated morphology of graphene membranes	Institute of Nano Science and Technology (INST), Mohali	25 October 2017
6	Dr. N. Harish Kumar	Delivered the keynote address in the National Conference on Advances in Electronics and Communication Devices (AECD- 2018)	Suresh Gyan Vihar University, Jaipur	9-10 March 2018
7	Dr. Sunethra Ramanan	Dr. Sunethra Ramanan	VECC, Kolkata	12-17 March 2018
8	Dr. Jim Libby	Invited talk: Belle II-Flavour physics at the intensity frontier seminar	IIT Guwahati	23 March 2018
Symposium				
1	Dr. M. S. Ramachandra Rao	Gave a talk at the symposium organised by A. P. Science Congress in the theme of nanotechnology	A. P. Science Congress, Visakhapatnam	8 November 2017
Conferences				
1	Dr. M.S. Ramachandra Rao	Oral presentation: Crack-free and device worthy 0.65PMN-0.35PT one micron thick film grown using PLD	9th International Conference on Materials for Advanced Technology, Suntec Singapore	18-23 June 2017
2	Dr. M. S. Ramachandra Rao	Invited talk: Electrical and optical properties of doped nanosystems and heterostructures	International Conference on Nanotechnology, SRM, University, Chennai	9 August 2017
3	Dr. M. S. Ramachandra Rao	Invited talk: Science of low dimensional systems and emerging technologies	National conference on Nanotechnology, Department of Physics, S. V. University, Tirupati	16 September 2017
4	Dr. Basudev Roy	Invited talk: Optical tweezers for determination of rotational motion in the mesoscopic scale	INST, Mohali	18 September 2017
5	Dr. R. Nirmala	Talk: Incomplete structural transition in $\text{Nd}_{0.15}\text{Ca}_{0.85}\text{MnO}_3$: a neutron diffraction study	Indian Institute of Technology Madras	20-22 November 2017
6	Dr. R. Nirmala	Visited the research group of Prof. A. K. Nigam for a collaborative project	DCMPMS, Tata Institute of Fundamental Research, Mumbai	25 December 2017-1 January 2018
7	Dr. Chandra Kant Mishra	Invited talk: On black holes, neutron stars and Physics Nobel; attended a workshop on Avenues in interface between astronomy and engineering	Model Engineering College, Kochi	4 June 2018-6 January 2018
8	Dr. M. S. Ramachandra Rao	Plenary talk: Functional materials and large-area PLD grown PZT-piezoelectric films for energy-related applications	Indo-US workshop, organised by PSG College of Technology, Coimbatore	12 January 2018

Sl. No.	Faculty Member	Title	Institution	Period
9	Dr. M. S. Ramachandra Rao	MRSI-Trichy chapter, Trichy; S.K. University, Ananthapur	Invited talk: Materials physics aspects and applications of functional materials and nanostructures; Keynote: Progress in materials physics: basics to technology, respectively	15 February 2018; 24 February 2018, respectively
10	Dr. Manu Jaiswal	Invited talk: Evolution and diversification in high dimensional phenotypic spaces and the optimality of evolution	Third Bangalore School on Population Genetics and Evolution March 2018, ICTS, Bengaluru	5-17 March 2018
11	Dr. Sivarama Krishnan	Invited talk: Ultrafast and many-body atomic physics workshop	IIT Tirupati	7 March 2018
12	P. Murugavel	iCOLD	IIT Madras	20-22 November 2017

Trainings

1	Dr. K. Sethupathi	The Department of Nuclear Physics, University of Madras	Summer Training Programme in Physics (STPIP-17) Magnetic Oxides for Cooling Applications	9 June 2017
2	J. Libby	XI SERC School on Experimental High-Energy Physics	NISER, Bhubaneswar	24-28 November 2017

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1	Dr. S. Ramaprabhu	Energy application of nanofluids	Manonmaniam Sundaranar University	2 March 2017
2	Dr. S. Ramaprabhu	Synthesis and energy application of carbon-based advanced functional materials	International Workshop on Advanced Functional Nanomaterials (IWAN 4)	22 March 2017
3	Dr. S. Ramaprabhu	Synthesis and characterisation of CNT and graphene---Energy-related and environmental applications of nanomaterials	Thiyagaraj College of Engineering	31 March 2017
4	Dr. R. Nirmala	Invited talk: Spin glass behavior in frustrated quantum spin system CuAl_2O_4 , Frustrated Magnetism conference	Institute of Mathematical Sciences, Chennai	10-12 April 2017
5	Dr. N. Harish Kumar	Delivered a special lecture: Fascinating World of Physics; INSPIRE Internship Camp	Government Degree College, Srikalahasti, Andhra Pradesh	27 June 2017
6	Dr. S. Ramaprabhu	Basics and energy applications of carbon-based nanomaterials	Hindustan Institute of Technology and Science	7 September 2017
7	Dr. K. Sethupathi	Guest lecture: Magnetic and magnetocaloric properties in rare earth doped nanocrystalline manganite	VIT, Vellore	8 September 2017
8	Dr. Somnath Chanda Roy	Gave a special lecture on nanotechnology	INST Mohali, Chandigarh	13 October 2017
9	Dr. Jim Libby	Invited lecture: Flavour Physics; Xith SERC School of Experimental High-Energy Physics	NISER, Bhubaneswar	23-27 November 2017
10	Dr. Jim Libby	Two invited talks: Flavour Physics: Circa 2025 and beyond; Study of the CKM angle ϕ_3 with Belle II, 7th Belle Analysis workshop	Malaviya NIT, Jaipur	28 November-1 December 2017
11	Dr. R. Nirmala	Poster: On the magnetism and magnetocaloric effect of electron-doped manganite $\text{Er}_{0.15}\text{Ca}_{0.85}\text{MnO}_3$; DAE Solid State Physics Symposium (DAE-SSPS 2017)	Bhabha Atomic Research Centre, Mumbai	26-30 December 2017

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
12	Dr. S. Ramaprabhu	Carbon nanomaterials for clean energy generation and storage	PSG Institute of Advanced Studies	11 January 2018
13	Dr. S. Ramaprabhu	Graphene and carbon nanotubes applications	International Conference on Composites Manufacturing Technologies and Applications	19 January 2018
14	Dr. Manu Jaiswal	Graphene-interfaced stable perovskite photoconductors – a story about confined water	IPS, CUSAT	1 March 2018
15	Dr. S. Ramaprabhu	Synthesis of carbon nanomaterials for renewable energy devices	Alagappa University, Karaikudi	2 March 2018
16	Dr. Ayan Mukhopadhyay	Special talk: A nonperturbative model of Quark-Gluon plasma	Institute of Mathematical Sciences, Chennai	15 March 2018
17	Dr. Jim Libby	Flavour physics (Tariqfest)	TIFR, Mumbai	17 March 2018
18	Dr. Jim Libby	Belle II: Flavour physics at the energy frontier	IIT, Guwahati	24 March 2018
19	P. Murugavel	Photovoltaic effect in ferroelectric oxides	SRM, University	16 February 2018

International Visits by Faculty Members

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
1	Dr. Jayeeta Bhattacharyya	France	22-26 May 2017	European Materials Research Society 2017 Spring Meeting; presented a paper	
2	Dr. Prabhat Ranjan Pujahari	Switzerland	25 May-25 June 2017	Visit CERN for CMS collaboration	
3	Dr. Suresh Govindarajan	USA	28 May-26 June 2017	Quantum Gravity and New Moonshines workshop	
4	Dr. Chandra Kant Mishra	Annecy, France	30 May-2 June 2017	Gravitational Wave Physics and Astronomy Workshop (GWPAW 2017); presented a paper	
5	Dr. Arul Lakshminarayan	Technische Universitat Dresden, Germany and Jagiellonian University in Krakow, Poland	2 June-21 July 2017	Visited collaborators and seminar	
6	Dr. A. Subrahmanyam	Montreal and York University	4-7 June and 8-11 June 2017	8th Functional Coating and Surface Engineering (FCSE-2017) Symposium	
7	Dr. Chandra Kant Mishra	IAP, Paris	4-8 June 2017	Scientific discussion with Prof. Guillaume Faye	
8	Dr. Sivarama Krishnan	Austria, Germany	6-9 June 2017	Quantum Fluid Clusters 2017	
9	Dr. Sivarama Krishnan	University of Innsbruck, Austria	7-9 June 2017	Invited to chair a session at Quantum Fluid Clusters 2017	
10	Dr. M. S. Ramachandra Rao	UK	15-18 June 2017	Editorial board meeting for Journal of Physics D: Applied Physics	
11	Dr. M. S. Ramachandra Rao	Munich, Germany	19-24 June 2017	Visited Walther-Meissner-Institute	
12	Dr. Sivarama Krishnan	University of Toulouse, Toulouse, France	25-30 June 2017	Invited talk: Dopant Dynamics in Superfluid Helium-4 Nanodroplets	
13	Dr. Somnath Chanda Roy	University of Alberta, Canada	1-30 July 2017	Faculty Training and Internationalization Travel Grant Awarded by Shastri Indo-Canadian Institute (SICI)	
14	Dr. Neelima M. Gupte	Corfu Holiday Palace, Corfu, Greece	10-14 July 2017	International Conference on Statistical Physics (SigmaPhi2017)	

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
15	Dr. Jim Libby	Switzerland	17-25 July 2017	Visited the University	
16	Dr. Jim Libby	University of Oxford, UK	17-25 July 2017	UKIERI project: From charm to beauty: toward a precise determination of the unitarity triangle angle gamma	
17	Dr. Prafulla Kumar Behera	Geneva, Switzerland	28 May-1 July and 3-31 July 2017	Research activities on CMS experiment	DST
18	Dr. Prafulla Kumar Behera	Geneva	7-17 September 2017	CMS collaboration meeting	CPDA
19	Dr. Prafulla Kumar Behera	Las Caridas, Asturias, Spain	10-15 September 2017	26th International Workshop on Vertex Detectors, Vertex 2017	
20	Dr. Yasir Iqbal	Freie Universitat, Berlin	18-22 September 2017	Discussion on ongoing and future research collaboration on the pseudo-fermion functional renormalization	
21	Dr. Yasir Iqbal	Max Planck Institute, Dresden	25-29 September 2017	International Workshop on Quantum Sensing with Quantum Correlated Systems	
22	Dr. A. Subrahmanyam	Amsterdam, Netherlands	27 September-3 October 2017	Annual Editors Meeting	
23	Dr. Yasir Iqbal	University of Wurzburg	2-6 October 2017	Research collaboration	
24	Dr. Yasir Iqbal	University of Wurzburg	9-13 October 2017	ERC Mini workshop	
25	Dr. S. Ramaprabhu	Las Vegas, USA	19-21 October 2017	Global Conference on Catalysis and Reaction Engineering (GCR 2017)	
26	Dr. M. S. Ramachandra Rao	Russia	25-28 October 2017	First meeting of BRICS Working Group on Materials Science and Nanotechnology	
27	Dr. S. Ramaprabhu	Deakin University, Australia	3-11 November 2017	Presented research activities, and to formulate a suitable joint project for Australia-India Strategic Research Fund (AISRF)	
28	Dr. S. Ramaprabhu	Australia	8 November 2017	Talk: Synthesis and energy applications of carbon based functional materials through strategic functionalization	
29	Dr. R. Nirmala	Westin Convention Centre, Pittsburgh, P.A., USA	6-10 November 2017	International Conference on Magnetism and Magnetic Materials (MMM 2017); Delivered talks: 1. Magnetocaloric effect in textured intermetallic compound ErNi (authored by Aparna Sankar, J. Arout Chelvane, A. V. Morozkin, A. K. Nigam S. Quezado, S. K. Malik and R. Nirmala); 2. Texture-induced anisotropy of the magnetocaloric effect in polycrystalline Dy ₅ Si ₃ Ge (authored by R. Nirmala, Y. Mudryk, D. Paudyal and V. K. Pecharsky)	CPDA
30	Dr. R. Nirmala	The Ames Laboratory, Iowa State University, Ames, IA, USA	10-18 November 2017	Talk: Crystal structure and magnetism of Dy ₅ Si ₃ Ge; MEP group meeting and for a collaborative project	

Sl. No.	Faculty Member	Country Visited	Date	Purpose of visit	Funding from
31	Dr. Yasir Iqbal	Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy	11-19 November 2017	International Conference on Frontiers in Two-Dimensional Quantum Systems	
32	Dr. Prafulla Kumar Behera	Switzerland	18 November-18 December 2017	CMS experiment work	DST
33	Dr. V. Subramanian	Singapore	19-22 November 2017	Progress in Electromagnetic Research Symposium 2017	
34	Dr. Yasir Iqbal	Institute of Theoretical Physics, University of Wurzburg, Germany	20-22 November 2017	ERC Mini workshop	
35	Dr. Yasir Iqbal	Germany	23 November 2017-4 January 2018	Research collaboration	
36	Dr. M. S. Ramachandra Rao	SIT, Tokyo, Japan	5-14 December 2017	Sakura Science Program and 10th International Workshop	
37	Dr. R. Nirmala	ISIS, Rutherford Appleton Laboratory, UK	11-15 December 2017	Carried out muon spin resonance experiments in ISIS-RAL	DST- nanomission
38	Dr. V. Subramanian	Universitat Koblenz Landau, Germany	8-20 January 2018	International Workshop on Mathematical Modeling of Complex Systems –Internationalization and Double Degree	
39	Dr. M. S. Ramachandra Rao	Shibaura Institute of Technology (SIT), Tokyo	11-12 December 2017	Invited talk: PASREG-2017 international conference; chaired a session	
40	Dr. Prafulla Kumar Behera	CERN, Geneva, Switzerland	20 February-18 March 2018	CMS experiment work	
41	Dr. Yasir Iqbal	California, USA	5-9 March 2018	American Physical Society (APS) March 2018 Meeting, Los Angeles	
42	Dr. K. Lakshmi Ganapathi (DST Inspire Fellow)	New Jersey Institute of Technology, USA	31 March-8 April 2018	International Conference on Material Research Society 2018 Conference	
43	Dr. M. S. Ramachandra Rao	Barcelona, Spain	23 March 2018	Editorial board meeting for Journal of Physics D: Applied Physics	

Honours and Awards Obtained by Faculty

Sl. No.	Faculty Member	Award	Awarded by	Awarded for	Date of award
Honours					
1	Dr. Ayan Mukhopadhyay	Visiting Professorship in TU Vienna	DKPI (Doctoral College on Particles and Interactions)	Four years	29 December 2017
2	Dr. L. Sriramkumar	The Secretary	The Indian Association for General Relativity and Gravitation (IAGRG)	Taken up the responsibility	15 March 2018
Awards					
1	Dr. Ayan Mukhopadhyay	Ramanujan Fellowship	DST	Five years	22 March 2017
2	Dr. G. Aravind	Young Faculty Recognition Award (YFRA) 2017			5 September 2017

Sl. No.	Faculty Member	Award	Awarded by	Awarded for	Date of award
3	Dr. Dillip Kumar Satapathy	YFRA 2017			5 September 2017
4	Dr. Dilip Kumar Satapathy	Young Scientist Award	The Academy of Sciences, Chennai		27 March 2018

Journal Editorial Boards

Sl. No.	Faculty Member	Position	Journal Name
1	Dr. Ramaprabhu S.	Editorial Advisory Board	Nano Digest (a bimonthly magazine)
2	Dr. M. S. Ramachandra Rao	Extended as Section Editor	INTERMAT section of Journal of Physics D: Applied Physics, an Institute of Physics Publishing (IOPP), UK journal
3	Dr. Manu Jaiswal	Guest Editor	Special issue on 2D materials: growth, characterisation, properties and devices, J. Phys. D: Applied Physics, 2017

4.16.4. Design and Development Activities

New facilities added or major equipment procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1	Low-temperature pyroelectric current measurement set-up using closed cycle cryostat	23

Patents awarded

Sl. No.	Faculty Member	Topic of patent
1	Prof. M. S. Ramachandra Rao, Prof. K. Sethupathi and Martando Rath	Process optimization for the growth of large area pulsed laser deposition (PLD) grown $\text{PbZr}_x\text{Ti}_{1-x}\text{O}_3$ (PZT) thin films for device applications
2	Dr. Ramaprabhu S.	Filed the invention, Graphene-based composite as solitary platform for sensing devices, 2017

4.16.5. Research and Consultancy

Sponsored research projects (ongoing and new)

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
1	Seeded femtosecond nanoplasmas for accelerated neutral atom beams applied to nanolithography	Three years	DST	49.78	Dr. S. Sivaramakrishnan
2	Scanning probe microscopy	One year	MCE	6	Dr. Sudakar Chandran
3	Macroscopic and microscopic description of black holes in String Theory	Three years	DST	25.53	Dr. Prasanta K. Tripathy
4	All oxide thin film solid state batteries with oxide-based super-ionic conductor and oxide (National Post Doctoral Fellowship)	Two years	DST	19.20	Dr. S. Ramaprabhu
5	Development of an imaging coupled optical tweezers platform for high-resolution probing of soft condensed matter systems	Two years	New Faculty Institution Grant	5	Dr. Basudev Roy
6	Scaling electronic dynamics in finite quantum systems from Angstrom to nanoscale	Three years	DST	43.67	Dr. S. Sivaramakrishnan

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
7	Attosecond dynamics of Angstrom and nanoscale systems	Three years	New Faculty Seed Grant	30	Dr. S. Sivaramakrishnan
8	Growth and characterizations of novel rare-earth-based half-Heusler phases RTX ($T=La$ and Lu ; $T=Ni$, Pd and Pt ; $X=Bi$ and Sb)–type topological insulators for electronic applications	Two years	DST	19.20	Dr. Panchanana Khuntia
9	From charm to beauty: towards a precision measurement of the CKM angle γ – UKIERI	Three years	UGC	17.22	Dr. Jim Libby
10	Construction of an electron-impact based anion source photo detachment experiments	Two years	CSIR	9	Dr. Aravind G.
11	Development of graphene-based composite materials for solar energy applications (under Women Scientist Scheme)	Three years	DST	30.70	Dr. Beauty Pandey and Dr. Somnath Chanda Roy
12	Exotic quantum phases of matter	Two years	New Faculty Initiation Grant (IC&SR)	5	Dr. Yasir Iqbal
13	Classical structures from primordial quantum fluctuations: inflationary vs bouncing scenarios	Two years	DST	19.20	Dr. L. Sriramkumar and Dr. Krishnamohan Parattu (PDF)
14	Photovoltaic effect in oxygen vacancy-controlled $Bi_{1-x}A_xFeO_{3-\delta}$ ($A=Ca^{2+}, K^+, Cs^+$) perovskite: polarization modulated and nanoparticulate sensitized solar cells	Three years	DST-SERB	45.28	Dr. Sudakar Chandra
15	Design and development of hydrogen storage device with Mg-based alloy NPs decorated frustule–nitrogen doped graphene composites	Two years	DRDO	66.10	Dr. S. Ramaprabhu and Dr. Manu Jaiswal
16	Lithium-ion battery cycling for chemistry-controlled magnetic switching in manganite spinels	Two years	DST	19.20	Dr. P. N. Santhosh and Dr. Neenu Lekshmi P. (SERB – National Postdoctoral Fellowship Scheme)
17	Surface dominated electronic transport in lateral and vertical two-dimensional layered topological insulator heterostructures – Ramanujan Fellowship	Five years	SERB, GoI	89	Dr. Pramoda Kumar Nayak
18	Development and characterization of 3D graphene foam as a thermal insulator for space applications	Two years	ISRO	25.988	Dr. Manu Jaiswal, Dr. T. Remyamol (ISRO) and Dr. Ajith M. R. (ISRO)
19	Development of sensors for the detection of explosive gases	Three years	DRDO	84	Dr. Somnath Chanda Roy and Dr. B. Ranjit Kumar Nanda
20	TiO ₂ –Graphene nanocomposites for solar energy applications	Three years	DST – under Women Scientist scheme through mentoring mode	30	Dr. Somnath Chanda Roy and Dr. B. Ranjit Kumar Nanda
21	Development of micro-nano zinc oxide based functional devices	2007-2019	DST–under Indo-Japan Cooperative Science Programme	5.53	Dr. Nilesh J. Vasa (ED), Dr. Ramanujam Sarathi (ELE) and Dr. M. S. Ramachandra Rao

Sl. No.	Title	Period	Funding Agency	Amount (Rs. in lakh)	Co-ordinators
22	Immobilization of calnuc protein on ZnO nanostructured film for biosensor applications	Three years	Ministry of Science and Technology (Department of Biotechnology)	45.96	Dr. Santhosh P. N., Dr. Murugavel P. and Dr. A Gopala Krishna
23	Theoretical Physics, String Theory	Two years	New Faculty Initiation Grant (IC&SR)	5	Dr. Ayan Mukhopadhyay
24	Condensed matter physics experimental, transport physics at reduced dimensions, two-dimensional layered materials and their heterostructures, CMOS device physics, non-volatile flash memory materials and devices	Two years	New Faculty Initiation Grant (IC&SR)	5	Dr. Abhishek Misra
25	Handheld low-cost field-deployable remote micro-spectrometer	One year	IC&SR Research Fund	10	Dr. Sivarama Krishnan
26	Tunable band gap ferroelectric oxides for next generation photovoltaic	One year	EPR – ISCR	4.50	Dr. Murugavel P.
27	Flexible and high performance perovskite based solar cells on graphene electrodes	Four years	DST INT	42.70	Dr. Manu Jaiswal
28	Nitrogen doped partially exfoliated multi walled carbon nanotubes-PtRu nanoparticle hybrids as high performance anode for direct methanol fuel cells	Two years	DST Nanomission	38.40	Dr. S. Ramaprabhu
29	High-sensitivity piezo-resistive array of sensors based on flexible graphene-metal-polymer based composite layers	Three years	Ministry of Defence (DST) and Tata Sons	464.58	Dr. S. Ramaprabhu
30	Tracking structural and magnetic transitions in electron-doped manganite oxides by powder neutron diffraction	Three years	UGC-DAE-CSR Mumbai	4.45	Dr. R. Nirmala and Dr. P. N. Santhosh
31	R&D efforts by University Groups for INO projects	Five years	DST	321	Dr. Prafulla Behera, Dr. Anil Prabhakar, Dr. Shanthi Pavan, Dr. Nitin Candrachoodan, Dr. Nagendra Krishnapura, Dr. James Libby and Dr. Aniruddhan
32	Compact Muon Solenoid (CMS) upgrade operation and utilization	Three years	DST	307	Dr. Prafulla Kumar Behera and Dr. James Libby
33	Effective harnessing of light-matter interaction in disordered photonic media	Three years	DST	67	Dr. C. Vijayan and Dr. Sivaramakrishnan
34	Fabrication of organic ferroelectric thin films for eco-friendly devices applications	Two years	CSIR	17	P. Murugavel (PI)
35	Enhanced ferroelectric and magnetoelectric effect in GdMnO ₃ by rare earth substitution	Two years	DST-SERB	39.93	P. Murugavel (PI)

Distinguished Visitors to the Department

Sl.No.	Name and Designation	Date of visit	Purpose of visit
1	Abhishek Kumar (IIT Kanpur)	6 April 2017	Invited seminar talk: Energy spectra and fluxes of buoyancy-driven turbulent flows
2	Prof. Sriramkumar L.	6 April 2017	Invited seminar talk: Did the universe bang or bounce?
3	Dr. Madhuparna Karmakar	23 May 2017	Imbalanced Fermi Superfluids
4	Dr. R. Kumaran	23 May 2017	Development of metamaterial-based tunable and flexible EMI shielding structures using magnetic nanoparticles/mesoporous carbon embedded polybenzoxazine polymer composite
5	Prof. John Chalker (University of Oxford)	5 April 2017	Brahmagupta Physics Colloquium (in-house colloquium) on Frustrated Magnets and Spin Liquids
6	Prof. Hilda Cerdeira (IFT-ICTP (SAIFR), Sao Paulo, Brazil)	29 June 2017	Seminar talk: Collective cohesive motion of chaotic attractors: Applications to a flock of starlings
7	Dr. Sumathi Rao (HRI Allahabad)	19 July 2017	Seminar talk: Non-abelian states of matter
8	Dr. Jagat Lamsal (University of Missouri at Columbia, Missouri, USA)	27 July 2017	Seminar talk: Phase competition and superconductivity in electron-doped BaFe_2As_2 and unusual magnetic order in hole-doped BaMn_2As_2
9	Dr. B. Prasanna Venkatesh (Institute of Quantum Optics and Quantum Information of the Austrian Academy of Sciences, and Institute for Theoretical Physics, University of Innsbruck, Innsbruck, Austria)	9 August 2017	Seminar talk: Quantum work fluctuation theorems and cycle dependence of work in a quantum heat engine
10	Dr. Durga Misra (Electrical and Computer Engineering Department, New Jersey Institute of Technology, Newark, USA)	16 August 2017	Seminar talk: Dielectric-semiconductor interface with high-k gate dielectrics
11	Dr. Mithun Choudhury (Chemical and Biological Engineering, Princeton University, USA)	18 August 2017	Seminar talk: Tuning properties of nanoconfined polymers
12	Dr. Niruj R. Mohan (NCRA, TIFR, Pune)	1 September 2017	Seminar talk: Radio astronomy: a window into the invisible
13	Dr. Vidya Praveen Bhallamudi (Ohio State University)	6 September 2017	Seminar talk: Spin-relaxation based broadband optically detected magnetic resonance spectroscopy using nitrogen-vacancy centers in diamonds
14	Dr. Darshan Kakkad (European Southern Observatory, Garching, Germany)	12 September 2017	Seminar talk: Observational insights into black hole feedback at high-redshift
15	Dr. Tripta Bhatia (Max Planck Institute of Colloids and Interfaces, Potsdam, Germany)	15 September 2017	Seminar talk: Biophysics of the lipid-protein membrane
16	Dr. Jayant V. Narlikar	26 September 2017	Visited the department and met faculty
17	Dr. Rajeev Paramel Pattathil (Head of the Gemini laser facility - one of the most powerful laser facilities in the world at the Rutherford Appleton Laboratory, UK)	9 August 2017	Brahmagupta Colloquium: Talk on Reaching light-speed in a centimeter
18	Prof. Anjan Gupta (IIT Kanpur, Experimental Condensed Matter Physicist)	27 September 2017	Talk on Evolution of electronic inhomogeneities in graphene with carrier density: role of screening and interface-defects' charge-state
19	Dr. Kanaka Raju Pandiri, J. R. McDonald Lab (Kansas State University)	10 October 2017	Seminar talk: Shining light on femtosecond molecular dynamics
20	Dr. K. G. Arun (Chennai Mathematical Institute)	24 October 2017	Seminar talk: Multimessenger observation of a binary neutron star merger
21	Ying Hao Chu (National Chiao Tung University, National Chiao Tung University and Industrial Technology Research Institute Taiwan)	25 October 2017	Seminar talk: van der Waals Oxide Heteroepitaxy

Sl.No.	Name and Designation	Date of visit	Purpose of visit
22	Dr. Nathan Jurik (University of Oxford)	27 October 2017	Seminar on Pentaquarks at LHCb
23	Dr. Marie-Helen Deiville (Universite Bordeaux, France)	27 October 2017	Seminar on Multimodal metal oxide nanoparticles and their interactions in biology: the two faces of the medal
24	Dr. Upendra N. Singh (NASA Technical Fellow Sensors/Instrumentation)	31 October 2017	Seminar talk: NASA sensors and instrumentation for space-based remote sensing applications
25	Dr. Vaibhav Prabhudesai, Reader, (Department of Nuclear and Atomic Physics, TIFR, Mumbai)	1 November 2017	Seminar talk: Symmetry breaking by quantum coherence in single electron attachment
26	Dr. Dishant Pancholi (IMSc, Chennai)	2 November 2017	Seminar talk: Gromov's non-squeezing theorem and its applications to Hamiltonian flows
27	Dr. Hardlee Joseph	3 November 2017	Seminar talk: Scanning microwave microscopy: a novel tool for nanoscale microwave imaging/ characterization
28	Prof. Siddartha Sen (Trinity College, Dublin, Ireland)	6 November 2017	Seminar talk: Mesoscopic structure formation
29	Dr. Tapasi Ghosh (Federal University of Goias, Brazil)	10 November 2017	Seminar talk: Measuring neutrino oscillation parameters by Long-Baseline Neutrino Experiments at Fermilab and its future
30	Dr. Dishant Pancholi (IMSc, Chennai)	16 November 2017	Seminar talk: Gromov's non-squeezing theorem and its applications to Hamiltonian flows
31	Prof. Venkat Chandrasekhar (Department of Physics and Astronomy, Northwestern University)	23 November 2017	Seminar talk: Superconductivity, magnetism, anisotropy and memory – the remarkable properties of the conducting gas at the (111) LaAlO ₃ /SrTiO ₃ interface
32	Prof. Abhijit Sen, Chandrasekhar Chair (Institute for Plasma Research, Gandhinagar)	4 October 2017	Brahmagupta Colloquium: Talk on The quest for Starfire on earth: where are we today?
33	Prof. Guy Wilkinson (University of Oxford)	25 October 2017	Brahmagupta Colloquium: Talk on Probing for new physics at the flavour frontier
34	Prof. Rudolk Gross, Walther-Meissner	23 November 2017	Brahmagupta Colloquium: Talk on Superconducting quantum circuits: science meets technology
35	Dr. Amit Kumar Pal	11 December 2017	Seminar talk: Entanglement under noisy environments: From quantum computation to quantum many-body physics
36	Dr. Arun Kannawadi (Leiden Observatory, Netherlands)	12 December 2017	Seminar talk: Probing dark energy with gravitational lensing
37	Dr Hari Srikanth (University of South Florida, USA)	14 December 2017	Seminar talk: Functional magnetic oxides for biomedical applications and spin caloritronics
38	Dr. Rohit P. Prasankumar (Los Alamos National Laboratory (LANL), New Mexico, USA)	15 December 2017	Seminar talk: Using novel ultrafast optical techniques to directly probe complex quantum materials
39	Prof Leo Kempel (Dean of the Michigan State University College of Engineering)	9 January 2018	Visit to the department and meeting with head and faculty
40	Prof B Shankar (University Distinguished Professor, Associate Chair, Department of Computational Maths, Science and Engineering, Department of Electrical and Computer Engg Department of Physics and Astronomy)	9 January 2018	Visit to the department and meeting with head and faculty
41	Prof. Dr. Stefan Fritzsche (Helmholtz-Institut Jena, Jena, Germany, Theoretisch-Physikalisches Institut, Universitaet Jena, Germany)	12 January 2018	Seminar talk: Excitation and ionization of atoms by twisted light
42	Dr. Swagata Mukherjee, Post-doctoral Research Fellow (RWTH Aachen University, Aachen, Germany)	12 January 2018	Seminar talk: Search for exotic new physics in CMS
43	Prof. Ganapathy Murthy (University of Kentucky)	16 January 2018	Seminar talk: Quantum Hall ferromagnetism in $\nu=0$ bilayer graphene

Sl.No.	Name and Designation	Date of visit	Purpose of visit
44	A delegation consisting of 12 members, including the President of UCA, Prof. Jean-Marc Gambaudo and other programme directors, Cote d'Azur, France	18 January 2018	Discussed potential synergies along the lines of the EUR (Ecoles Universitaires de Recherche) programmes
45	Prof. Mark Birkinshaw (School of Physics, University of Bristol, Bristol, UK)	22 January 2018	Seminar talk: Ancient light: the microwave background radiation and cosmology
46	Prof. Krishna Rajagopal (MIT)	23 January 2018	Seminar talk: Current theoretical understanding of Quark-Gluon Plasma
47	Dr. Somnath Choudhury (CHEP, IISc)	24 January 2018	Seminar talk: The large hadron collider and the CMS experiment at CERN
48	Prof. Arnab Sen (IACS, Kolkata)	17 January 2018	Brahmagupta Colloquium: Talk on Disorder as a probe for spin liquids
49	Prof. Urbasi Sinha (RRI)	24 January 2018	Brahmagupta Colloquium: Talk on fascinating world of photons, superposition and entanglement
50	Dr. Santhosh Kumar Das (University of Lanzhou, China)	7 February 2018	Seminar talk: Heavy quark dynamics in QCD matter
51	Dr. Michael Urban (IPN Orsay, France)	8 February 2018	Seminar talk: S-wave pairing in neutron matter beyond BCS
52	Dr. Robert D. Shull (NIST, US)	9 February 2018	Seminar talk: Measuring Magnetism
53	Dr. Sreraman Muralidharan (Army Research Labs, USA)	13 February 2018	Seminar talk: Architectures for quantum repeaters
54	Dr. S. Dutta Gupta (University of Hyderabad)	15 February 2018	Seminar talk: Applications of avoided crossing in optics: Slow light to transverse spin
55	Prof. Riccardo Mazzarello (Institute for Theoretical Solid State Physics and JARA, RWTH Aachen, Germany)	17 February 2018	Seminar talk: Ab initio simulations of crystallisation of phase-change materials
56	Dr. Anbarasu (Indian Institute of Technology, Indore)	21 February 2018	Seminar talk: Ultrafast electrical switching dynamics of phase change memory devices: a pathway towards enabling universal memory
57	Prof. Roderich Moessner (Max Planck Institute for the Physics of Complex Systems, Dresden, Germany)	22 February 2018	Seminar talk: Thermodynamics and order beyond equilibrium—from Floquet thermalisation to time crystals
58	Prof. Narendra B. Dahotre (University of North Texas, USA)	23 February 2018	Seminar talk: Laser materials processing: fundamentals and applications
59	Dr. Ravi Pant (IISER-TVM)	23 February 2018	Seminar talk: Coherent interactions between Brillouin pathways: controlled wideband excitation of fano resonance and induced transparency
60	Prof. Guillaume Faye (IAP, Paris)	25 February 2018	Visited the Physics Department
61	Dr. Hui Khoon Ng (Yale-NUS College)	27 February 2018	Seminar talk: Reliable maximum likelihood reconstruction for quantum tomography
62	Dr. Subhendu Kahaly (Scientist, Extreme Light Infrastructure, Hungary)	16 March 2018	Seminar talk: Probing the fastest
63	Prof. U. van Kolck (Centre National de la Recherche Scientifique, Paris and University of Arizona)	19 March 2018	Seminar talk: Time reversal in light of light nuclei
64	Dr. Shin-Da Lee, Dr. Mei-Chin Yin, Dr. Charles C. N Wang and Dr. Rung-Sheng Chen (a delegation from Asia University, Taiwan)	20 March 2018	Visited Physics Department and interacted with HoD and faculties
65	Prof. Shiv Sethi (Raman Research Institute, Bengaluru)	22 March 2018	Seminar talk: Cosmological observables and the nature of dark matter
66	Prof. G. Baskaran (IMSc and Perimeter Institute, Waterloo, Canada)	7 February 2018	Brahmagupta Colloquium: Talk on Carbon: From simplicity to quantum complexity
67	Prof. Avinash Deshpande (Raman Research Institute, Bengaluru)	28 February 2018	Brahmagupta Colloquium: Talk on Fascinating life-stories of cosmic lighthouses
68	Prof. Rajesh Gopakumar (ICTS, Bengaluru)	7 March 2018	Brahmagupta Colloquium: Talk on Down To Earth String Theory

Sl.No.	Name and Designation	Date of visit	Purpose of visit
69	Prof. Chandra Kant Mishra (Indian Institute of Technology, Madras)	14 March 2018	Brahmagupta Colloquium (in-house colloquium): Talk on From listening to black-hole collisions to discovering cosmic gold mines
70	Prof. Ubirajaravan Van Kolck (CNRS, Paris and University of Arizona)	21 March 2018	Brahmagupta Colloquium: Talk on The discrete charm of scale invariance in nuclear and atomic physics

4.16.7. Other Activities of the Department/Centre

Faculty visit

Sl.No.	Faculty Member	Purpose of Visit	Date and Venue
1	Dr. M. S. Ramachandra Rao	Viva Voce Examination	29-30 May 2017, School of Sciences, IIT Bhubaneswar
2	Dr. Chandra Kant Mishra	ICTS-TIFR, Bengaluru	27 June-9 July 2017, Visited ICTS-TIFR
3	Dr. M. S. Ramachandra Rao	Ph.D. Viva Voce examination	13 July 2017, IIT Bhubaneswar; 14 July 2017, IIT Kharagpur; 18 July 2017, IIT Indore
4	Dr. M.S. Ramachandra Rao	Science Day, Invited talk: Fascinating and simple science that paves the way for useful technology	8 September 2017, Department of Physics, Madras Christian College (MCC), Chennai
5	Dr. M.S. Ramachandra Rao	Conducted Ph.D. Viva Voce examination	19 August 2017, CUSAT, Kochi
6	Dr. K. Sethupathi	Conducted comprehensive viva voce of the Ph. D. student	8 September 2017, VIT, Vellore
7	Dr. Somnath Chanda Roy	Ph.D. Viva at the Department of Physics	1 November 2017, IIT Kharagpur
8	Dr. Manu Jaiswal and Dr. N. Harish Kumar	Secondary-level exposure visit organised by Rashtriya Madhyamik Siksha Abhiyan (RMSA)	22 November 2017

Student Visit

Sl.No.	Name	Purpose	Date and Venue
1	Dhruba Das (PH15D027)	National Symposium on Nano-Science and Technology, Centre for Nano Science and Engineering	2-4 July 2017, IISc, Bengaluru
2	Mamta (PH15D200)	Refresher course on Measurement of non-electrical parameters—temperature, pressure and force	12-14 July 2017, CEC, IIT Madras

Activities Initiated

- IIT Madras recently joined the LIGO Scientific Collaboration (LSC) as one of the participating institutes, under the leadership of Dr. Chandra Kant Mishra.
- Manuscript of photovoltaic and photo-capacitance film by Dr. P. Murugavel was selected by Editorial Liang-Sheng Liad and highlighted on the journal homepage.
- Dr. N. Harish Kumar along with Dr. C. Vijayan, Dr. Mahaveer Kumar Jain, Dr. P. Murugavel, Dr. Sudhakar Chandran, Dr. B. Ranjit Kumar Nanda and Dr. Shantanu Mukherjee served as judges in the school-level science exhibition, Brahma-17, held at Ramakrishna Science Centre, T. Nagar, Chennai.
- Media coverage report on press release: IIT Madras Physics Department to host dedicated silicon detector R&D and application centre to help CERN.
- Invention on minimising the wear and tear and damages caused to machine components, headed by Dr. S. Ramprabhu. Alternative Energy and Nanotechnology Laboratory, IIT Madras led the team of research scholars in the three years of long research.
- Dr. Chandra Kant Mishra, LIGO-Virgo and its EM partners have detected gravitational and electromagnetic radiation from the merger of two neutron stars. The discovery paper and other related papers are available at <http://ligo.org>.

Major infrastructure development made in the department

Director, IIT Madras, Prof. Bhaskar Ramamurthi inaugurated Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching Hall (HSB 210) built with financial support from TLC on 19 October 2017 at 2 p.m. The class room has been named as S.N. Bose Hall.

5

Sophisticated Analytical Instrument Facility

5.1. Introduction

The Sophisticated Analytical Instrument Facility (SAIF) was established with financial support from the Department of Science and Technology, Government of India. The facility provides sophisticated instruments and equipment to students, scientists, researchers and faculty members from IIT Madras as well as academia, educational institutions, national laboratories, R&D establishments and industries all over India, particularly south India. The primary purpose is to enable the scientific community to collect data and carry out analysis using extremely sophisticated analytical equipment for advanced research at very nominal rates.

SAIF also undertakes, on request, servicing of sophisticated analytical instruments at other institutions and provides training in the operation and maintenance of such equipment. Periodically, SAIF conducts workshops, seminars and conferences to disseminate information on new trends in sophisticated instrumentation and methods in addition to providing training and hands-on experience. Students from educational institutions, colleges and schools visit SAIF regularly to gain exposure to the use of sophisticated instruments for analysis.

5.2. Faculty and their Activities

Faculty

Name and Qualifications	Major Areas of Specialisation
Professor	
Prof. S.S. Bhattacharya, Ph.D. (Head)	Nanocrystalline materials–synthesis and characterisation, superplasticity–theoretical and experimental, metal forming
Adjunct Professor	
Prof. S. Subramanian, Ph.D.	Nuclear magnetic resonance spectroscopy, electron spin resonance spectroscopy
Technical Staff	
C. Baby, Ph.D.	Nuclear magnetic resonance spectroscopy, fluorimetry
K.V. Rama, Ph.D.	Analytical chemistry, ICP-OES, thermal and elemental analyses
K.P. Paranjothi, Ph.D.	Mass spectroscopy, electronics and instrumentation
Sudhadevi Antharjanam, Ph.D.	Single crystal x-ray diffractometry, optical spectroscopy
N. Sivaramakrishnan, M.S.	VSM, scanning electron microscopy, electron spin resonance
G.R. Kamalnab, IEEE	Electronics and instrumentation
N.K. Gopinath, M.Sc., M.Phil.	TG-DSC/DSC
P. Thirupathi, IEEE	Electronics and instrumentation, UV-VIS-NIR/fluorescence/lifetime/electron spin resonance
A. Varalakshmi, M.Sc	VSM
P. V. Narayanan, M.Sc	

Short-term courses/workshops/seminars/symposia/conferences Organised by Faculty Members

Sl. No.	Coordinator(s)	Title	Period
Workshops			
1.	Dr. P. K. Sudhadevi	Single crystal X-ray data collection and structure solution	10-13 August 2017
2.	Dr. P. K. Sudhadevi	Theory and application of single crystal X-ray diffraction	8-10 November 2017
3.	Dr. C. Baby and Prof. S. Subramanian	Nuclear magnetic resonance spectroscopy	5-7 March 2018

Special Lectures Delivered by the Faculty in Other Institutions

Sl. No.	Faculty Member	Topic of Lecture	Institution	Date
1	N. Sivaramakrishnan	Technical aspects of instrumentation on ESR/VSM towards measurements	NIT Trichy	5 May 2017
2	Dr. C. Baby	Recent trends in analytical techniques in NMR	Anna University	27 September 2017
3	Dr. K. V. Rama	Recent trends in analytical techniques in ICP OES	Anna University	27 September 2017
4	Dr. C. Baby	Homocuclear two-dimensional NMR spectroscopy and its applications	SRIBS, Kottayam	28-29 October 2017
5	Dr. P. K. Sudhadevi	Structure solution and refinement of single crystal X-ray diffraction data	SAIF, IIT Patna	21-23 March 2018

Visits abroad by staff Members

Sl. No.	Staff member	Country Visited	Date	Purpose of visit	Funding from
1.	Dr. C. Baby	Switzerland	19-23 March 2018	Advanced NMR system operation	Bruker
2.	P. Thirupathi	Switzerland	19-23 March 2018	Advanced NMR system operation	Bruker

5.3. Design and Development Activities

New facilities added or major equipment procured

Sl. No.	Name of Equipment	Value (Rs. in lakh)
1	UV - VIS NIR spectrometer	28.80

5.4. Other Activities of the Department/Centre

Major infrastructure development made in the Department

A UV-Vis-nIR spectrometer was procured by the SAIF and has been made operational. This is now being used, at a nominal charge, by students and research scholars from IIT Madras as well as academic institutions all over the country. In addition, the facility is available for Government R&D institutions and industries against payment.

6

Centres of Special Facilities

6.1. Centre for Continuing Education

6.1.1. Introduction

The Centre for Continuing Education (CCE) was established in June 1986. The centre supports faculty members in meeting the following objectives of Indian Institute of Technology Madras:

- Providing knowledge-based technological services to satisfy the needs of society and industry
- Helping build national capabilities in science, technology, humanities, management, education and research
- Effectively participating and contributing to the institute's commitment of providing a broad base of learning opportunities through the following major activities:
 - a) Conducting academic programmes (M.Tech. and Ph.D.) under the Quality Improvement Programme (QIP) (sponsored by the AICTE)
 - b) Conducting short-term courses (STCs) under QIP (sponsored by the AICTE)
 - c) Writing books under the Book Writing Scheme
 - d) Conducting Continuing Education Programmes (CEPs) for industry professionals
 - e) Developing and conducting User-Oriented Programmes (UOPs) for specific industries through which their engineers acquire higher degrees (M.Tech.)

- f) Developing and conducting web-enabled M.Tech programmes for industries
- g) Conducting courses under National Programme on Technology-Enhanced Learning (NPTEL)
- h) Recording important activities through the facilities in the Central Photographic Section
- i) Conducting conferences/seminars/workshops/symposia
- j) Allotment of ISBN numbers for textbooks and other publications of faculty members
- k) Conducting online short-term CEPs for industries
- l) Conducting courses under Global Initiative of Academic Networks (GIAN)
- m) Conducting courses under IIT PAL

QIP

The faculty development activities under AICTE that are funded by the Ministry of Human Resource Development (MHRD) are geared to ensure quality, relevance, excellence and equity in technical education by supporting activities under the QIP scheme. Deputation to the academic programmes (M.Tech. and Ph.D.) of the institute facilitates the career development of faculty members of AICTE-approved technical institutions in the country. From the inception of the programme to 2017–2018, 540 faculty members from other institutions have obtained Ph.D. degrees and 610 faculty members have obtained M.Tech. degrees:

Period	Ph.D.			M.Tech		
	Admitted	No. on Roll	Awarded	Admitted	No. on Roll	Awarded
2017–2018	8	46	9	3	8	4
Since inception	663	—	540	643	—	610

Short-Term Training Programmes under QIP (AICTE-STC)

Organisation of short-term courses under QIP for faculty members of engineering institutions is supported by the AICTE, and these courses open avenues in which the institute's faculty members with rich experience in new and upcoming areas can share their expertise with others.

Under this programme, 19 courses (with a total duration of 19 weeks) were conducted during 2017–2018 and a total of 521 teachers of engineering institutions participated. From 1970–1971 to 2017–2018, 403 programmes have been conducted, benefiting 9,871 teachers from various engineering colleges. The details of the courses conducted in 2017–2018 are given below:

List of Short-Term Course under QIP (AICTE-STC-2017-18)

S. No.	Coordinators	Department	Title Project No	Date	Participants
1.	Abdus Samad and Jitendra Sangwai	Ocean Engineering	Advances in Petroleum Production Engineering CCE/QIP/01/AS&JS/OE/17-18	29 January-3 February 2018	27
2.	Ch. Srinivasa Rao Y. V. S. S. Sanyasiraju	Mathematics	Nonlinear Partial Differential Equations: Theory and Numerics CCE/QIP/02/ CHSR&YVSSS/OE/17-18	22-27 January 2018	35
3.	M. Thenmozhi	Management Studies	Workshop on Business Groups and Governance in Emerging Markets CCE/ QIP/03/MT/MS/17-18	17-22 July 2017	31
4.	Tiju Thomas	Metallurgical and Materials Engineering	Materials Chemistry: Solids, Nanomaterials, and Semiconductors CCE/ QIP/04/TT/MME/17-18	29 October-5 November 2017	17
5.	R. Sarathi	Electrical Engineering	Recent Trends in Condition Monitoring of Power Apparatus and Systems CCE/QIP/05/ RS/EE/17-18	19-24 February 2018	27
6.	G. Rajesh and A. Sameen	Aerospace Engineering	Special Topics in Fluid Dynamics CCE/ QIP/06/GR&AS/AE/17-18	9 October 2017 to 14 October 2018	26
7.	Priyanka Shukla and R. Usha	Mathematics	Introduction to Hydrodynamic Stability CCE/QIP/07/PS&RU/MA/17-18	26-31 March 2018	11
8.	K. Rajagopal and D. N. Arnepalli	Civil Engineering	Geosynthetics as Modern Civil Engineering Construction Materials CCE/QIP/08/ KR&DNA/CE/17-18	5-19 February 2018	39
9.	Rajesh Kumar	Humanities and Social Sciences	Language Structure and Variation Insights from Theoretical and Applied Perspectives CCE/QIP/09/RK/HSS/17-18	3-8 October 2018-8 October 2017	26
10.	J. Murali Krishnan and Parag Ravindran	Electrical Engineering and Mechanical Engineering	Rheology of Bituminous Binders CCE/ QIP/11/JMK&PR/CE&ME/17-18	26-31 March 2018	34
11.	R. Usha and S. H. Kulkarni	Mathematics	Numerical Linear Algebra CCE/QIP/12/ RU&SHK/MA/17-18	19-24 March 2018	15
12.	R. Vinu and Rajnish Kumar	Civil Engineering	Thermochemical Conversion of Biomass for Energy and Fuels CCE/QIP/13/RV&RK/ CH/17-18	12-17 February 2018	27
13.	Anjan Chakravorty and Deleep R. Nair	Electrical Engineering	MOSFETs and Beyond CCE/QIP/14/ AC&DRN/EE/17-18	10-15 July 2017	31
14.	T. Renganathan and Ethayaraja Mani	Civil Engineering	Development of Chemical Engineering Thermodynamics Laboratory for Undergraduates CCE/QIP/16/TR&EM/ CH/17-18	22-27 January 2018	22
15.	Ashis Kumar Sen and Pallab Sinha Mahapatra	Mechanical Engineering	Microfluidics-based Healthcare Diagnostics and Interfacial Phenomena CCE/QIP/17/ AKS&PSM/ME/17-18	6-11 November 2017	27
16.	Arul Jayachandran and Lakshmi Priya	Civil Engineering	Stability Design of Steel Building CCE/ QIP/18/AJ&LP/CE/17-18	6-11 November 2017	34
17.	Sivasrinivasu Devadula, G. L. Samuel and N. Ramesh Babu	Mechanical Engineering	Ultra High Precision Machine Tools-Design and Characterization CCE/QIP/19/SD&GLS/ ME/17-18	5-10 March 2018	33
18.	Ratna Kumar Annabatula and Sundararajan Natarajan	Mechanical Engineering	Finite Element Method for Engineers from All Disciplines CCE/QIP/20/NRB&RKA/ ME/17-18	26 March 2018-1 April 2018	29
19.	P.V. Manivannan	Mechanical Engineering	Embedded Controller, Real time Operating System and Wireless Sensor Network in Automation CCE/QIP/21/PVM/ME/17-18	19-24 March 2018	30
Total Number of Participants					521

6.1.2. Continuing Education Programmes (CEPs)

Several short-term courses (STCs) were organised for professionals from industry and R&D establishments on a need basis. The programmes are tailor-made to suit the requirements of industries. The CEPs are divided in two

categories: Internal CEPs and External CEPs. From 1980 to 2018, a total of 1,604 STCs have been conducted, benefitting 2,89,761 participants. Generally, 80 to 90 such programmes are organised every year. During 2017–2018, 70 STCs were conducted and 59,791 participants attended the programmes.

List of Internal CEPs 2017-2018

Sl. No.	Department/s	Coordinator/s	Title of the Proceedings	Duration	Number of Participants
1	Computer Science Engineering	Dr. Rupesh Nasre	Programming Applications in Python	1-16 June 2017	34
2	Metallurgical and Materials Engineering and Biotechnology	T. S. Sampath Kumar and Prof. Mukesh Doble	Workshop on Medical Biomaterials	23-24 June 2017	40
3	Biotechnology	Prof. Sathyanarayana Gummadi and Prof. Mukesh Doble	9 th Summer Works on Bioprocess Engineering Lectures and Laboratory 2017	3-7 July 2017	33
4	Management Studies	Prof. T. J. Kamalanabhan and Prof. M. Thenmozhi	Executive Development Programme	13-19 May 2017	17
5	Management Studies	Prof. T. J. Kamalanabhan and Prof. M. Thenmozhi	Executive Programme in Business Administration	August 2017 to July 2019	27
6	Management Studies	Dr. Saji Mathew and Prof. G. Arun Kumar	India Immersion programme, Victoria University Wellington, New Zealand	27 May 2017	25
7	Management Studies	Prof. R. P. Sundarraj	Business Solutions Using R-based Analytics	23-24 May 2017	25
8	Management Studies	Prof. R. P. Sundarraj	Thriving in a Digital Economy	19 June-11 July 2017	40
9	Management Studies	Prof. R. P. Sundarraj	Business Solutions Using R-based Analytics	30-31 May 2017	25
10	Ocean Engineering	Dr. Abdus Samad and Dr. Jitendra Sangwai	Advances in Oil and Gas Production Engineering	29 January-3 February 2018	18
11	Central Electronics Centre (CEC)	Dr. V. Jagadeesh Kumar and Dr. K. Sulochana	Measurement and Calibration concept on Non-electrical Parameters: Temperature, Pressure, Load and Force	28-30 June 2017	12
12	Engineering Design	Dr. Venkatesh Balasubramanian	Anand Manufacturing Excellence	15 June-31 March 2017	10
13	Civil Engineering	Dr. Shiva Nagendra	Two days' Refresher Course on Operation, Maintenance and Calibration of Instruments for Monitoring Air Pollution and Air Quality	6-7 July 2017	50
14	Central workshop and Applied Mechanics, Dean, Students, and Mechanical Engineering	Dr. G. Balaganesan, Prof. M. S. Sivakumar and Prof. N. Ramesh Babu	Essential Skills for Enhancing Employability of Engineering students	1 August-30 September 2017	9
15	Management Studies	Prof. M. Thenmozhi	Workshop on Business Groups and Governance in Emerging Markets	17-22 July 2017	16
16	Management Studies	Prof. R. P. Sundarraj	Business Solutions with R-- Part 1 and Part 2	26 July-3 August 2017	25

Sl. No.	Department/s	Coordinator/s	Title of the Proceedings	Duration	Number of Participants
17	Civil Engineering	Prof. Koshy Varghese	Lean Construction	31 July-4 August 2017	40
18	Metallurgical and Materials Engineering	Dr. V. Subramanya Sarma	Advanced High Strength Steels for Automotive Applications	28 October 2017	18
19	Management Studies	Dr. Rupashree Baral and Prof. T. J. Kamalanabhan	DISHA-IOCL Dealer Training Program	23-24 August 2017	36
20	Management Studies	Prof. T. J. Kamalanabhan and Prof. M. Thenmozhi	Supervisory Development Programme	17-22 September 2017	24
21	Management Studies	Dr. Rupashree Baral and Prof. T. J. Kamalanabhan	DISHA-IOCL Dealer Training Programme	25-26 September 2017	35
22	SAIF	Dr. P. K. Sudhadevi	National Workshop on Theory and Applications of Single Crystal X-Ray Diffraction	8-10 November 2017	39
23	Management Studies	Dr. Rupashree Baral and Prof. T. J. Kamalanabhan	DISHA-IOCL Dealer Training Programme	27-28 November 2017	22
24	Electrical Engineering and Computer Science Engineering	Dr. Kaushik Mitra and Dr. C. Chandra Sekhar	Two-day Course on Machine Learning	13-14 November 2017	33
25	Management Studies	Dr. Richa Agrawal	Theory Construction for Model Specification	22-26 November 2017	16
26	Management Studies	Dr. Rupashree Baral and Prof. T. J. Kamalanabhan	Talent Management and Career Progression Programme for CPCL Executives	20-24 November 2017	20
27	Mechanical Engineering	Dr. C. Sujatha	Practical Vehicle Dynamics Training	20-21 November 2017	19
28	Physics	Prof. M. V Satyanarayana and Dr. C. V. Krishnamuthy	Workshop on Physics Education and Research	18-23 December 2017	30
29	Management Studies	Dr. C. Rajendran	Six Sigma Belt	10-30 November 2017	14
30	Management Studies	Prof. T. J. Kamalanabhan and Prof. Thenmozhi	Project Leadership and Managerial Development Programme	4-9 December 2017	31
31	Electrical Engineering	Prof. K. Shanti Swarup	Power System Operation and Energy Management	5-9 February 2018	21
32	Centre for Social Innovation and Entrepreneurship	Prof. R. Nagarajan, Dean (I&AR)	Winter School on Social Entrepreneurship	3-12 January 2018	30
33	Management Studies	Dr. Usha Mohan	Descriptive, Inferential and Forecasting Analytics	2-5 January 2018	27
34	Management Studies	Dr. Rupashree Baral and Prof. T. J. Kamalanabhan	Talent Management and Career Progression Programme for CPCL Executives	29 January-2 February 2018	20
35	Civil Engineering	Dr. Arul Jayachandran	Workshop on the Revised Wind Load Code IS 875 Part 3 (2015)	4 February 2018	118
36	Civil Engineering	Prof. Koshy Varghese	GCRF-Problem Discovery Workshop	7 March 2018	40
37	Civil Engineering	Prof. J. Murali Krishnan	Bituminous Material Characterization	15-17 February 2018	35
38	Ocean Engineering	Prof. S. Nallayarasu	Conducting Recruitment Process	24 February 2018	194
39	Civil Engineering	Prof. Manu Santhanam	ALDEP for SPCL Engineers	12-16 February 2018	7

Sl. No.	Department/s	Coordinator/s	Title of the Proceedings	Duration	Number of Participants
40	Management studies	Dr. Rupashree Baral and Prof. T. J. Kamalanabhan	DISHA-IOCL Dealer Training Programme	19-20 February 2018	40
41	Mechanical Engineering	Dr. S. Soundarapandian	CEP on Next Generation 3D Printing	22-23 February	91
42	Electrical Engineering	Prof. R. Sarathi	Recent trends in Condition Monitoring of Power Apparatus and Systems	19-24 February 2018	4
43	Management Studies	Dr. Rupashree Baral and Prof. T. J. Kamalanabhan	DISHA-IOCL Dealer Training Programme	19-20 March 2018	30
44	Management Studies	Dr. Richa Agrawal	Workshop on Theory Development for Model specification	4-8 April 2018	11
Total					1,451

List of External CEPs 2017-18

Sl. No.	Department/s	Coordinator/s	Title of the Proceedings	Duration	Number of Participants
1	CCE-NPTEL	Prof. Andrew Thangaraj	From Online Course Website	January-April 2017	21998
2	Mechanical Engineering	Prof. P. Chandramouli	Vibration Fundamentals and Applications to Refrigeration Compressors	31 May-2 June 2017	20
3	Engineering Design	Dr. Venkatesh Balasubramanian	Anand Manufacturing Excellence	15 June-31 March 2018	10
4	Centre for Social Innovation and Entrepreneurship	Prof. R. Nagarajan, Dean (I&AR)	Product Design and Business Model	27 June-29 July 2017	20
5	Chemical Engineering	Prof. R. Rengaswamy and Prof. S. Narasimhan	Advanced Data Analytics	1 August-1 November 2017	15
6	O/o Dean, Students	Prof. Lt. Col. Jayakumar, Joint Registrar	Life Skills' Workshop: Table Manners	5, 6, 12, 13 August 2017	117
7	O/o Dean, Students	Prof. Lt. Col. Jayakumar, Joint Registrar	Outbound training	12-13 August 2017	117
8	o/o Dean, Students	Prof. Lt. Col. Jayakumar, Joint Registrar	Life Skills: Workshop, Youth Development	5-6 August 2017	117
9	Mechanical Engineering	Prof. B.V.S.S.S. Prasad	Computer-based Tests for Inland Waterways Authority	1 May-25 July 2017	55
10	Civil Engineering	Dr. Ashwin Mahalingam	Mentoring and Augmenting Planning Skills 8.1	8-11 August 2017	20
11	Ocean Engineering	Prof. P. Krishnankutty and Prof. V. Anantha Subramanian	Short-Term Lab Course on Experimental Hydrodynamics	1 October-1 November 2017	60
12	NPTEL	Prof. Andrew Thangaraj	IITM-NPTEL Online Certification Exam	1 July-31 October 2017	43641
13	Management Studies	Dr. Lata Dyaram	Empowering Middle Level Managers Programme	5 October 17	30
14	Centre for Social Innovation and Entrepreneurship	Prof. R. Nagarajan, Dean (I&AR)	Winter School on Social Entrepreneurship	2 August-12 October 2017	20
15	Computer Science Engineering	Prof. D. Janakiram	Android Internals	11-13 October 2017	15
16	NPTEL	Prof. Andrew Thangaraj	IITM-NPTEL Online Certification Exam	1 July-31 October 2017	26583
17	Metallurgical and Materials Engineering	Prof. K. C. Hari Kumar	Computational Thermodynamics using Thermo-Calc Software	October-December 2017	20

Sl. No.	Department/s	Coordinator/s	Title of the Proceedings	Duration	Number of Participants
18	Metallurgical and Materials Engineering	Prof. K. C. Hari Kumar	Diffusion Simulations using Dictra Module of Thermo-Calc Software	January-March 2018	20
19	Engineering Design	Dr. Palaniappan Ramu	Surrogate-enabled Optimization	18-21 December 2017	
20	Civil Engineering	Dr. Ashwin Mahalingam	Mentoring and Augmenting Planning Skills 8.1	9-12 October 2017	20
21	Civil Engineering	Dr. Ashwin Mahalingam	Mentoring and Augmenting Planning Skills 8.1	12-15 December 2017	20
22	Electrical Engineering	Dr. N. Lakshminarasamma	Digital Controller Course for Power Application	19-20 December 2017	25
23	O/o Dean, Students	Lt. Col. Jayakumar	Annual Meeting	16-19 January 2018	25
24	Electrical Engineering	Dr. Qadeer Ahmad Khan	Power Management Integrated Circuits	9-10 February 2018	40
25	O/o Dean, Students	Lt. Col. Jayakumar	Outbound training (life skills)	17-18 February 2018	120
26	Mechanical Engineering	Prof. Raghu Prakash	Training: Aero-Gas Turbine Design	5 February-31 March 2018	40
Total					93,168

6.1.3. User-Oriented Programs (UOPs)

UOPs are designed to suit the requirements of industrial organisations. Two-year M.Tech. programmes are being

organised to meet the specific needs of the associated industries. So far, 20 programmes have been conducted or are being conducted by the Departments of Civil Engineering, Ocean Engineering, Mechanical Engineering, Engineering Design and Management Studies.

List of User Oriented Programs (UOPs)

Sl. No.	Department/s	Coordinator/s	Title of the Proceedings	Project No
1	Civil Engineering	Dr. K. Ramamurthy and Prof. Koshy Varghese	Construction Technology and Management (CT&M)	CCE/CEP/UoP/19A/KR&KV/CE/16-17
2	Civil Engineering	Dr. K. Ramamurthy and Dr. Koshy Varghese	UoP M. Tech (Construction Technology and Management) - 20th Batch	CCE/CEP/UoP/20/KR & KV/17-19
3	Ocean Engineering	Dr. Nallayarasu and Prof. S. K. Bhattacharyya	M. Tech Offshore Technology	CCE/CEP/UoP/12/OE/SN-SKB/11-12
4	Management Studies	Prof. G. Srinivasan and Dr. Rahul Marathe	VLM Project	CCE/CPE/UoP/18/VLM/15-16
5	Civil Engineering	Dr. R. G. Robinson	PG Diploma Programme on Metro Rail Technology and Management	CCE/CEP/UoP/21/RGR/CE/17-18

6.1.4. Web-Enabled M.Tech Programmes for Industries

IIT Madras has been actively interacting with leading industries through R&D, consultancy projects and continuing educational programmes. Several projects have been undertaken towards development of products and processes. Based on the approval and guidelines of the Senate and the needs of industries, IIT Madras has come up with M. Tech programmes in the web with adequate opportunity for student and teacher interaction. Post-class interaction is facilitated by an effective course management platform. Candidates need to take approved core and elective courses of their choice and can complete the entire M.

Tech programme at their own pace. On completion of each course, a certificate is awarded; on finishing the required credits in different categories, the candidate becomes eligible for a master's degree. The candidate may also do a set of laboratory experiments and projects as defined by the curriculum. Seven programmes (listed below) jointly worked out with industries by the concerned departments have been approved by the Senate. The web-enabled M. Tech (Automotive Technology) course was started in May 2017. Five automotive industries have sponsored 29 students for this course in the first year. This was followed by two other courses offered by the Department of Electrical Engineering, namely M. Tech (VLSI) with 27 students and M. Tech (Communication Systems Engineering) with 49 students.

List of Web-Enabled M.Tech. Programs for Industries

S.No	Department	Title
1.	Aerospace Engineering	Mathematical Methods for Aerospace Engineers
2.	Aerospace Engineering	Aero Dynamics and Aircraft Performance
3.	Computer Science and Engineering	M. Tech in Computer Science and Engineering with specialisation in Information Security
4.	Electrical Engineering	Master's in Communications Systems Engineering
5.	Electrical Engineering	Master's in VLSI
6.	Mechanical Engineering	Automotive Technology
7.	Metallurgical and Materials Engineering	Industrial Metallurgy

6.1.5. Global Initiative of Academic Networks (GIAN)

Government of India approved Global Initiative of Academic Networks (GIAN) in Higher Education to tap the talent pool of scientists and entrepreneurs internationally to encourage their engagement with the institutes of higher education in

India to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate scientific and technological capacity to global excellence. Under this scheme, 24 courses as listed below were conducted along with accomplished researchers and technologists from all over the world between 1 April 2017 and 31 March 2018. The status of proposals for GIAN courses from IIT Madras as on 31 March 2018 is indicated in the following table:

List of Global Initiative of Academic Networks

S. No.	Department	Host Faculty	International Faculty	GIAN Course Title	Duration	Number of Participants
1	Mechanical Engineering	Dr. N. Ramesh Babu	Dr. Satish T.S. Bukkapatnam, Texas A&M University, Texas	Data Science for Smart Manufacturing	15-26 May 2017	27
2	Mechanical Engineering	Prof. Sourav Rakshit	Dr. Sudhakar Pamarti, University of California, Los Angeles, USA	Robot Motion Planning	31 July- 4 August 2017	40
3	Mathematics	Prof. Arya Kumar Bedabrata Chand	PD Dr. Peter Massopust, Technische Universitat Munchen, Germany	Fractal Geometry: Foundations to Frontiers	14-31 August 2017	39
4	Mechanical Engineering	Dr. V. Raghavan (ME)	Prof. Malcolm Lawes, University of Leeds, United Kingdom	Combustion in Engines	4-11 September 2017	22
5	Mechanical Engineering	Dr. M. P. Maiya (ME)	Prof. Armin Hafner, Norwegian University of Science and Technology, Norway	Refrigeration Technology with Natural Working Fluids, Specialisation on R744 (CO ₂)	9-13 October 2017	25
6	Applied Mechanics	Dr. Shaikh Faruque Ali (AM)	Prof. Sondipon Adhikari, Swansea University, United Kingdom	Analysis and Design of Piezoelectric Vibration Energy Harvesters	30 October-3 November 2017	33
7	Metallurgical and Materials Engineering	Dr. G.D. Janaki Ram	Prof. Leijun Li, University of Alberta, Canada	Welding Metallurgy and Weldability of Steels and Stainless Steels	11-15 December 2017	103
8	Metallurgical and Materials Engineering	Dr. G.D. Janaki Ram	Prof. Sudarsanam Suresh Babu, University of Tennessee, Knoxville, United States of America	Welding Metallurgy and Weldability of Non-Ferrous Alloys	11-15 December 2017	113
9	Mechanical Engineering	Prof. Raghu V. Prakash	Prof. Ashok Saxena, Provost and Vice Chancellor for Academic Affairs, University of Arkansas Fayetteville, AR 72701, United States of America	Nonlinear Fracture Mechanics and Applications Structural Integrity Assessment	11-16 December 2017	24

S. No.	Department	Host Faculty	International Faculty	GIAN Course Title	Duration	Number of Participants
10	Mathematics	Prof. Arya Kumar Bedabrata Chand	Prof. David Levin, Tel-Aviv University, Israel	From Subdivision to Wavelets and Fractals	4-11 December 2017	53
11	Mechanical Engineering	Dr. Parag Ravindran Dr. Ratna Kumar Annabatula	Prof. Amit Acharya, Carnegie Mellon University, United States of America	Continuum Mechanics of Dislocations Leading to Plasticity	18-29 December 2017	30
12	Computer Science and Engineering	Prof. Madhu Mutyam	Prof. Vijaykrishnan Narayanan, The Penn State University, USA	Emerging Computational Devices, Architectures and Computational Models	11-15 December 2017	23
13	Electrical Engineering	Dr. Amitava DasGupta	Prof. Dimitrios Peroulis, Purdue University, United States of America	Coupling-Matrix Design of Advanced RF/Microwave Filters	11-16 December 2017	30
14	Mathematics	R. Usha	Prof. Matthew Juniper, University of Cambridge, United Kingdom	Instability Methods in Hydrodynamics	18-22 December 2017	61
15	Mathematics	Prof. K. C. Sivakumar	Michael John Tsatsomeros, Washington State University, United States of America	Matrices with Positive Principal Minors: Theory and Applications	18-22 December 2017	28
16	Civil Engineering	Dr. A Veeraraghavan	Prof. Serji Amirkhanian, University of Alabama	Pavement Preservation and Environmental Impact Assessment of Recycled Materials in Pavement Management	4-9 December 2017	44
17	Aerospace Engineering	Dr. G Rajesh	Prof. Gabi Ben-Dor, Ben-Gurion University of the Negev, Beer Sheva, Israel	Shockwave Reflection Phenomena	1-12 January 2018	25
18	Electrical Engineering	Dr. Pradeep Kiran Sarvepalli	Prof. David Poulin, Universite de Sherbrooke, Canada	Quantum Error Correction and its Relations to Statistical Physics	22-26 January 2018	34
19	Mathematics	Prof. R. Radha	Hans G Feichtinger, University of Vienna, Austria	Mathematical Foundations of Signal Analysis (A Fresh Look at Harmonic Analysis)	8-20 January 2018	27
20	Mathematics	Dr. N. Narayanan	Dr. Reza Naseras, Institut de Recherche en Informatique Fondamentale, France	Minors and Homomorphism: Correlation	20 January-2 February 2018	22
21	Chemical Engineering	Dr. Niket S. Kaisare	Prof. Jay H. Lee, Korea Advanced Institute of Science and Technology (KAIST), South Korea	Model Predictive Control: Theory and Applications	29 January-2 February 2018	23
22	Mechanical Engineering	Prof. Raghu V. Prakash	Prof. Monica Bordegoni, Politecnico di Milano, Italy	Innovative Digital Tools Enabled Product Design	5-9 February 2018	22
23	Mathematics	Prof. S. Sundar	Agnieszka Wylomanska, Chair of Applied Mathematics, Poland	Advanced Mathematical Methods for Real Data Analysis: From Partial Differential Equations approach to Time Series Modelling	5-17 March 2018	38
24	Civil Engineering	Prof. Balaji Narasimhan	Prof. V Chandrasekar, Colorado State University, United States of America	Weather Radar and Hydrology	5-17 March 2018	25

6.1.6. Conferences

IIT Madras has instructed faculty members (vide circular No. F.R.150/3/2011 dated 31 March 2011) to register

all national and international conferences, workshops, seminars, symposiums and others organised by them with the CCE. The following programmes were registered with the centre in 2017–2018:

List of Conferences registered during 2017-18

S. No	Organising Chairman, Department	Organising Secretary, Department	Title	Duration	Number of Participants
1	Dr. Arun K. Tangirala, Chemical Engineering	Prof. M. Chidambaram, Chemical Engineering	National Symposium on Trends in Process Control	21 April 2017	50
2	Dr. Abdus Samad, Ocean Engineering	Dr. Nilanjan Saha, Ocean Engineering	International Workshop on Indo-Korean Joint Workshop on Wave and Thermal Energy Conversion	22-23 February 2018	28
3	Prof. S.P. Dhanavel, Humanities and Social Sciences	Dr. Parag Ravindran, Mechanical Engineering	National Workshop on Self-Awareness and Higher Goals in Education 2017	29 May-2 June 2017	100
4	Prof. V. Kamakoti, Computer Sciences and Engineering		National Workshop on SANJOG 2017	5-7 June 2017	50
5	Prof. Krishna Vasudevan, Electrical Engineering	Dr. Arun Karuppaswamy, Electrical Engineering	International Conference on Power Electronics, Drives and Energy Systems 2018 (PEDES 2018)	18-21 December 2017	550
6	Dr. P. Anbarasan, Chemistry	Dr. Md. Mahiuddin Baidya, Chemistry	International Conference on Emerging Medicinal Chemistry Approaches against Neuropsychiatric and Neurodegenerative Diseases	27-28 November 2017	202
7	Prof. R. Sundaravadivelu, Ocean Engineering		National Workshop on Pre-conference Workshop on Modernization of Ports	16-17 February 2017	
8	Prof. R. Sarathi, Electrical Engineering		National Workshop on High-Voltage Engineering-Adaptability to Smart Grid	10 July 2017	39
9	Dr. Beeraiiah Baire, Chemistry	Dr. P. Venkata Krishnan, Chemistry	Institutional Symposium on CiHS-2017	17 August 2017	300
10	Dr. Mahalakshmi M. Ravi Institute Hospital	Dr. Renella, Institute Hospital	National Conference on Bridge 2017	1-2 July 2017	250
11	Prof. A. Ramesh, Mechanical Engineering		National Workshop on Stakeholder Consultation Workshop for Transport Sector	7 July 2017	65
12	Dr. M. Michael Gromiha, Biotechnology		International Symposium on 4 th IIT Madras–Tokyo Tech joint symposium on Frontiers in Bioinformatics: Large-scale Data Analysis, Resources and Drug Design	10-11 November 2017	165
13	Prof. M. S. Ramachandra Rao, Physics		International Conference on iCOLD (International Conference on Laser Deposition)	20-22 November 2017	200
14	Prof. V. Kamakoti, Computer Science and Engineering		Regional Workshop on Advance Cyber Forensic	3-5 July 2017	50
15	Prof. S.A. Sannasi Raj, Ocean Engineering	Prof. V. Sundar, Ocean Engineering	International Workshop on INAMEREW2: Indo-Australian Marine Renewable Energy Workshop	17-18 February 2018	50

S. No	Organising Chairman, Department	Organising Secretary, Department	Title	Duration	Number of Participants
16	Prof. C. Vijayan, Physics	Prof. N. Harish Kumar, Physics	Regional Conference on Annual Convention of IAPT (Indian Association of Physics Teachers) Convener	22-23 September 2017	200
17	Dr. V. Sriram Ocean, Engineering	Prof. K. Murali, Ocean Engineering	International Workshop on Recent Advances in Wave-Structure Interactions	18 February 2018	40
18	Dr. Shweta Agrawal, Computer Science and Engineering		International Conference on Theory of Cryptography Conference	5-8 August 2018	130
19	Dr. Mathangi Krishnamurthy, Humanities and Social Sciences	Dr. Akshay M. Patil, Humanities and Social Science	National Conference on Subjugated Knowledge's	2-4 February 2018	300
20	Prof. Asokan Thondiyath, Engineering Design	Prof. B Ravindran, Computer Science Engineering	International Conference on 4th International Conference on Advances in Robotics	2-6 July 2019	
21	Dr. S. Mohan, Civil Engineering		International Workshop on Wastewater and Flood Management Modelling for Chennai City	6-8 December 2017	58
22	Prof. R. Sarathi, Electrical Engineering	Prof. M. Mahesh Kumar, Electrical Engineering	National Conference on Second National Power Engineering Research Scholars Conference	24-25 February 2018	75
23	Dr. Sathyan Subbiah, Mechanical Engineering		5th Diamond Turning Workshop	10-11 November 2017	35
24	Prof. M. S. R. Rao, Physics	Dr. Jayeeta Bhattacharyya, Physics	Physics In-House Symposium 2017	3-4 November 2017	200
25	Prof. Guhan Jayaraman, Biotechnology		Bio Incubator Workshop	30 November-2 December 2017	10
26	Prof. Venkatesh Balasubramanian, Engineering Design		National Health Mission – TN	9-10 November 2017	300
27	Dr. Rajesh Nair, Ocean Engineering		Petroleum Modeling	4 December 2017	
28	Prof. V. Sundar, Ocean Engineering	Prof. S. A. Sannasiraj, Prof. K. Murali, Ocean Engineering	Workshop on Coastal Management information System (WCMIS - 2018)	24 January 2018	30
29	Prof. R. Gnanamoorthy, Mechanical Engineering	Prof. M. Kamaraj, Metallurgical Materials Engineering	Indo-Japan Bilateral Symposium on the Futuristic Materials and Manufacturing	16-17 July 2018	100
30	Prof. V. Kamakoti, Computer Science and Engineering		Secure Systems Engineering	5-14 December 2017	50
31	Prof. V. Kamakoti, Computer Science and Engineering		FinAL – Training	13-16 December 2017	15
32	Prof. R. P. Sundarraj, Management Studies		Design Science Research in Information Systems and Technology (DESRIST 2018)	3-6 June 2018	100
33	Prof. Koshy Varghese, Civil Engineering	Dr. Sivakumar Palaniappan, Civil Engineering	IGLC 2018	16-22 July 2018	200

S. No	Organising Chairman, Department	Organising Secretary, Department	Title	Duration	Number of Participants
34	Dr. Himanshu Sinha, Biotechnology	Dr. Karthik Raman, Biotechnology	1 st IBSE International Symposium-From Genotype to Phenotype: Computational Approaches to Understand Biological Systems	21-24 January 2018	
35	Prof. M. T. Nair, Mathematics	Prof. Y. V. S. S. Sanyasiraju, Mathematics	National Symposium on Mathematics and Applications	22 December 2017	32
36	Dr. Balaji Narasimhan, Civil Engineering	Dr. Soumendra Kuiry, Civil Engineering	Flood Hazard Mapping for Dam Emergency Action Plans	18-23 September 2017	30
37	Prof. S. S. Bhattacharya, SAIF	Dr. C. Baby, Dr. S. Subramanian, SAIF	National Workshop on Nuclear Magnetic Resonance (NMR) Spectroscopy	5-7 March 2018	30
38	Dr. S. M. Shiva Nagendra, Civil Engineering		3 rd Indian International Conference on air Quality Management (IICAQM 2018)	6-7 December 2018	150
39	Dr. Prafulla Kumar Behera, Physics	Dr. Sivasrinivasu Devadul, Mechanical Engineering	23 rd DAE-BRNS High Energy Physics Symposium 2018	10-14 December 2018	320
40	Prof. M. S. Ramachandra Rao, Physics		Photovoltaic: Fundamentals, Device characterization, Simulation and Emerging Concepts	10 March 2018	80
41	Prof. V. Kamakoti Computer Science and Engineering		RISC V International Workshop	18-19 July 2018	100
42	Prof. K. C. Sivakumar, Mathematics		Analysis and its Applications	18-22 June 2018	55
43	Prof. S. A. Sannasiraj, Ocean Engineering	Prof. P. Krishnakutty, Dr. R. Vijayakumar, Dr. Suresh Rajendran, Ocean Engineering	International Conference on Computational and Experimental Marine Hydrodynamics	26-27 November 2018	100
44	Dr. Ratana Kumar Annabattulam, Mechanical Engineering	Dr. Narsimhan Swaminathan, Mechanical Engineering	International Workshop on Mechanics of Energy Materials	19-21 November 2018	50
45	Dr. Prafulla Kumar Behera, Physics	Dr. Sivasrinivasu Devadula, Mechanical Engineering	The 27th International Workshop on Vertex Detectors	22 -26 October 2018	80

6.1.7. IIT-Professor Assisted Learning

IIT-PAL is an MHRD initiative where lectures have to be recorded by IIT professors based on the CBSE syllabus of Physics, Mathematics and Chemistry. The national coordinator from IIT Delhi is responsible for managing the fund transfer from the MHRD and its allocation to the participating institutions. Channel coordinators and subject coordinators (each for Biology, Chemistry, Mathematics and Physics) are also from IIT Delhi. Subject coordinators assign lectures on various topics to institute coordinators (one from each participating institute) who in turn identify the faculty willing to offer and record lectures. Ten lectures in Physics were recorded and review have been completed.

6.1.8. NPTEL: A Joint Initiative of the IITs and IISc, Funded by MHRD

NPTEL, implemented using information and communication technology (ICT), is India's largest technical dissemination programme involving seven IITs (Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and IISc, Bengaluru. Together, several web and video-based material for science and engineering courses have been developed. IIT Madras is the coordinating institute of this project. The tables below indicate the details of the courses conducted under this programme till March 2018.

Courses completed (discipline-wise—Video and Web) under NPTEL

Discipline	Video (Completed)	Web (Completed)	Grand Total (Completed till April 2018)
Aerospace Engineering	31	17	48
Atmospheric Science	3	1	4
Basic Courses (Semester 1 and 2)	14	17	31
Biotechnology	35	16	51
Chemical Engineering	59	35	94
Chemistry and Biochemistry	38	17	55
Civil Engineering	79	61	140
Computer Science and Engineering	107	32	139
Electrical Engineering	70	24	94
Electronics and Communication Engineering	83	27	110
Engineering Design	3	8	11
Environmental Science	0	3	3
General	11	0	11
Humanities and Social Sciences	88	25	113
Management	57	13	70
Mathematics	63	25	88
Mechanical Engineering	135	67	202
Metallurgy and Material Science	38	13	51
Mining Engineering	1	1	2
Nanotechnology	2	3	5
Ocean Engineering	25	1	26
Physics	36	16	52
Textile Engineering	2	14	16
Architecture	4	0	4
Automobile Engineering	0	0	0
Agriculture	7	1	8
Multidisciplinary	0	0	0
Total	991	437	1428

Number of courses (video and web) completed by each institute

Institute	Video	Web	Grand Total (till April 2018)
IISc Bangalore	66	39	105
IIT Bombay	75	46	121
IIT Delhi	47	38	85
IIT Guwahati	37	81	118
IIT Kanpur	205	79	284
IIT Kharagpur	238	48	286
IIT Madras	244	76	320
IIT Roorkee	73	30	103
IIT Ropar	1	0	1
IEST Shibpur	1	0	1
IISER Pune	1	0	1
IIT Patna	2	0	2
IIITB	1	0	1
Total	991	437	1428

NPTEL courses are used extensively by faculty members and students across the world to further their knowledge on various subjects in different disciplines. The learning material is supplemented with references and recommended reading material and contains self-assessment quizzes for students. The courses developed for NPTEL can be viewed at <http://nptel.ac.in> and on YouTube (as a separate channel, at <http://www.youtube.com/iit>).

Transcripts and MP3 versions of video lectures (as of April 2018)

Edited transcripts (in the form of PDF files), audio extracts of video lectures (in the MP3 format) and subtitled text (in the form of srt files) are all hosted at the ICT home page, the URL of which is <http://textofvideo.nptel.iitm.ac.in>. These may be downloaded by users free of charge.

All NPTEL video lectures are transcribed and edited so that students can access the content in a video lecture as textual material. The process of verifying the text transcripts is going on. The same text is also used for subtitling the video lectures. The audio of a video lecture is extracted as an MP3 file, which is small in size compared with the corresponding video lecture. This file, coupled with the text transcript, serves as a good educational resource. So far, more than **34,298** lectures have been transcribed through a manual transcription process, and more than **32,893** videos are available with subtitles in English. The availability of complete text material for technology courses will enable the lectures to be subtitled in Hindi and other regional languages. This will help non-native English speakers and students in rural colleges throughout India learn the concept through a partial or complete translation of the spoken content in their first language.

Translation of Text Transcripts to Local Languages

Translation of text transcripts of 11 basic NPTEL courses are being carried out in eight languages viz., Hindi, Tamil, Malayalam, Telugu, Kannada, Gujarati, Bengali and Marathi. Once verified by language experts, subtitles of these language transcripts will also be made available.

Statistics of NPTEL Usage

The web-based NPTEL content is registered with Google Analytics, and the statistics provided by Google are being used to study the effectiveness of this programme. The data that have been collected to date show that the number of visitors to NPTEL has steadily increased over the years and that the NPTEL content is being used extensively by students, faculty members and working professionals.

NPTEL videos are also hosted on YouTube at <http://youtube.com/iit>. Statistics gathered from YouTube show that NPTEL is the educational channel most subscribed to (in YouTube).

NPTEL Online Courses

Online learning has been going through a major revitalisation in the last few years with major worldwide players such as Coursera (www.coursera.org) and edX (www.edx.org) offering free education to anyone who is interested. These courses have been named Massive Open Online Courses (MOOCs) and are quite popular today. NPTEL has recently embarked on a project of offering online courses through its new portal (<https://onlinecourses.nptel.ac.in/>). The portal is powered by Google India. This new effort has been termed NPTEL Online Certification, or NOC in short.

The MOOCs are essentially an asynchronous platform and a process for teaching using pre-recorded lectures, resource video materials, lecture notes, assignments and quizzes, which are usually online and provide self-assessment at regular intervals during learning. The learning happens in a fixed time duration, and, therefore, the simultaneous participation of teachers and many students may be termed synchronous. This learning is, thus, similar to that which takes place in a classroom although it is enabled

by the Internet and the size of the class is much larger. The extended classrooms on the Internet facilitate the development of new methodologies and are well suited to the current mobile–Twitter–Facebook–YouTube generation of students. When offered through supplementary DVDs and mobile-delivered content, considering students in non-urban and rural areas, they enable quality and equitable access to a much larger population of students and can lead to a significant rise in the Gross Enrolment Ratio.

NPTEL Online Certification

The objective of ‘enabling students obtain certificates for courses’ is to make students employable in industry or pursue a suitable higher education programme. Four-week, eight-week and twelve-week online courses, typically on topics relevant to students (typically in their final years of higher education), basic core courses in sciences and humanities, and relevant exposure to tools and technologies are being offered through an online portal. Enrollment in these courses and the learning process involve no cost. At the end of each online course, an in-person, proctored certification exam is conducted, and a certificate is provided through participating institutions and industry, when applicable. To date, about 740 courses have been offered under NPTEL online certification.

Methodology

The following are the features of a typical online course:

1. Clear assumptions about prerequisites
2. Clear learning outcomes
3. Duration of four weeks (10 hours), eight weeks (20 hours) and twelve weeks (30-40 hours)
4. Two to four hours of lectures every week
5. The lectures are broken up into short modules.
6. Each module has a clear description of its contents and expected learning outcomes.
7. Objective/subjective/programming assessments every week as decided by the faculty member
8. A discussion forum where students can raise questions and get their doubts answered
9. An announcements section in which announcements are posted
10. A progress page where a student can view his or her scores and an analytics page for the course instructor that provides an overview of a student’s performance and interest in the course

The content of online courses will be peer reviewed to assess if it meets all the requirements.

Certification process

NPTEL began the initiative of offering certification for courses in March 2014. The process of certification is as follows:

1. Subject Matter Experts (SMEs, faculty members of IITs or partner institutes, with input from industry) create new content in the MOOCs format or use course content that has already been created for NPTEL and offer the entire course for certification or slice up the content and use parts of it to make a 20-hour course.
2. The course is uploaded on the portal and opened for enrollment, which is free.
3. Every week, about 2–3 hours of video content is released, along with an assignment based on this, which is evaluated and provides the student with a score.
4. Teaching Assistants (TAs) and faculty members support the discussion forum, answering questions and clearing doubts.
5. Registration for the online proctored certification exam is opened (which is optional), in collaboration with an exam partner, and nominal fees of Rs.1100 per course is charged.
6. The certification exam is conducted on pre-announced dates (preferably Saturdays/Sundays) after the course has been run, giving the student flexibility in terms of the date of the exam.
7. Certificates (hard copies, e-verifiable on a website) are issued. The scores on the certificates are combinations of scores for assignments and final scores. These certificates are issued by the CCEs of IITs (in partnership with industry bodies, if applicable).
8. Now certificates are being used by select universities for transfers, for making the student more employable or for enhancing her or his growth in the current place of work.

From March 2014 to date, the details of the courses are:

- 15 exam runs; 514 courses completed
- Ongoing courses: 226 for January-April 2018
- Upcoming courses: 269 for July-December 2018

Certification completed

Number of Courses	Exam period	Course Run	Enrolled	Registered	Certified
226	1 April	January-April 2018	934156	87038	
94	1 October	July-October 2017	459274	26725	23957
65	17 September	July-September 2017	581064	43702	39433
66	17 April	January-April 2017	314042	23419	19341
64	17 March	January-March 2017	219899	23598	19064
31	16 October	July-October 2016	144769	8250	6832
73	16 September	July-September 2016	245124	23176	19988
35	16 April	January-April 2016	90925	4265	3574
29	16 March	January-March 2016	150766	13080	11736
18	15 November	July-November 2015	38037	1722	1398
18	15 September	July-September 2015	122782	5562	4629
27	15 July	May-June 2015	26408	2425	1848
15	15 May	Feb-May 2015	31684	1659	853
12	15 March	Jan-Mar 2015	78924	2262	1856
2	14 November	Sep- November 2014	58947	1653	1549
1	14 July	March-August 2014	53807	1380	1182

Tentative list for upcoming July-December 2018 semester

S. No.	Discipline	Course Name	Duration	Hrs
1	Aerospace Engineering	Aircraft Stability and Control	12 Weeks	30
		Design of fixed wing Unmanned Aerial Vehicles	8 weeks	20
		Engineering Thermodynamics	12 Weeks	30
		Fundamentals of Combustion (Part 2)	8 weeks	20
2	Agriculture Engineering	Dairy and Food Process and Products Technology	12 Weeks	30
		Farm Machinery	12 Weeks	30
		Fundamentals of Food Process Engineering	12 Weeks	30
		Irrigation and Drainage	12 Weeks	30
		Organic Farming for Sustainable Agricultural Production	8 weeks	20
		Soil and Water Conservation Engineering	12 Weeks	30
		Architectural Acoustics	8 weeks	20
3	Architecture	Contemporary Architecture and Design	8 weeks	20
		Culturally Responsive Built Environments	8 weeks	20
		Landscape Architecture and Site Planning-Basic	8 weeks	20
		Fundamentals		
		Role of Craft and Technology in Interior-Architecture	8 weeks	20

S. No.	Discipline	Course Name	Duration	Hrs
4	Biotechnology and Bioengineering	Bioengineering: An Interface with Biology and Medicine	8 weeks	20
		Biomedical nanotechnology	4 Weeks	10
		Biomicrofluidics	4 Weeks	10
		Biostatistics and Design of Experiments	8 weeks	20
		Computational Systems Biology	12 Weeks	30
		Computer Aided Drug Design	8 weeks	20
		Functional Genomics	4 Weeks	10
		Industrial Biotechnology	12 Weeks	30
		Interactomics	8 weeks	20
		Introduction to Biostatistics	8 weeks	20
		Introduction to Mechanobiology	8 weeks	20
		Introduction to Proteomics	8 weeks	20
		Material and Energy Balances	12 Weeks	30
		Nanotechnology in Agriculture	8 weeks	20
		Wildlife Conservation	8 weeks	20
		5	Chemical Engineering	Heat Transfer
Infrared Spectroscopy for Pollution Monitoring	4 Weeks			10
Introduction to Polymer Physics-IITG	8 weeks			20
Introduction to Polymer Physics-IITR	12 Weeks			30
Natural Gas Engineering	8 weeks			20
Optimization in Chemical Engineering	12 Weeks			30
Phase Equilibrium Thermodynamics	8 weeks			20
Unit Operations of Particulate Matter	4 Weeks			10
Advanced Chemical Thermodynamics and Kinetics	12 Weeks			30
Analytical Chemistry	12 Weeks			30
6	Chemistry	Chemical Crystallography	12 Weeks	30
		Chemistry: Atomic Structure and Chemical Bonding	12 Weeks	30
		Computational Chemistry and Classical Molecular Dynamics	8 weeks	20
		Coordination Chemistry	12 Weeks	30
		Inorganic Chemistry of Life: Principles and Perspectives	12 Weeks	30
		Molecules in Motion	8 weeks	20
		Pericyclic Reactions and Organic Photochemistry	8 weeks	20
		Stereochemistry	8 weeks	20
		Symmetry and Group Theory	12 Weeks	30
		Advanced Concrete Technology	12 Weeks	30
7	Civil Engineering	Application of Geotechnical Engineering	12 Weeks	30
		Concrete Technology	12 Weeks	30
		Design of Reinforced Concrete Structures	12 Weeks	30
		Environmental Engineering-Chemical Processes	12 Weeks	30
		Fire Protection, Services and Maintenance Management of Building	12 Weeks	30
		Fluid Inclusion in Mineral Principles, Methodology, Practice and Application	8 weeks	20
		Foundation Engineering	12 Weeks	30
		Geoenvironmental Engineering (Environmental Geotechnology); Landfills, Slurry Ponds and Contaminated Sites	12 Weeks	30
		Geosynthetics Testing Laboratory	4 Weeks	10
		Geotechnical Engineering Laboratory	4 Weeks	10
		Glass in Buildings: Design and Applications	12 Weeks	30
		Glass Processing Technology	12 Weeks	30
		Higher Surveying	12 Weeks	30
		Integrated Waste Management for a Smart City	12 Weeks	30
		Introduction to Accounting and Finance for Civil Engineers	8 weeks	20
		Matrix Method of Structural Analysis	8 weeks	20
Modern Construction materials	12 Weeks	30		
Photogeology In Terrain Evaluation (Part 2)	4 Weeks	10		

S. No.	Discipline	Course Name	Duration	Hrs
8	Civil Engineering	Principles of Construction Management	8 weeks	20
		Project Planning and Control	8 weeks	20
		Reinforced Concrete Road Bridges	4 Weeks	10
		Remote Sensing and Digital Image Processing of Satellite Data	8 weeks	20
		Strength of Materials	12 Weeks	30
		Theory of Elasticity	12 Weeks	30
		Unsaturated Soil Mechanics	12 Weeks	30
		Wastewater Treatment and Recycling	12 Weeks	30
		The Joy of Computing using Python	12 Weeks	30
		Artificial Intelligence Search Methods for Problem Solving	12 Weeks	30
		Blockchain Architecture Design and Use Cases	12 Weeks	30
	Computer Science and Engineering	Cloud Computing	8 weeks	20
		Cloud Computing and Distributed Systems	8 weeks	20
		Computer Architecture	12 Weeks	30
		Computer Networks and Internet Protocol	12 Weeks	30
		Data Base Management System	8 weeks	20
		Deep Learning	12 Weeks	30
		Design and Analysis of Algorithms	8 weeks	20
		Design and Pedagogy of the Introductory Programming Course	4 Weeks	10
		Discrete Mathematics	12 Weeks	30
		Embedded Systems--Design Verification and Test	12 Weeks	30
		Hardware Modeling using Verilog	12 Weeks	30
		Introduction to Internet of Things	12 Weeks	30
		Introduction to Machine Learning	8 weeks	20
		Introduction to parallel Programming in Open MP	4 Weeks	10
		Introduction to Programming in C	8 weeks	20
		Introduction to R Software	8 weeks	20
		Model Checking	12 Weeks	30
		Multi-Core Computer Architecture Storage and Interconnects	8 weeks	20
		Problem Solving through Programming in C	12 Weeks	30
		Programming in C++	8 weeks	20
		Programming, Data Structures and Algorithms using Python	8 weeks	20
		Scalable Data Science	8 weeks	20
Social Networks	12 Weeks	30		
Software Engineering	12 Weeks	30		
Software Testing	12 Weeks	30		
9	Design Engineering	Switching Circuits and Logic Design	12 Weeks	30
		Control Systems	12 Weeks	30
		Interaction Design	4 Weeks	10
		Product Design and Innovation	4 Weeks	10
		System Design for Sustainability	12 Weeks	30
		Advanced Linear Continuous Control Systems: Applications with MATLAB Programming and Simulink	8 weeks	20
		Advanced Topics in Probability and Random Processes	8 weeks	20
10	Electrical Engineering	An Introduction to Information Theory	8 weeks	20
		Analog Circuits	12 Weeks	30
		Analog Communication	12 Weeks	30
		Analog Electronic Circuit	12 Weeks	30
		Analysis and Design Principles of Microwave Antennas	8 weeks	20
		Applied Optimization for Wireless, Machine Learning, Big Data	12 Weeks	30
		Architectural Design of Digital Integrated Circuits	8 weeks	20
		Basic Electrical Circuits	12 Weeks	30

S. No.	Discipline	Course Name	Duration	Hrs
	Electrical Engineering	Computational Electromagnetics and Applications	12 Weeks	30
		Control Engineering	12 Weeks	30
		Design of Photovoltaic Systems	12 Weeks	30
		Digital Circuits	12 Weeks	30
		Digital Image Processing	12 Weeks	30
		Discrete Time Signal Processing	8 weeks	20
		Electrical Distribution System Analysis	8 weeks	20
		Fabrication Techniques for MEMs-based sensors: clinical perspective	12 Weeks	30
		Facts Devices	8 weeks	20
		Fiber-Optic Communication Systems and Techniques	12 Weeks	30
		Fundamentals of Electrical Engineering	12 Weeks	30
		Information Theory, Coding and Cryptography	12 Weeks	30
		Introduction to Smart Grid	8 weeks	20
		Introduction to Wireless and Cellular Communications	12 Weeks	30
		Microwave Integrated Circuits	8 weeks	20
		Microwave Theory and Techniques	12 Weeks	30
		Nonlinear and Adaptive Control	4 Weeks	10
		Op-Amp Practical Applications: Design, Simulation and Implementation	12 Weeks	30
		Physical Modelling for Electronics Enclosures using Rapid prototyping	8 weeks	20
		Power System Analysis	12 Weeks	30
		Principles of Digital Communications	12 Weeks	30
		Principles of Signal Estimation for MIMO/OFDM	12 Weeks	30
		Wireless Communication		
		Recent Advances in Transmission Insulators	4 Weeks	10
		Semiconductor Devices and Circuits	12 Weeks	30
		Applied linguistics	12 Weeks	30
		Cognition, Transformation and Lives	4 Weeks	10
		Consumer Psychology	8 weeks	20
		Developing Soft Skills and Personality	8 weeks	20
		Development of Sociology in India	4 Weeks	10
		Educational Leadership	8 weeks	20
		English Language for Competitive Exams	12 Weeks	30
	Gender Justice and Workplace Security	4 Weeks	10	
	History of English Language and Literature	12 Weeks	30	
11	Humanities and Social Science	Indian Fiction in English	12 Weeks	30
	Intellectual Property	12 Weeks	30	
	Introduction to Basic Spoken Sanskrit	4 Weeks	10	
	Introduction to cultural studies	12 Weeks	30	
	Introduction to Literary Theory	8 weeks	20	
	Introduction to Modern Indian Political Thought	12 Weeks	30	
	Soft Skills	12 Weeks	30	
	Technical English for Engineers	8 weeks	20	
	Visual Perception and Art: A Survey Across the Cultures	4 Weeks	10	
	Water, Society and Sustainability	4 Weeks	10	
	Business Analytics and Data Mining Modeling Using R Part II	4 Weeks	10	
	Corporate Social Responsibility	8 weeks	20	
	Data Analysis and Decision Making - I	12 Weeks	30	
	E-Business	12 Weeks	30	
12	Management	Economic Growth and Development	8 weeks	20
	Economics of Health and Health Care	8 weeks	20	
	Engineering Econometrics	12 Weeks	30	
	Ethics in Engineering Practice	8 weeks	20	
	Human Resource Development	12 Weeks	30	
	Industrial Safety Engineering	12 Weeks	30	
	Innovation, Business Models and Entrepreneurship	8 weeks	20	

S. No.	Discipline	Course Name	Duration	Hrs
	Management	Introduction to Operations Research	8 weeks	20
		Knowledge Management	8 weeks	20
		Leadership	4 Weeks	10
		Management of Inventory Systems	12 Weeks	30
		Marketing Management-I	8 weeks	20
		Marketing research and analysis	8 weeks	20
		Microeconomics: Theory and Applications	12 Weeks	30
		Project Management for Managers	12 Weeks	30
		Selected Topics in Decision Modeling	8 weeks	20
		Simulation of Business Systems: An Applied Approach	8 weeks	20
		Sustainability through Green Manufacturing Systems: An Applied Approach	8 weeks	20
		Total Quality Management - I	8 weeks	20
		Working Capital Management	12 Weeks	30
	13 Mathematics	Calculus of One Real Variable	8 weeks	20
		Groups: Motion, Symmetry and Puzzles	4 Weeks	10
		Integral Equations, Calculus of Variations and its Applications	12 Weeks	30
		Introduction to Abstract and Linear Algebra	8 weeks	20
		Introduction to Abstract Group Theory	8 weeks	20
		Introduction to Probability and Statistics	4 Weeks	10
		Introduction to Probability Theory and Stochastic Processes	12 Weeks	30
		Mathematical Modelling: Analysis and Applications	4 Weeks	10
		Matrix Analysis with Applications	8 weeks	20
		Matrix Solver	12 Weeks	30
		Measure Theory	12 Weeks	30
		Nonlinear Programming	4 Weeks	10
		14 Mechanical Engineering	Numerical methods	8 weeks
	Ordinary and Partial Differential Equations and Applications		12 Weeks	30
	Regression Analysis		12 Weeks	30
	Statistical Inference		8 weeks	20
	Transform Techniques for Engineers		12 Weeks	30
	Advanced Composites		12 Weeks	30
	Computational Fluid Mechanics		12 Weeks	30
	Design for Quality, Manufacturing and Assembly		8 weeks	20
	Design Practice - II		8 weeks	20
	Energy Conservation and Waste Heat Recovery		12 Weeks	30
	Engineering Fracture Mechanics		12 Weeks	30
	Engineering Metrology		12 Weeks	30
	Experimental Stress Analysis-An Overview		4 Weeks	10
	Fluid Dynamics and Turbomachines	8 weeks	20	
	Fundamentals of Manufacturing Processes	12 Weeks	30	
	Fundamentals of Surface Engineering: Mechanisms, Processes and Characterisations	12 Weeks	30	
	Heat Exchangers: Fundamentals and Design Analysis	12 Weeks	30	
	Introduction to Abrasive Machining and Finishing Processes	8 weeks	20	
	Laws of Thermodynamics	4 Weeks	10	
	Manufacturing of Composites	8 weeks	20	
	Manufacturing Systems Technology I and II	12 Weeks	30	
	Mechanics of Human Movement	12 Weeks	30	
	Mechanics of Machining	8 weeks	20	
	Noise Management and Control	12 Weeks	30	
	Principle of Hydraulic Machines and System Design	8 weeks	20	
	Principles of Casting Technology	8 weeks	20	
	Principles of Metal Forming Technology	8 weeks	20	
	Processing of Polymers and Polymer Composites	8 weeks	20	

S. No.	Discipline	Course Name	Duration	Hrs
		RAC Product Design	4 Weeks	10
		Refrigeration and Air-conditioner	8 weeks	20
		Robotics	8 weeks	20
	Mechanical Engineering	Smart Materials and Intelligent System Design	4 Weeks	10
		Surrogates and Approximations in Engineering Design	4 Weeks	10
		Theory of Rectangular Plates-Part1	4 Weeks	10
		Work System Design	12 Weeks	30
		Advanced Materials and Processes	12 Weeks	30
		Analysis and Modeling of Welding	8 weeks	20
		Corrosion - Part I	8 weeks	20
		Defects in Crystalline Solids (Part-I)	8 weeks	20
		Elementary Stereology for Quantitative Metallography	4 Weeks	10
		Nature and Properties of Materials	8 weeks	20
15	Metallurgical & Materials Engineering	Phase Equilibria in Materials (Nature and Properties of Materials-II)	8 weeks	20
		Phase Field Modelling: The Materials Science, Mathematics and Computational Aspects	12 Weeks	30
		Steel Quality: Role of Secondary Refining and Continuous Casting	12 Weeks	30
		Structural Analysis of Nanomaterials	4 Weeks	10
		Welding of Advanced High Strength Steels for Automotive Applications	4 Weeks	10
16	Mining Engineering	Drilling and Blasting Technology	8 weeks	20
		Biology for Engineers and other Non-Biologists	4 Weeks	10
		Ecology and Environment	8 weeks	20
		Health Research Fundamentals	8 weeks	20
		Introduction to Research	8 weeks	20
		Manage TB	8 weeks	20
17	Multidisciplinary	Neuroscience of Human Movement	12 Weeks	30
		Non-Conventional Energy Resources	12 Weeks	30
		Outcome Based Pedagogic Principles for Effective Teaching	4 Weeks	10
		Stress Management	4 Weeks	10
		Symbolic Logic	8 weeks	20
		HSE Practices for Offshore and Petroleum Industries	12 Weeks	30
18	Ocean Engineering	Hydrostatics and Stability	12 Weeks	30
		Structural Health Monitoring	12 Weeks	30
		Advanced Quantum Mechanics with Applications	8 weeks	20
		Control System Design	12 Weeks	30
		Introduction to Electromagnetic Theory	8 weeks	20
19	Physics	Introduction to Non-linear Optics and its Applications	12 Weeks	30
		Modern Optics	12 Weeks	30
		Solid State Physics	12 Weeks	30
		Theory of groups for physics applications	12 Weeks	30
		Upstream LNG Technology	12 Weeks	30
20	Textile Technology	Science of Clothing Comfort	12 Weeks	30
		Yarn manufacture I: Principle of Carding and Drawing	8 weeks	20

Role of CCE of IIT in NOC

Each online course will be conducted administratively under the CCE of the IIT whose faculty member is offering the course for certification. All financial transactions and contracts will be done through the CCE. The final course completion certificate and scorecard from the proctored exam will be issued by the Chairman of the CCE and NPTEL jointly. Aricent and Tata Technologies have partnered with NPTEL through IITM-OAA to sponsor scholarships

for students in financial need to aid payment for the certification exams.

Use of NPTEL video and Web Material as GATE Preparation Aids

NPTEL has taken up the task of mapping every question in the GATE question papers (2014–2016) to NPTEL reference material, readily available within existing NPTEL courses.

Question papers in 21 disciplines have been mapped so far with the help of postgraduate student volunteers, and the answers have been further validated by faculty members specialising in the area. Both the students and the faculty members have been paid honorarium.

NPTEL Local Chapters (LCs)

NPTEL has been actively organising local chapters in colleges. These local chapters will provide a platform for

continuous engagement with the colleges involved and serve as direct point of contact that will act as champions of NPTEL in these colleges. These chapters are a recent initiative of NPTEL but have received a tremendous response. We have local chapters outside India too (Afghanistan and Ethiopia). Today, there are 1,679 colleges across India that has NPTEL local chapters.

Local Chapters across India

State	Number
Andaman and Nicobar	1
Andhra Pradesh	125
Arunachal Pradesh	1
Assam	6
Bihar	4
Chhattisgarh	23
Delhi	9
Ethiopia	2
Goa	3
Gujarat	57
Haryana	22
Himachal Pradesh	3
Jammu and Kashmir	4
Kabul, Afghanistan	1
Jharkhand	12
Karnataka	85
Kerala	85
Lakshadweep	1

The local chapters have helped spread awareness about NPTEL, gauge the needs of colleges in the academic environment, fill the gaps, and identify how more students across colleges can benefit from the certification courses. It is through the local chapters that NPTEL can interact with colleges and award fee waivers to deserving candidates who come from economically poor background.

Feedback on NPTEL

Feedback from many students, teachers and other users is being collected regularly. Several feedback forms have been designed for this purpose, with varying degrees of detail.

State	Number
Madhya Pradesh	41
Maharashtra	295
Mizoram	1
Manipur	1
Meghalaya	2
Odisha	17
Puducherry	12
Punjab	28
Rajasthan	35
Sikkim	2
Tamil Nadu	286
Telangana	63
Tripura	5
Uttar Pradesh	328
Uttarakhand	25
West Bengal	94
Grand Total	1679

NPTEL Workshops

Workshops are routinely conducted for students and faculty members of other institutes to create awareness about NPTEL. Four types of workshops are conducted by NPTEL:

- Awareness workshops for students
- Awareness workshops for faculty members
- Course-specific workshops for faculty members
- MOOCs workshop for faculty members

The participants at these workshops are from various institutes, and so the information reaches many colleges. Suggestions are also invited from the participants for improvements to enhance the learning experience.

Number of workshops conducted during 2017-2018

Year	Workshops
2017	50
2018	16
Total	66

(as of April 2018)

Faculty were informed how to adapt the content for their classes. More than 1,00,000 teachers and students have attended these workshops. During the last year, several MOOCs workshops were conducted across the country to familiarise faculty members with the MOOCs form.

Collaboration with Industry

The next step in empowering the students is to make them job ready. To achieve this, NPTEL has been collaborating with the industry. The industry may do any one of the following: co-offer a course with an IIT faculty, sponsor a course, and provide CSR funds to provide fee waivers to deserving students

With the growing number of colleges partnering with NPTEL, the CSR initiative from the industries, will create a wider impact on the students who are otherwise devoid of quality education due to their economic conditions.

We are also working with the industry in providing workshops to NPTEL Certification Toppers to bridge the gap between the academia and the industry.

Process: A Memorandum of Understanding (MoU) is signed with the organisation to formalise the partnership between the industry/corporate and NPTEL. This alliance is aimed at those segments of a company (if not the entire organisation itself) to whom NPTEL services will be beneficial and who could be a value addition to the NPTEL.

NPTEL has currently signed MoUs with four industry partners: Vunet, Glass Academy, Internshala and Green Research IT Solutions

NPTEL Portals for Various Workflows

The following portals have been created:

- <http://nptel.ac.in> - This portal was given a better design, and the NPTEL office continues to add new features to this website.
- <http://nptel.ac.in/noc> - For candidates to check scores and details regarding courses
- <http://nptel.ac.in/LocalChapter> - For NPTEL local chapters with login for single point of contact (SPOCs) and mentors of NPTEL local chapters
- <http://nptel.ac.in/IndustryAssociate/> - For industry associates

Social Media

NPTEL has new Facebook and Twitter accounts as well:

<https://www.facebook.com/NPTELnoc> - 73,298 (likes)+ followers

<https://twitter.com/nptelindia> - 3,434 followers

<https://www.youtube.com/user/nptelhrd> - 7,476 Connections

<https://www.linkedin.com/company/nptel> - 11,92,220 YouTube Subscribers

<https://plus.google.com/u/0/+nptelhrd> - 10,351 Google +followers

Virtual Classrooms over National Knowledge Network and Exclusive Video Productions for Departments

- Video conference connecting universities across the world for faculty recruitment to various departments
- VC sessions on behalf of Director with MHRD and other Departments
- Technical expertise offered for creation of virtual classrooms – IIM Tiruchirappalli
- Technical assistance in creating virtual classrooms and recording studios for National Institute of Epidemiology, Directorate of Technical Education, Government of Tamil Nadu and IIIT Hyderabad
- Technical support for NITTR in creation of virtual classroom and studios for NPTEL and DTH, Swayam Prabha

Virtual Class Rooms over the National Knowledge Network

Using the facilities created under the national knowledge network, CCE offered the following services to the faculty members of the institute:

- Web-enabled classes for M. Tech courses for industries
- 100+ conferences for the Uchathar Aavishkar Yojana project
- NPTEL meetings with all IITs and partnering institutions for planning, monitoring the progress of MOOCs and online examinations
- Semester classes by IIT Madras faculty to the students of IIT Tirupati, IIT Palakkad and IIT Mandi
- Technical support for the creation of studios and virtual classroom facilities in different institutions across the country
- QEEE courses connecting several institutions and recording for the DTH-Swayam Prabha Project
- Conducting Ph. D. viva voce exams
- Video conferences with alumni, government departments and industries
- Live webcast of events in the institute
- Live webcast of all NPTEL workshops
- Technical support for NITTR in creation of virtual classroom and studios for NPTEL and DTH, Swayam Prabha

A few exclusive video productions have also been done using the following facilities:

- Short video on research facilities at NCCRD, IIT Madras
- Video on Glass Fiber Reinforced Gypsum-GFRG Building and Research at IIT Madras
- Videos on Carbon Zero Challenge
- Video recording and publishing of International Seminar and Workshop – Centre for Computational Brain Research, IIT Madras
- Several lectures by prominent alumni of the institute to inspire students

6.2. Centre for Industrial Consultancy and Sponsored Research

6.2.1. Introduction

The Centre for Industrial Consultancy and Sponsored Research (IC&SR) was set up in 1973 to foster and promote sponsored research activities as well as relationships with industries. It facilitates active participation of the faculty in various interactive programmes organised for the benefit of the industries and the institute. The centre also plays a pro-active role in managing the intellectual property and its commercialisation by the institute. In addition, the centre provides administrative support for carrying out consultancy and sponsored research projects, particularly for recruitment of project staff, maintenance of accounts and purchase of equipment and materials.

Some of the major activities at the centre are:

- Sponsored research programmes
- Consultancy projects: research based/retainer/institutional

- Collaborative projects with organisations and industries in foreign countries
- Industrial Associateship Scheme/Industry Relationship
- ISRO-IITM Space Technology Cell joint projects
- IGCAR-IITM Cell joint projects
- HAL-IITM joint projects
- NIOT-IITM Ocean Technology Cell
- Patenting and Technology Transfers
- Faculty and Student Entrepreneurship and Incubation
- Positive Messaging and Outreach Program
- Support scheme through Research Group

Dean : Prof. Krishnan Balasubramanian (till afternoon of 7 March 2018)

Dean : Prof. Ravindra Gettu (from the afternoon of 7 March 2018)

Associate Dean : Prof. Ravindra Gettu (till the forenoon of 7 March 2018)

Staff

Mr. R. Sundaram	Chief Techno Economic Officer (up to October 2017)
Dr. V. Suresh	Senior Techno Economic Officer
Mr. Sundaravinayagam	Joint Registrar
Mr. P. Sarvahan	Assistant Registrar
Mr. K. Rajendran	Superintendent
Mr. D. Madheeswaran	Junior Superintendent
Mr. K. C. Chandrajit	Junior Superintendent
Ms. Hemalatha Hariharan	Senior Assistant
Ms. E. Revathi	Junior Assistant
Mr. Vignesh Santhanam	Junior Assistant

6.2.2. Sponsored Research

The institute was sanctioned 220 projects worth Rs.36,590.78 lakh during 2017-2018.

S. No.	Agency	No. of Projects	Value (Rs. in lakh)
1	Ministry of Shipping	1	7,053.95
2	Defence Research and Development Organisation	27	6,820.45
3	Department of Telecommunications	1	5,975.80
4	Department of Science and Technology	118	5,964.61
5	Impacting Research Innovation and Technology – IMPRINT	9	2,210.75
6	Department of Heavy Industry	1	1,950.00
7	Manipur Renewable Energy Development Agency	1	1,711.92
8	Ministry of Electronics and Information Technology	3	1,158.70

S. No.	Agency	No. of Projects	Value (Rs. in lakh)
9	Department of Biotechnology	11	593.20
10	Jammu and Kashmir State Power Development Corporation Limited	1	560.00
11	Ministry of Environment and Forests	1	399.47
12	Aeronautics Research and Development Board	4	214.01
13	Biotechnology Industry Research Assistance Council	3	208.70
14	Indian Space Research Organisation	7	203.28
15	North Eastern Development Finance Corporation Limited	1	200.00
16	Deakin University	1	175.00
17	Wellcome Trust UK	1	166.85
18	Armament Research Board	1	150.88
19	Naval International Cooperative Opportunities in Science and Technology Programmes	1	144.33
20	Central Power Research Institute	1	125.00
21	Research, Designs and Standards Organisation	1	100.00
22	Ministry of Earth Sciences, New Delhi	2	98.58
23	Indian National Academy of Engineering	1	57.00
24	Society for Biomedical Technology	1	44.40
25	Council of Scientific and Industrial Research	3	37.80
26	International Development Research Centre	1	33.98
27	Naval Research Board	1	32.48
28	Indo-French Centre for the Promotion of Advance Research	1	29.96
29	Board of Research in Nuclear Sciences	1	25.41
30	National Mission for Power Electronics Technology	1	23.82
31	Space Application Centre	1	23.22
32	Indo-French Centre for the Promotion of Advanced Research	1	21.31
33	University Grants Commission	1	17.22
34	Indian Council of Social Science and Research	2	12.00
35	Indian Society of Heating, Refrigerating and Air Conditioning Engineers	1	11.87
36	Indian Council for Medical Research	1	10.04
37	Boeing India University Relations	1	10.00
38	Ministry of Human Resource and Development	2	6.75
39	Department of Atomic Energy	1	3.48
40	National Board for Hire Mathematics	1	3.33
41	Government of Telangana	1	1.25
TOTAL		220	36,590.78

About **208** faculty members served as coordinators for the projects sanctioned in 2017-2018. The value of the ongoing sponsored research projects was Rs.1,17,684.64 lakh with **377** faculty members involved.

6.2.3. Consultancy Programmes

Exactly **528** consultancy assignments amounting to Rs.**11,684.31** lakh were initiated during 2017-2018.

S. No.	Type of Consultancy	Number of Jobs	Value (Rs. in lakh)
1	Institutional Consultancy	345	6497.17
2	Research-based Industrial Project	137	4841.86
3	Retainer Consultancy	29	240.29
4	Testing (ET & IT)	17	105.00
	Additional Value		1426.19
		528	13110.51

One hundred and eighty faculty members are actively involved in the ongoing consultancy projects with a total value of Rs.22,000.61 lakh.

- Corporate Social Responsibility: CSR activities, as defined in Schedule VII of the Companies Act 2013, were carried out by IIT Madras in alliance with industries. During 2017-18, 17 proposals were approved for funding under CSR for a total sum of Rs.1,601.29 lakh.

Some of the ongoing CSR projects are: Popularisation of Bharati Script, Enhanced Traffic Mobility Using Signal Improvements, Carbon Zero Challenge Integrated Urban Governance in Metropolitan Chennai, Implementation Roadmap for Sustainable Urban Freight Mobility in Chennai, Smart Secure: Elderly Assistance Device, Robert Bosch Centre for Data Science and AI, IIT Madras Computer Science and Engineering Colloquium Series, Thermal Imaging Based Breast Cancer Detection, Advanced Process Control System Lab, Endoscopy Technology Platform, Implementation of Inverterless Solar DC system (Saipem), Study of Onload Tap Changers in Power Transmission Networks, Inverterless Based CSR Project for IEX, The Gopalakrishnan-Deshpande Centre for Innovation and Entrepreneurship, Creating a Ripple Effect in the Youth's Development: Through Holistic Education, Enhancing the Profitability and Growth of the Micro and Marginal Enterprises run by Women.

6.2.4. New Faculty Scheme

IIT Madras provides funds to new faculty members to initiate research in their area of specialisation at the institute. This funding also helps them get sponsored research grants to continue and establish their research activities. This scheme is a project under the Centre for IC&SR. Proposals for projects up to Rs.5 lakh will be recommended by the Dean, IC&SR to the Director for approval. For proposals requiring special equipment, the institute support may increase to Rs.30 lakh. During the year, 11 proposals were approved for funding under the scheme for a total sum of Rs.330 lakh.

6.2.5. Industrial Associateship Scheme

A total of 104 industries (21 large scale, 58 medium scale, and 25 small scale) were members of this scheme in 2017. The members use the library facilities and are encouraged to interact with IIT Madras faculty for R&D support.

6.2.6. Other Programmes

ISRO-IITM Space Technology Cell joint projects

These are the ongoing activities sponsored by the Indian Space Research Organisation (ISRO) where research

projects of interest to the ISRO are being taken up at the institute. Seventeen ongoing projects totaling to a value of Rs.547 lakh have been running and seven new projects worth Rs.203 lakh were taken up during 2017-2018.

IGCAR-IITM Cell

This is an ongoing activity sponsored by the IGCAR where research projects of interest to IGCAR are being taken up at IIT Madras. Three new projects were initiated during this period for a total value of Rs.101 lakh.

NIOT-IITM Cell

NIOT-IITM Cell has been set up in IIT Madras to initiate further NIOT-sponsored research activities at IIT Madras during 2010-2011. The two ongoing projects continued during 2017-2018, totaling to a value of Rs.53.88 lakh.

Technologies for Social Development

IIT Madras has ongoing activities for transfer of technologies of immediate relevance to society. For this purpose, the following three schemes have been taken up:

- (1) Socially Relevant Projects
- (2) Rural Technology Action Group (Funded by Planning Commission)
- (3) Centre for Social Innovation and Entrepreneurship (CSIE)

A write-up on the activities of the above projects is given in Annexure – 1a,b and c.

6.2.7. Distinguished Visitors to the Centre

Delegations from many organisations visited IIT Madras for discussions on possible collaborative research work. Some of the eminent delegations were from:

- Honda Motors
- Tata Auto Components Limited Ordnance Factory, Medak
- Advantage Austria
- Ashok Leyland
- Automotive Research Association of India
- Special Railway Establishment for Strategic Technology & Holistic Advancement (SRESTHA) - Ministry of Railways
- TVS Motors
- Mahindra & Mahindra
- Lucas TVS

MoUs/Agreements signed

During 2017-18, agreements were signed with the following organisations/institutions:

Agreements

- Timbre Media Private Limited
- Data Patterns (India) Private Limited
- Chennai Petroleum Corporation Limited
- Tamil Nadu Water Supply and Drainage Board
- Hitachi India Private Limited and Hitachi Limited
- Lionex FmbH and others
- Jaipur-Mahua Tollway Private Limited
- Jawaharlal Institute of Postgraduate Medical Education and Research
- Cyient Limited
- PRS Neurosciences & Mechatronics Research Institute Private Limited and Pravyosh Neuro Innovators Private Limited
- Hear2Read
- SINTEF Energi AS
- Deakin University
- Tata Consultancy Services Limited
- Equad Engineering Services Private Limited
- Swadha Energies Private Limited and Cygni Energy Private Limited
- Swagene Private Limited
- Vision Research Foundation
- Hydromaterials Private Limited
- Shell India Markets Private Limited
- Saint-Gobain Research India Private Limited
- WiSing Networks Private Limited
- Detect Technologies Private Limited
- Saipem India Projects Private Limited
- Shakti Sustainable Energy Foundation
- MedloTek Health Systems
- CBCI Society for Medical Education and St. John's Research Institute
- National Institute of Electronics and Information Technology
- SRF Limited
- Tech Mahindra Limited and Gyandata Private Limited
- National Agro Foundation
- GAVS Technologies India Private Limited
- Applied Materials Private Limited
- Essel Green Mobility Limited
- Bird Eye Energy Technologies Private Limited
- Tata Steel Limited
- Biotechnology Industry Research Assistance Council
- Micromatic Grinding Technologies Limited
- Caterpillar India Private Limited
- Institute List of the French Alternative Energies and Atomic Energy Commission
- Wadhvani Institute of Artificial Intelligence
- Dr. Reddy's Laboratories Limited
- The Voltas Limited
- Reliance Industries Limited
- Ordinance Development Centre
- FLSmidth Private Limited

6.2.8. A write-up on patent and details of patent applications filed and granted are given in Annexure 2.

Technology Transfer/Royalty

S. No.	Party Name	Amount Received (Rs.)
1	Amara Raja Batteries Limited	67,26,000
2	Benchmark Electronic Systems Private Limited	1,60,372
3	CDAC	1,14,500
4	Cygni Energy Private Limited	16,20,000
5	Detect Technologies Private Limited	1,08,000
6	Diamondbay Technologies Private Limited	25,00,000
7	Ericsson India Global Services	18,62,700
8	Exicom Tele Systems Limited	46,25,600
9	Exide Industries Limited	67,26,000
10	Gudlavalluru Engineering College, Vijayawada	1,14,500
11	Helois and Matheson	5,75,000
12	Centre for Development of Advanced Computing	23,000
13	National Institute of Technology, Andhra Pradesh	1,18,000
14	NIT Warangal	1,14,500
15	Qunu Labs	2,00,000
16	Swadha Energies Private Limited	60,068

S. No.	Party Name	Amount Received (Rs.)
17	Synkromax Biotech Private Limited	1,72,500
18	Weaver Technologies LLP	11,800
19	TANSTIA-FNF Service Centre	5,001
Total		2,58,37,541

6.2.9. Publications

- The Centre for IC&SR brought out the IITM Calendar, IITM New Year Greeting Card, and the IITM Diary for 2018.

6.2.10. Research Fund

To promote research activities at IIT Madras, the Board of IC&SR decided to use its corpus to support several new initiatives. A part of the earnings of IC&SR from consultancy projects was invested in term deposits, and the interests earned through these are now being used to support schemes like ERP and NFIG, R&D Award, and IP Cell activities. From an initial amount of Rs.50 crore, the corpus has been increased to Rs.100 crore.

The broad allocation for expenses for this financial year (2017–2018) is as given below:

- R&D Award:** Half from the Institute Fund and half from the Research Fund; seven awards for a total value of Rs. 230 lakh.
- Innovation Ecosystems:** Rs.110 lakh has been provided to support student projects and pre-incubation activities.
- Exploratory Research Projects:** To support projects from any faculty who has a “breakthrough” idea and wishes to initiate work without waiting for their proposal to be sanctioned by the funding agency, a maximum of Rs. 10 lakh with a duration of 12 months is given. There are 31 such projects worth Rs.271 lakh.
- New Faculty Initiation Grant:** A start-up grant up to maximum of Rs.5 lakh for national and international travel is permitted for new faculty members. In 2017-18, 20 projects for a total value of Rs.100 lakh were sanctioned.
- One Team Project of significance** which as demonstrated proof of concept will be eligible for funding for two years with an initial maximum budget of Rs.200 lakh. The project will be selected through peer review members. No new projects were initiated during this period.
- Patenting and commercialisation activities by IP Cell:** A maximum amount of Rs.50 lakh was earmarked for a year.

- Maintenance of capital equipment and operation of these facilities:** This will be supported by IC&SR initially for a value of Rs.25 lakh and used for hiring a technical person for maintaining and operating select central research facilities. Maintenance funds for capital equipment will require further steps on the modalities and will be considered soon. During the reporting period, 21 projects for a total value of Rs.103 lakh were supported.

6.2.11. Positive Messaging and Outreach Program

IIT Madras is one of the few high-ranking institutions in India that are prompt, active and well connected on the social media. Our Facebook page has over 1,02,000 likes, is well updated with a response time of just one day, and actively engages over 30,000 people every week. IIT Madras’ tweets have 36K impressions every month on an average. We have a noteworthy LinkedIn connect, and are ahead of the curve across other platforms like Instagram, Google+ and Pinterest. A monthly e-newsletter is also sent to all stakeholders of the institute.

6.2.12. Other information

- The centre organised a workshop on CAAR at ARAI, Pune, on 21 April 2017.
- An MoU was signed with National E-Governance Division (NEGD) to establish Centre for Digital Government and Knowledge Societies (CDG&KS).
- For establishment of Robert Bosch Centre for Data Science and Artificial Intelligence (RBCDSAI), an MoU was signed with Robert Bosch Engineering and Business Solutions Private Limited.
- An MoU was signed with KPMG to engage the company as intellectual property licensing advisor.
- The Tata Steel Advanced Materials Research Centre at IIT Madras Research Park was inaugurated on 11 August 2017.
- The IC&SR Annexe building was inaugurated on 30 August 2017.

Rural Technology Action Group, IIT Madras

Activities during 2017-18

Summer Internships

10 students from various engineering institutions from the PALS network and IIT Madras interned for 6-8 weeks under the mentorship of IITM/other college faculty members during April-June 2017.

Sr. No	Topic of internship	Mentor
1	Development of apps DspeakING (Digital Speaking) and TOLO (Toilet LOcator)	Prof. Pushpavanam, IITM
2	Development of app for real-time visibility data	Prof. Shiva Nagendra, IITM
3	Design of low head micro turbine for agricultural canals	Prof. Shankar Krishnapillai, IITM
4	Modifying palm tree climber design	Prof. Palaniappan Ramu, IITM
5	Identification of scope for suggesting technologies developed in IIT-M for issues in Payir Trust and Tribal Health Initiative.	Prof. Palaniappan Ramu, IITM
6	Impact Assessment of 100 biogas plants of Vivekananda Kendra at Rameswaram, TN	Dr. K. Sundararajan, Project Adviser, RuTAG, IITM
7	Animal intrusion detection and alarm system	Prof. Abhijit Deshpande; Prof. Anil Prabhakar, IITM
8	Composing textile image for weaving names with C#. NET for electronic jacquard attachment	Prof. K. Badari Nath, R. V. College of Engineering, Bengaluru

Initiation of New Projects Funded by RuTAG

No.	Title	Institution	Faculty
1	Embedded system based elephant tracking and warning system along forest border areas	PPG Institute of Technology, Coimbatore	Dr. I. Rajarajeswari, Assistant Prof, EEE
2	Motorized sledgehammer, washing machine and vegetable chips slicer	IIT-Madras	Mr. Arumugam Achari (a rural innovator) and Prof. Mangala Sunder Krishnan, Chemistry
3	Development of air quality measurement system using low cost sensors	IIT Madras	Prof. S.M.Shiva Nagendra, Civil Engineering

Initiation of new Projects Funded by other Government Agencies

- Establishment of a Common Facility Centre in Pathamadai- Rs. 47 lakh sanctioned by The Tamil Nadu Handicrafts Development Corporation Ltd. (Poompuhar) for implementation by RuTAG and CSIE, IITM
- Enabling set up of 20 sanitary napkin manufacturing units across 8 states of North East Region- Rs. 2 crore project funded by Ministry of Development of North East Region, Gol

Installation of Technologies Developed by RuTAG

- **Electronic jacquard handloom:** RuTAG's upgraded technology of mat-weaving electronic jacquard handloom has been installed on July 18, 2017 on a trial basis in Killimangalam, Kerala. Training to the weavers for operation of the loom is underway. This loom increases their productivity by 300% and enables easy incorporation of sophisticated designs in mats, while being ergonomically comfortable.



- **Hank-to-cone and semi-automatic pirn winding machine:** The hank to cone and semi-automatic pirn winding machine developed by RuTAG has been installed in Amayanoor Khadi production centre, Kottayam, Kerala on July 7-8, 2017. Subsequent training was provided to women winders in the centre.

Technology Demonstration to Bidriware artisans in Bidar, Karnataka

- A technology demonstration was conducted with 40 Bidriware artisans on 9th January, 2018 in Bidar,



Karnataka after completion of a RuTAG project that identified a suitable chemical substitute to the Bidri Fort clay used in manufacture of Bidriware handicrafts. Organized in collaboration with the Office of Development Commissioner (Handicrafts) and Sahayog NGO, Bidar, a positive feedback was received from the artisans for the color developed by the demonstrated alternate patination process.

Workshops conducted

- **Designing and Developing Innovations for Elderly Population/Palliative Care Patients:** A workshop was conducted on November 11-12, 2017 in Government Engineering College, Thrissur, Kerala on “in

collaboration with Creativiti Council, Kerala and Alpha Palliative Care, Thrissur, Kerala. 25 students from ITI and engineering colleges participated in this idea generation and proposal writing workshop. Proposals are expected to be submitted to RuTAG to take up design and prototype development.



- **Proposal Writing Workshop:** A one-day workshop was conducted in collaboration on November 16, 2017 with PanIIT Alumni Leadership Series (PALS) for 50 faculty members from 14 engineering colleges across Tamil Nadu. Faculty member teams worked on 7 problem statements provided by RuTAG and eventually submitted technical proposals. RuTAG has approved 4 projects to be taken up shortly.

Contests held

- **Agrineers, Shaastra- 2018:** RuTAG-TN floated problem statements in agricultural sector to students from engineering colleges across the country for obtaining design ideas. IViL, a voluntary student body in IITM organized the event on 4th January, 2018, as part of the technical fest of IITM ‘Shaastra 2018’.

- Rural Innovative TechnologZ, 2018: The final round of technical design contest 'Rural Innovative TechnologZ (RITZ)' was conducted on 24th January, 2018 in IITM in which 42 students in 11 teams from 7 polytechnic colleges in Chennai presented a model of their design in the presence of a technical panel of judges. The three

winning teams will be provided funding from RuTAG-TN for further prototype development of a solar drier for agricultural produce, mechanized vegetable cutter for large-scale rural applications and mechanized palm tree climber.



- Tech2Farm, Mechanica- 2018: Mechanica organized its flagship event Tech2Farm in association with Rural Technology Action Group, Rural Technology Business Incubator and Creativiti Council, Thrissur for students from engineering institutions across India. RuTAG funded the prototypes developed in this event over November 2017- March 2018 to develop a scalable prototype to solve the technological innovations required in agriculture. The five winning teams developed support for banana trees against winds,

nutmeg harvester, pepper harvester cum collector, robotic palm tree climber and deweeder.

Participation in events

- MSME Vendor Expo- 2018: RuTAG exhibited its technologies over a 2-day National Level Vendor Development Programme Cum Industrial Exhibition on February 2-3, 2018.



- **Rural Technology Development and Delivery- 2018:** RuTAG, IIT Madras participated and presented in the

first international conference organized by RuTAG, IIT Delhi over March 9-11, 2018.



6.2.13. Centre for Social Innovation and Entrepreneurship

6.2.13.1. Introduction

Centre for Social Innovation and Entrepreneurship (CSIE) at IIT Madras was founded in August 2010 with a focus on teaching and research related to social enterprise in India. The centre works in promoting social entrepreneurship through education, research and dissemination. It has successfully reached out to many high schools, higher institutions and social entrepreneurs internationally through various project activities. It undertakes research projects and livelihood improvement projects to build capacities of social entrepreneurs and enrich knowledge of this sector. For all these initiatives, CSIE works closely with institutions, builds partnerships and helps them build capacities to create awareness, identify and nurture aspiring social entrepreneurs.

CSIE continues its evolution from a centre focused on education and research in social innovation and entrepreneurship to one enabling capacity building, technology commercialisation and livelihood enhancement. The projects undertaken in 2017-18 bear testimony to this. The centre has turned into an important vehicle for building scale for social enterprises. With a strong network of academic, governmental and NGO partners, CSIE is uniquely positioned to turn concepts into solutions for society.

Major activities of CSIE in 2017-18:

- Launch of International Summer and Winter Schools on Social Entrepreneurship
- Securing the grant of Rs.47 lakh from Government of Tamil Nadu for establishing Common Facility Centre (CFC) for the korai mat weavers at Pathamadai.
- NABARD identified CSIE as one of the resource institutions for conducting capacity-building programme for POPIs (Producer Organisation Promoting Institutions)

6.2.13. 2. Governance Structure

The Governance Committee (GC) consists of representatives from the sponsors ('84 batch), IIT Madras faculty members and the partnering agency. The members of GC are:

- Dr. R. Nagarajan, Project Coordinator, CSIE
- Dean, International & Alumni Relations, and Professor, Chemical Engineering

- Prof. L. S. Ganesh, Professor, Management Studies
- Prof. Ashwin Mahalingam, Assistant Professor, Civil Engineering
- Prof. Devendra Jalihal, Professor, Electrical Engineering
- Prof. L. Prakash Sai, Professor, Management Studies
- Prof. Mahesh Panchagnula, Professor, Applied Mechanics
- Dr. V. Kalyanaraman, Project Consultant, RuTAG, IIT-M
- Dr. Tamaswati Ghosh, CEO, IIT-M Incubation Cell
- Mr. Joseph Thomas, Development Office, IIT-M

2.1 Staff

- James Rajanayagam, Senior Project Advisor, CSIE
- Vidhiya Saravanan, Project Officer, CSIE
- Gangaram Sandeep Kumar, Project Associate, CSIE
- Aishwarya Raman, Senior Project Officer, CSIE
- Krishnaveni P., Senior Project Assistant, CSIE

6.2.13.3. Activities

3.1 Education

Education in the field of social entrepreneurship was identified as one of the primary objectives of CSIE. By educating students, the centre is creating a ready-source of talent for the sector.

3.1.1 International Winter/Summer School

During 2017-18, CSIE conducted one summer and winter school each on social entrepreneurship. These schools are typically of two weeks' duration, and open to students from national and international universities and working professionals interested in social entrepreneurship. The number of participants is usually limited to 30. The resource persons of the schools include faculty members of IIT Madras, experts, social entrepreneurs from the industry, and government officials.

The two-week Winter School includes classroom lectures, field visits for orientation and immersion, interactions with accomplished social entrepreneurs, discussions on case studies and documentaries, and self-study and peer learning opportunities.

The participants made presentations and reports as part of the course. The CSIE has successfully completed two editions of Summer/Winter Schools.

	Summer School 2017	Winter School 2017
Programme Dates	15-24 August 2017	3-12 January 2018
Number of Participants	14	24
Participating Universities/ Companies	IITM, RwTH Aachen Germany, Atma Jaya Indonesia, RGNIYD, IITM Alumni	IITM, RwTH Aachen, HKUST, IITM Alumni
Profile of participants	Students, working professionals, alumni	Students, working professionals, alumni
Prominent Speakers	Mr. Arunachalam Muruganantham from Jayaashree Industries, Mr. Sridhar Ecologin, Ms. Svati Bhogle from Sustaintech	Dr. Amitava Bhattacharya from Bangalanatak.com, Mr. Ajith Narayanan from Invention Labs, Mr. Mathew Jose from Paperman, workshops from Fields of View
Field Visits	UnLtd TN, Kuthambakkam Village, Aravind Eye Hospital, Puducherry	ASSEFA Pooriyambakkam, ITWWS (Irula Tribal Women's Welfare Society), NAF (National Agro Foundation) Illedu, EleFriends 101 (elephant care facility)

3.1.2 Certificate Course

The CSIE offers short-term certificate courses to students from other engineering institutions. This year, the centre

successfully completed two certificate courses for the students of Tagore Engineering College and scientists from Murgappa Chettiar Research Centre (MCRC). About 40 students and scientists participated in the course.

Institution	Dates	Theme	Medium	Number of Participants	Profile of Participants
MCRC	27 June-29 July 2017	Product Design and Business Model	Lectures	20	Scientists
Tagore Engineering College	June-October 2017	Introduction to Social Entrepreneurship	Lectures and field visits	19	MBA students

CSIE along with Centre for Continuing Education (CCE) at IIT Madras provides these certificate courses. It is conducted through CSIE team members, IITM faculties, veteran product developers and entrepreneurs. Some of the guest speakers included Prof. Asokan, Department of Engineering Design, IIT Madras, Mr. Thiru. Srinivasan, PALS and Mr. AB Chakravarthy, Villgro. CSIE supports the faculty of the colleges in all possible ways by providing course contents, knowledge sharing and other means for successful outcome of the business model course.

3.1.3 Social Enterprise Education Program (SEEP) and UK-India Social Entrepreneurship Education Network

CSIE is actively engaged in UK-India Social Entrepreneurship Education Network (UKISEEN) through University of Southampton. The network is engaged in education promotion activities through conferences, seminars, workshops, competitions and related projects.

As part of the SEEP initiative, the UKISEEN meeting and seminar was organised at KLSMER, Belgaum on 23 September 2017. It had some like-minded people debate on the concept of social entrepreneurship education and corporate social responsibility. Two panel discussions were part of the seminar. The panellists for social entrepreneurship education were Prof. L. S. Ganesh, Prof. Majumdar and Dr. Neelam Maheshwari from Deshpande Foundation. The panellists for the role of CSR were Mr. Balasubramanian,

Aditya Birla Group, Mr. Jayant Humbarwadi, Ashok Iron Works and two executives from Aequis Private Limited.

3.2 Research

The social enterprise sector is a new, yet dynamic field. The sector is characterised by unique business models, dynamic partnerships, changing regulation, and young entrepreneurs. It is not adequately studied and documented, at least in India. Practitioners have found that there is little useful information on the various aspects of the sector. It is for this reason that CSIE has chosen to focus on research. CSIE will contribute to the growth of the sector by providing actionable insights to stakeholders. Research themes range from business models, impact investing, scaling social impact, and social entrepreneurship education to theories of social entrepreneurship.

3.2.1 Current Projects

Title: A study of the impact of socio-political factors on the growth of Social Enterprises (SEs)

Funding Source: Rajiv Gandhi National Institute of Youth Development (RGNIYD)

Duration: 1 year

Objective: To explore, determine, analyse various social and political factors, and economic factors that impact, aid and hinder the growth (or failure) of SEs

Led by: Prof. Sudharsan Padmanabhan, Department of Humanities and Social Sciences

Deliverable: Publication in progress

3.2.2 Completed Projects

Title: Women's Empowerment & Social Entrepreneurship

Funding Source: UK British Council

Duration: 6 months

Objective: To understand the interplay between social enterprise and women's empowerment, and explore questions such as

- To what extent are social enterprises challenging or reinforcing gender norms and stereotypes in the economy?
- Do a significant number of social enterprises seek to provide greater opportunity/access to resources for women, or address key issues related to women and girls' empowerment issues?
- What role are women playing in growing a more social economy?
- Is social enterprise providing an effective platform for women's empowerment?

Led by: It is a multi-country (UK, USA, Brazil, Pakistan and India) research project. The India report was managed by Jindal School of Social Entrepreneurship and CSIE, IIT Madras. At IIT Madras, the study was undertaken by CSIE along with Faculty from Department of Management Studies and Department of Humanities and Sciences. Mark Richardson from Social Impact Consulting, UK led the consortium in which the team from IIT Madras was led by Prof. G. Arunkumar.

Deliverable: Publication of report

3.3 Consultancy

CSIE undertakes consultancy assignments to provide business development support for social enterprises (including FPCs) and carries out impact assessment for philanthropic projects.

3.3.1 Capacity Building of Producer Companies (PCs) for Better Management Practices and Sustainable Growth

Funding source: CSR grant from Tamil Nadu Newsprint & Papers Limited

Objective: To build capacities of Farmer Producer Companies (FPCs) in way of equipping them to make active role in the agricultural supply chain network

Activities

- Capacity building programmes conducted at IIT Madras and at regional level in Madurai
- An exploratory field visit to an FPO in Krishnagiri
- Surveyed social capital attributes in an FPO near Villupuram

Widened areas of engagement

NABARD identified CSIE as one of the resource institutions for conducting capacity building programme (CBP) for POPIs (Producer Organisation Promoting Institutions)

- Funded for two CBPs covering six POPIs
- Exhibition-cum-sale of FPO products enabled in parallel to the CBP

	Capacity building Program – FPOs	Capacity building Program – FPOs	Capacity building Programme–POPIs	Capacity building Programme–POPIs
Program Dates	30-31 March 2017	24-25 January 2018	9-11 October 2017	22-23 February 2018
Number of Participants	122	58	34	21
Number of participating organisations	38 FPOs and 5 Non-governmental organizations	35	6	6
Profile of participants	FPOs and NGOs	FPOs and NGOs	POPIs	POPIs
Speakers	Academicians, representatives from TNSFAC, NABARD and value chain finance, lawyers, large retail heads	Directors/CEOs of FPOs identified for best practices	Faculty-management, agribusiness consultant, brand manager-FMCG, lawyers, design, thinking experts, bankers, representatives- NABARD, SFAC	Entrepreneurs, brand builder, marketing consultant, taxation consultant, food technologist

3.3.2 Business Development and Livelihood Enhancement of Pathamadai Mat Weavers

Funding source: RuTAG, Tamil Nadu Handicrafts Development Corporation Limited

Objective: To improve the livelihood of weavers in Pathamadai by penetrating technology

developed by RuTAG and establishing market linkage.

Activities

To professionalise the venture and strengthen branding by tagging tales to products

- Exposing to regional and international expos and market spaces
- Linking to retailers and formalising the linkage
- Marketing through social media and tracking the reach

Widened areas of engagement

CSIE has played a key role in procuring a grant of Rs. 47 lakh under the Revival of Languishing Crafts initiative by the Government of Tamil Nadu along with RuTAG. The centre's role includes:

- Establishment of an CFC
- Training programmes to artisans to use latest technologies
- CBPs for improving the supply chain
- Marketing support – through both print and electronic media

3.3.3 Commercialisation and Transfer of Technologies developed by Shri Murugappa Chettiar Research Centre (MCRC)

Funding source: MCRC

Objective: To identify the technologies that are market ready for transfer and to connect potential entrepreneurs to take up the selected technologies.

Activities

- Capacity building workshops for scientists to instil market perspective
- Enabling business model development and evaluating market readiness of technologies
- Handholding support to test commercial feasibility of technologies
- Shortlisting technologies and rendering focal points for market readiness
- Field visits to survey adoption costs and market acceptance

- Identifying potential entrepreneurs for scaling up technology products

3.4 Outreach

CSIE offers one- to three-day entrepreneurship awareness programmes and CBPs to high school students, students and faculty from higher institutions and social entrepreneurs.

3.4.1 Summer Camps for School Children Theme: Social Innovation through Technology

Funding Source: Entrepreneurship Development Institute (EDI), Tamil Nadu and fee from students

A total of 97 young and energetic students from private and government schools kindled their thoughts around innovation and entrepreneurship for three days at IIT Madras. Students had fun watching the live scientific demonstrations, interactive lectures, and creating simple products in the Central Workshop.

3.4.2. Faculty Development Programme

Theme: Entrepreneurship

Funding Source: Entrepreneurship Development Institute (EDI), Ahmedabad

Two faculty development programmes, covering 37 faculty from various parts of the country, were conducted through the funding from Entrepreneurship Development Institute (EDI), Ahmedabad. The objective of the programme was to enable the lead by participating faculty for various entrepreneurial activities in their respective institutions. They ensured an active participation to lectures, workshops and field visits, and, in the process, made life-long memories with strong entrepreneurial lessons.

3.4.2 Business Plan Workshop

Title: Business plan workshop for graduate students

Funding Source: Fee from participating students

Seventy students from local engineering colleges participated in the Business Plan workshop conducted by CSIE with Tagore Engineering College for two days at IITM Research Park. It had lectures, interactions with successful business persons, and competitions in the end.

3.5 MoUs Signed

- An MoU was signed between CSIE and E-Cell, Government of Puducherry to be a knowledge partner for their innovation competition among students from engineering and other higher institutions.
- An MoU was signed between CSIE and Sri Aurobindo Society to promote social entrepreneurship.

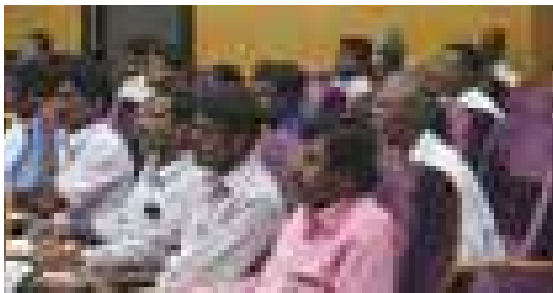
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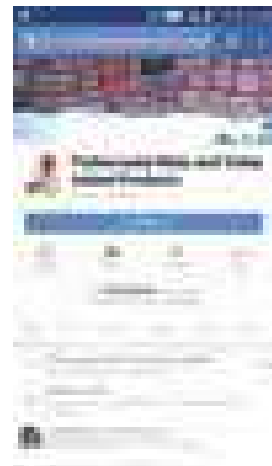
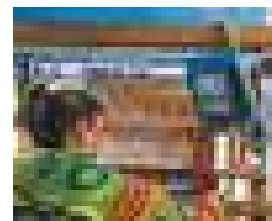
International Summer and Winter Schools on Social Entrepreneurship



UKISEEN Seminar on Social Entrepreneurship in KLS IMER Belgaum



Capacity Building Programs for FPOs and POPIs





Summer Camp for school students



Faculty Development Programme

6.3. Central Electronics Centre

6.3.1. Introduction

The Central Electronics Centre (CEC) was established in 1971 with the main objective of servicing and maintaining the wide variety of sophisticated electronic equipment at the institute. A key attribute of this centre is a blend of an academic environment and an industry-like working atmosphere.

The centre is housed in a dust-free environment. The CEC has a team of qualified, experienced and talented staff members, trained in India and Germany in various aspects of electronic instrumentation, testing and calibration. The infrastructural facilities and equipment have been continually enhanced over the years using Government of India funds and successive Indo-German collaborative projects.

When the centre was established, a critical need for training service engineers for maintaining electronic equipment was foreseen, and an 18-month training programme, the first of its kind in the country, was started. Later, the period of the training programme was extended to 24 months. In view of the large demand for trained personnel both within the institute and outside, conducting such long-term training programmes has become one of the important activities of the centre.

The centre has diversified its activities and now offers the following services:

- Servicing and maintenance of electronic equipment/instruments
- Training programmes for manpower development
- Calibration of electronic test and measuring instruments
- Testing of electronic products
- Development of custom-built equipment

- Consultancy services to industries in the above-mentioned areas
- Servicing and maintenance of personal computers and printers
- Arranging public address system for institute functions

So far, the CEC has provided expertise and services in the above areas to more than 230 industries/organisations inside and outside the country.

The CEC has been playing a key role in the area of renewable energy by conducting training programmes related to solar photo-voltaics (SPV). Forty SPV training programmes have been conducted and more than 860 personnel have been trained. The project was sponsored by the Indian Renewable Energy Development Agency (IREDA), New Delhi. SPV laboratory (indoor and outdoor) facilities have been established to promote developmental activities in this area. The CEC is active in diverse projects involving SPV technology.

As and when requests are received from industries, the centre conducts the short-term training programmes on Calibration Requirements and Uncertainty Calculations for Electro-Technical, Thermal and Mechanical Parameters.

As the centre has expanded its activities, most of the laboratories have been upgraded. In 2001, the CEC received the ISO 9001:2000 quality certification from RWTÜV, Germany for having established quality systems in its services. The centre also received NABL accreditation in 2004 for testing and calibration laboratories in accordance with ISO/IEC 17025:2005 standard. The ISO and NABL accreditations are actively maintained through adherence to the specified processes and procedures as per the latest standards. In the area of testing, the centre has also obtained the accreditation from BIS.

6.3.2. Academic Programmes

Short-Term Courses

Sl. No.	Coordinator(s)	Title	Period
Short-term Course for IIT Staff/Research Scholars			
1	Prof. V. Jagadeesh Kumar and Dr. K. Sulochana, Technical Officer	Refresher course on Measurement of Non-electrical Parameters: Temperature, Pressure and Force for research scholars of IIT Madras	12-14 July 2017
Short-term Course for Industries			
1	Prof. V. Jagadeesh Kumar and Dr. K. Sulochana	Measurement and Calibration Concept of Non-electrical Parameters: Temperature, Load and Force	28-30 June 2017
2	Prof. V. Jagadeesh Kumar and Dr. C. R. Jeevandoss	Solar Photovoltaic System Design and Maintenance	22-26 May 2017

Training Attended by the staff Members in Public sector Undertakings

Sl. No.	Faculty Name	Title	Institution	Period
Training:				
1.	Dr. C. R. Jeevandoss, IE	Orientation Programme as a Nodel Officer	National Institute of Solar Energy (NISE), Gurugram	8 September 2017
2.	Dr. C. R. Jeevandoss, IE	Training of Trainer Program (ToT)	National Institute of Solar Energy (NISE), Gurugram	18-20 September 2017
3.	Sri. P. Sadasivam, Junior Technical Superintendent	Training of Trainer Program (ToT)	National Institute of Solar Energy (NISE), Gurugram	18-20 September 2017
4.	Dr. K. Sulochana Technical Officer	ISO 9001:2015 Lead Auditor (Quality Management Systems) Training Course	TUV Nord, Chennai	18-22 September 2017
5.	Sri. K. K. Muthuswamy, Technical Superintendent	Testing of Telecommunication Equipments	NABL-organised programme conducted in Bengaluru	16-18 November 2017
6.	Sri. P. Sadasivam, Junior Technical Superintendent	Testing of Telecommunication Equipments	NABL-organised programme conducted in Bengaluru	16-18 November 2017
7.	Sri K. K. Muthuswamy, Technical Superintendent	Awareness Program on Proficiency Testing Provider-Accreditation based on ISO/IEC 17043-2010	NABL-organised programme conducted in Kochi	4 December 2017
8.	Ms. N. Karthiyayini, Technical Officer	Awareness Program on Accreditation of Medical Device Calibration on Leveraging Quality Service	NABL-organised programme conducted in Mumbai	11-12 January 2018
9.	Dr. K. Sulochana, Technical Officer	Awareness Program on Accreditation of Medical Device Calibration on Leveraging Quality Service	NABL-organised programme conducted in Mumbai	11-12 January 2018
10.	Ms. N. Karthiyayini, Technical Officer	Symposium in connection with setting up of new calibration facilities through indigenous resources	Air Force Station, Coimbatore	22 February 2018

6.3.3. Design and Development Activities

New facilities added or major equipment procured

Sl. No.	Equipment	Value (Rs. in lakh)
1	AC/DC Measurement/Transfer Standard	20,80,000
2	Digital Vibration Controller	3,60,750
3	Precision LCR Meter	8,58,894
4	VST Apparatus	63,248
5	USB-Based Spectrum Analyser	1,99,420

6.3.4. Research and Consultancy

Industrial Consultancy projects

Sl. No.	Faculty Name	Title	Industry	Amount (Rs.)
1	The Head, CEC	Tests on Light Fixture of 200W LED bay Light	M/s Halonix Technologies Private Limited, Chennai	17,250
2		Tests on K-Lite Lumineries	K-Lite Industries, Chennai	59,800
3		Tests on K-Lite Lumineries	K-Lite Industries, Chennai	13,800
4		Tests on LED Tube Lights, Halonix Make	Universal Electrical & Electronics Co, Mumbai	34,500
5		Tests on K-Lite Lumineries	K-Lite Industries, Chennai	27,600
6		Testing of 350W LED Flood Light fittings, Bajaj Make	Bajaj Electricals Limited, Chennai	2,07,000
7		Testing of LED Flood Light fittings, Philips Make	Philips Lightings India Limited, Chennai	1,61,000
8		Tests on LED Lumineries	Airport Authority of India, Coimbatore	96,600

Sl. No.	Faculty Name	Title	Industry	Amount (Rs.)
9		Tests on LED Lumineries	Baliga Lighting Equipments Private Limited, Chennai	23,000
10		250W LED Light Fittings	Airport Authority of India, Chennai	34,500
11		Tests on LED Lumineries	Airport Authority of India, Chennai	64,400
12		Failure Rate Analysis and modification in component rate and design	Jude Equipments Private Limited, Chennai	35,400
13		Servicing of BLDC Motor Drive	Anna University, Guindy Campus, Chennai	22,500
14		Testing of LED Street Lights	Mahaveer Electric Agencies Madras, Chennai	94,400
15		Tests on K-Lite Lumineries	K-Lite Industries, Chennai	28,320
16		Testing of LED Luminaire, Halonix Make	Shanthi Enterprises Electricals Private Limited, Chennai	17,700
17		Tests on LED Lumineries	Philips Lightings India Limited, Chennai	28,320
18		Vibration Tests on UPS	CET Power Solutions India Private Limited, Chennai	24,780
19		Surge Test on MOV Circuit	Baliga Lighting Equipments Private Limited, Chennai	11,800
20		Testing of LED Lamps	Airport Authority of India, Coimbatore	53,100
21	The Head, CEC	Photometric Tests on LED Luminaire as per LM 79	Baliga Lighting Equipments Private Limited, Chennai	14,160
22		Temperature Cyclin Tests	CET Power Solutions India Private Limited, Chennai	19,500
23		Photometric Tests on LED Luminaire as per LM 79	Baliga Lighting Equipments Private Limited, Chennai	33,040
24		Calibration of Power Analyser, Digital Storage Oscilloscope and Clamp Meter	JR Communications and Power Controls Private Limited, Trichy	15,930
25		Testing of Smart/watches as per IS 13252 (Part1):2010+A1:2013+A2:2015	Trio Technologies, Bengaluru	81,000
26		Lumen Tests on 18W LED Lamp	Halonix Technologies, Ernakulam	32,000
27		Testing of LED Fittings	Project Director, District Rural Development Agency, Cuddalore, Tamilnadu	35,400
28		Testing of LED Lights as per LM 79	Jaydeep Agency Corporation, Ahmedabad, Gujarat	35,400
29		Testing of LED Lights as per LM 79	K-LITE Industries, Chennai	28,320
30		Current Injection Testing for Alternator	Lucas TVS, Chennai	35,400
31	Environmental Tests on Electronic Products	Sosaley Technologies, Chennai	23,600	
32	Testing of custom made PCBs for Ultrasound Scanners	Aloka Triitron Medical Technology Private Limited	35,400	
33	Testing of PCBs (Environmental)	Baliga Lighting Equipments Private Limited, Chennai	29,500	
34	Testing of LED Fittings	AAI, Thiruvananthapuram Airport	17,700	
35	LED Lamp Testing as per LM 79	Green Field International, Chennai	1,23,900	
36	Testing of LED Products as per LM 79	Sri Subadra Energy Innovations Private Limited, Bengaluru	70,800	
37	Measuring flux output of LED	Valeo Lighting Systems India Limited, Chenna	28,320	
38	Testing of LED Products	Lighting Technologies India Private Limited	40,120	
39	Head, CEC	Trouble-shooting of AC Power Source	Technocomm Instruments Private Limited, Hobli	86,400
40		Tests on LED Lamps	LED's World, Chennai	1,06,200
41		Tests on 30W LED Lamps as per LM 79	Orion LED Manufacturing Private Limited, Chennai	14,160
42		LED Lamp Testing as per LM 79	AAI, Chennai Airport	53,100
43		Tests on Adornis Tunnel Light	Lighting Technologies India Private Limited	34,400
44		Testing on LED Street Lights	Southern Electricals, Chennai	1,29,800
45		ILC Testing of Ballast	Venture Power Systems, MEPZ, Chennai	5,000
Total				13,96,620

6.4. P.G. Senapathy Centre for Computing Resources

6.4.1. Introduction

The computer centre at Indian Institute of Technology Madras was established in 1973 to provide centralised computing resources and support to the academic initiatives of the institute. It has had professionally maintained facilities that have served the IIT Madras community, from the IBM System 370 in the 1970s and the Siemens system in the 1980s to the SGI, IBM power and Sun systems in the earlier part of this millennium, and the super-computers and communication and network services today. Over the years,

the computing and information technology requirements of IIT Madras community have been increasing. The computer centre's organisation has also evolved with the increase in requirements. In 2007, the infrastructure of the centre was significantly upgraded through an endowment given by Mr. S. Gopalakrishnan in the name of his father Mr. P.G. Senapathy.

The activities of the centre are organised under five verticals: high-performance computing environment, networks, e-services, data centre, and workflow.



Each vertical is focused on continually improving its services to meet the needs of IIT Madras community. The computer centre has been ISO 9000 certified since 1999. The TUV has certified the centre as an ISO 9001:2015 standard management system for a period of three years from February 2017 to January 2020, after conducting the final auditing as per TUV NORD CERT procedures. Currently, the centre maintains all its processes in conformance with the ISO 9001:2015 standards and is certified along with other units at the institute by TUV Nord. This report presents a background of each vertical and a summary of the annual activities.

6.4.2. High-Performance Computing Environment

The High-Performance Computing Environment (HPCE) group was established to cater to the ever-increasing demand for super-computing facilities from researchers at IIT Madras.

The Virgo super-cluster, with 292 nodes and two iDataPlex dx360 M4 master nodes, with FDR 10 InfiniBand connectivity, is already in use. These nodes have 2× Intel E5-2670 eight-core, 2.6 GHz processors, with 4 GB of memory per core. This machine catering to the needs of the research community generally uses parallel programming.



Virgo cluster

The Virgo system has a storage capacity of two 80 TB General Parallel File system and a 50 TB NAS file system for backup. The AMC of Virgo system has been renewed only for the critical parts of the system. The following are some active research areas that use the Virgo cluster: aerospace engineering, atmospheric and ocean modelling, analysis of large structures, flows and combustion modelling, material sciences, social, ecological and physical network modelling, numerical weather prediction and data assimilation, molecular modelling, spectroscopy, and VLSI.

The computer centre at IIT Madras has a cluster for B.Tech. users called GNR—named after the great scientist Prof. G.N. Ramachandran—with one head node from Supermicro, with Intel Xeon CPUs with a memory of 32 GB and 500 GB hard disks and eight compute nodes of the same configuration. This cluster has a file system of 14 TB, and PBSPro is the job scheduler. Eight compute nodes have been provided by the Biotechnology Department and eight nodes are funded from institute's grant. Eight nodes of this cluster are populated with 16 Intel Xeon PHI cards (two PHI cards per node).

The GNR cluster has 16 compute nodes with dual processors, eight-core Intel Xeon Ivy Bridge E5-2650v2 series processors with 4x8 GB RAM and a 500 GB SATA hard disk in each node and a head node with a Super Micro server with dual processors, eight-Core Intel Xeon Ivy Bridge E5-2650v2 series processors with 4x8 GB RAM and a 500 GB SATA hard disk with 14 TB of shared storage. The warranty of GNR expired in March 2018, and it is under AMC for one year.

The HPCE group maintains machines from various departments and centres. The group also supports users in improving code and organises training programmes for effective use of the facility. It maintains all commercial software related licenses and implements the 80:20 policy for all commercial software procured by computer centre for HPCE users. Detailed information about HPCE, including the latest usage statistics and the software available is posted at cc.iitm.ac.in.

6.4.3. Networks

The campus computer network was established in 1994, connecting about 18 buildings in the Academic Zone with telephone cables. Its initial bandwidth was 64 kbps. Today, with a fiber-backbone high-speed network connectivity of 10 Gbps, all the three zones—Academic Zone, Hostel Zone and Residential Zone—are inter-connected. The total number of nodes in the campus is approximately 20,000. The network equipment in the Academic Zone was upgraded to provide 100/1000 Mbps connectivity to the nodes. All the buildings in the Academic Zone are provided with dual fiber connectivity. Facilitation for video conferencing is also provided under the network service. The network vertical also oversees the procurement of external network services, as well as the design, installation and maintenance of the network structure, switches and cabling across the IIT Madras campus.

A summary of the key activities of the Network Group for the year under consideration is as follows:

- Implementation Wi-Fi in Class Room complex, Raman and Ramanujam Blocks, FFT (Food for Thought canteen), Zaitoon canteen, BEGH and Taramani guest houses.
- Support for conducting online examinations for many courses.
- Implementation of Eduroam, which is useful for IIT Madras users, including students. Students visiting other universities can get internet connectivity by connecting through Eduroam SSID with our LDAP credentials. Similarly, visiting academics or researchers or students from India or abroad, with their university/institutions/research laboratory with Eduroam facility, can get Internet access immediately in the campus with their institute credentials.
- Supported web-casting of Convocation through Internet and Intranet.
- Upgraded the Internet bandwidth from 2 Gbps to 10 Gbps through NKN.



6.4.4. E-Services

The E-Services vertical focuses on services such as web system configurations, e-mail, web access, web security,

Mail services

- IIT Madras (email.iitm.ac.in) Microsoft exchange 2013
- Students (smail.iitm.ac.in)
- Alumni (alumni.iitm.ac.in)
- Retirees (retiree.iitm.ac.in)
- Conferences (wmail.iitm.ac.in)
- Projects (imail.iitm.ac.in)

Web services

- Virtual hosting
- Mailing list
- Employee User Web portal
- Websites
- Shared Hosting
- Moodle online learning platform
- Security and monitoring services
- Firewall tuning
- Hack solution
- Security gateway (spam appliances)
- Web application firewall (WAF)
- Log analytics
- Digital certificate
- IT Infrastructure monitoring (NAGIOS)

Storage solution

- Backup and restore process
- Disaster recovery
- Server and desktop consolidation by virtualization (VMWARE)

User management services

- Active Directory Service (ADS)
- Lightweight Directory Access Protocol (LDAP)

storage solutions, virtualisation, web services, and others. Several new services were enhanced and added by this group. The services maintained and initiated by the group are:

Development and deployment services

1. Convocations
2. Distinguished Alumnus Awards
3. User registration for IC&SR
4. HPCE Web-based user management
5. Faculty and staff portal
6. Web-based training
7. VTLS support (Library)
8. Support to students' elections
9. Support to JEE
10. Support to HSEE
11. Support to departments with Web services
12. Support to Office of Alumni Affairs
13. Support to Placement Office
14. Support for conferences
15. Support to ICSR

Other services

1. SMS gateway
2. Google API services
3. Intranet services
4. Project management support
5. Online ticketing system
6. Home portal for staff/faculty
7. Cloud services (own cloud)
8. Authenticated mail service
9. Local/global FTP
10. VDI (Virtual Desktop Infrastructure)
11. Resources booking system
12. Microsoft licensing
13. Request Tracker
14. MS/PHD online exam through Moodle
15. English O-level exam through Moodle



Virtualization

A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An

operating system installed on a virtual machine is called guest operating system. The virtual machine gets a CPU, memory, video cards, access to storage and network connectivity from the host it runs on.

VMware server: Before virtualization



After virtualization



E-Services server area in computer Centre's Data Centre



Email Gateway: Sonic WALL

All incoming mails and outgoing mails go through this appliance.



Web Application Firewall: WAF Fortinet 1000 series

Acts as the firewall for websites





6.4.5. Data Centre

The function of the Data Centre is to ensure appropriate management of facilities so that all verticals of the Computer Centre function efficiently. These facilities

include uninterrupted power supply, backup power supply (DG set), CCTV, climate control, access control, water leakage system, fire protection under BMS and office space maintenance. The Data Centre operates and maintains the following equipment:

Sl. No.	Description of Equipment	Capacity	Quantity
1	Diesel generator set (Caterpillar) with 12 V/200 AH (Exide)—2 Nos.	600 kVA	2 Nos.
2	Synchronizing panel for parallel operation	1000 kVA	1 No.
3	UPS (DB) with 12 V/120 AH (Rocket)—192 Nos. and 12 V/200 AH (Batteries)—60 Nos.	160 kVA	3 Nos.
4	UPS (SOCOME) with 12 V/200 AH (Batteries)—60 Nos.	200kVA	1Nos
5	UPS (MGE) with 12 V/150 AH (Batteries)—32 Nos.	80 kVA	1No.
6	UPS (SOCOME) with 12 V/150 AH (Batteries)—32 Nos.	80 kVA	1 No.
7	UPS (Emerson) with 12 V/42 AH (Batteries)—68 Nos.	30 kVA	1 Nos.
8	UPS (DB) with 12 V/65 AH (Batteries)—25 Nos.	20 kVA	1 No.
9	PRAC AC (Blue Star)	17 TR (60 kW)	10 Nos.
10	PRAC AC (Blue Star)	13.5 TR (48 kW)	2 Nos.
11	PAK AC (Blue Star)	11 TR	4 Nos.
12	PAK AC (Blue Star)	5.5 TR	2 Nos.
13	Ductable split AC (Blue Star)	8.75 TR	2 Nos.
14	Ductable split AC (Blue Star)	5.5 TR	6 Nos.
15	RO plant (EXEL)	250 LPH	1 No.

The Data Centre has Upgraded the Building Management Systems with the latest technology, as follows

Details of New Building Management Systems

BMS

1. Enterprise Buildings Integrator (EBI) R430 server
2. CP IPC panel—1 No. (with IPC controller—1 No.)
3. CP SPC panel—3 Nos. (with SPC controller—8 Nos.)
4. Battery monitoring system for all UPS

Single Zone (FAAST)

5. Vesda panel for network area (Fire alarm aspiration seeing technology)

Security system

6. CCTV Camera IP-based IR indoor/outdoor (Capture)—27 Nos.
Sixteen-channel encoder—2 Nos.

Fire system

7. Fire alarm system Intelligent photoelectric smoke detector—84 Nos.
Response indicator—40 Nos.

Intelligent heat detector—2 Nos.

Temperature sensor—2 Nos.

Manual pull station—4 Nos.

Hooter—9 Nos.

Isolator module—3 Nos.

8. Fire fighting Gas release panel (Ravel) —2 Nos.
Door access system
9. Access control TEMA server—1 No.
Biometric card reader—4 Nos.
Emergency push switch—13 Nos.

PA system

10. Plena 480 W amplifier (Bosch)

Infrastructure Development

1. Humidity control system for D.G. sets installed.
2. LCD projector installed for the seminar room.
3. Modular furniture has been provided to the Room No. 220 and the hall to accommodate SRA and the entire workflow team.
4. All works related to electrical and networking have been carried out.
5. 200 kVA UPS x 1 Nos installed for server Area - 2



(Newly installed 200 kVA UPS)

6.4.6. Workflow

Enterprise resource planning (ERP) software, internally referred to as Workflow, has been implemented at the Computer Centre. The Workflow group supports system usage and capture changes in requirements involved in process development activities, maintaining reporting websites that collect data from Workflow and generating reports using new software tools.

Workflow submissions, which are enforced in the processes for administration, stores, accounts and academics are

running successfully. In last financial years, data extracted from Workflow were analysed using a reporting tool, Tableau, and utilised by the administration section to improve staff performance. For 2017-18, we have started development activity in a new open source reporting tool called R, which will eventually replace Tableau.

As part of optimisation, indent creation process, purchase order amendment, estate application, and others were released. Profile correction, annual performance appraisal report process, immovable property returns, and degree

certificate preparation are few important processes that were implemented in 2017-18. Another major development activity for this year was course registration changes and integration with SEAT allocation algorithm. The SEAT committee was formed based on the recommendations of Curriculum Task Force to enhance overall curriculum and elective course registration experience for B.Tech and Dual Degree students.

Workflow is integrated with a new application called Thesis Evaluation System in 2017-18. Scholars can now submit their synopsis/thesis through Workflow and, after necessary approvals, get it transferred to another independent portal for external examiners to evaluate. Automatic email triggers and user-friendly screens are introduced for academic section—research unit to handle the process peacefully.

Along with regular development and optimisation activities, enhancement to rate contract website, enhancement

to vehicle pass website for outsiders, new supplier registration website and migration of academic website were implemented in this financial year. The GST and 7th Pay Commission changes are implemented in Workflow and Tally. Support was provided to stores and accounts section continuously.

Online TCF was implemented in financial year 2015-16 and enhanced during 2016-17. For 2017-18, online TCF moved to the next level as a mobile app. Students can now submit their feedback through their mobile phone; the reports are enabled for faculty within Workflow application.

6.4.7. ISO

The computer centre quality systems manual has been upgraded from ISO 9001-2008 to ISO 9001-2015.

Faculty/Staff Members and Areas of Works

Sl. No.	Name (Dr/Mr/Ms/Mrs)	Designation	Area of Focus
1	Prof. Harishankar Ramachandran	Chairman	Overall coordination and planning
2	Venkata Krishna Nandivada	Faculty-in-Charge	High-Performance Computing Environment
3	Nitin Chandrachoodan	Faculty-in-Charge	Networks
4	N. S. Narayanaswamy	Faculty-in-Charge	E-Services
5	Rahul Ratnakar Marathe	Faculty-in-Charge	Workflow
6	V. Ravichandran	Deputy Systems Engineer	High-performance computing, application programming, system programming and administration, user education and planning, data centre operations
7	C.N. Vijayaragavan	Deputy Systems Engineer	Centre representative for ISO-9000
8	Banavath Baman	Assistant Systems Engineer	Training
9	S. Anand Kumar	Assistant Systems Engineer	Mail domains, mail gateways, server hardware, VMWARE, Web services, virtualisation, support services
10	V. Selvaraju	Assistant Systems Engineer	Network design, servers, switches, campus network maintenance and administration
11	S. Priya	Assistant Systems Engineer (contract)	Workflow, software development
12	T.V. Subba Rao	Technical Superintendent	Workflow—Administration Module
13	R. Thiruneelagandan	Junior Technical Superintendent	Planning, operations and maintenance of D.G. sets, UPS's, A/c's, BMS, furniture and all Data Centre related equipment
14	P. Gayathri	Junior Systems Engineer	High-performance computing, system software, installation of open source applications and commercial applications, user education development
15	M. Jeevanantham	Junior Technician	Computer networks
16	M. Irudayaraj	Junior Technical Superintendent	Web programming, Linux, E-Services
17	R. Madhanarasan	Junior Technical Superintendent	Data Centre, BMS and ISO
18	E. Arun	Junior Technical Superintendent	Workflow
19	P. Mahesh Mithreevan	Senior Technician	Computer networks, servers, switches, campus network, maintenance
20	C. Rajendran	Senior Assistant	Administration

Apart from the permanent staff listed in the foregoing, there are project officers, project associates and project technicians assigned to each vertical in the computer centre to support the various activities of the centre.

6.5. Central Facilities

Founded in 1959, Central Workshop initially consisted of shops associated with three major manufacturing processes - metal cutting, metal joining and metal forming. Later, sections on other modern manufacturing processes and

control systems were introduced in workshop training. Today, Central Workshop has facilities in different shops and sections. The list of shops and sections with their facilities are given below.

6.5.1. Central Workshop Facilities

S. No.	Shop	Facilities
1	Carpentry	Wood working with planing, circular saw cutting, turning, thickness reducing, polishing processes and hand-operated power tools
2	Fitting & Tool Room	Filing, drilling, tapping, jig boring, tool milling, engraving, marking, slotting, grinding and cutting
3	Machine Shop	Horizontal and vertical milling machines, lathes, planing machine, radial drilling machine, tool and cutter grinder, CNC lathes, CNC milling machines, vertical and universal milling machines and computer-aided manufacturing software.
4	Gear Shop	Spur, helical and bevel gear cutting and gear inspection
5	Electrical Shop	Trainers for single-phase electrical circuits, three-phase Direct On Line and Star-delta starter trainers
6	Instrument Shop	Calibration of pressure gauges up to 1000 bar and precision machines, Rapid Prototyping Machine (3D Printer)
7	Welding Shop	Arc welding, gas welding, brazing, TIG welding, Plasma Arc cutting and arc welding simulator
8	Foundry Shop	Sand molding, melting and die casting machines
9	Smithy Shop	Open hearth furnace
Sections		
10	Pneumatics and Hydraulics	Basic and Advanced Pneumatics trainers, Electro pneumatic trainer, PLC for pneumatics trainer, Basic and Advanced Hydraulic trainers
11	FRP	Manufacturing polymer-reinforced composites by hand lay-up process
12	Plastics	Introduction to plastics, demonstration and production in hand operated, semi-automatic injection and compression moulding of plastics
13	Instrumentation & Communication Lab	Introduction to basic communication systems, exercises on optical fiber communication, Introduction to various kinds of transducers, microprocessor based control applications, example of stepper motor control and traffic light controller and PLC

In addition to above facilities, the Central Workshop is operating and maintaining institute's bus

WS1010 (4 Credit), WS1020 (2 Credit) and WS 1030 (2 Credit) course (exclusively for the students of Engineering Design during first semester). The details of the students and training modules are given below.

The Central Workshop is training 803 B.Tech/Dual degree (1st year) students of 2017-18 batch for course code

Department	No. of students	Training Modules
1. Electrical Engineering	120	Power Tools
2. Engineering Physics	31	
3. Mechanical Engineering	147	
4. Metallurgical and Materials Engineering	51	
5. Aerospace Engineering	60	
6. Chemical Engineering	92	
7. Naval Architecture and Ocean Engineering	54	
8. Civil Engineering	99	
9. Biological Engineering	34	
10. Computer Science and Engineering	58	
11. Engineering Design	57	
Total	803	

The first semester workshop training course for 2017-18 batch was conducted for 12 days between 22 November and 3 December 2017. The second semester training course for the batch was conducted from 16-29 July 2018.

The second semester training course for 2016-17 batch Year I B. Tech/Dual degree students was conducted for 12 days from 17-28 July 2017.

The Central Workshop executes fabrication of experimental test set-ups and their accessories related to B. Tech/M. Tech students and M.S./Ph.D scholars. A total of 987 work orders were executed during 2017-2018.

The workshop offered two months' course on essentials skills to enhance employability of Mechanical Engineering graduates of Nagaland state as part of IIT Madras' contribution to National Skill Development programme.

The Central Workshop has also trained 26 apprentice trainees bearing ITI, diploma and B. E. qualification. Two of them have been trained for maintenance of buses in Auto shop. An orientation programme for newly recruited Junior Technicians and Junior Technical Superintendents was also conducted. The workshop is coordinating Engineering is Fun workshop for school students and campus children.

An HRD training programme, BOSCH Power tools was attended by two staff members from 6-7 September 2017.

About 200 Government and Government aided school students have participated in two-day hands-on workshop training at Central Workshop.

The Central Workshop staff members are actively participating in the product development process of IIT Madras incubated start-up companies.

6.5.2. Central Glass Blowing Section

Established in 1972, the Central Glass Blowing Section (CGBS) is one of the important infrastructural facilities of Indian Institute of Technology Madras. The facility undertakes design and fabrication of sophisticated glass apparatus for research and development in various departments. It has a range of modern glass working equipment that was largely procured from Germany under a collaborative programme. The apparatus includes a horizontal-cum-vertical lathe, a universal forming lathe and a high-vacuum system. The section is also well equipped with a good number of sophisticated burners, drilling and cutting machines, grinding and polishing equipment and such other tools necessary for fashioning varied glass apparatus. It has adequate facility for quartz working and developed a high level of expertise in this area.

The sophisticated apparatus fabricated includes cryostats, spherical and cylindrical Dewar flasks, lugging probes, laser housing tubes with water jackets, reactor tubes, vacuum tube collectors (for solar energy) and quartz ware. From April 2017 to March 2018, the CGBS undertook 262 work orders from various departments.



7

International and Alumni Relations

7.1. Introduction

The Dean's Office for International & Alumni Relations (I&AR) was established in October 2012. This office strives to support the institute's drive towards global excellence in education, research, relations with industry, innovation and entrepreneurship, sustainability and social impacts, internationalisation, and physical infrastructure.

7.2. Vision

The vision of the Office of I&AR is to enhance the global stature and impact of IIT Madras by leveraging alumni and international relations.

7.3. Mission

The mission of the Office of I&AR is to leverage the institute's excellent relationship with alumni to increase

engagement with academia/research labs, industry/business, entrepreneurs and foundations to promote institute-external relations by building on alumni relations and to raise funds for the benefit of the institute and its stakeholders—students, faculty and staff, and society.

7.4. Distinguished Alumnus Awards

The Distinguished Alumnus Award (DAA) is the highest award given by IIT Madras to its alumni in recognition of their exceptional merit and excellence. The awards are given for outstanding achievements in the areas of entrepreneurship, leadership and management, academia, social and technological innovation, and service to humanity at large.

In December 2017, the following 12 Distinguished Alumni were Announced.



Dr. Kianthra Mani Chandy

1965/BT/EE
Simon Ramo Professor of Computer Science, Emeritus, California Institute of Technology, California, USA



Shri V.M. Thomas

1973/BT/ME
Joint Managing Director, Johnson Lifts Private Limited, Chennai, India



Dr. D.V. Satyanarayana Gupta

1974/BT/CH
Technology Fellow, Baker Hughes, a GE company, Texas, USA



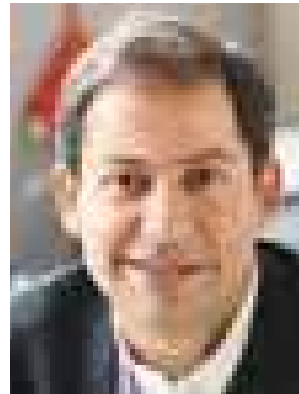
Dr. M. A. Subramanian

1982/PhD/CY
Milton Harris Professor in Materials Science, Oregon State University, Oregon, USA



Shri Lazar T. Chitillapilly

1983/BT/AE
Project Director, Air Breathing Propulsion Project, VSSC, ISRO, Thiruvananthapuram, Kerala, India



Dr. Noshir S. Contractor

1983/BT/EE
Jane S. & William J. White Professor of Behavioural Sciences, Director of SONIC Research Group, Northwestern University, Illinois, USA



Dr. Sridhar R. Tayur

1986/BT/ME
Ford Distinguished Research Chair Professor of Operations Management, Carnegie-Mellon University, Pittsburgh, Pennsylvania, USA



Shri Rajesh Jha

1988/BT/CS
Executive Vice President, Office Product Group, Microsoft Corporation, Redmond, Washington, USA



Dr. Seeram Ramakrishna

1989/MT/ME
Director, Center for Nanofibers & Nanotechnology, Professor of Mechanical Engineering, National University of Singapore, Singapore



Dr. Nagabhushana Sindhushayana

1989/BT/EE
Vice President, Technology, Qualcomm Inc, San Diego, California, USA



Dr. Giridhar Madras

1990/MT/CH
Professor of Chemical Engineering, Indian Institute of Science, Bangalore, India



Dr. Sudhir Kumar Mishra

1996/MT/ME
CEO & MD, BrahMos Aerospace Distinguished Scientist & Director General (BrahMos), DRDO, Ministry of Defence, Gol, New Delhi, India

Leadership Lecture Series

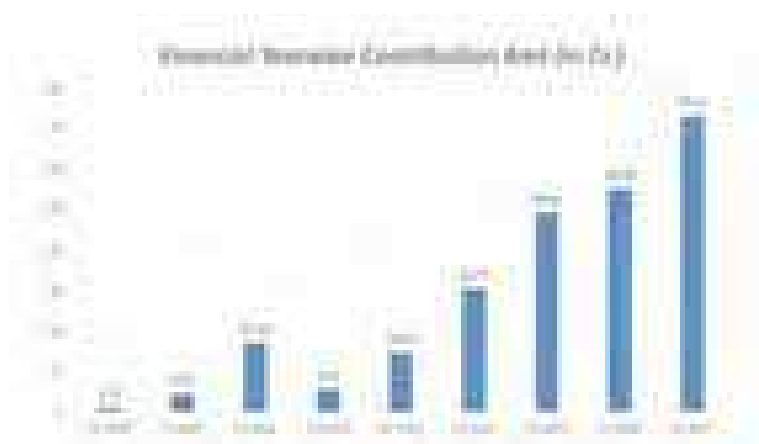
LLS were initiated in 2012 to create more avenues for alumni to interact and share their experiences with students and faculty members. Three to four lectures are held each month during the semester, with more than 160 lectures so far, of which 29 lectures were held between April 2017 and March 2018. Please visit <http://alumni.iitm.ac.in/leadership-lecture-series/> for details.

Travel grants

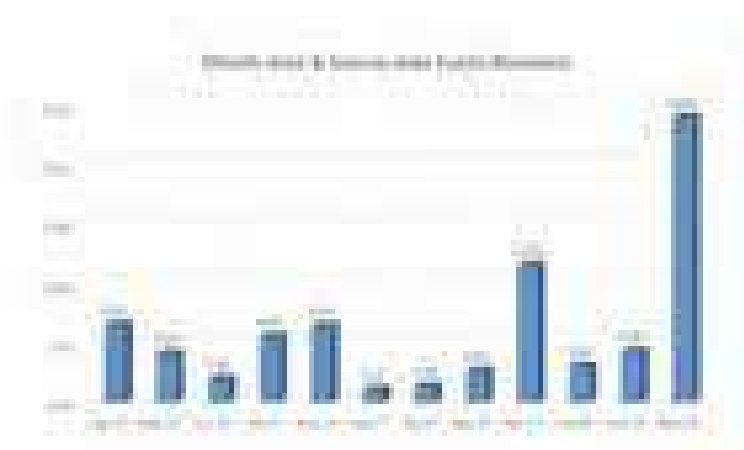
The IITMAANA (IIT Madras Alumni Association of North America) Travel Grant was instituted 11 years ago. Its scope

was enlarged in 2010 to support undergraduate travel also. The programme partially reimburses expenses incurred abroad by students and allows them to travel overseas for competitions, summits, workshops, conferences and internships. In 2017-18, about 267 students received grants. The total amount granted towards student travel was about Rs.1.04 crore. Twenty-two faculties were supported with travel grants for research-collaboration visits. The total amount granted towards faculty travel was about Rs.11.86 lakh.

Statistics of Funds Received



Month-wise and Source-wise Funds Received



Major Donations

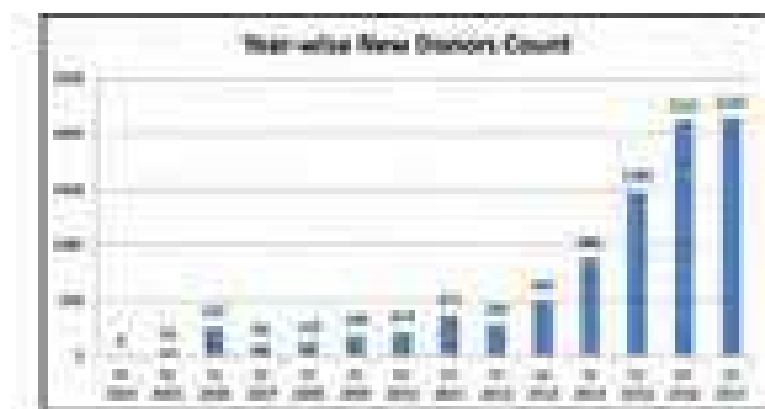
Batch Reunion			
#	Donor Name	Batch Details	Amount (Rs. in crore)
1	G. D. S. Ramkumar	1990/BT/CS	0.22
2	Arvind Narayanan	1992/BT/CE	0.20
3	Yogesh Kumar Gupta	1981/BT/EE	0.16
4	Gopal Raja	1991/BT/CE	0.16
5	Joseph Sirosh	1990/BT/CS	0.14
6	Vasanth Kumar Victor	1982/BT/ME	0.13
7	Debashish Gupta	1990/BT/CS	0.13
8	Xavier Puthur J.	1971/BT/ME	0.11
9	Shrikumar Suryanarayanan	1982/BT/CH	0.10

HNI			
#	Donor Name	Batch Details	Amount (Rs. in crore)
1	Kris Gopalakrishnan	1979/MT/CS & 1977/MSc/PH	7.10
2	Gururaj Deshpande	1973/BT/EE	6.40
3	Prem Watsa	1971/BT/CH	3.84
4	Subramonian Shankar	1971/BT/EE	3.28
5	Prakash Arunachalam	Non-alumnus	1.93
6	Ajit Singhvi	Non-alumnus	1.50
7	Vijay Ullal	1980/BT/CH	1.28
8	Krishna S. Kolluri	1986/BT/ME	1.28
9	Chandrasekhar D.	1970/BT/MT	0.90
10	Rajinder Singh Duggal	1967/BT/EE	0.90

CSR		
#	Donor Name	Amount (Rs. in crore)
1	HT Parekh Foundation	4.00
2	Rural Electrification Corporation Limited	3.26
3	Robert Bosch Engineering and Business Solutions Private Limited	3.00
4	VirtusaPolaris	2.10
5	L&T Technology Services Limited	1.07
6	Indian Additives Limited	1.04
7	American Express Services India	1.00
8	Aricent Technologies (Holdings) Limited	1.00

Non CSR		
#	Donor Name	Amt (Rs. in crore)
1	J. Mitra & Co. Private Limited	2.00
2	Chemplast Sanmar Limited	1.00
3	Tata Consultancy Services Limited	0.91
4	Deakin University	0.73
5	Mitra Medical Services LLP	0.53
6	Micromatic Grinding Technologies Ltd.	0.50
7	MD Anderson Cancer Center	0.16
8	Wellcome Trust/DBT India Alliance	0.16
9	Cognizant Technology Solutions India Pvt Ltd	0.14
10	The Boeing Company	0.14

New Donors (Year-Wise)



Fund-Raising Summary

- The funds raised in FY 2017-18 reached a record Rs.73 crore, beating our previous highest tally by nearly Rs.20 crore (and the next-nearest IIT by an anecdotal 4X!)
- One-third of the amount (Rs.25 crore) is towards CSR.
- Individual donors contributed 50 per cent of the total amount; 47 per cent of them are based in India, 43 per cent are based in the USA.
- The number of donors also reached a new high, over 900, in 2017-18, increasing by nearly half over 2016-17.
- December and March are the high-inflow months (FY-end), with March being higher by a factor of 2X.
- Cumulatively over past nine years, endowments made 40 per cent of the funds raised.
- Chairs and scholarships attract most endowments.

SSAN Ananya Educational Trust

SSAN Ananya is a trust set up with the noble intention of helping deserving students who require financial help during their education at IIT Madras and inspiring them to be a part of a unique brand of citizens who believe in the importance of 'paying forward' the interest-free loan. So far, 12 students have received Rs.6 lakh from this scheme.

Events

Institute Day and DA Forum

The 58th Institute Day was celebrated on 18 April 2017. Ten out of the 10 Distinguished Alumni (DAs) for 2017 received their awards on the day. One alumnus received the award on 16 March 2017. Fifty-nine alumni-sponsored Institute Day Prizes were given to the students on Institute Day.



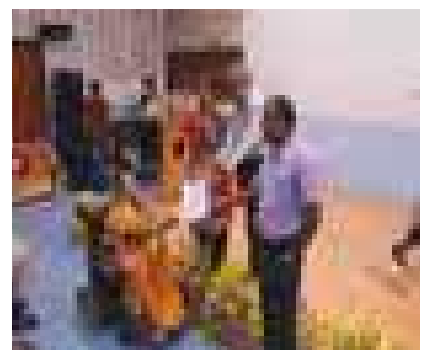
Prof. A. Ramesh (1985/MT/ME and 1990/Ph.D/ME) – ME Department received Srimathi Marti Annapurna Gurunath Award for Excellence in Teaching instituted by Dr. Marti G. Subrahmanyam (1967/BT/ME).



AlumnNite

The AlumNite 2017 was held on 22 July 2017. An Institute Chair, endowed in the name of late Prof. S. Sampath by alumni of the pioneer batches, 64-66, was launched. Also, a new initiative to honour the Founding Professors with a Chair was announced by Shri Mallick Putcha [(1964/BT/EE) and (1966/MT/EE)]. Ace Micromatic Chair Professorship was launched by Mr. P. Ramadas, MD, Micromatic. Prof. Anand Raghunathan, Purdue University and Distinguished Visiting Professor, IIT Madras received Distinguished Alumnus Award 2017.

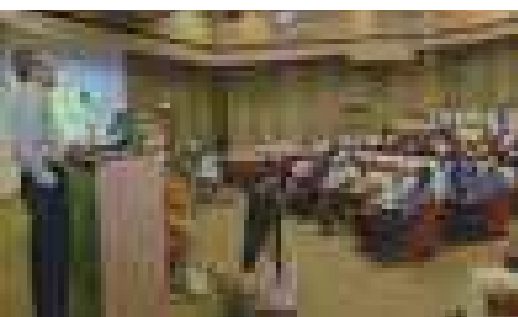
The Director, IIT Madras, conferred the YBG Varma Award for Excellence-in-Teaching in Chemical Engineering, Excellence-in-Research award instituted by Dr. Prakash Keshaviah, the JC Bose Patent award (instituted by our alumni, Anil Kumar (2000/BT/CH) and Kundan Kumar), along with other faculty and student awards. The Graduating Class Gift Cheque of Rs 62 lakh was handed over to the Director, IIT Madras, by 2017 Batch Representatives. Eighteen alumni-sponsored Convocation Prized was given on Convocation Day. Twenty-four alumni sponsored the Alumni Day prizes that were given on AlumNite.



Reunion Day

More than 270 alumni and their family attended the event. The batches of 1972, 1982, 1992, 1997 and 2007 had

their reunion. Prof. Ashok Jhunjhunwala delivered a talk on Scaling EV in India. The names of 2018 Distinguished Alumnus were announced.

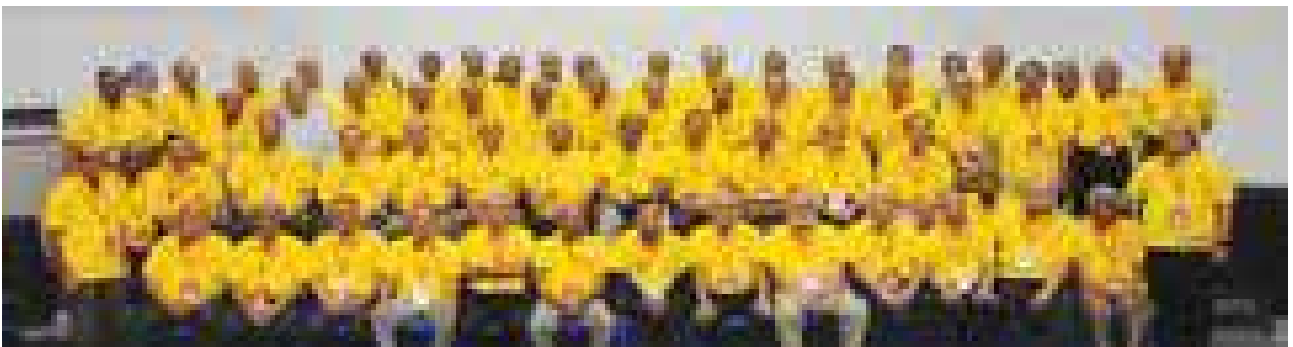
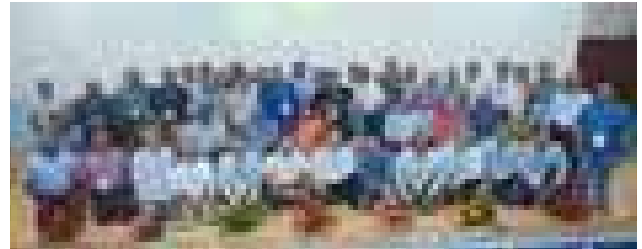


Ruby, Golden and PG Reunion

The 1977 Batch Ruby Reunion and first-ever Research Scholars' Reunion across years and departments was held



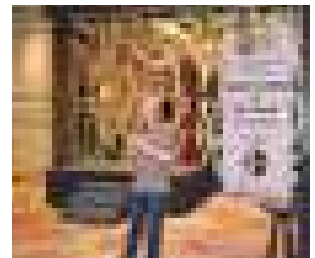
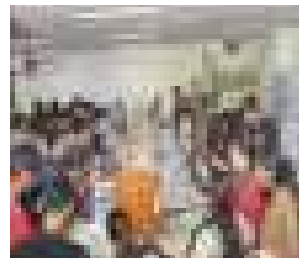
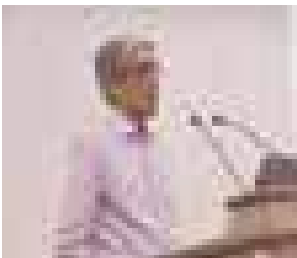
on 2 January 2018. The 1968 Batch Golden Reunion was held on 9 January 2018.



CCBR Winter Course on Machine Intelligence and Brain Research

CCBR Workshop was held from 2-7 January 2018. The workshop was attended by over 250 delegates who

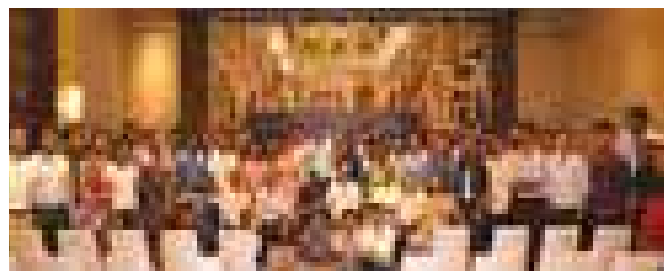
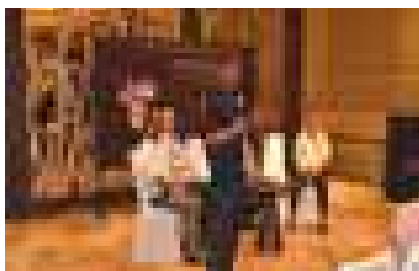
witnessed informative talks by over 25 esteemed speakers over the course of five days.



IITMAANA dinner reception

A felicitation ceremony for the 2017 graduating students going to North America for higher studies was organised by

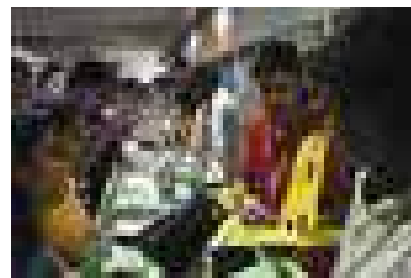
the IITMAANA and the IITM Foundation in association with the Office of Alumni Affairs (OAA) on 20 July at the Westin in Velachery.



The CFI Open House

CFI was set up in 2008 with the funds donated by the batch of 1981 and other alumni. The CFI Open House held on 8 October 2017 displayed the work of the institute's

three internationally acclaimed competition teams: Team Anveshak's Mars Rover, Team Abhiyaan's Autonomous vehicle and Team Raftar's Racecar. Many of our alumni contributed towards these competitions.



2nd Pan IIT Biotech Meet 2017

IIT Madras, Department of Biotechnology, Bhupat and Jyoti Mehta School of Biosciences organised three-day 2nd Pan IIT Biotech Meet 2017, sponsored by The Mehta Family Foundation (USA) in association with IITM Alumni, from 5-7 October 2017 at The International Centre Goa, Dona Paula. The aim of the meeting was to bring all the researchers, faculties, expertise from different IITs, IISC, inStem and biotech as well as biopharmaceutical industries

into a single platform and discuss the recent progress and challenges in synthetic biology and cardiovascular diseases.

The meeting initiated with welcome address and introduction of 2nd Pan IIT Biotech Meet 2017 by Prof. Rama Shanker Verma, Organising Secretary. The whole inaugural function was presided by the Chief Minister of Goa accompanied by Mehta Family Foundation, DBT Secretary and IIT Madras along with the participated delegates. The meet had around 50 participants.



Tree Plantation @ IIT Madras

Due to Vardah cyclone, we lost around 650 trees in the campus. Most of the damaged trees are non-native trees, yielding an insight regarding tree plantation, and hence,

more native trees were planted to restore the green cover. The tree plantation event was held on **13 October** and **3 November 2017**. Out of 1,200 trees planned to be planted, around 600 trees have already been planted in the campus.



1st IBSE International Symposium

The first international symposium was organised from 22-24 January 2018. The event had participants from all over

the country and a faculty each from IIT Guwahati and IIT Kharagpur.



Deshpande Gopalakrishnan Symposium on Innovation and Entrepreneurship

The first international symposium was organised from 22-24 January 2018. The event had participants from all over the country and a faculty each from IIT Guwahati and IIT Kharagpur.



Naming/Chair launches

Deepak Parekh Institute Chair Launch

Deepak Parekh Institute Chair was launched on 12 April. The Chair has been endowed by 1981 batch alumnus, and



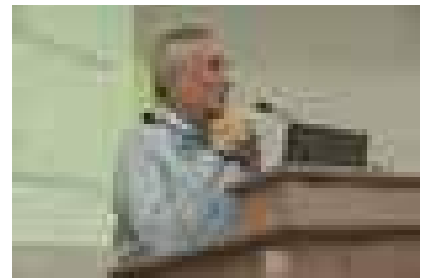
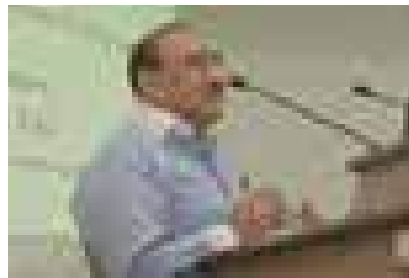
the Occupant of the Chair is Prof. T. Pradeep, Chemistry Department.



Dr Ajit Singhvi Chair Launch

Dr Ajit Singhvi Chair in Department of Management Studies was launched during Reunion Day (28 December). The chair is sponsored by Dr. Ajit Singhvi, FCA, ACMA (Lon)

Ph.D., D. Eng. (Lon). Its occupant is Dr. C. B. Rao (1974/MT/IE), Founder and Chairman, Leadercrest Academy Private Limited.



Scholarship/Award

Ram Shriram Merit Scholarship (RSMS)

An event to give away the Ram Shriram Merit Scholarship (RSMS) was conducted on 2 September 2017. A total of

67 students were identified for the scholarship, and 66 of them who participated in this event received the Scholarship Award Letter from Mr. Ram Shriram. The Director IIT Madras, Dean I&AR and Mr. Ram Shriram, Founding Board Member, Google, expressed their views and thoughts.



Student receiving the MCM scholarship



Young Faculty Recognition Award (YFRA)

YFRA is sponsored by our alumnus Dr. P. Balasubramanian (1971/BT/AE and 1973/MT/IM). Six IIT Madras faculty received the award on Teachers Day (5 September 2017).



Dr Shaikh Faruque Ali
Department of Applied Mechanics



Dr Saravanan U
Department of Civil Engineering



Dr Kalpana Mahalingam
Department of Mathematics



Dr Ashis Kumar Sen
Department of Mechanical Engineering



Dr Aravind G
Department of Physics



Dr Dillip Kumar Satapathy

HFCL Scholarship

HFCL Social Services Society sponsored a scholarship for five economically disadvantaged students under the company's

CSR programme. The scholarship was announced on 10 November 2017, and Ms. Neelu Chandra, CSR Head, HFCL handed over the scholarship sanction letter to students.



B. S. Ramapriya Memorial Scholarship

The scholarship is awarded in memory of B. S. Ramapriya, a B.Tech. student of the institute from 1974 to 1979. This

scholarship is awarded to a deserving student of limited means to cover any shortfall in tuition and provide a grant towards living expenses. This scholarship was announced by Mr. Krishna Prasad, brother of B. S. Ramapriya, on 17 November 2017.



Centre Launch

Emerson - Centre for Advanced Studies' Lab

Emerson - Centre for Advanced Studies' Lab was inaugurated by Ram Krishnan, Group President, Emerson Automation Solutions on 27 December 2017. Emerson contributed Rs.14.22 lakh for this laboratory.





Singapore – April 29



Bengaluru – April 8



London – September 22



Germany – September 23



Tokyo – November 18



Hong Kong - November 21



Delhi – 11 February 2018

A Day @ IITM

A Day @ IITM was held on 25 February 2018. Its objective was to highlight the salient features that enabled IIT Madras

to be ranked as No.1 among engineering institutions in the India Rankings 2016 and 2017 released by the National Institutional Ranking Framework (NIRF), Union Ministry of Human Resource Development.



Faculty Recognition Luncheon

The luncheon was held on 3 March 2018 to express our gratitude to our faculty for playing a pivotal role in supporting

our fund-raising activities and international relations. More than 30 faculties attended the programme.



Other Events



IAL Meet with Director and Team – 17 July 2017



Shri R. Natarajan's (First Registrar) Remembrance event – 5 August 2017



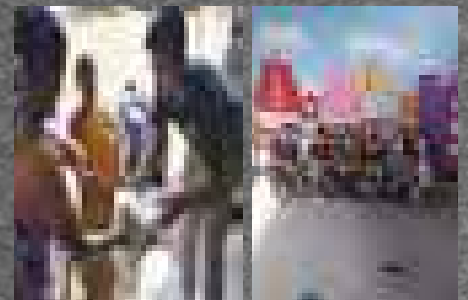
Distinguished Service Awards – 26 August 2017



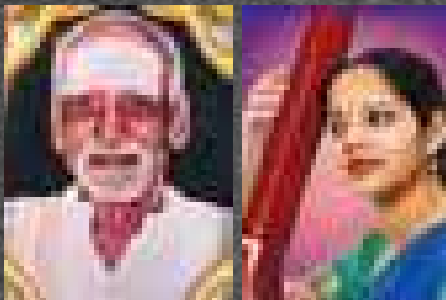
Data Science Research Centre signing pact



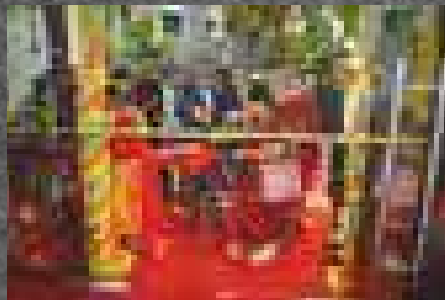
IViL Cycle Donation 2016-17



DAAN UTSAV – 2-8 October 2017



Composer Day – 15 October 2017



Inauguration of Mehta Biotech Block II – 9 October 2017



Nimbus awards @ Inter IIT Sports Meet – 23 December 2017



Faculty Association Dinner – 25 November 2017



EML Talk by Shri Parekh – 12 April 2017



IITM Stadium Inauguration – 3 May 2017



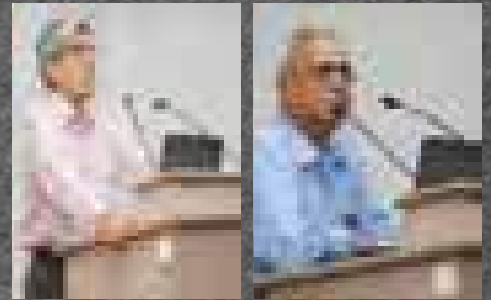
Student Alumni Meet by SPARC – 25 June 2017



AMIND signed MoU 28 February 2017



IITM Summit Bay Area – 10 June 2017



Open Day at IIT Madras – 2 June 2017



Shyama Sastri and Mudduswami Dikshithar – 12 November 2017



The launch of FinAL – 5 November 2017



All IIT Deans Meet @ Guwahati – 23-25 January 2018



Saipem India projects signed MoU – 5 January 2017



Virtusa, title sponsor at Shastra 2018



Carbon Zero Challenge – 7-9 February 2017



Dr. Prakash Arunachalam signed MoU – 12 January 2017



Heritage Workshop – 18 February 2018



Heritage Centre Day – 3 March 2017

International Relations Ngee Ann Polytechnic – 10 April 2017

A delegation from Ngee Ann Polytechnic, Singapore visited IITM on 10th April 2017. The purpose of their visit was to explore possible opportunities for their students and staff

The delegation comprises of,

1	Ms Teo Hui Leng	Director	School of Humanities and Social Sciences
2	Ms Lek-Lim Geok Choo	Director	School of Electrical Engineering
3	Ms Nora Saheer	Assistant Director	School of Humanities and Social Sciences

They had a visit to the Humanities and Electrical Engineering departments.

National Formosa University, Taiwan – 25 April 2017

Prof. Wen-kai Kuo, Dean and Prof. Chung-yen Lin, Director of the Intl. Affairs office, National University, Taiwan. They are from Department of Electro-Optical Engineering and Aeronautical Engineering respectively. They met with the faculty and students from the same departments.

Virginia Tech, USA – 27 April 2017

The Delegate(s) – (1) Srinath Ekkad-Rolls-Royce Professor, Mechanical Engineering, (2) Guru Ghosh-VP for International Programs and Outreach, (3) Gene Ball-Director of Finance, VP for International Programs and Outreach, (4) Dale Pike-Executive Director, Technology-enhanced Learning and Online Strategies had a meeting with the Dean IAR

Freie Universitat Berlin, Germany – 2 May 2017

Dr. Stefan Diederich, Head, Freie Universität Berlin – Liaison Office New Delhi and Ms. Regina Rahm, from FU Berlin's International Affairs department paid a visit to the Dean IAR in our Institute to discuss bi-lateral MoU and possibilities for further academic cooperation.

British Deputy High Commission, Chennai – 15 May 2017

Mr Kieran Drake, Counsellor, Political & Press (designate), British High Commission in India, New Delhi and Mr Bharat



to engage in study visits, immersion programmes in India (short-term), work-study programme. They were looking for esteemed institutions in India that may be keen to accommodate their students to get acquainted with top notch universities and also to expose their students to the cultural aspects of India.

Joshi, Deputy High Commissioner visited IITM on May 15th and discussed with Faculty involved in UKERI projects.

- **Brief discussion with the faculty**

Faculty briefed on Landscape of Research in India; Issues & challenges of doing research in India; Government & Private sector's role in research; Research funding focused in future; Perspective on Industry and academia working together; how other countries work with India in research, how UKERI projects are adding value to this scenario & its importance

- **Interactive session with research students**

Students ask questions about studying in the UK, scholarships, working in the UK, Internships, partnerships.

Politecnico Di Torino, Italy – 25 May 2017

The Delegate(s) – (1) Francesca Chicco, (2) Graziella Vendola-Department of International Affairs came to the International office and staff. They also made a presentation to the IIT students on their university programs.

Australia National University – 31 May 2017

ANU delegation comprising of Professor Brian Schmidt, Vice Chancellor, Professor Shirley Leitch, Deputy Vice Chancellor (Global Engagement), Ms Anne Baly, Director International, Mr Jonathan Dampney, Manager, Strategic Partnerships visited IITM on Wednesday, May 31st. The MOU signing ceremony took place with Prof Krishnan Balasubramanian and Director.



Consulate General of the United States of America – 20 June 2017

The Delegate(s) – (1) Joseph S. Bernath-Economic Officer, (2) George Mathew-Economic Specialist met with our Director and made a visit to the Aerospace Engineering department.

CEA Tech, France – 30 June 2017

Remi Perony the French representative from CEA Tech visited NCCR (National Centre for Catalysis Research and spoke with Prof. P. Selvam. He also made a visit to the Physics, Chemistry, Chemical and Mechanical Engineering departments and later to the Research Park as well.

National Chiao Tung University and Delta Electronics INC, Taiwan – 11 July 2017

The Delegates: (1) Edward Yi Chang-Senior Vice President, Dean, International College of Semiconductor Technology , (2) Chiun-Hsun Chen-Senior Vice President, Professor, Dept. Of ME (3) Shou-Fong Chin-Senior Vice President, Delta Electronics, Inc. , (4) Om Prakas-Country Head - Government & Strategy, Delta Electronics, Inc.h , (5) Frank Liu-Sr. Director – HR, Delta Electronics, Inc. , (6) Rituparna G Vats-Director – HR, Delta Electronics, Inc visited the Dean I&AR Prof R.Nagarajan and made their respective presentations. They later had a meeting with the Electrical Engineering department and met with the semiconductor group and students.



University of Melbourne, Australia – 24 July 2017

Prof. Ashok Muthupandian had a meeting with Dean IAR, Prof R.Nagarajan. He also gave a presentation the students about the Joint degree program.

State University of New York at Binghamton, USA – 25 July 2017

The Delegates: (1) Bahgat Sammakia-Interim President - SUNY Polytechnic, (2) Mohammad T. Khasawneh-Professor and Chair, Systems Science and Industrial Engineering , (3) Krishnaswami (Hari) Srihari-Executive Vice Provost for International Initiatives and Chief Global Affairs Officer met with the Department of Management Studies and faculty Prof. Hari and Prof. Khasawneh. He also met with Prof. Sundarraj and had a wrap up session with the Dean IAR Prof R.Nagarajan.

Ahlia University (Bahrain) – 27 July 2017

The founding President and Managing Director Professor Abdulla Al-Hawaj and Professor Mansoor Alaali, and the current President were in IIT Madras on the 26th and 27th

of July 2017 to meet the Dean IAR Prof R.Nagarajan. They also made a visit to the Research Park.



University of New South Wales, Australia – 9 August 2017

The Delegates: (1) Amit Dasgupta-Director- Ambassador [Retd] and (2) Grace-Ann- Assistant Director Marketing and Partnerships- India made a visit to the International Office and met the Dean IAR Prof R.Nagarajan.

International Students' Meet – 9 August 2017

The Participants for the meet were Dr. Bhaskar Ramamurthi (Director), Prof. R. Nagarajan (Dean I&AR), Prof. M.S. Sivakumar (Dean of Students), Prof. Sathyanarayana N Gummadi (Chairman, CCW), Ms. Kavitha. G.R (Manager, Office of International Relations), Ms Vadhana Ramanan (Liaison Officer – Inbound Mobility), Mr. Arvind Sivamani (Liaison Officer – Outbound Mobility), Ms Vani Samuel (Liaison Officer – University Partnerships), Ms. Kalyani Sahu (Liaison Officer – International Projects)



NCTU, Taiwan – 10 August 2017

The Senior Vice President and Dean, Prof. Edward Yi Chang visited Dean Prof. R. Nagarajan on 10th August for further discussions on the agreement due to some different regulations between IIT Madras and NCTU.

met with Dean AC, Prof. Jagadeesh Kumar, Registrar, Prof. Sriram, Assoc Dean IC & SR Prof. Ravindra Gettu and made a visit to the Research Park. They also made visits to the Mechanical, Electrical and Biotechnology departments for the lab tours.

Adama Science and Technology University, Ethiopia – 11 August 2017

A advisory team from Addis Ababa Science and Technology University, Ethiopia visited IITM on August 11th comprising of;

- (1) Shiferaw Feyissa Balcha-Vice president, (2) Mengistu Sime Biratu-Advisor to the President, (3) Fekadu Lemessa Tesso-Advisor to the President, (4) Solomon Alemu Tesfaye-Advisor to the President, (5) Getachew Biru Worku-Advisor to the President, (6) Zerihun Belay Gemeta-Advisor to the President, (7) Amenu Oljirra Gemedie-Dean, Postgraduate Program

The purpose of the visit was to share the experience of the universities in Science and Technology. They

The University of Adelaide, Australia – 14 August 2017

Professor David Lewis, School of Chemical Engineering and Prof Anthony Zander, School of Mechanical Engineering visited IITM on August 14th. The purpose of their visit was to meet with the Faculty in Chemical Engineering and Mechanical Engineering Schools, give a seminar each and discuss opportunities.

Chang'An University, China – 17 August 2017

Lalhlupuii Sailo-Foreign Expert (English Language Teacher) visited the Heritage Center and met with the Dean IAR Prof R.Nagarajan.

University of South Australia, Australia – 17 August 2017 – Study TourA group of 13 final year Computer Science

students visited Chennai as part of a study tour with HPE (now DXC Technology). These students are all studying an internship program at UniSA. They came to visit the Computer Science department and get a feel of how life in the campus would be like in IIT Madras. Grant Wigley-Program Director and a staff member from HPE, Dino Rossi accompanied them

Shibaura Institute of Technology (Japan) – 20 August-2 September 2017 – Study Tour

21 students from Shibaura Institute of Technology (SIT) Tokyo visited the Indian Institute of Technology Madras (IITM), Chennai for 2 weeks as part of the Engineering Internship and Short term English program from 20th August 2017 – 2nd September 2017 for IITM – SIT English program and department/laboratory visits. They were accompanied by Prof Muralidhar Miryala-Professor, (2) Takeuchi Naoki, (3) Furukawa Yusuke (4) Yuta Nakanishi



Tokyo Institute of Technology, Japan – 28 August-3 September 2017 (Study Tour)

Dr. Anil C. Wijeyewickrema, Professor in Civil Engineering and Ms. Miwako Taya from the International office brought

in 11 students who had come to visit the campus to get a feel of the life in IIT Madras. They also attended classes for a day to know how the academic life is. A presentation was made about their university to the IIT students.



University of Southampton, U.K. – 7 September 2017

Professor Colin Grant, Vice-President International, Prof Shenoi, Director of the our Marine and Maritime Institute, Keith Johnstone, Director of International Relations & Development and Mr. Amarjit Singh, Chief Executive Officer

of the India Business Group visited IITM on September 7th, 2017. They met with the Director, Prof Bhaskar Ramamurthi and our Dean IAR Prof R.Nagarajan.

During their visit they had roundtable discussions with the faculty members in Ocean Engineering. Key topics for discussion were robotics and also link through the Port-City Universities League and the current MoU.



University of Southampton, U.K. – 8 September 2017

Robert Raja, FRSC, Professor of Materials Chemistry & Catalysis, from University of Southampton visited IITM on September 8th and was particularly interested in exploring partnerships within Chemistry, Biological Sciences and Ocean and Earth Sciences. He was representing the Faculty of Natural & Environmental Sciences at Southampton. He had a meeting with Prof Viswanathan and made a visit to the Biotechnology, Chemical and Civil Engineering departments.

Prof Ravindra Gettu and had a meeting with the Department of Civil Engineering to explore possibility of initiating joint Postgraduate research and education programmes between IITM and UoL. He was accompanied by Ms. Shwetha Datta the Country Advisor.

Heritage Network and Joint Degree Program with Ecole Centrale de Nantes – 25-26 September 2017

The Heritage Consortium consisted of 18 universities (including IITM). The Heritage Network will be a continuation/extension. Dr. Fouad Bennis represented ECN for strategic development of the network at the Executive Committee Meeting that concluded on September 26 2017.

It started out with the Validation of the feedback from the partners of HERITAGE Network Statutes proposed during the Final meeting, in order to start the signature of the agreement.

University of Leeds (U.K) – 8 September 2017

Prof P.A. Muhammed Basheer our Chair in Structural Engineering and Head of the School of Civil Engineering visited the Dean IAR Prof R.Nagarajan. He works closely with



Taiwan Education Expo – 26 September 2017



The Participants for in this delegation were National Tsing Hua University (Leader), Taiwan Education Centre in India (Coordinator), National Chiao Tung University, National Yunlin University of Science & Technology, Kaohsiung Medical University, Asia University, National Formosa University, National Cheng Kung University, Elite Study in Taiwan Project Office, Yuan Ze Univesity, National Chung



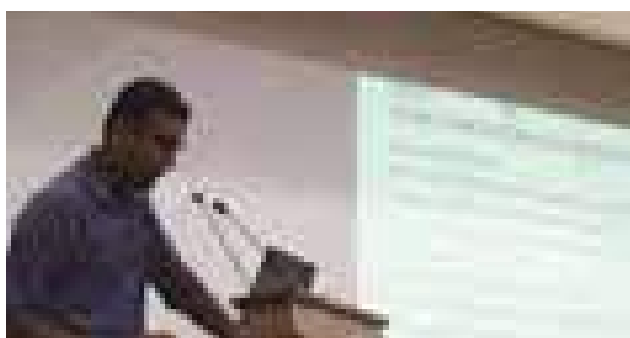
Cheng University, Tamkang University, National Kaohsiung Normal University, National Chung-Hsing University and Ming Chi University of Technology.

They met with the Director, Dean IAR, Dean Admin, Dean AR, Dean AC and Dean IC&SR. They also met with the Humanities and Social Sciences HoD, Prof Umakant Dash along with Prof. Wang and Ms Peng.

Information Sessions for IIT Madras Students (UG/DD & PG/PhD) – 5-10 October 2017

Information on opportunities abroad (semester exchange, research internships, summer programs, scholarships, Joint

Degree Programs & Joint Supervision Programs) was given by Mr. Arvind Sivamani (Liaison Officer for Outbound Mobility, Office of International Relations) and was organized by Ms Kavitha (Manager, Office of International Relations) for the IIT students.



International Day – 2 November 2017 – Colours of Joy

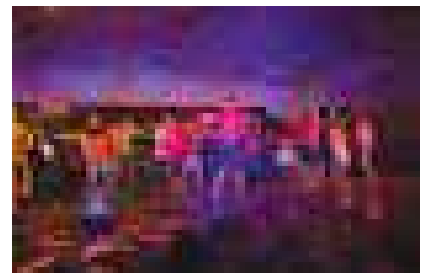
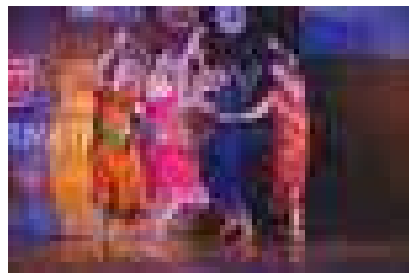
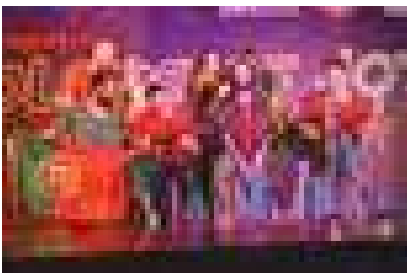
Indian Institute of Technology Madras celebrated the Sixth Edition of the International Day at the campus on 2nd November 2017. The event is meant to celebrate the presence of students from other countries studying at IIT Madras.

From Cooking and Kuchipudi Dance to German Volksfest Dance, a Portuguese musical performance, a Fashion Show, a Silenced Poetry and Traditional Japanese Dance, the celebrated featured a melange of cultural events. Of course, no college festival is complete without a dance to peppy Bollywood numbers as well. Stalls were erected for the international students to showcase their native cuisines.

The celebrations were organized by the Office of International and Alumni Relations and Ipals. It also includes several games for the campus community and exchange students.

At any time, the Institute has around 100 international students on campus through exchange programmes. This number has grown by 50 percent over past three years.

Nearly 70 percent of them come from Europe, with Germany being the single largest source, followed by France. IIT Madras is also seeing an increase in students from Australia and from Asian countries such as Japan, Taiwan and Korea. Department of Management Studies receives the maximum number of students.



Western Sydney University (Australia) – 7 November 2017

The delegates were Professor Barney Glover, Vice-Chancellor and President Associate Professor Linda Taylor, Pro Vice-Chancellor (International) Dr. Anton Bogdanovych, Senior Lecturer, School of Computing, Engineering and Mathematics Dr Bahman Javadi, Senior Lecturer, School of Computing, Engineering and Mathematics Associate Professor Meg Smith, Deputy Dean (International and Accreditation), School of Business Dr Wayne Fallon, Associate Dean International, School of Business.

Dr Anton Bogdanovych travelling with the delegation addressed the IITM students on Virtual Reality, Artificial

Intelligence, and Robotics utilising his unique teaching methods.

The purpose of the meeting was to sign the MOU renewal, and to sign the Research Internship Agreement, with discussions to further build the relationship between our two institutions.

Embassy of France – 13-14 November 2017

The Delegates involved were (1) Jerome Bove, Scientific & Academic Attache (India), (2) Michel Bidoit, Director (CNRS), (3) Patrick Nédellec, Director (European Research & International Cooperation), (4) Catherine Suard, Consul

General (French Consulate Pondicherry), (5) Edouard Besserve, Deputy Director for Africa (CNRS), (6) Pierre Dos Santos, Vice President for Research (University of Bordeaux), (7) Keitaro Nakatani, Vice President for Research (ENS Paris-Saclay), (8) Pascal Weil, Research Director, CNRS, and (9) Srinivasa Kaveri, Director, CNRS India. They met with the Dean IAR, Dean AR, Dean AC and Dean IC & SR.

They made a visit to the Chemistry, Biotechnology and Electrical Engineering departments along with the Data Analytics Team.

Clarkson University (U.S.A) – 21 November 2017

Prof. Powers met with the Dean IAR Prof R. Nagarajan and made a visit to NPTEL. They also met with the Chemical and Civil Engineering faculty.

AOTULE Conference – Hanoi University of Science and Technology, Vietnam – 22-24 November 2017

AOTULE (Asia Oceania Top University League in Engineering), founded in 2007, is a consortium of thirteen premier engineering universities in the Asia-Oceania region. IIT Madras has been part of the consortium since 2014.



AOTULE 2017 was held at Hanoi University of Science and Technology HUST at Hanoi, Vietnam. During AOTULE 2017, meeting for the Deans and staff of the partner universities was organised to collective work under the consortium.

A conference was also organised for the students from partners of the consortium.

Ms. Kavitha and Ms. Vani attended AOTULE 2017. Credit Transfer and Recognition: Best practices and Challenges' was discussed in the staff meeting and Ms. Kavitha presented a presentation regarding the best practices of credit transfer followed by IITM. Ms. Vineesha and Mr. Ashok of IITM attended the student conference and presented the research presentation.

Also, an invite was extended to all the members for AOTULE 2018 which is to be held at IIT Madras in **November**.

The Participating Universities - National Taiwan University, Taiwan, Tokyo Institute of Technology, Japan, University of Malaya, Malaysia, Hanoi University of Science and Technology, Vietnam, The Hong Kong University of Science and Technology, Hong Kong, Tsinghua University, China, Bandung Institute of Technology, Indonesia, Chulalongkorn University, Thailand, Korea Advanced Institute of Science and Technology, Korea, The University of Melbourne, Australia, Nanyang Technical University, Singapore



University of New South Wales Workshop – 23 November 2017

The list of participants in the UNSW Research Roadshow had a total of 21 researchers in the

themes include that include:

- 9 members from Water & Environment
- 6 members from Smart Cities

- 5 members from Global Health
- 1 member from Social Entrepreneurship

There was a welcome note by Dean I & AR, Introduction and Presentation by UNSW and IITM Faculty and then a wrap up session. Prof. Ashwin Mahalingam, Prof. Ligy Philip, Prof. Pradeep and Prof. Mohansankar were involved from the IITM side.



Deakin University (Australia) – 28 November 2017

Prof. Peter Hodgson, Deputy Vice Chancellor - Research, Deakin University came to visit the Dean IAR Prof R.Nagarajan and Prof B.S Murty (MME) for a follow up discussion in relation to Deakin IITM Centre of Excellence.

Freie Universität Berlin (Germany) – 28 November 2017

The Delegates: (1) Stefan Diederich, Head, Freie Universität Berlin Liaison Office, New Delhi met with the Dean IAR Prof R.Nagarajan and the Office of International Relations.

MIELES Workshop Focus Group Meeting – 4 December 2017

MIELES Project - Modernizing and Enhancing Indian eLearning Educational Strategies –is co-financed by the

European Commission under the Erasmus + Programme, Action 2. MIELES's project wider objective is to modernize and enhance access to the Indian Higher Education system by supporting the development of diverse institutional e-Learning strategies. The kick-off meeting took place in University of Barcelona (Spain) in 2016. The follow-up meeting took place in KTH (Sweden). IIT Madras was the host and venue for the Focus Group Meeting & Workshop in 2017.

The Participating Universities/Organizations were University of Barcelona, KTH Royal Institute of Technology, Asian Institute of Gaming & Animation, SSN College of Engineering, European Association for Quality, Zoho University, Tata Consultancy Services, Sapienza University of Rome, University of Mysore, Videoken, Google India.

Georgia Institute of Technology (U.S.A) – 11 December 2017



Prof. Jechiel Jagoda, Associate Director of the School of Aerospace Engineering, Georgia Institute of Technology is visiting IIT Madras. He wishes to establish collaboration between IIT Madras and Georgia Institute of Technology.



Prof. Jagoda met with Dean AR, Prof. A. K. Mishra, Dean AC, Prof. V.K. Jagadishkumar, Dean IAR, Prof. R. Nagarajan and the Director Prof Bhaskar Ramamurthi.

Michigan State University (U.S.A.) – 14 December 2017

The Delegates Prof. Andree Lee, Prof. Alexandra Zavalkink, Prof. Andre Benard, Prof. Ranjan Mukherjee, Prof. Sandeep Kulkarni, Prof. Carl Boehlert and Prof. Ramani Narayan visited the departments of Mechanical Engineering, Metallurgical and Materials Sciences and Computer Science. They expressed interest in building collaborations with the IITM faculty.

Curtin University – 15 December 2017

Prof. Andrew Rohl (Director), Prof. Brett Kirk (Mechanical Engineering) and Prof. Abhijit Mukherjee (Civil Engineering) visited IITM to collaborate with their counterparts. There was a welcome note by Dean I&AR, an Introduction and presentation by IITM and Curtin University faculty members, break out sessions and lab visits and later a wrap-up session.

India–Russia Students Conference – 18 December 2017

Organized by the Ministry of External Affairs and co-organized by Embassy of India Moscow, Russian Center of Science & Culture, the India-Russia Students Conference commemorated 70 years of Indo-Russian diplomatic relations at the Russian Centre of Science & Culture, Chennai. Dean I&AR was invited as a speaker (Topic: Promoting Indo-Russian educational cooperation and student exchanges)

University of Twente (The Netherlands) – 20 December 2017

Prof. Geert Dewulf and Dr. Jella Fewerda from University of Twente, Netherlands visited IITM on Decemebr 20th in order to re-affirm existing ties and expand on our ties particularly in the areas of industry 4.0, (medical)robotics and water management. As such, groups in Mechanical Engineering, Civil Engineering and Engineering Design that deal with these issues were of most interest.

Shibaura Institute of Technology (Japan) – 26 December 2017

The Delegates Hisaya Igarashi, Chairman, Kazuya Noguchi, Director and Prof. Muralidhar Miryala, Deputy President

visited the Director Prof Bhaskar Ramamurthi and Dean IAR Prof R.Nagarajan. They wanted a significant discussion between our two institutions to further expand collaborations in the following areas of research, staff, and introduction of new DD/JD programs.

PNG University of Technology, Papua New Guinea – 26 December 2017

Dr. Albert Schram, Vice Chancellor and Dr. Subramanyam Gopalakrishnan, Coordinating Officer visited the Dean IAR to make Academic and Research collaborations with IITM.

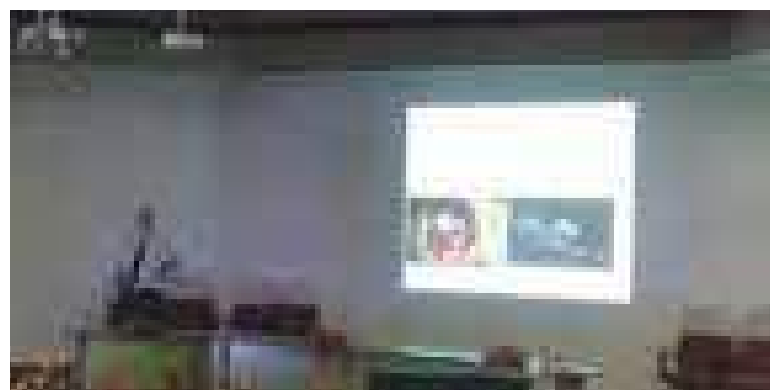
Michigan State University, U.S.A – 8-10 January 2018

Prof. Leo Kempel, Dean and Prof. B. Shanker Computational Mathematics, Science & Engineering visited to have an in-depth discussion on the organization functioning of IITM Incubation Cell. They were interested to learn more in terms of how it functions operationally, how it facilitates interactions with faculty, students, and VCs, stages of incubation, etc. They are thinking of setting up something similar at MSU and would like to learn from successful ones. This meeting also took place to strengthen our partnership.

A visit to the Research Park was made where they met with Mr. Rajendra Mootha and Ms. Naveena Swamy along with a visit to HTIC and Incubators. The next day they met with the Physics, Electrical and Chemical Engineering departments. There was a talk held by Prof Shankar and hosted by Dr. Kavitha Arunachalam which they attended. The delegates also met with Prof Mahesh Panchagnula, Prof Tamaswati Ghosh and Dean I&AR Prof R.Nagarajan.

Purdue University, U.S.A – 10 January 2018

Prof. Anand Raghunathan, School of Electrical & Computer Engineering, Prof. Philip. S Low, Director of Purdue Center for Drug Discovery and Ms. Heidi Arola, Managing Director, Global Partnerships had come and met with our Dean I&AR Prof R.Nagarajan and our Director. Meetings with the faculty involved in Medicinal Chemistry were also done. A visit to the Research Park and the bio, med tech incubators and start ups. They also met with the PURE 2017 and 2018 students. A lecture was organized by Prof. Philip. S Low at the IC&SR Auditorium.



Northeastern University, U.S.A – 18 January 2018

Prof. Thomas Webster, The Art Zafiropoulo Chair and Professor, Chair, Department of Chemical Engineering visited several departments like the Chemical Engineering, MME, EE, ED and gave a talk at Biotechnology department. A meeting with the Dean I&AR was also made.

University of Cote d'Azur (France) – 18t January 2018

The delegation consisted of 12 members: (1) Prof. Laure Capron, (2) Prof. Jean-Christophe Martin (3) Prof. Didier Auroux, (4) Prof. Jérémie BEC, (5) Prof. Jean-Marc Gambaudo, President, (6) Prof. Véronique Paquis, (7) Prof. Johan Montagnat, (8) Prof. Musso Patrick, (9) Prof. Stephane NGO MAI, (10) Prof. Mederic Argentina, (11) Prof. Laurent Counillon, (12) Prof. Stéphane Noselli. The aim of the visit is to meet with interested faculty members to discuss potential synergies along the lines of the "EUR" projects, Ecoles Universitaires de Recherche programs which covers all the fields of expertise that UCA offers. These include –

1. EUR "INnovative Concepts In Science and Engineering" INCISE
2. EUR "UCA Next Generation Life Scientists"
3. EUR "Digital Systems for Humans"
4. EUR "ELMI: Economics, Law and Management of Innovation"

A Visit to the Research Park, Meeting with Dean IAR and OIR Staff, and visits to Mathematics, Physics and Chemistry departments were made.

Massachusetts Institute of Technology (U.S.A) – 23 January 2018

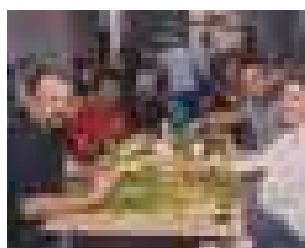
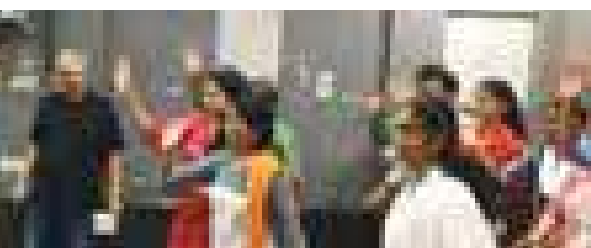
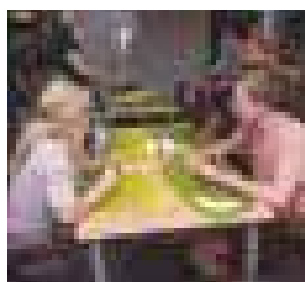
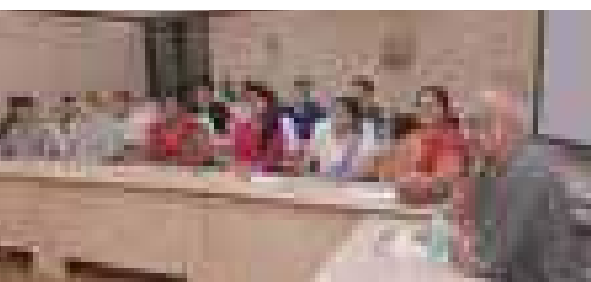
Dr. Krishna Rajagopal, MIT's Dean of Digital Learning & William A. M. Burden Professor of Physics had a meeting with the Digital learning team. Prof. Andrew Thangaraj, Prof. Prathap Haridoss and and Prof. Edamana Prasad also met with him. A visit to the Research Park and the Physics department were also made. A talk by Prof Krishna Rajagopal, Dean from MIT was made.

Nagaoka University of Technology (Japan) – 23 January 2018

Prof Taisuke Nishimura and Professor Kiyoshi Ohnuma met with the Director and our Dean I&AR Prof R.Nagarajan.

International Students Meet and Cross Cultural Sensitization Workshop – 24 January 2018

The Participants for the meet were Dr. Bhaskar Ramamurthi (Director), Prof. R. Nagarajan (Dean I&AR), Prof. M.S. Sivakumar (Dean of Students), OIR Staff and the IPals. This meet is usually organized to welcome all the exchange students to our campus and get an idea on how they have acclimatized to the campus environment. To enable smooth relations between IIT staff and the International Students we organized a Cross Cultural workshop for the Staff and the Students separately to sensitize them on different values in each country.



German Delegation – 29 January 2018 (Baden-Wurttemberg, Germany)

The Delegates attended were: (1) Dr. Michael Pfeffer, Vice-Rector for Research, International Affairs and Transfer, University of Applied Sciences Ravensburg-Weingarten, (2) Dr. Margit Zachar, Professor, Albert Ludwigs University of Freiburg, (3) Ms. Petra Olschowski, State Secretary in the Ministry of Science, Research and the Arts, Baden-Wuttemberg, (4) Mr. Johannes Dingler, Acting Director, University of Konstanz, (5) Mr. Guido Lukoschek, Coordinator of International Relations, Baden-Wuttemberg, (6) Dr. Ing. Andreas Nauerz, Professor, Mannheim University of Applied Sciences, (7) Dr.-Ing. Stephan Schenkel, President, Duale Hochschule Baden-Württemberg Karlsruhe. This meeting aims at gaining (deeper) insights into the Higher Education sector and to enhance cooperation between India and Baden-Württemberg. A meeting with the Dean I&AR and an introduction session for IIT Madras was held for them.

University of Toulouse, France – 2 February 2018

Prof. Pascal Maussion, Vice-President met with our Dean I&AR and Director.

French Embassy – 2 February 2018

Dr. Jean-Stéphane DHERSIN, Deputy Scientific Director and Mr. Edouard Besserve, Deputy Director for Africa, Middle East & India met with our Dean I&AR and Director.

Bonjour India Workshop, France – 5 February 2018

The Delegates who attended were: (1) Ms. Sabine VERMILLARD, International Relations, Ecole Centrale de Nantes, (2) Prof. Cristina PRONELLO, Sorbonne Universités, (3) Prof. Valérie PRALONG, Director of Reseach, CNRS, (4) Prof. Mathias BRIEU, École Centrale de Lille, (5) Prof. Gilles MILLERIOUX, Université de Lorraine, (6) Dr. Sofen Jena, Lead CFD Analyst, Faurecia Clean Mobility, (7) Prof. Gaële Lesteven, Researcher, Ecole nationale des ponts et chaussées and (8) Mr. Ranjith Chockalingam, Senior Manager Product Engineering, Faurecia Clean Mobility.

French Embassy in India and Institut Francais en Inde (IFI) organized the Future tour on Urban Mobility that brings together scientists, academics and companies to discuss future partnerships between India and France under the third edition of Bonjour India.

France and India both have recognized that the planned transition to electric vehicles may offer a golden opportunity to live up to its commitments to the Paris Agreement. These issues can be best addressed by a synergy approach from government bodies, academic institutions, industrial partners and NGOs. They feel that such institutions should be brought together for brainstorming on sustainable and clean urban mobility, renewable energy advances and its large-scale adoption can combine with novel battery technologies, smart grids, increased electric vehicle demand with supportive policies for the transition to electric vehicles.

With this background, parallel round tables sessions were organised at IIT Madras as partner institute, linking it with the Erasmus heritage network meeting that will be held on the 6th and 7th of February. We invited experts from various institutions to conduct brainstorming roundtable sessions on following themes to address the challenges by creative and collective efforts. These workshops were conducted in the Civil and Electrical Engineering departments.

Heritage Network Workshop – 6-8 February 2018

(Smart Cities Workshop Indo-European network of Technical Higher Education Institutions)

IITM and Ecole Central Nantes, France as part of Heritage Network are jointly hosting a workshop on Smart City.

Heritage Network is a Indo-European network of leading Technical Higher Education Institutions who are jointly engaged in collaborations through their research and academic activities that address common priorities of national interest and wellbeing of society. The network aims to achieve these goals by identifying partner institution/s members in the network and undertaken joint research projects, academic and research exchanges, industry partnerships.

Heritage Network Members

Indian Institute of Technology Madras	Ecole Centrale de Nantes, France
Indian Institute of Science, Bangalore	Universidad de Sevilla, Spain
Indian Institute of Technology Bombay	Politecnico di Milano, Italy
Indian Institute of Technology Guwahati	Politecnico di Torino, Italy
Indian Institute of Technology Kanpur	Warsaw University of Technology, Poland
Indian Institute of Technology Dhanbad	Instituto Superior Técnico, Lisboa, Portugal
Indian Institute of Technology Roorkee	CTU Prague, Czech Republic
National Institute of Technology Warangal	RWTH Aachen, Germany
National Institute of Technology Rourkela	UPM Madrid, Spain
Anna University, Chennai	KTH, Swden

The Indian Participants were: (1) Prof. Ashwin Mahalingam (IIT Madras), (2) Prof. Rathish Kumar (IIT Kanpur), (3) Prof. Sukadev Meher (NIT Rourkela), (4) Prof. Praveen Kumar (IIT Guwahati), (5) Dr. K. Srinivasa Raju (Anna University), (6) Prof. KV. Jayakumar (NIT Warrangal), (7) Prof. Swati Patnagar (IIT Bombay), (8) Ms Babita Lohani (IIT Kanpur), (9) Prof. Swagata Basu (IIT Bombay), (10) Prof. Ramana Rao (NIT Warrangal), (11) Mr. Chagun Basha (IISc Bangalore), (12) Prof. P Murali Prasad (IIT Kanpur), (13) Prof. Bholu Gurjar (IIT Roorkee), (14) Dr. Lelitha Devi (IIT Madras), (15) Prof. Somnath Chattopadhyay (IIT Dhanbad), (16) Dr. Sarat K Panda (IIT Dhanbad), (17) Dr. Saurabh Dutta Gupta (IIT Dhanbad), (18) Dr. Gitakrishnan Ramadurai (IIT Madras), (19) Prof. Rajendran (Anna University), (20) Prof. Ravi

Puneekar (IIT Guwahati), (21) Prof. Rakhi Chaturvedi (IIT Guwahati), (22) Prof. M. Parida (IIT Roorkee), (23) Prof. Tom Mathew (IIT Bombay)

The International Participants were: (1) Ms Ana Pipio (IST Portugal), (2) Prof. Jean-François Hetet (Ecole Centrale de Nantes France), (3) Prof. Frédéric Dorel (Ecole Centrale de Nantes France), (4) Prof. Claudio Feijoo (Universidad Politecnica de Madrid Spain), (5) Prof. Teresa Zielenska (Warsaw University of Technology), (6) Prof. Fouad Bennis (Ecole Centrale de Nantes France), (7) Prof. Monica Bordegoni (Polimi Politecnico di Milano, Italy), (8) Dr. Carl Gustav-Jansson (KTH Sweden), (9) Ms Sabine Vermillard (Ecole Centrale de Nantes France), (10) Prof. Marianna Jacyna (Warsaw University of Technology)



Universiti Malaysia Pahang, Malaysia – 6 February 2018

Dr. Joilus Gimibun, Associate Professor visited our International Office and met with the Dean I&AR.

Russian Academy of Natural Sciences (Russia) – 7 February 2018

The Delegates: (1) Anokhin Yu.N., Professor and (2) Ms. Ekaterina Petrova met with the Dean I&AR and gave a lecture on Nuclear medicine in cancer diagnosis and therapy/Nuclear and radiation technologies for scientific and

technological development and will also present scholarship opportunities.

Binghamton University (U.S.A) – 7-8 February 2018

Prof. Krishnaswami (Hari) Srihari and (2) Prof. Bahgat Sammakia met with the Dean I&AR and were given an introduction to IITM. They also visited MS, ME, CSE Lab visits and the Research Park. They are looking to expand their research-based interaction to other facets of Engineering (including Manufacturing/Enterprise Systems).

Swinburne University (Australia) – 8 February 2018

Prof. Ajay Kapoor, Pro Vice-Chancellor (International Research Engagement), Prof. Steven Langford, Associate Dean and Prof. Kim Vincs, Professor met with the Dean IAR and given an introduction to IITM. They also visited CHY, ED and the Research Park.

Cardiff University (U.K) – 12 February 2018

Prof. Nora De Leeuw and Ms. Anne Morgan met with our Dean IAR.



Hochschule Bremen (Germany) - 12 February 2018

The Delegates: (1) Dr. Shazia Aziz Wülbers, (2) Dr. Heike Tauerschmidt, (3) Dr. Helmut Eirund, (4)Ms. Corinne Ghorbani, (5)Dr. Mechthilde Schrooten, (6)Dr. Willi Wittig, (7)Dr. Tim Goydke, (8)Dr. Birgit Zich, (9)Dr. Karin Luckey, (10)Dr. Christiane Trüe, (11)Dr. Rainer Hartmann, (12)Dr. Monika Blaschke visited the MS, EE, HSS, OE departments and the Research Park. There was a signing ceremony for the renewal of the MOU agreement with our Dean IAR and Director.



The University of British Columbia (Canada) – 19 February 2018

The Delegates: (1) Faisal Beg, Director, India Office, (2) Prof. Murali Chandrashekaren, Vice Provost International and (3) Santa. J. Ono, President and Vice Chancellor met with our Dean IAR and Director. The three main elements of the visit were as follows:

1. Meeting with IIT-M Director and Prof R Nagarajan;
2. Visiting the IIT-Madras Incubation cell, and meeting with key functionaries and,
3. Visiting the Department of Management Studies for a discussion on collaboration in the area of urban resilience that will include the city of Chennai.
4. Prof Ashwin Mahalingam in the Civil Engineering department and an MOU signing ceremony

Hokkaido University (Japan) – 20 February 2018

Prof. Fujita Osamu and Prof. Ankit Ravankar made visits to the Computer Science, Mechanical Engineering and Aerospace Engineering departments and the Research Park.

University of Waterloo (Canada) – 26 February 2018

Dr. Ramnath S Mani, Vice President, ENFUSE met with our Dean IAR and Director.

Hokkaido University (Japan) – 8 March 2018

Prof. Ankit Ravankar, Faculty of Engineering, (2) Ms.Hitomi Sato, Director, International Affairs Office of Engineering, and (3) Prof Takashi Matsumoto had a meeting with Dean I & AR and Prof. Amit. Visits to the CE, ED departments and the Research Park was made.

Asia University (Taiwan) – 20 March 2018

The Delegates: (1) Prof Mei - Chin Yin (2) Dr. Charles C. N. Wang, Assistant Professor (3) Dr. Shin Da Lee Distinguished Professor, Dean, College of Medical and Health Sciences and (4) Rung Sheng Chen Associate Professor had a meeting with the Dean IAR Prof R. Nagarajan and visits were made to BT, PHY, and the Research Park. They were here to explore possibilities in academic cooperation such as joint research. They also met with the PhD Students.

American University of Sharjah (UAE) – 21 March 2018

Prof Mohamed El-Tarhuni Vice Provost for Graduate Studies met with the Dean IAR and visited the Research Park. He also gave a talk for the students.

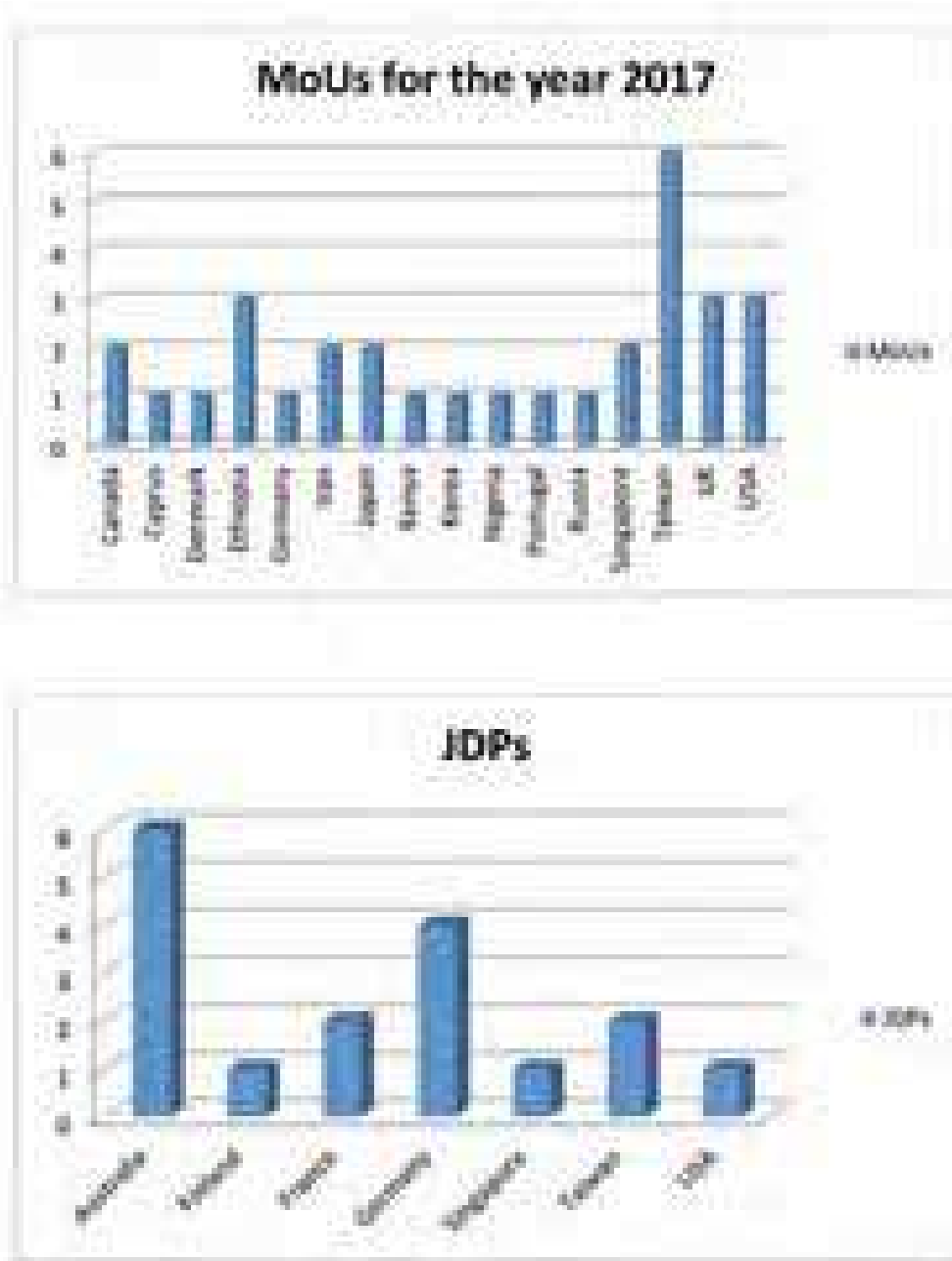
Queensland Government (Australia) – 27 March 2018

Ms.Hema Ravishankar Principal Business Development Manager had a meeting with the Dean IAR Prof R.Nagarajan.

University of Sussex (United Kingdom) – 27th March 2018

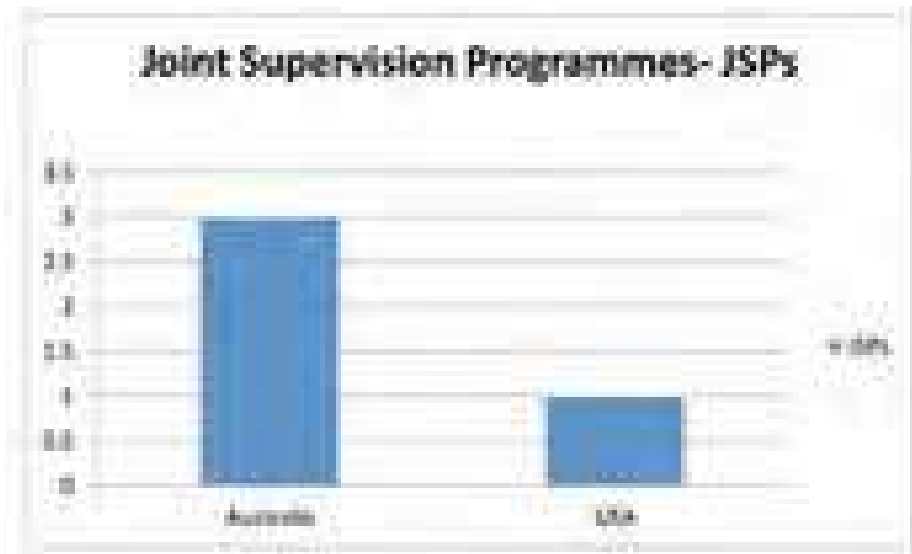
Dr. Saurabh Arora Senior Lecturer in Technology and Innovation for Development met with the Dean IAR and gave a talk on technology and innovation for development. This is a broad multidisciplinary area which he hoped would be of interest to our students studying a wide range of disciplines.

A graph for the MoUs, JDPs and JSPs of 2017



List of JDPs

- Heidelberg University, Germany
- Ecole Centrale De Nantes, France
- National Chiao Tung University, Taiwan
- Aalto University, Finland
- Michigan State University, USA
- University of Bordeaux, France
- RWTH Aachen, Germany
- Deakin University, Australia
- Queensland University of Technology, Australia
- University of Duisburg, Germany
- Curtin University, Australia
- University of Technology, Sydney, Australia
- The University of Melbourne, Australia
- National University of Singapore, Singapore
- Swinburne University, Australia
- National Tsing Hua University, Taiwan
- University of Passau, Germany

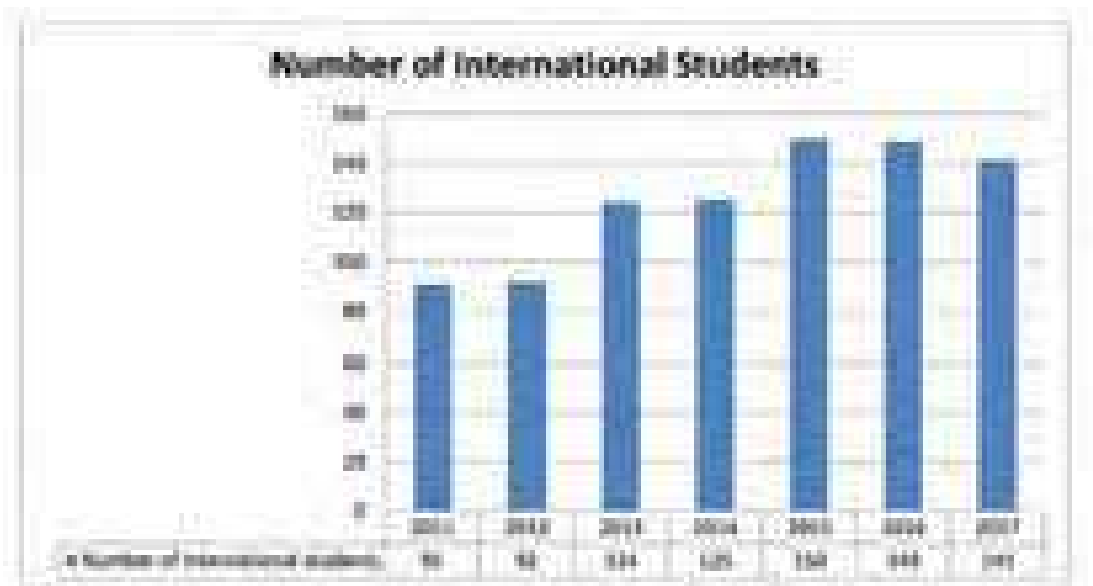
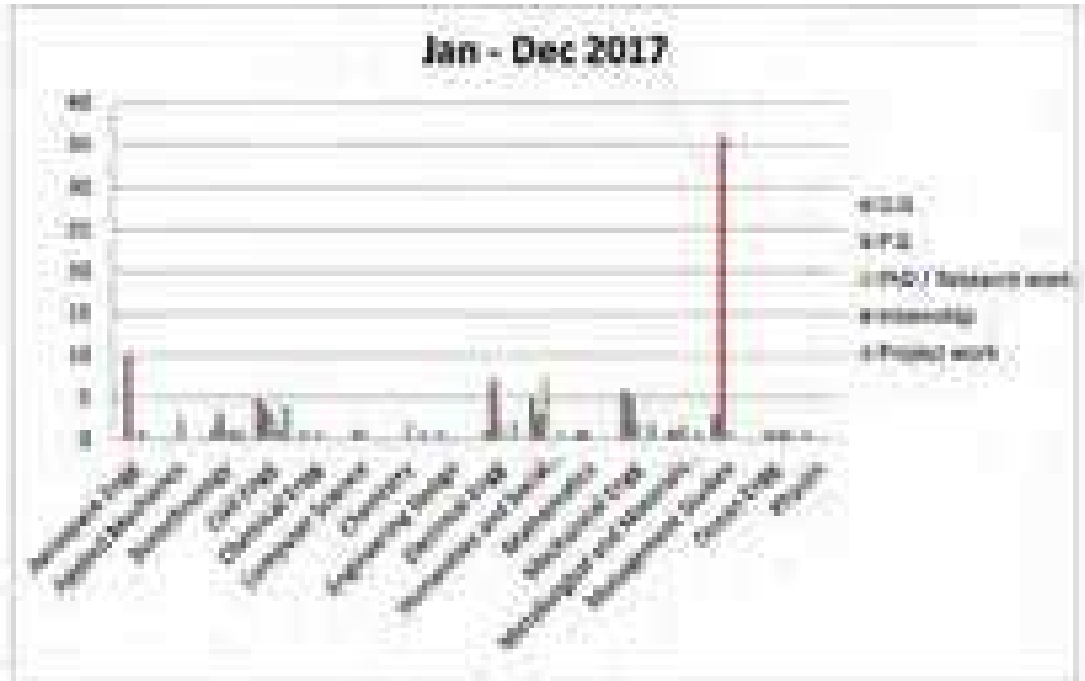


- List of JSPs
- University of Sydney, Australia
- Deakin University, Australia
- The University of Melbourne, Australia
- Purdue University, USA

Joint PhD 2017

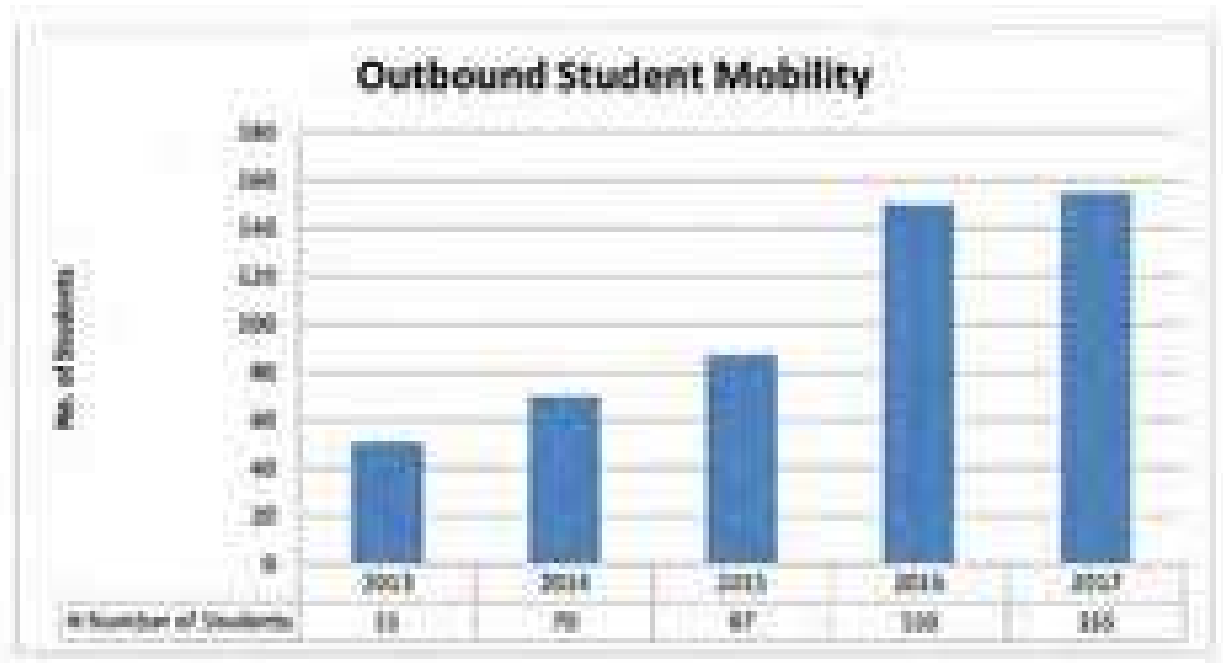
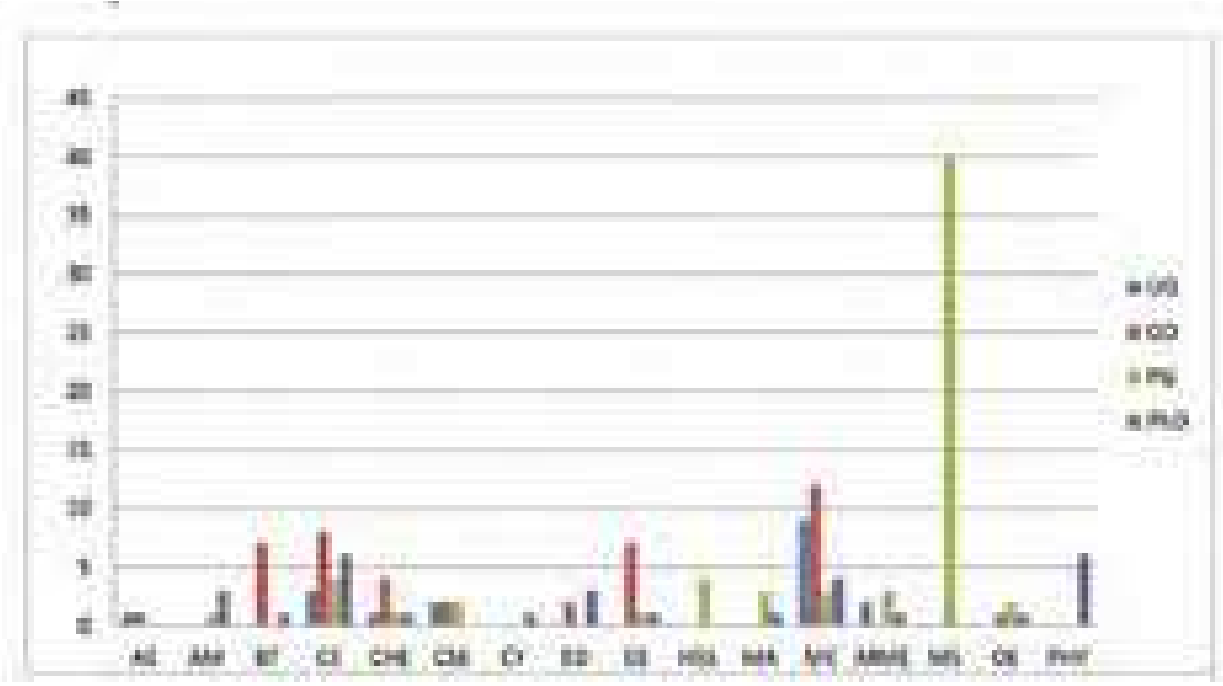
Name	Host University	Department	Host Supervisor	Host Supervisor	Start Date
Divyesh Kumar	Michigan State University, USA	Engineering Design	Dr. Anand Murthy	Dr. Latha Lakshmi	December 2017 to December 2018
Harish Goggin	Curtin University, Australia	Mechanical Engineering	Dr. Arvind Pattabatta	Dr. Ramiah Manjanna	December 2017 to December 2018
Uthair Khan	Queensland Technology Centre, Australia	Civil Engineering	Dr. Ashwin Mahalingam	Dr. Robert Clegg	August 2017 to July 2018
Chandrasekar Rajaram	Swinburne University of Technology, Australia	Electrical Engineering	Dr. Stuart Mathieson	Dr. Souvik Kundu	September 2017 to September 2018
Jayashree Lakshminarayanan	University of Technology Sydney, Australia	Civil Engineering	Dr. Indrajit Ghosh, Dr. Srinivasan K.R.	Dr. Henry Soudki, Dr. Mubashir Tahir	January 2017 to January 2018
Shourya Prasad	National University of Singapore	Civil Engineering	Dr. Ananta Rajan	Dr. Prasenjit Saha	January 2017 to January 2018

Inbound Students Graph 2017



Outbound Students Graph 2017

January-December 2017



8

Central Library

The Central Library is equipped with all modern facilities. It has a rich collection of information resources in the form of CD-ROMs, online databases, e-journals, e-books, e-standards, e- patents and printed material related to applied science, engineering, technology, humanities, management, social science and emerging subjects. The

library has 3,86,477 items, including 655 current journals, catering to the information needs of 12,540 members, providing various value-added services with the help of modern information-handling tools and techniques. The major activities of the Central Library between April 2017 and March 2018 are described here.

8.1. Library Information Services: Statistics

Item	2016-2017	2017-2018
Collections		
Books (general)	2,32,474	2,34,185
Books (gratis)	1672	2205
Books (Hindi)	304	375
Books (project)	1187	1398
Theses	7173	7773
Book Bank	14,058	14,618
Current periodicals by subscription	655	962
Back volumes of periodicals	1,14,533	1,15,049
German collection	---	---
CD-ROMs	1500	1500
Audio/video cassettes	448	448
e-Books	6681	7964
Total	3,80,685	3,86,477
Membership		
Staff	695	721
Faculty/SSO/SO/Emeritus Prof./Visiting Faculty/Adj. Prof.	735	757
Students	10,650	10,516
Retired Faculty/Officer	095	46
Alumni members	386	410
Corporate members	42	42
Special members	Nil	Nil
IAS members	190	190
Project coordinators	56	56
Total	12,849	12,540
Services: Circulation		
Number of books/journals issued	62,544	66,958
Number of books issued Book Bank (GS)	2551	2815
Number of books issued Book Bank (WS)	1912	1782
Overdue and other charges collected (Rs.)	5,10,584	6,99,766
Photocopy charges collected (Rs.)	15	Nil
Project loans to Faculty/Departments/Centre's		
Books issued	774	211
Inter-library loan transactions		
Borrowed from other libraries	Nil	1
Loaned to other libraries	9	4
DDS/Reprint service		
Reprints received from other institutions (pages)	273	396
Reprints supplied to other institutions (pages)	752	675
Smart Cards		
Cards generated/issued	6108	5793
Expenditure (lakh of Rs.)		
1. Purchase of books/eBooks (Rs.)	78.79	114
2. Subscriptions to journals and databases (Rs.)	969	2058,24

8.2. ISO 9001:2008 to ISO 9001:2015 Activities

The Central Library actively participated in ISO 9001:2008 activities. It has upgraded from ISO 9001:2008 to ISO 9001:2015 for maintaining quality-based library system services and procedures. The major activities related to ISO 9001:2008 and ISO 9001:2015 are listed here:

1. An ISO 9001:2015 certificate was awarded on 26 April 2017.
2. An ISO management review meeting (QSM-I and QSM-II) was held on 24 July 2017.
3. Internal Audit for ISO 9001:2015 was conducted on 8 January 2018.
4. An ISO management review meeting (QSM) was held on 25 January 2018.
5. ISO Surveillance External Audit was conducted on 7 March 2018.

8.3. Major Initiatives

The Central Library has taken various initiatives to improve the existing infrastructure, facilities, services and collections to provide strong and dynamic support to academic, research, development, continuing education and industrial interaction programmes and policies of the institute. Some of these initiatives are described in the following sections.

8.3.2. Online resources (e-journals, e-databases, and e-books)

1. The IIT Madras has access to online journals and databases from 15 publishers through e-ShodhSindhu consortium of MHRD.
2. Access to the e-databases and e-journals of various publishers, including the following, were renewed: American Chemical Society, AGU, AIAA, AIP, American Mathematical Society, Blackwell, BMJ, De Gruyter, Elsevier, ICE, Indian Economy Database, IOP, ISI—Emerging Market, JSTOR, Journal Citations Report (JCR), MANEY, MathSciNet, Mendeley Institution Edition, NPG, One Petro, Oxford University Press, ProQuest: Dissertations and Theses (PQDT), PsyArticle, RSC-Gold, Sage, SIAM, Sage Research Methods Online (SRMO), SciFinder Scholar, Science (online subscription), Scopus, Taylor & Francis, Thomson Core Patents, Thomas Telford, Turnitin, UpToDate, Web of Science, Wiley.
3. E-Books from AMS, Cambridge University Press, CRC, De Gruyter, Elsevier, Edward Elgar, Emerald, ICE, IOP (2017 collection), McGraw-Hill, Oxford University Press, Pearson, RSC, SAE, Wiley, World Scientific, ProQuest Ebrary and EBSCO were purchased with perpetual access rights.

8.3.3. e-Shodh Sindhu Consortium

The MHRD has formed e-ShodhSindhu Consortium for Higher Education Electronic Resource merging three consortia initiatives, namely UGC-INFONET Digital Library Consortium, NLIST, and INDEST-AICTE Consortium. The main objective of the e-ShodhSindhu: Consortium for Higher Education Electronics is to provide access to qualitative electronic resources, including full-text, bibliographic and factual databases to universities, colleges and centrally funded technical institutions in India at lower rates of subscription. The IIT Madras is getting access for 15 e-resources from e-ShodhSindhu for the year 2018.

8.3.4. Extended Working Hours on Saturday and Sundays

The working hours of the Central Library have been extended up to midnight on Saturdays and Sundays during quiz and end-semester and make-up exams for the benefit of students.

8.3.5. Systematic re-shelving of books

Two groups of eight members each have been formed that devote one hour daily in the morning/afternoon in the stack areas to facilitate easy retrieval of books. The first phase of re-shelving of books has been completed, and the second phase is in progress. This initiative has produced considerable satisfaction among users.

8.3.6. Smart Card facilities

The Central Library provides the Smart Card facility to students, faculty and staff members and other members (IAS and corporate members, alumni and retired employees of the institute). A dual-side retransfer Smart Card printer is used. The library also provides the dependent card to the employees of the institute.

8.3.7. Major Reorganisation of Library Book in Stacks

With reorganization of books more reading space was created in the Library. Tables and chairs were provided near the book stacks in all the floors. The Book Bank also shifted from the basement to the first-floor left wing. The Children's corner library shifted to the First floor.

8.4. Set up an Institutional Digital repository

Central Library has set up an institutional digital repository, IRepose by using DSpace digital library software. IRepose IIT Madras preserves and enables easy and open access to all scholarly publications of IIT Madras Research, i.e. journal articles, book chapters, conference papers, working papers and technical reports. The 17,434 articles bibliographic details have been uploaded. <http://irepose.iitm.ac.in:8080/jspui/>

8.5. Retirement of Staff Members

Mr. N. Rajabather, Attendant, retired from service on 28 February 2018.

8.6. Recruitment/Promotion of Staff Members

Dr. M. Ananda Murugan joined as Deputy Librarian on 3 June 2017.

Ms. V. Saradha Ambal was appointed Junior Technical Superintendent (Library) on 8 May 2017.

Mr. P. Velmurugan was promoted as Senior Technical

Assistant (Library) on 28 August 2017.

Mr. M. Rajendran was promoted as Junior Assistant on 26 October 2017.

8.7. Automation

1. The e-books have been catalogued in the library i-portal Chamo <http://iportal.cenlib.iitm.ac.in:8080/>
2. The new library website has been designed.
3. Data relating to 2245 patrons' (students, faculty and staff members, alumni, IAS members) records were added to the Virtua-VTLS database.

8.8. Faculty and Their Activities

Faculty Member	Qualifications	Major Areas of Specialisation
Mahendra N. Jadhav, Librarian	M.Sc., M.L.I. Sc., M.Phil., Ph.D.	Library automation, digital library, open source software, library portals, RFID, e-resources
M. Ananda Murugan, Deputy Librarian	M.L.I.Sc., M.Phil., Ph.D.	Library administration acquisition, technical processing, smart card
K. Saravanan, Assistant Librarian	M.L.I.Sc., M.Phil., Ph.D.	Library administration, circulation and maintenance

Short-term courses/workshops/seminars/symposia/conferences/meetings/training programmes Attended by Faculty and staff Members at recognised Academic Institutions

Sl. No.	Faculty/Staff Member	Title	Institution	Dates
1.	Dr. Mahendra N. Jadhav	Subject Expert Selection Committee	Open University Chennai	12 July 2017
2.	Dr. Mahendra N. Jadhav	Subject Expert Selection Committee	NIT Trichy	16 September 2017
3.	Dr. Mahendra N. Jadhav	External Examiner to conduct Viva voca of PhD	Alagappa University	18 September 2017
4.	Dr. Mahendra N. Jadhav	Subject Expert Selection Committee	IISER Trivandrum	9 January 2018
5.	Dr. Mahendra N. Jadhav	Subject Expert Selection Committee	IIT Tirupati	22 January 2018
6.	Dr. Mahendra N. Jadhav	Library Purchase Committee meeting	IMU Chennai	27 January 2018
7.	Dr. Mahendra N. Jadhav	Chair the technical session in Interactional Conference	IEE International Symposium on ETTLIS, Bennett University, Noida	21-22 February 2018
8.	All Library Staff	Wiley Author Workshop	IIT Madras	11 October 2017
9.	All Library Staff	SRR@125 (International Conference)	IIT Madras	23-25 October 2017
10.	All Library Staff	Emerald Author Workshop	IIT Madras	1 November 2017
11.	Mr. K. Thiagarajan	ROLAR -2018	IISER Bhopal	19-22 December 18
12.	Ms. Saradha Amabl	ROLAR -2018	IISER Bhopal	19-22 December 18

8.10. Special Lectures Delivered by Faculty Members at Other Institutions

Sl. No.	Faculty Member	Topic	Venue and Date
1.	Dr. Mahendra N. Jadhav	Best practices @ IIT Madras: New Paradigms in the Digital era	National Seminar on Innovative and Best Practices in Academic Libraries in the Digital Era, 26 August 2017, JBAS College, Chennai
2.	Dr. Mahendra N. Jadhav	An institutional repository	Anna University
3.	Dr. Mahendra N. Jadhav	1. National Digital Library India 2. Electronic resources management- An overview	Workshop on Utilization of E-resources and Networking of Libraries, 2 November 2017, DRW College, Gudur, Andhra Pradesh
4.	Dr. Mahendra N. Jadhav	Tools for the Librarians and Researchers	IEEE Xplore Program 16 November 2017, Anna University
5.	Dr. Mahendra N. Jadhav	An Institutional Repository	Refresher Course, 19 February 2018, Anna University
6.	Dr. Mahendra N. Jadhav	Importance of Resources in Institutions Ranking and Reputation	Wiley Impact Forums, University Conclave 12 March 2018
7.	Dr. Mahendra N. Jadhav	Modern Concepts in Library Designing and Importance of Resources in Institutions Ranking and Reputation	National Seminar on Modern Concept in Library Designing and Modification, 22 March 2018, D. Y. Patil University Navi Mumbai

8.11. Distinguished Visitors/Groups to the Library

Sl. No.	Name and Designation	Date	Purpose of Visit
1	Mr. K. Chandramoorthi, Officiating Registrar, Dr. Nihar K. Patra, University Librarian, Nalanda University	11 May 2017	To know the functioning, specifications and components of RFID systems in the Central Library
2	Mr. Jayanta K Tripathy, Librarian, IIM Ranchi	11 May 2017	Functioning, specifications and components of RFID systems in the Central Library
3	Ramanjaney Kumar Upadhyay	17 June-5 July 2017	To refer the resource collections
4	PG students and two faculty members, Department of Economics, E.S. Arts and Science College, Villupuram, Tamil Nadu	17 August 2017	To study the functioning of library and its infrastructure facilities
5	Dr. Stephen, HOD and students, Department of Library and Information Science, Erode, Tamil Nadu	25 September 2017	To know the functioning, specifications and components of RFID systems in the Central Library
6	NITTTR, Chennai (an international library and information science delegates)	12 October 2017	To study the functioning of library and its infrastructure facilities
7	NITTTR, Chennai (an international library and information science delegates)	15 December 2017	To study the functioning of library and its infrastructure facilities
8	PG students and a faculty member, Department of English, E.S. Arts and Science College, Villupuram, Tamil Nadu	21 March 2018	To study the functioning of library and its infrastructure facilities

8.12. Children's Corner Library

We have shifted the Children's corner library to the first floor. At the entrance's right side area, we have created more pigeon holes to keep users' belongings.

8.13. LED Lights

All the lamps of the library have been replaced with LED lights.

8.14. Future Plans

1. To initiate the submission of scholar's electronic thesis into the IRepose of IIT Madras
2. To initiate the creation of a database of bound volumes
3. Updation of project/permanent loan book database
4. To organise professional development lectures and other professional events
5. To initiate the creation of a database of conference proceedings received from faculty members of IIT Madras
6. To weed out and write off mutilated, very old, unused books and German books
7. Condemnation of old outdated computer hardware, furniture and other items



9

Student Amenities and Activities

9.1. Hostels

Indian Institute of Technology Madras, being a residential institute, requires students to reside in the hostels on campus. At present, there are 16 men hostels and four women hostels for UG and PG students, research scholars and project staff. A total of 6,948 single rooms, 70 double rooms, 96 triple rooms, five quadruple rooms and three quintuple rooms are available in the hostels. Research scholars and some master's programme students who are married and seek family accommodation on campus are housed in earmarked quarters. A few students, especially those from the armed forces, are provided accommodation in the MOH quarters. During the period under report, there were about 7,566 students living in the hostels.

At present, there are ten dining halls (messes) for students and project staff members to have food. Of these messes, two are operating in Nilgiri building, six in Himalaya building and two (for lady students) at Vindhya building. All the messes are run by private contract caterers. The mess registration and allocation of mess to students is done online, based on the preference of students. Similarly, the accommodation request is made online. The housekeeping services in the hostels are outsourced.

Each hostel is administered by a Warden (a faculty member), an Assistant Warden (a senior research scholar

or project staff member) and a Hostel Council, consisting of student secretaries and the Assistant Warden, who assists the warden in the day-to-day functioning of the hostel. Each hostel office is supported by the staff of the Office of the Hostel Management, which is a centrally administered body and overall in-charge of the functioning of the hostels.

During the period under report, the hostel management initiated efforts to make majority of its activities online. An online portal catering to the demands of students was introduced, and now students are using the following facilities extensively:

- Mess registration: A student can log in and choose the mess of his/her choice every month
- Mess accounts: The mess account is updated daily, and the student can know the balance instantly
- Mess rebate: A student can avail his/her rebate by sending the request online
- Mess extras: The ID card can be charged instantly and used in the messes for availing extras
- Mess entry: Biometric entry of students to the messes has been enabled
- Mess fee: Fee remittance made completely online by which student can remit fee from anywhere
- Saarang/LTAP Fee: A student can avail Saarang tickets, opt and pay for the courses through the portal



There are 69 permanent employees and 48 contract staff. They are accountable to the hostel management through respective hostel wardens. The Chairman, Council of Wardens is the Chairman of the Office of the Hostel Management. The Chairman is assisted by the supporting staff. During the period under this annual report, the following Wardens were in position:

Chairman, Council of Wardens and Chairman, Hostel Management

Prof. Sathanarayana N. Gummadi
Professor, Department of Biotechnology

Warden	Hostel name
Dr. Thyagaraj T, Associate Professor, Civil Engineering	Alakananda
Dr. Mallikarjuna J M, Associate Professor, Mechanical Engineering	Bhadra
Dr. Arya Kumar B Chand, Associate Professor, Mathematics	Brahmaputra
Dr. Srinivasa Rao CH, Associate Professor, Mathematics	Cauvery
Dr. Kothandaraman R, Associate Professor, Chemistry	Ganga
Dr. K. Chandraraj, Professor, Biotechnology	Godavari
Dr. Raghuram Chetty, Associate Professor, Chemical Engineering	Jamuna
Dr. Benny Raphael, Associate Professor, Civil Engineering	Krishna
Dr. Anupkumar Bhandari, Associate Professor, Humanities and Social Science	Mahanadhi
Dr. Raghavendra Sai VV, Associate Professor, Applied Mechanics	Mandakini
Dr. Srirama Srinivas, Associate Professor, Electrical Engineering	Narmada
Dr. Ramesh Gardas, Associate Professor, Chemistry	Pampa
Dr. Balaji Narasimhan, Associate Professor, Civil Engineering	Saraswathi
Dr. Lelitha Devi, Associate Professor, Civil Engineering	Sarayu
Dr. Kalpana Mahalingam, Associate Professor, Mathematics	Sharavati
Dr. Radha R, Professor, Mathematics	Sabarmati
Dr. Anbarasan P, Associate Professor, Chemistry	Sindhu
Dr. Satya Sundar Sethy, Associate Professor, Humanities and Social Sciences	Tamiraparani
Dr. Shankar Ram CS, Associate Professor, Engineering Design	Tapti
Dr. Deepa Venkitesh, Associate Professor, Electrical Engineering	Tunga

9.2 Medical Facilities

The hospital of IIT Madras is an ISO 9001:2015 certified hospital. A 25-bedded hospital, it has a well-equipped casualty, ward and operation theatre with a recovery room and post-operative ward with required infrastructure. Its other facilities include an NABL-accredited clinical laboratory, pharmacy, echocardiogram, ultra-sonogram, X-Ray unit and physiotherapy unit. It also has a well-equipped Labour Room Unit with New Born Care. The outpatient department functions from 8.30 am to 6.30 pm and is manned by 11 Medical Officers. The Hospital serves a dense campus community of 19,810 – 24x7x365 days.

9.3 Institute Gymkhana

The Institute Gymkhana takes care of the general welfare, sports and co-curricular and cultural activities of students. Sports form an integral part of the overall development of an individual's personality and prepare students to overcome challenges in life after their graduation. Hence, students are encouraged to organise and participate in many sports activities.

The following tournaments were conducted during the year 2017-2018 by the Institute Gymkhana:

- Freshmen Tournament for Year I B.Tech students (for all games)
- Inter-collegiate invitation tournament, Sportfest 2017
- N.S.O. selection for Year I B.Tech/Dual Degree students (compulsory attendance of 85 per cent)
- Jimmy George Inter-Collegiate Volleyball Tournament 2017-2018
- GF & KR Inter-Collegiate Basketball Tournament 2017-2018
- Inter-hostel tournament for men, Schroeter Trophy (Gymkhana Day)
- Inter-hostel tournament for girls (Gymkhana Day)
- Inter-hostel tournament for PG students
- Inter-IIT Aquatic Meet 2017 at IIT Madras
- Inter-IIT Sports Meet 2017 organised by IIT Madras
- Non-Media Tournament, Dean (Students) Trophy, for men and women
- Inter-IIT coaching camp (ten days, compulsory for Inter-IIT contingent)
- Inter-IIT Staff Meet selection and coaching organised by IIT Madras
- Institute Annual Open Road Race

- Institute Annual Cycle Race
- Institute Open Chess Tournament
- Institute Open Triathlon Competition
- Institute Open Bridge Tournament
- Institute Open Powerlifting Competition
- Summer coaching camp for swimming, basketball, badminton, football and tennis

Sportfest 2017– 2018

The inter-collegiate invitation tournament was conducted for city colleges, for both men and women, from 20-24 September 2017. This tournament helps finalise the probable inter-IIT team. Seventeen men's colleges and 11 women's colleges participated in Sportfest 2017–2018. Tournaments were conducted on a league cum knock-out basis. Trophies were awarded to winners. The institute students took part enthusiastically in all the games and won in some of the events. The results are listed in the table below:

S. No	Games	M/W	Position	College Name
1	Badminton	Men	IV	R. M. K. Vivekananda College
			III	IIT Madras 'B'
			II	IIT Madras 'A'
			I	Loyola (ICAM)
2	Badminton	Women	IV	B. S. A. University
			III	IIT Madras 'B'
			II	Stella Maris College
			I	IIT Madras 'A'
3	Basketball	Men	IV	Guru Nanak College
			III	B. S. A. University
			II	IIT Madras 'A'
			I	Hindustan Arts College
4	Basketball	Women	IV	IIT Madras
			III	Ethiraj College
			II	Stella Mary's College
			I	Women's Christian College (W.C.C.)
5	Chess	Men	IV	---
			III	IIT Madras
			II	Vivekananda Engineering College
			I	Sri Sivasubramaniya Nadar College of Engineering (SSN)
6	Football	Men	IV	New College
			III	Guru Nanak College
			II	V. I. T. Chennai
			I	D. B. Jain College
7	Hockey	Men	IV	Guru Nanak College
			III	Veterinary College
			II	Stanley Medical College
			I	Anna University
8	Table Tennis	Men	IV	B. S. Abdur Rahman University
			III	IIT Madras 'A'
			II	V. I. T. Chennai
			I	Loyola College
9	Table Tennis	Women	IV	V. I. T. Chennai
			III	IIT Madras 'A'
			II	Stella Maris College
			I	B. S. Abdur Rahman University
10	Tennis	Men	IV	IIT Madras 'B'
			III	IIT Madras 'A'
			II	R. M. K. Vivekananda College
			I	Loyola College
11	Tennis	Women	IV	----
			III	----
			II	IIT Madras
			I	Stella Maris College

S. No	Games	M/W	Position	College Name
12	Volleyball	Men	IV	V. I. T. Chennai
			III	D. B. Jain College
			II	Guru Nanak College
			I	Hindustan Arts College
13	Volleyball	Women	IV	IIT Madras
			III	Stella Maris College
			II	Chellammal Women's College
			I	W. C. C.
14	Weightlifting	Men	IV	R. M. K. Engineering College
			III	IIT Madras 'B'
			II	IIT Madras 'A'
			I	Velammal Engineering College
15	Athletics	Men	IV	-----
			III	V. I. T. Chennai
			II	Hindustan Arts College
			I	IIT Madras
16	Squash	Men	IV	----
			III	IIT Madras 'B'
			II	IIT Madras 'A'
			I	D. G. Vaishnav College

33rd Inter IIT Aquatic Meet 2017

The 33rd Inter-IIT Aquatic Meet was organised by IIT Madras from 1-4 October 2017. The participation from other IITs was, 11 in individual swimming events and eight in water polo. The swimming team of Indian Institute of Technology Madras performed exceptionally well, winning both the men's and women's swimming championships and securing third place in the men's water polo event. C. K. Ananda Krishnan was adjudged as the Best Swimmer (Men) and L. R. Kamala Devi was adjudged as the Best Swimmer (Women). IIT Madras swimming (men) team currently holds

the records in all the events in the inter IIT aquatics meet.

The opening ceremony on 30 September 2017 was graced by eminent swimmer and five-time national champion and Arjuna Award winner, Rehan Jahangir Poncha. He address to the participants was an inspiration that set the spirits high for the competition. IIT Madras dominated the competition from the very beginning. The meet was well organised, and the organising team went to great lengths to make the swimmers' stay at the IIT campus comfortable. The results are listed below:

Swimming

	Position	IIT
Men	First	IIT Madras
	Second	IIT Bombay
	Third	IIT Kharagpur/IIT Kanpur
	Fourth	IIT Madras
Women	First	IIT Madras
	Second	IIT Bombay
	Third	IIT Kanpur
	Fourth	IIT Delhi/IIT Kharagpur

Water Polo

Position	IIT
First	IIT Kanpur
Second	IIT Kharagpur
Third	IIT Madras
Fourth	IIT Roorkee

3rd Inter-IIT Chess Meet 2017

IIT Madras hosted the 3rd Inter IIT Chess Meet from 6-12 December. Sixteen IITs participated in this event. IIT Madras contingent came third in the contest.

Inter-IIT Sports Meet 2017

The Inter-IIT Sports Meet organising team comprised the Sports Secretary, two Heads and nine Cores from six different departments. The student organising team was headed by Shaswat Mohanty and Shuhel Abdul Kareem with around 200 coordinators under them. This team was selected in May 2017 and worked with the Sports Advisor

and PEOs/PTIs and other gymkhana staff members to make the event a grand success. A sub-committee was also formed for each sport. The committee took care of facilities and requirements, hospitality and transportation, design and media, sponsorship and publicity, web-ops and events.

Finally, Gymkhana Advisory Board helped a lot to accomplish the tournament successfully.

The opening ceremony on 15 December 2017 was graced by Mr. Viren Wilfred Rasquinha, Arjuna Awardee and CEO, Olympic Gold Quest and former captain of India's national field hockey team.

In 52nd Inter IIT Sports Meet, IIT Madras secured the following positions

Contingent	Sport	Position
Men	Badminton	First
	Swimming	First
	Hockey	Second
	Table Tennis	Second
	Football	Third
	Water Polo	Third
Women	Swimming	First
	Badminton	First
	Tennis	Second
	Table Tennis	Third
	Athletics	Third

The women's contingent retained the cup of Women's General Championship for the second time. The men's contingent came third. IIT Madras secured second position in the overall championship after losing closely to IIT Bombay on the final day of the meet, bettering their previous performance of third position last year. Roshni Shetty was adjudged the Best Badminton Player (Women). Dharavath Naresh Naik created a new meet record in pole vault.

This is the first time that all the 23 IITs took part in the competition. The number of participants was 2,600. In view of more competitors, we introduced a new format (fixtures) to organise the tournament successfully within the stimulated time. The tournament was brilliantly organised and proved to be a mind-refreshing, worthy and healthy competitive experience for students. The closing ceremony was conducted on 23 December 2017 and was graced by our Director, Prof. Bhaskar Ramamurthy, Dean, Students, Prof. M. S. Sivakumar and Advisor, Sports Prof. P.N. Santhosh. The winners were given prizes at the function.

Jimmy George Volleyball Tournament 2018

The tournament was inaugurated on 4 March 2018 by Former Dean, Students, Prof. L. S. Ganesh and Advisor, Sports, Prof. P. N. Santhosh. Eight men teams were invited and divided into two groups, and matches were conducted on league and super league basis. Four teams competed in the league match in the women's category.

The annual tournament is aimed at providing a multi-dimensional platform to national talents. In the men's category, R. Arjun Durai, President, Chennai District Volleyball Association and S. N. Jayamurugan, Managing Director, SNJ Group of Companies gave away Jimmy George Rolling Trophy to St. Joseph's Engineering College. In the women's category, Dr. Rajendran, IAS, State Election Commissioner, Tamil Nadu gave away Jimmy George Rolling Trophy to Hindustan University. A. Chandra Sekaran, Assistant Director, Directorate of Enforcement, A. J. Martin Sudhakar, President, Volleyball Association, Thiruvallur

district and Prof. P. N. Santhosh, Advisor, Sports were present on the occasion.

Physically Challenged (Blind Volleyball)

IIT Madras conducted a tournament for the physically challenged, blind volleyball, for the first time on 7 March 2018. Three teams participated in the tournament. Loyola College, Chennai came first. IIT Madras came at the second place, and St. Louis Institution, Chennai, at the third place. Prof. Samuel G. L. and Prof. P. N. Santhosh, Advisor, Sports honoured the winners.

Gerhard Fisher and Kokila Rani (GF & KR) Basketball Tournament 2018

IIT Madras conducted All India inter-collegiate basketball tournament for men and women at Institute Gymkhana from 12-16 March 2018. Eight men teams were invited and divided into two groups, and matches were conducted in league and super league. Four teams competed in the league matches under the women's category.

Winners were awarded cash prizes with medals and certificates. In the men's category, Aadhav Arjuna, Secretary, Tamil Nadu Basketball Association, Chennai, gave away Gerhard Fisher and Rolling Trophy to Loyola College, Chennai. In the women's category, R. P. Ilango, Deputy Superintendent of Police, Tamil Nadu Commando Force/School Chennai gave away the trophy to Hindustan University.

Inter-Hostel Tournaments 2017- 2018

This year's Schroeter was more competitive than ever, as many hostels grabbed points in the different sports with no major dominance unlike previous years. Jamuna hostel clinched the Men's Schroeter by 58 points---20 points more than Alakananda hostel, which came second. Women's Schroeter was won comfortably by Sharavati hostel. Dean's Trophies for men and women were won by Godavari and Sabarmati, respectively.

Schroeter Trophy (Inter-IIT events)

S. No	Games	S.No	Games
1	Athletics (men and women)	8	Swimming (men and women)
2	Badminton (men and women)	9	Squash (men)
3	Basketball (men and women)	10	Table Tennis (men and women)
4	Cricket	11	Volleyball (men and women)
5	Football	12	Water polo (men)
6	Hockey	13	Weightlifting (men)
7	Tennis (men and women)		

Dean Trophy Non–Media Tournaments

S. No	Games
1	Nine-a-Side Tennis Ball - Cricket (hostel wise)
2	Nine-a-Side Tennis Ball - Cricket (freshers only)
3	Six-a-side Football
4	Six-a-side Hockey
5	Three-a-side Basketball
6	Three-a-side Volleyball
7	Road Race
8	Cycle Race
9	Triathlon
10	Cycle Race (Freshers only)
11	Chess
12	Ball Badminton

All the above-listed events were aimed at encouraging participation from the students/campus community.

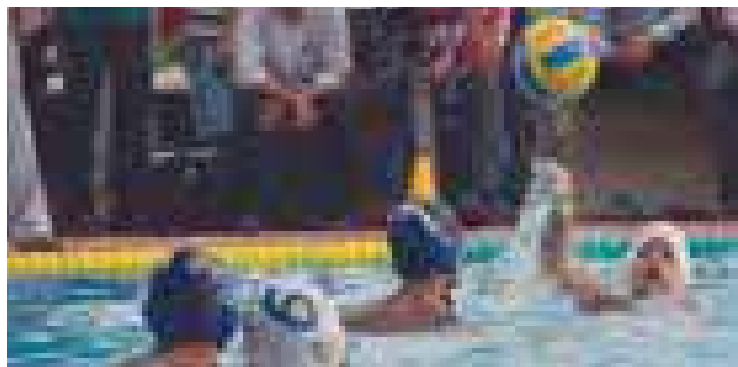
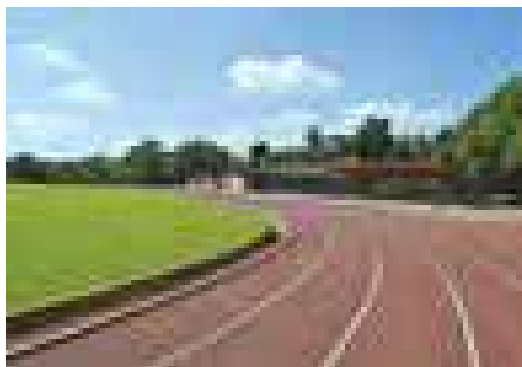
All the Gymkhana clubs, including fitness, skating, badminton, tennis and swimming pool functioned very well during this period. More than a few thousand students, staff and faculty members and campus children benefited from these excellent facilities and coaching.

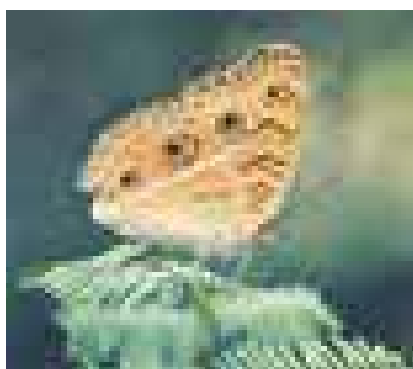
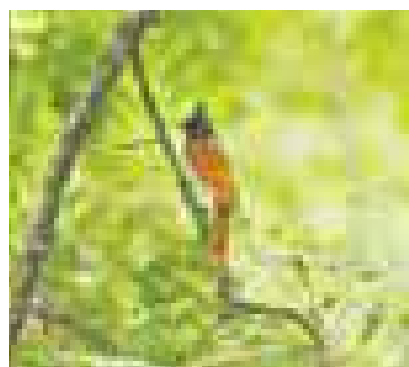
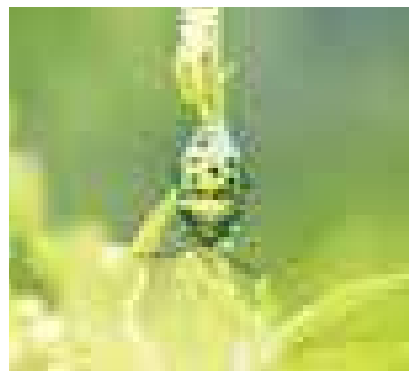
The Fitness Club has a registered membership of 458, the Tennis Club a membership of 41, the Skating Club a membership of 90, the Badminton Club a membership of 73, the Swimming Pool a membership of 3,153, the Squash Club a membership of 23 and the Aerobics Club has a membership of 47. Excellent training and able guidance were provided to students and campus residents at the Fitness Club and Yoga Club to underline the importance of maintaining a good physique and health.

National Sports Organisation

IIT Madras has been taking necessary steps to encourage students to participate in various games, sports and activities for maintaining physical fitness. Many first-year undergraduate students were registered under NSO in the academic year 2017-2018. About 450 students were registered for various NSO activities and 54 were registered for fitness. Coaches and experts from various sports federations and Sports Development Authority of Tamil Nadu were engaged to coach the NSO students in 20 sports and games (both men and women).

The noteworthy performance of first-year students in various tournaments, namely Inter-IIT Sports Meet, Inter-IIT Aquatic Meet, Sportsfest, and Inter-Collegiate Jimmy George Volleyball Tournament is partly due to the quality of training given to the students and the hard efforts put in by them during the NSO programme.





9.4. Advisor, Weaker Section 2017-18

The institute has nominated one Advisor to take care of the welfare of the foreign nationals and weaker section students. The Advisor periodically meets these students and counsels them regarding various academic and non-academic matters. During the period under report, efforts were taken to address the issues faced by differently abled candidates, women candidates and academically weak students. The differently abled students along with their parents/relatives were counselled in the beginning of the academic year and informed about the steps taken by the

institute, to instill confidence in them. The wheel chairs, reading assistance software and other necessary assistance was given to them.

The Assistive Technologies for the visually challenged students such as Infty scanning and reading software for Math (full license), PIAF Tactile Graphic Maker, Tactile Graphic Paper (A4 size, 100), Talking Scientific Calculator and Math Type Equation Editor were procured.

Two students represented IIT Madras at the 4th National Centre for Promotion of Employment for Disabled People (NCPEDP)–Accenture National Convention for Youth with Disabilities (NCYD) in Delhi on 9-10 November 2017.



As part of the All India Jimmy George Inter-Collegiate Volleyball Tournament 2018 conducted by IIT Madras, a volleyball tournament for the visually challenged was

organised on 7 March 2018, bringing together a team to represent IIT Madras.



Solar-assisted vehicle for students with special needs are being procured for their transport.



A survey is being undertaken by the Social Equity Committee to look at the social equity scenario of the institute. Institute buildings are being analysed with external help to check if they are accessible to the differently abled community. The institute buildings have already been made differently abled friendly.

Student legislators, mentors and volunteers were identified to render support and counsel academically weaker students. Student meets were arranged to address various academic and hostel issues of students. The mentor programmes, which were started in the earlier years, are being continued. Efforts have been taken to bring social equity among the students.

9.5. MiTR

Events

- An orientation programme was conducted for PG students at the CLT on 23 January 2017.
- Helper/Helpsee, an Medall Behavioral Health Services (MBHS) training programme, was conducted on 9 February 2017.
- Spot training programme was conducted by VP, MBHS Dr. Sabiha Sultana at PPT Hall on 12 March 2017.
- Chief Advisor MiTR conducted a selection for MiTR volunteers on 12 April 2017.
- MiTR Day was celebrated on 19 April 2017. The Chief Guest Speaker, Dr. Sumathi Narayanan gave a wonderful talk on Words We Speak in the Campus.
- Events Planning, a combined Saathi-MiTR meeting, was organised on 23 June 2017.
- On 29 June 2017, a meeting was chaired by Dean (Students) to formulate the Saathi-MiTR website.
- An orientation programme was conducted for the PG students at the CLT on 13 July 2017.
- On 25 July 2017, an orientation programme for the parents of UG students was conducted at the SAC building. The topic of this highly interactive programme was Your Child@the Institute.
- Orientation followed by a Q&A session for PG students was conducted at the SAC on 27 July 2017.
- Dean (Students) chaired a meeting on Creating Harmony at the Institute in the Conference Hall on 8 August 2017.
- Chief Advisor MiTR, Prof. G. Ranga Rao chaired a self-introductory meeting of the MiTR team/volunteers in the Chemistry block on 10 August 2017.
- Introduction to Barefoot Training was conducted by YourDost team at the CLT on 13 September 2017.
- F.I.E.S.T.A., an informal gathering, was conducted at the SAC building on 6 October 2017.
- World Mental Health Day - Wellness audio visual programme was screened in the Himalaya Building on 10 October 2017.
- Relaxation Training was conducted by MBHS trainers at the DoST Office, Conference Hall on 14 October 2017.
- YourDost Team conducted an Awareness-cum-Barefoot Training Part 2 programme on psychological wellness at the Central Library on 7 November 2017.
- Wellness support activities prevalent in the Institute – Dean of Students gave a presentation for the PG students at the CRC building on 3 January 2018.
- Aspiring MiTR volunteers meeting was conducted in the Chemistry Department, chaired by Prof. Ranga Rao, Chief Advisor, MiTR, on 16 April 2018.
- Selection was conducted for Core MiTR-Saathi team by the faculty on 24-25 April 2018.
- Saathi-MiTR Day was celebrated at the IC&SR Auditorium on 28 April 2018. Saras Bhaskar, Counselling Psychologist, Bloom Health Care, was Chief Guest. She talked on the topic, Mental Health, Well-being, and being an Effective Counsellor.

Counselling

- One-to-one counselling was given by counsellors from Medall and YourDOST to the students who reached them via the support contact number pasted on the doors of the hostel rooms.
- The coordinators of the MiTR helped students by talking to them and counselling them whenever needed. Students

SAATHI

Freshmen Orientation for UG, PG, M.Tech., Ph.D.

The freshmen orientation was conducted at the start of the semester for both undergraduate and postgraduate students to help them to adjust to their new life in campus. The Freshman Guidebook was written, re-edited and re-designed for circulation at the orientation programmes.

Saathi Undergraduate Freshmen Treasure Hunt

The institute conducted the treasure hunt for the incoming undergraduate freshmen. It was a huge success.

UG Student Mentor Programme

The programme was started for the incoming batch of undergraduate freshmen. It started on time and the mentors were constantly given instructions on what to do throughout the semester.

UG Acad Buddy Program

Acad Buddy Program started a bit late than the planned time. We have over 20 Acad Buddies and, probably, will have more in the even semester.

Talk by Mrs. Neerja Birla on Mental Health and the Stigmas Associated

The first talk of the semester was held at IC&SR. The lecture was preceded by an interesting and powerful skit pertaining to taboos on mental health.

Barefoot Counselling Session

A barefoot counselling session mandatory to all the executive wing members, SLC members and Saathi mentors, and open to everyone in the institute was organised in CLT. Lot of misconceptions about mental health were cleared.

Awareness Programme on Suicide Prevention

On World Suicide Prevention Day (10 September), we conducted an awareness programme on suicide prevention at Himalaya Mess. We played suicide prevention videos and distributed suicide prevention ribbons.

Awareness Programme on Mental Health

An awareness programme on mental health was conducted on World Mental Health Day (10 October) at Himalaya Mess where videos on mental health, drug addiction and common mental illnesses were played.

F.I.E.S.T.A.

This time, F.I.E.S.T.A. saw a higher number of participants from faculty compared to last year. It had events like Pictionary, charades, poker, chess, karaoke and a pani puri eating competition. The event attracted a large student crowd.

English-Minglish Programme

Content from experts has been arranged to help the students facing difficulty in speaking, especially in English. The students who show interest in learning are paired with volunteers with a common language other than English. The programme has received a positive response.

Sticker and Mailer Publicity Campaigns

Stickers with contact information of experts and other helpline have been pasted on the room doors and noticeboards of hostels. Mailers with relevant contact information are being sent at a regular interval to all the students. Articles from experts regarding various student-related issues are being shared with the public in collaboration with YourDost and Fitmag.

7-day Fitness, Nutrition and Health Program - Unlearn the Rules

This programme was organised to help students gain the basic knowledge of physical fitness and quantified nutrition. This workshop had three lecture hours on alternative days that explained the nutritional aspects of fitness and three gym hours that concentrated on form and technique of various exercises. The programme received an overwhelming response with over 600 registrations in just two hours of opening the portal.

Building Holistic Wellness

This workshop included topics like overall well-being, physical intelligence, body rhythms, food habits and connecting with people. It was conducted in four sessions—one per week for four weeks. Each session was of two hours and open only to 50 students. The workshop was hosted by Dr. G. L. Sampoorna.

Rehabilitation programme for Non-Substance Addiction

This two-session programme hosted by Sunitha Ramadurai, an NLP Coach and Master Practitioner, received a lot of traction online with posters and publicity. The workshop was open only to 70 students.

Love Yourself, Heal Your Life

This gentle healing workshop was described by many as transformative. This close to a full-day workshop made positive impact on individuals who attended it.

Collaboration with International Coaching Federation

The institute gave the ICF a list of students enthusiastic about receiving career guidance and helped them decide about the career path to choose.

9.6. N.C.C.

A total of 158 NCC cadets were enrolled during 2017-18. Training was conducted as per the NCC syllabus. A flight of SD cadets joined the march past conducted in the campus on Republic Day and Independence Day.

9.7. National Service Scheme

The National Service Scheme (NSS) was launched in 1969, the birth centenary of Mahatma Gandhi, to involve students in community service. NSS comes under the Union Ministry for Youth and Sports and is an academic requirement in many universities, including IITs and NITs, making it both challenging and exciting.

National Service Scheme, IIT Madras is guided by a faculty advisor and organised into a few sub teams of equal footing working within the NSS Managerial Team. The sub teams include Event Management, Project Administration, Finance, Design and Web Ops. Our current faculty advisor, Professor K.C. Sivakumar, Department of Mathematics, took charge on 10 August 2016.

The NSS activities in a year can be broadly classified into three categories: Projects, Events and Winter Internships or, as we call it, The Wintern. Projects are initiatives that are oriented towards specific areas and goals. Every team includes one or more Project Representatives (PRs), who ideate, design and execute the project and 15-20 volunteers who actively participate in the process under the guidance of the PR. Events, on the other hand, require participation from all volunteers and include service, awareness and motivational activities. Winterns are the camps organised in December in collaboration with service-oriented NGOs. Due to some technical difficulties, Winterns could not be organised this year.

EVENTS

After the orientation session on 1 August 2017 and NSS selection test, we kick-started the year with the inauguration ceremony on 19 August 2017. The inaugural address was given by Padma Vibhushan Dr. M. S. Swaminathan, Father of Green Revolution in India and Ramon Magsaysay winner, on the topic, Hunger Free India. Students also had a vibrant interactive session with him.

The NSS Foundation Day lecture was given by Dr. V. Shanta, Chairperson, Adyar Cancer Institute and Magsaysay award winner, on 15 October 2017. She gave an inspiring lecture on social service and ignited the minds of volunteers towards catering to the needs of society.

On 4 November 2017, a lecture was delivered by Dr Srinivas Chakravarthy, Professor, Department of Biotechnology, IIT Madras on the topic, Science Popularisation in Indian Languages: A Personal Journey. The lecture was followed by a dynamic interactive session with the volunteers.

A movie screening by IViL-IIT for Villages was organised for the NSS volunteers. The movie Mitti – Back to Roots is about the harsh realities faced by Indian farmers. It was screened on 27 February 2018. The volunteers were made aware about the problems farmers face and possible solutions to it. The film screening was followed by a panel discussion with Anshul Sinha, the film director, V. M. Parthasarathy, an organic farmer, and Radhika Rammohan, an urban sustainability champion, and a discussion with the volunteers.

On 5 March 2018, a lecture on the topic, How and Why of Voluntary Organ, Eye, Body and Tissue Donation was

conducted. The speakers were Dr. Hemal Kanvide – Mohan Foundation, K. Hari Babu – C.U. Shah Eye Bank, Sankara Nethralaya and Dr. J. Balasubramanian – Blood Bank, Voluntary Health Services. The lecture was conducted in the memory of Prof. E.G. Tulapurkara (formerly Professor and Head, Department of Aerospace Engineering). The volunteers were educated about the need for voluntary organ donation and issues with organ donation. The volunteers were encouraged to sign up for voluntary organ donation and blood donation.

An EML lecture, held on 11 April 2018, was by Magsaysay awardee, Dr Prakash Amte on the topic, Odyssey of Community Service. He gave an insight into community service of Lok Biradari Prakalp, his animal park and much more. The volunteers were introduced to his life with a view to motivating them to shape up the country for the better.

NSS conducted two monthly collection drives. The collection drive on 27 August was in collaboration with the Disaster Management Committee. In the even semester, three more collection drives were organised on 25 February, 18 March and 15 April 2018. The collected items included mostly non-perishable items such as books and clothes, which were then donated to various NGOs working in the city.

PROJECTS

During the year, we had 16 projects that can be classified into three kinds - Teaching, Content Generation and Bring a Change.

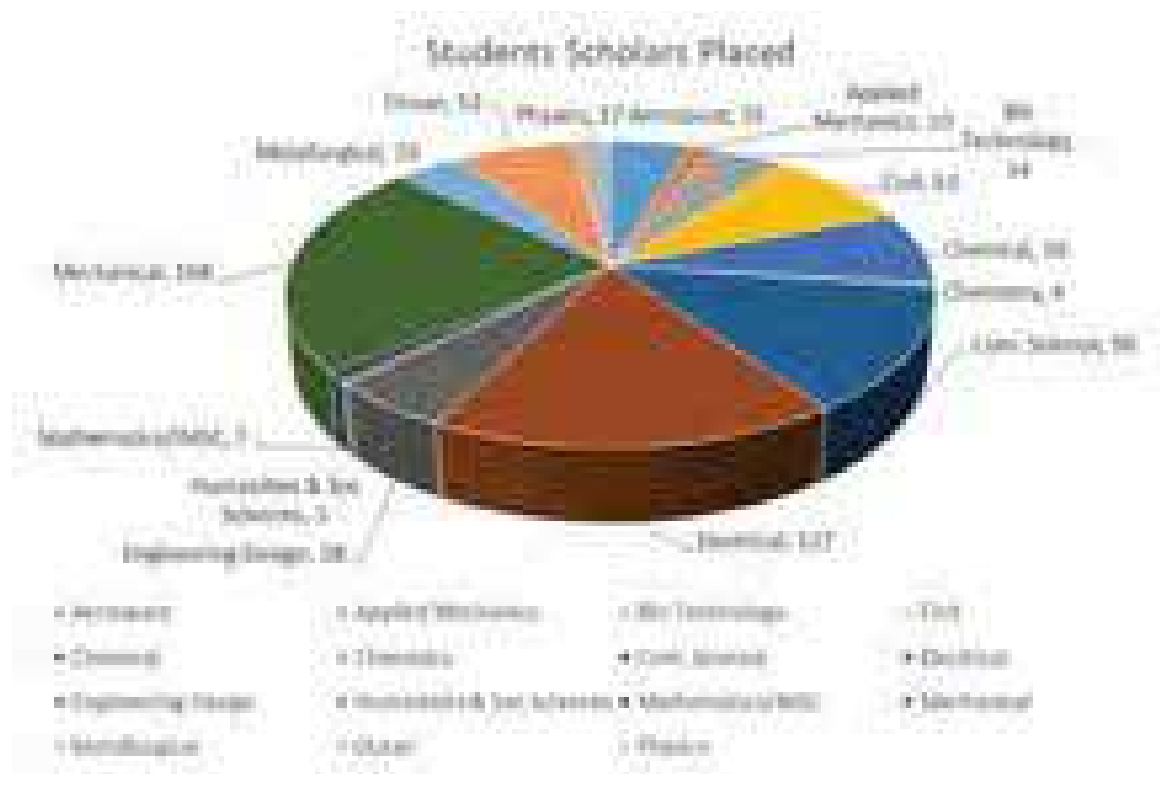
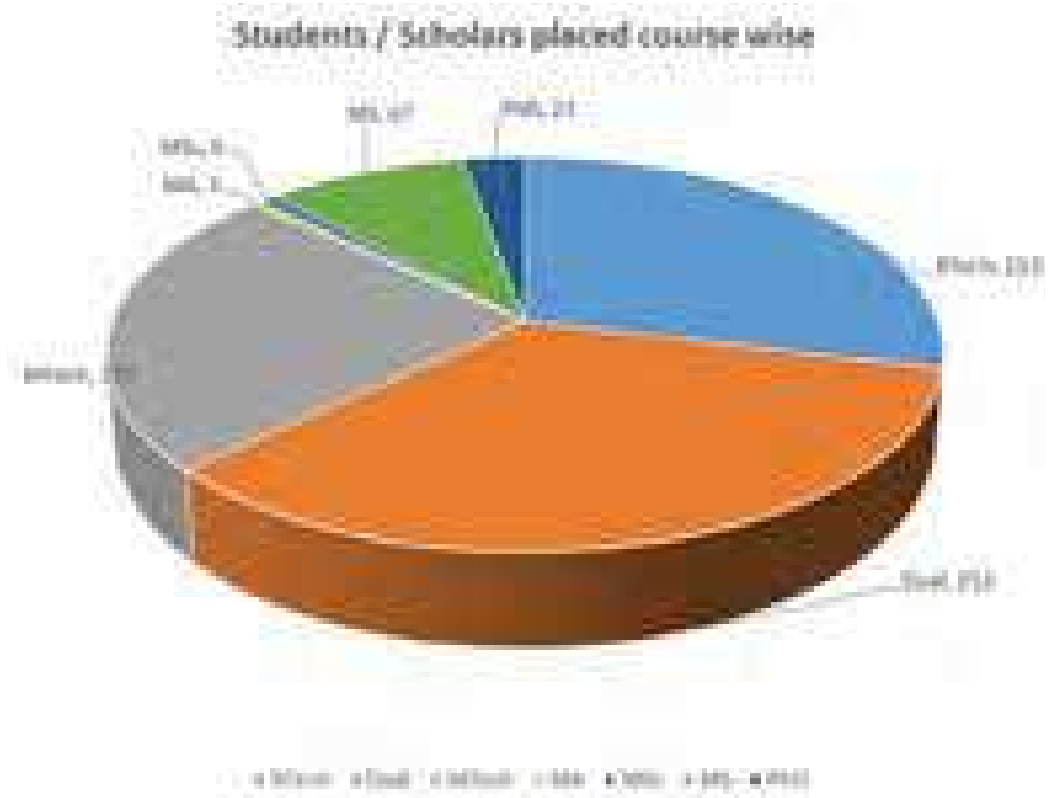
Project	Project Aim	Project Description
Project Suyam	Educate the students with limited means and help them stay in track with the competitive world.	Suyam is a charitable society founded by youth to help deprived children in Vyasarpadi. The trust has a small school with basic facilities. Teams visit Suyam at Vyasarpadi every weekend and teach Maths, Physics and Chemistry to class 9-12 students. Classes for class 11-12 students are taken on Sunday.
Teach for National Olympiad	Expose students to various types of Olympiad problems and improve their understanding of basic concepts.	Volunteers visit Chennai High School in Kottur and teach basic concepts of math and science to class 6 and 7 students. They help students solve different logical questions useful for Olympiad and help in their academics.
Project NMS	Improve verbal communication, reading and writing skills of high school students through language-based puzzles, storytelling sessions, and others.	Volunteers visit Nehru Middle School in Velachery (near Phoenix) and interact with class 8 and 9 students. They help them in developing communication skills and make them solve language-based puzzles.
Teach Your Neighbour	Assist the students living around the campus to get a better standard of primary education and a better exposure of dealing with their subjects and other competitive exams, which most of the volunteers are good at.	The project is an attempt to help students improve their basic aptitude, math and communication skills. Classes are conducted in IIT campus, making it convenient for both volunteers and students.

Project	Project Aim	Project Description
Project Akshara	Help students in rural Andhra Pradesh by translating articles and videos into Telugu.	We are going to collaborate with an NGO that teaches children living in rural areas. Volunteers help in translating valuable teaching videos into Telugu so that children can understand them better.
Project Shrayam	Create quality audio content, in English and vernacular, distribute the content and make sure it reaches the needy.	Volunteers are expected to convert textual material (mostly non-academic) into audio files. Apart from English literature, vernacular texts set in Malayalam and Tamil are given priority.
Hindi Wikipedia	Increase the number of Hindi Wikipedia articles to help students facing problems in understanding English.	Volunteers choose the articles that are not available in Hindi and are useful. After translation and proofreading, the articles are uploaded on Wikipedia. Credits depend upon the number of translated pages, quality of the language and uploading the articles on Wikipedia.
Bring a Smile	Visit a cancer hospital to spend time with the children diagnosed with cancer. Our goal is to make them happy and engage them in various activities while they are in the hospital. Our secondary goal is to create awareness about cancer.	Volunteers visit Adyar Cancer Institute every Saturday for two hours and engage the children in activities like colouring, drawing, solving puzzles and toys.
Science Teaching Kit	Teach high school students the basic laws in science using toys, career counselling, other science-related demonstrations, quizzes and video presentation.	The main part of the project is a Winter in Kerala and a school visit in Tamil Nadu.
Blood Connect	Make people aware about blood shortage in India and conduct blood donation camps in the institute.	Conducted two blood donation camps in the Institute. Prior to the camps, we conducted awareness sessions.
Drishti	Inculcate compassion and empathy among volunteers. The project creates a platform for interactions with the visually challenged and deaf children.	Volunteers of this project visit the Saint Louis Institute for the Deaf and Blind, Adyar every weekend. They spend quality time with children and help them in their academics.
Project Erudite	Help achieve the goal of bridging the knowledge gap between primary and secondary school education.	Teaching math and English to class 3-8 students at the centres managed by NGO, Chudar
Friends of Animals	Create a safe and healthy life and environment for the animals in the campus.	The students were involved in: <ol style="list-style-type: none"> 1. Campus clean up: To prevent plastic intake by animals. 2. Vaccination drives and De-worming: To keep the animals healthy 3. Student volunteers at BMAD, a shelter for animals: To help them get familiarised with animals.
Velicham	Help underprivileged students in improving their academic performance.	The project work with NGO MSSRF helps students in English, math and science through regular sessions on weekdays. Volunteers are involved in conducting regular classes and tests on developing a peer learning environment. Volunteers also help students in developing future educational goals.
Project Eride	Empower digital literacy among students as part of National Digital Literacy Mission.	The project conducts sessions for school children (primary classes) on digital education. The students are told about the uses of email, tablets, apps, MS software and others at the three centres under Chudar.
Project SOS	Impart conceptual knowledge in science and math	Class 6-8 students under Tamil Nadu State Board are taught science and math.

The teaching projects were mostly collaborations with various NGOs in and around Chennai, and our volunteers worked as tutors in places around the city. Content Generation projects were centred on creating quality content in cyberspace and other areas. We have had audio content generation projects

for blind and various Wikipedia projects aimed at adding to the knowledge capital of various fields in many languages. We are happy to announce that we collaborated with many new NGOs this year. We had projects not only outside the institute, but also inside.

During the Year, 834 students/scholars were placed in various organisations (excluding MBA).



11

Financial Assistance to Students

Indian Institute of Technology Madras supports meritorious students with financial assistance through scholarships and fellowships to pursue engineering and technology and science education at the institute. The details of the scholarships and fellowships sanctioned to students of different programmes during 2017-18 are listed in this section.

11.1. Assistance to B.Tech/Dual Degree students

Merit-cum-means scholarship

Students admitted to B.Tech/Dual Degree programmes whose parental income is less than Rs.1 lakh were sanctioned MCM Scholarship (i.e exempted from payment of tuition fee of Rs.1,00,000 per semester and given monthly pocket allowance of Rs.1,000) and for those whose parental

income is between Rs.1 and 5 lakh are given two-third tuition fee waiver of Rs.66,666 per semester and pocket allowance of Rs.1,000 per month. During the period under report, 553 students were benefited by the scholarship.

All SC/ST/PwD students are exempted from payment of Rs.1,00,000 per semester as tuition fee. SC/ST students admitted to B.Tech/Dual Degree programmes and whose parental income is less than Rs.4.5 lakh were sanctioned the concession of free messing and monthly pocket allowance of Rs.250 and exemption from payment of tuition fees and hostel seat rent. As on 31 March 2018, 202 students were benefited.

Alumni-funded scholarship for B.Tech/Dual Degree programmes were sanctioned to students. This comprises an exemption of one-third payment of tuition fees for those whose parental income is between Rs.1 and 5 lakh.

The Batch-Wise Details of Number of Students Benefited are Given Below

Sl. No	Scholarship	Number of students
1.	ST Scholarships, Ministry of Tribal Affairs, Government of India	24

MCM and SC/ST Scholarships

Batch	MCM Scholarship	SC/ST Scholarship
2017	78	36
2016	138	42
2015	155	58
2014	182	66
Total	553	202

Top 7 per cent of the General category students admitted to B.Tech/DD programme are eligible to be given Notional Prize of Rs.1,000 (one time) and a Certificate of Merit on the basis of the rank in JEE (Advanced) and parents' income not exceeding Rs.4.5 lakh. A total of 412 General category students were admitted to B.Tech/DD in July 2017, and 30 students were eligible for Notional Prize.

Alumni-funded scholarships are available to students based on their academic performances as proposed by the sponsoring alumni.

Other Scholarships

Scholarships were sanctioned by NCERT, Government of India and State Governments to meritorious students pursuing B.Tech programme in Indian Institute of Technology Madras.

State Government Scholarship obtained by B.Tech/DD Students

Scholarship	Batch/Number of students				Total
	2017	2016	2015	2014	
NCERT	11	7	9	3	30

11.2. M.Tech

Students who joined M.Tech programme through GATE were awarded Half-time Teaching Assistantship (HTTA) at

Rs.12,400 per month. During the period under report, 489 fresh assistantships and 265 renewed assistantships were given. The discipline-wise details are given below:

HTTA awarded

Sl. No.	Discipline	Fresh – Batch 2017		Renewal - Batch 2016 (January-May 2018)
		Semester I	Non-HTTA got HTTA	
1	Aerospace Engineering	13	11	10
2	Applied Mechanics	17	4	10
3	Biotechnology – Clinical Engineering	10	-	2
4	Chemical Engineering	38	3	26
5	Civil Engineering	65	16	31
6	Computer Science and Engineering	60	-	43
8	Electrical Engineering	64	4	39
9	Industrial Maths and Scientific Computing	11	3	6
10	Mechanical Engineering	83	12	52
11	Metallurgical and Materials Engineering	24	4	18
12	Ocean Engineering	38	1	22
13	Solid State Technology	8	-	6
	Total	431	58	265

11.2.1. M.Tech Dual Degree

The students of 2013 batch who joined M.Tech programme under Dual Degree were awarded Half-time Teaching Assistantship (HTTA) at Rs.12,400 per month from 1 June 2017 onwards, based on their registering valid GATE score or on securing CGPA of 8.0 or above. During the period under

review, 321 students were awarded fresh assistantships from June 2017 to December 2017, and 320 renewed assistantships in January 2018 out of which 306 students were renewed HTTA at the rate of Rs.12,400 per month and 14 students at the rate of Rs.6,950 per month as they obtained CGPA of less than 6.5 in July-November 2017 semester. The department-wise details are given below:

Sl. No.	Discipline	Batch 2013	
		Fresh (9 Semester)	Renewal (10 Semester)
1	Aerospace Engineering	19	19
2	Biotechnology	41	40
3	Chemical Engineering	13	13
4	Civil Engineering	37	37
5	Computer Science and Engineering	21	21
6	Electrical Engineering	56	56
7	Engineering Design	41	41
8	Mechanical Engineering	67	67
9	Metallurgical and Materials Engineering	11	11
10	Naval Architecture and Ocean Engineering	10	10
11	Physics	5	5
	Total	321	320

11.3. M.Sc.

The students admitted to M.Sc programme were sanctioned Rs.1,000 per month merit scholarship as per rule. Exemption from payment of tuition fee was also given to certain students.

Merit Scholarship and Freeship awarded

Sl. No.	Course	Merit scholarship		Freeship (tuition fee waiver)		50 per cent Freeship (half tuition fee waiver)	
		Year I	Year II	Year I	Year II	Year I	Year II
1.	Chemistry	14	14	7	5	2	2
2.	Mathematics	15	14	5	4	1	1
3.	Physics	11	11	6	4	1	2
	Total	40	39	18	13	4	5

11.4. M.A.

Institute Merit Scholarship

Twenty-five per cent of students admitted to M.A. programme and whose parental income is less than Rs.4.5 lakh were sanctioned Merit Scholarship (i.e., they were exempted from tuition fee of Rs.3,000 per semester and given pocket allowance of Rs.1000 per month).

The SC/ST students admitted to the programme and whose parental income is less than Rs.4.5 lakh were sanctioned the concession of free messing and provided pocket allowance of Rs.250 per month, besides exemption from payment of tuition fees and hostel seat rent, as per Government of India post-matric scholarship rules.

Institute free studentship scholarships for M.A. programme were sanctioned to the students, which comprises exemption from payment of tuition fees.

The Batch-Wise Details of Number of Students Benefited are Given Below

Batch	Merit Scholarship	SC/ST Scholarship
2017	1	0
2016	2	4
2015	2	1
2014	3	1
2013	1	2
2012	1	2
Total	10	10

11.5. M.S.

The scholars admitted to M.S. programme through GATE are given Half-time Teaching Research Assistantship (HTRA) of Rs.12,400 per month for two years. The HTRA

was later extended to third year on the recommendation of GTC. During the period under report, 411 scholars received these assistantships of which 178 were fresh scholars. The department-wise details of the assistantships awarded and renewed are given below:

HTRA Awarded

Sl. No.	Discipline	Fresh	Renewal	Total
1	Aerospace Engineering	10	18	28
2	Applied Mechanics	19	24	43
3	Biotechnology	5	29	34
4	Chemical Engineering	8	8	16
5	Civil Engineering	17	6	23
6	Computer Science and Engineering	13	26	39
7	Engineering Design	8	8	16
8	Electrical Engineering	24	42	66
9	Management Studies	8	14	22
10	Mechanical Engineering	44	44	88
11	Metallurgical and Materials Engineering	11	5	16
12	Ocean Engineering	11	9	20
	Total	178	233	411

11.6. Ph.D.

The scholars admitted to the Ph.D. full-time programme in Engineering are sanctioned Half-time Teaching/Research Assistantship (HTRA) of Rs.25,000 per month for first

two years and Rs.28,000 per month for next three years. During the period under report, 1,696 scholars obtained assistantships of which 251 were fresh scholars. The department-wise details of the assistantships awarded and renewed are given below:

Number of HTRA awarded

Sl. No.	Discipline	Fresh	Renewal	Total
1	Aerospace Engineering	6	83	89
2	Applied Mechanics	16	81	97
3	Biotechnology	27	86	113
4	Chemical Engineering	13	82	95
5	Chemistry	22	99	121
6	Civil Engineering	26	177	203
7	Computer Science and Engineering	5	42	47
8	Engineering Design	4	42	46
9	Electrical Engineering	33	153	186
10	Humanities and Social Sciences	10	44	54
11	Management Studies	10	36	46
12	Mathematics	5	49	54
13	Mechanical Engineering	29	218	247
14	Metallurgical and Materials Engineering	12	71	83
15	Ocean Engineering	15	82	97
16	Physics	18	100	118
	Total	251	1445	1696

The Ph.D. scholars of science departments who are able to submit thesis within four-and-a-half years and engineering departments who are able to submit thesis within four years from the date of admission are sanctioned Pre-Doctoral Fellowship of Rs.45,000 for six months. During the year under report, 45 Ph.D. scholars were sanctioned Pre-Doctoral Fellowship.

11.7. Financial Assistance to Research Scholars/Students for presentation of papers abroad

The institute encourages research scholars to present papers in international conferences for which they are given financial assistance. The financial assistance provided to M.S. and Ph.D. scholars is up to the limit of Rs.1,50,000, including registration fee.

11.8. National/International Conferences in India

Research scholars and students of course programmes are given the following financial assistance for presentation of papers in national/international conferences in India:

Registration fee

National and International conference : Rs.5,000

Travel : Third Class AC train fare

Daily allowance : Rs.500 per diem subject to a maximum of 10 days



12 Weaker Section & Foreign National Students

12.1. B.Tech programme

As per the Government of India orders, 27 per cent, 15 per cent and 7.5 per cent of seats are reserved for OBC, SC and ST students, respectively in the B.Tech. programme. These students are admitted through the Joint Entrance Examination (Advanced) with a relaxation. These students have to get only 60 per cent of the marks obtained by the

last student of the General category to get qualified for admission. During the counselling done prior to admission, the Adviser explains to each student the requirements of different branches. This helps the students to choose a suitable branch of their capability and interest. When a student finds the chosen branch is tough, one is allowed to switch over to lower JEE cut-off branch at the end of the first semester.

The following are the number of SC/ST Students admitted to B.Tech. Programme through JEE (Advanced) and Preparatory Course during 2016-17

Total Sanctioned Intake	Sanctioned Intake		Programme						
			JEE		Preparatory Course				
	SC	ST	Programme	SC	ST	SC PD	ST	GE PD	OBC PD
B.Tech - 446	70	35	B.Tech	68	35	-	-	1	1
Dual Degree - 372	56	28	Dual Degree	56	27	1	2	-	-

SC/ST students admitted against reservation are given the following benefits:

- Tuition fee waiver.
- Free lodging and messing (basic menu only) and monthly pocket allowance of Rs.250 provided their parents' income is Rs.4,50,000 net per annum or less.
- A Book Bank as part of Central Library is maintained for the benefit of the SC/ST students. The students are issued 12 tickets for taking books from the bank. The books are issued for a semester.
- Help in getting placement. Wherever possible, industries are requested to conduct separate interviews for SC/ST students, and the requirements for these students are lower than those for the General category.

12.2. Preparatory Course for Admission to B.Tech Programme

A preparatory course of one academic year was initiated by the Ministry of Human Resource Development, Government of India, exclusively for SC/ST/PwD students. Selection for this course is made from the Joint Entrance Examination (Advanced) list of SC/ST/PwD students who did not qualify for admission. Upon successfully completing the preparatory course at the IIT, they would be eligible to join the B.Tech programme and not require to write the JEE (Advanced) again. Following are the details of admission in July 2017 (IIT Madras, IIT Bombay, IIT Indore, IIT Bhilai, IIT Goa):

Offer issued for PC				Offer issued for PC			
SC PD	ST PD	OBC PD	GE PD	SC PD	ST PD	OBC PD	GE PD
2	1	3	2	2	1	3	2

Five preparatory course of 2016-17 batch candidates were offered admission to B.Tech/Dual Degree Programme in July 2017, as they have successfully completed the preparatory course.

12.3 M.Tech programme

Seats are reserved for SC and ST candidates as per the Government of India orders. They are admitted through GATE by a separate merit list. Following are the details of admission in July 2017:

Offer issued		No. joined (HTTA)	
SC	ST	SC	ST
63	39	61	36

12.4 M.Sc programme

Admission was made to the M.Sc. programme through JAM entrance examinations only; 24 SC and 9 ST students were admitted in M.Sc. These students were given tuition fee waiver.

M.Tech and M.Sc students admitted against reservation are given the following benefits:

- Book Bank facility with 12 library tickets. The books are issued for a semester.
- Both public sector and private sector industries were requested to recruit SC and ST students. Other special

steps were also taken to enhance the recruitment of this category of students.

- Scholarship is given to these students as per Government of India norms.

12.5 Admission of Foreign National Students and Indian National Residing Abroad

In July 2017, one student joined M.Tech programme and one student joined Ph.D programme. At the end of March 2018, two foreign nationals were on the rolls of the institute. The programme and country-wise details are given below:

Country	Year I	Year II	Year III	Year IV	Year V	Total
1. Foreign National Students						
M.Tech						
Ethopia	1					1
Romania		1				1
Ph.D						
Ethopia	1					1

Foreign students are also permitted to use the Book Bank. Book Bank Library tickets are issued to each student. The books are issued for a semester.

In addition to the above, IIT Madras Alumni Association provides financial assistance to students under IITMAANA

Travel Grant programme to assist the institute's students to visit the USA and present their papers at nationally recognised technical conferences. The grant will cover airline ticket charges and visa fees, but not conference registration fees.



13 Campus Amenities

13.1. Engineering Unit

The Engineering Unit of Indian Institute of Technology Madras is entrusted with constructions and maintenance of buildings and services in the institute. The works are carried out through contract by calling tenders and quotations in a transparent manner. For maintaining outstanding quality in the construction of buildings, the unit has used the expertise

of faculty members who are experts in their respective areas. To complete the projects in time, the Engineering Unit holds periodic review meetings with stakeholders.

The Engineering Unit has introduced new materials and technologies in construction and maintenance activities. The status of its works (completed, in progress and in the planning stage) is as follows:

Major Works Completed at the Institute

Sl. No.	Work	Amount (Rs. in lakh)
1	Construction of new dining facility in Krishna Hostel (Ground + first floor) at IIT Madras.	1070
2	Construction of two new classroom complexes (B Blocks-Ground+3 floors) by replacing the existing Chemistry and Physics Lecture Theatre at IIT Madras.	1310
3	Construction of additional building for IC&SR (Ground+3 Floors) at IIT Madras, including interior works and Centralized Air Conditioners.	304
4	Supply, laying, testing and commissioning of treated sewage water supply pipeline and construction of underground sump in AZ and RZ.	375
5	Construction of Two lane over bridge connecting the IITM campus with the IITM Research Park.	1200
6	Providing grey water delivery line and tanks	240
7	Construction of additional one more floor over the existing Central Electronics Centre at IIT Madras.	85

Major Works in Progress at the Institute

Sl. No.	Work	Amount (Rs. in lakh)
1	Construction of 96 Nos. of new 'B' Type Quarters (3 Blocks-G+8 floors -32 Flats in each Block) at IIT Madras	6700
2	Construction of Biotechnology and Centre for Sustainability building (Ground +6 Floors) at IIT Madras	2956
3	Construction of Academic Complex (G+6) by replacing the dilapidated workshop and stores buildings	12940
4	Construction of additional floor above the Composite Technology Building, including water supply, drainage and internal electrification for IIT Madras	67

Major Works Being Planned in 2018-19

Sl. No.	Work	Amount (Rs. in lakh)	Remarks
1	Construction of girls' hostel by replacing existing rear wing of Sarayu Hostel at IIT Madras	2159	Handed over to CPWD
2	Construction of 64 G1 type quarters for married research scholars at IIT Madras	1585	
3	Construction of 48 new D type quarters (1 Block-Ground+8 Floors-6 flats in each floor) at IIT Madras	2733	
4	Construction of additional rooms for Taramani Guest House at IIT Madras.	447	Handed over to CPWD and work started.
5	Upgradation of water supply in the campus, phase - 1	850	
6	Construction of New Academic Complex-II	12910	
7	Construction of new hostel (1200 beds) by replacing the existing Mandakini hostel	10130	
8	Construction of Computational Fluid Dynamic (CFD) Building (G+1)	404	

Sl. No.	Work	Amount (Rs. in lakh)	Remarks
9	Augmentation of facilities at Centre for Innovation (CFI) Lab by completely replacing the existing structure building	1647	
10	Construction of Computer Science and Engineering (CSE) building	2180	
11	Construction of New Extension to Electrical Science Block (ESB) annexure building	2908	
12	Upgradation of existing sewerage system at IIT Madras	3458	
13	Revamping of water supply system in IIT Madras	2849	

13.2. Housing Facilities

A total 457 faculty quarters, 412 staff quarters and 232 student quarters are available in the campus for accommodation. In addition, there are 167 servant quarters. A total of 96 B-Type quarters were added to the institute in 2017.

13.3. Horticulture

The Horticulture Unit is functioning under the Engineering Unit. It maintains 30,000 square meter lawns and

hedges. It takes care of tree plantation, maintains the plants and performs other associated activities. On 12

December 2016, IITM lost around 600 trees due to Vardah cyclone. Moreover, due to a court order, around 3,000 Julia Prosopis were cut down and removed outside campus by auction. The Horticulture Unit has removed all the fallen trees and is replanting in a phased manner.

13.4. Public Health

The Public Health Division takes care of mosquito and termite control and disposal of garbage and hazardouswaste

generated from different departments in the campus through Tamil Nadu Waste Management Limited.

13.5. Telephone Facilities

A new telephone exchange was commissioned by BSNL, Chennai Telephones Division, in the campus. All the direct lines of the institute that were linked from Raj Bhavan Telephone Exchange have been linked to this exchange.

13.6. Local Body Approval

The CMDA has approved 15 buildings. The plan for other buildings constructed and under construction were already submitted to CMDA and is now under approval process.

13.7. Hospital

Healthcare is a noble profession and a holistic approach. Our focus has been to provide accurate diagnosis, best medical care, appropriate patient guidance and follow-up in tertiary centres. The dedicated team for this cause is as follows:

Chief Medical Officer i/c	Senior Medical Officers	Medical Officers
Dr. Mahalakshmi M. Ravi, DGO	Dr. B Rebecca Punithavalli, MD (O&G)	Dr. N. Porchelvi, MBBS
	Dr. Sabitha Selvam, DMRD	Dr. V. Thenral, MBBS
		Dr. D. Saraswathi, MBBS
		Dr. R. Gowri Sanker, MBBS, DA
		Dr. Kavitha, MBBS
		Dr. J. Siva, MBBS
		Dr. A. J. Tamilmani, MBBS, DLO
		Dr. Preethi, MBBS

The Consultants Attached to the Hospital are as Follows

Name	Speciality	Name	Super-speciality
Dr. Vishnu	Orthopaedic Surgeon	Dr. S. Manoj	Cardiologist
Dr. Amit Kumar Sharma	Orthopaedic Surgeon	Dr. N. Mahesh	Neurologist
Dr. D. Sankar	Oral Surgeon	Dr. Srividhya	Endocrinologist
Dr. Sharada Mani	Dentist	Dr. Shruthi	Endocrinologist
Dr. Shashi Umesh	Dentist	Dr. Shiv Prakash	Psychiatrist
Dr. K. Balamurugan	ENT Surgeon	Dr. G. Manoharan	Gastroenterologist
Dr. Fathima Hyder	Paediatrician	Dr. Gnanasambandam	Cardiologist
Dr. Indira Chaturvedi	Paediatrician	Dr. Venkatesh	Nephrologist
Dr. A. Chandan	Dermatologist	Dr. V. B. N. Murthy	Plastic Surgeon
Dr. V. Ganesan	Radiologist	Dr. Sindhu Maran	Psychiatrist
Dr. A. Mohan Rao	General Surgeon	On call	

Name	Speciality	Name	Super-speciality
Dr. Shobana Priya	Obstetrician/Gynaecologist	Dr. Sornam	Obstetrician/Gynaecologist
Dr. Aparajith	Physiotherapist	Dr. Sukanya	Paediatrician
Dr. Karthick	Ophthalmologist	Dr. Subha	Paediatric Surgeon
Dr. Rajaram	Anaesthesiologist	Dr. Shibir	Anaesthesiologist
Dr. Harish Bhat	Urologist	Dr. N. Kathiresan	Surgical Oncologist
		Dr. P. Rajkumar	Surgical Oncologist
		Dr. Rejiv Rajendranath	Medical Oncologist

Apart from the medical officers and consultants, we have paramedics and other supporting staff.

Academic Activities

The following continuing medical education (CME) programmes were conducted for the medical staff during the year:

S. No.	Date	Topic	Speaker
1	18 August 2017	Endocrine Hypertension	Dr. K. Baraneedharan
2	28 September 2017	ILD – When to Suspect and How to Diagnose On	Dr. M. Harish, Pulmonologist
3	8 December 2017	Post-Transplant Diabetes Management	Dr. K. Baraneedharan
4	12 December 2017	Uro-gynaecology – A Hybrid Perspective	Dr. Meera Raghavan
5	12 December 2017	Urology in General Practice	Dr. Raghavan
6	19 December 2017	Rabies and Its Prevention	Dr. Dhavapalani Alagappan
7	22 February 2018	Approach to Arthritis	Dr. Sham S.

Conference convened

BRIDGE 2017 was conducted on 1-2 July 2017 with the themes of Practical Gastro, Antibiotics and Evidence Based Medicine for the benefit of our doctors and budding post-graduates (ICSR).

Academic Activities

Conference attended

Dr. Mahalakshmi M. Ravi	10-11 June 2017	Apollo Infectious Disease Conference
	15 July 2017	Mastering Medicine 2017, SMF
	30 November-2 December 2017	International Patient Safety Conference, Mumbai
	9 December 2017	Forum 2017
	15-16 December 2017	Indo-UK Oncology Summit
Dr. Rebecca Punithavalli	15 July 2017	Mastering Medicine 2017, SMF
Dr. Sabitha Selvam	15 July 2017	Mastering Medicine 2017, SMF
	9 December 2017	Forum 2017
	10-11 June 2017	Apollo Infectious Disease Conference
Dr. N. Porchelvi	24-25 June 2017	Diabetes Management in the Era of Personalised Care, Apollo
	15 July 2017	Mastering Medicine 2017, SMF
	1-2 July 2017	Bridge 2017, ICSR, IIT Madras
	22-23 July 2017	TRENDO 2017 – Annual Conference of Endocrine Society, Chennai
	9 December 2017	Forum 2017
Dr. Gowri Shankar	26-29 January 2017	APICON 2017
	22 April 2017	Update on Dementia
	15 July 2017	Mastering Medicine 2017, SMF
	9 December 2017	Forum 2017
	22-25 February 2018	APICON 2018
Dr. P. Kavitha	9 December 2017	Forum 2017
Dr. A. J. Tamilmani	15 July 2017	Mastering Medicine 2017, SMF
	18-20 August 2017	ENT Conclave VII, Hyderabad
Dr. R. Preethi	24-25 March 2018	Infectious Diseases Update (IDEF)

ANNUAL CENSUS OF HOSPITAL FOR THE YEAR 2017-2018

Month	O. P. Day (8 am–6 pm)	Emergency Cases (6 pm - 8 am)	In-Patient (Casualty)	In Patient (Ward)	Surgery (Major)	Surgery (Minor)	Diagnostic Procedure	Dental	X-ray	ECG	USG	Physio
April 2017	7903	813	235	46	2	14	8	122	266	65	54	545
May 2017	6365	695	242	30	3	9	2	90	260	76	56	496
June 2017	6299	649	201	23	4	7	5	120	226	51	10	430
July 2017	7844	887	304	33	6	10	7	159	231	73	8	612
August 2017	9415	1110	337	47	7	7	5	145	364	57	84	736
September 2017	9805	1121	469	71	1	9	8	142	283	98	62	536
October 2017	9443	1105	328	49	2	6	11	136	325	98	65	620
November 2017	8005	885	283	43	2	9	5	85	245	71	45	473
December 2017	7894	845	245	24	0	4	5	117	322	66	50	556
January 2018	9526	1121	255	33	0	13	3	111	290	63	58	435
February 2018	8533	948	295	39	0	6	6	104	326	35	67	618
March 2018	8849	962	295	28	0	6	11	141	318	89	67	619
Total	99881	11141	3489	466	27	100	76	1472	3456	842	626	6676
Grand Total: 1,28,252												

In-service Education: Doctors, Nurses and Paramedics

As part of in-service education, the staff nurses and other paramedics were sent for Basic Life Support/Advanced Cardiac Life Support training at The Academy of Clinical Training.

Events

- Cancer Awareness Talk by Dr. Sathya Consultant Oncologist from Global Hospital on 19 April 2017 at widow.
- World Nurses Day was celebrated at the institute hospital on 12 May 2017.
- Doctors Day was celebrated on 1 July 2017.

Free medical check-up camps for institute's Students, employees and their dependents

- Urology camp (prostate screening) was conducted by Dr. Harish Bhat on 19 April 2017.
- BMD Camp was organised on 21 April 2017.
- On International Women's Day (March 8), a health camp was conducted for Women's Forum Spouses/Dependent and Students from 5-7 March 2018.
- World Diabetic day camp was held on 13 November 2017

- Pulse Polio Camps were organised by COC on 2 April 2017 (first dose) and 30 April 2017 (second dose), and 28 January 2018 (first dose) and 11 March 2018 (second dose).
- A health check-up camp was conducted for CCW Catering staff in the month of September 2017.
- Kendriya Vidyalaya Students Medical Screening for the academic year 2017–2018 in August 2017.

The total claim for in-patient Admissions in the institute hospital from insurance companies was Rs.68,39,071.

The year saw us scaling our clinical value proposition with the introduction of several new initiatives across super-specialties. Non-communicable diseases are being handled as per international guidelines and protocols. Communicable diseases are aptly handled as per guidelines and with special attention to preventive aspects and measures. Patients brought in moribund state are promptly and efficiently handled by our medical officers, who are regularly being trained in relevant and required areas.

13.8. Guest Houses

The institute has two guest houses within the campus: the Bose–Einstein Guest House near the Administrative Building and Taramani Guest House (TGH) in the hostel zone. The

Bose–Einstein Guest House has 18 air-conditioned suites. Each room has a telephone, fridge and TV. VIPs, institute guests and invited guests are usually accommodated here. TGH has 83 rooms, of which 18 are suites and 65 are air-conditioned rooms. The guest house provides board and lodging facilities for institute guests and visitors, newly appointed faculty members, staff members, delegates and participants attending conferences, seminars, symposia and workshops.

13.9. Bank

State Bank of India has a branch and two ATMs on campus. Canara Bank also has a branch and an ATM facility within the institute. In addition, ICICI Bank has installed an ATM in the hostel zone.

13.10. Post office and Telecom Centre

There is a post office on campus to cater to the needs of the campus community. A 24-hour telecom centre caters to the needs of the employees, students and residents.

13.11. Schools

Vanavani Matriculation Higher Secondary School (VVMHSS), administered by the IIT Madras Educational Trust, and a Kendriya Vidyalaya (KV) function on campus. VVMHSS offers courses from LKG to class 12 and the KV offers courses from class 1 to 12.

13.12. Open-Air Theatre

The Open-Air Theatre is used by the Film Club to screen films during weekends. It is also used for other functions of the institute and schools.

13.13. Student Activities Centre

This building is used by students for indoor games. Important functions such as convocations and orientation programmes for freshers are also conducted here.

13.14. Crèche

A crèche is functioning on the campus for the benefit of the staff and working women. There were about 157 children in the crèche during the period under report.

13.15. Transport services

The institute has eight LYNX buses that provide transport facilities to the staff, students and residents of the campus. Transport facilities are also available for official work.

13.16. Security Section

The Security section is an important constituent of Indian Institute of Technology Madras, as it is vested with the task of ensuring the security of men and materials on the campus. The section is also responsible for the maintenance of peace and ensuring harmonious coexistence of campus residents. A part of support service, it serves the residents in cases of emergencies and contingencies that may adversely affect the normal life of the campus.

Recruitment of ASO/Security Guard/Training

The second batch of the institute security guards has nine guards, including two women. They were recruited and joined on 8 May 2017. One Assistant Security Officer (ASO) also joined on 12 June 2017. Subsequently, they were routed to Police Training College, Ashok Nagar, Chennai for basic training for a month. The training programme covered a wide range of indoor subjects and a rigorous part of outdoor, especially squad drill and physical training. The training was completed on 4 August 2017.

13.17. Campus News

Published every Friday, the Campus News highlights the important events of the institute.

13.18. Cafeteria

There are two canteens, the IIT Staff Canteen and the IRTC restaurant, on campus to cater to the needs of employees and students.



Passing Out Parade and Demo

The passing out parade took place on 5 August 2017. The parade was reviewed by Director, Dean Administration and

Registrar and staff. Squad drill, lathi drill, physical exercise and unarmed combat were performed during the parade.



Fire Safety Training Programme

The Security section conducted a training programme on fire safety for the students of IIT Madras. They were given

hands-on experience on the use of various fire-extinguishing equipment.

Sl. No.	Date	Department	Venue	No. of participants
1	19 April 2017	Chemistry	Chemistry	43
2	9 June 2017	IC Engine Lab (Department of Mechanical Engineering)	IC Engine Lab	37
3	23 June 2017	IC&SR	IC&SR	97
4	29 July 2017	Vanavani School (teachers and staff)	Vanavani School	69
5	3 November 2017	Department of Chemistry	Seminar Hall, Chemistry Department	21
6.	4 January 2018	IIT student volunteers, Saarang	OAT	17
7.	14 March 2018	IIT Tirupati students	Classroom (IIT Tirupati)	108
8.	15 March 2018	PhD and MS students	CRC	165
9.	23 March 2018	Battery Innovation Centre	CSD 213	34



ISO-Internal Audit and External Audit

The internal audit for security section was conducted by Dr. R. K. Amit, Assistant Professor, Department of Management Studies and Mr D. Venkatesan, Superintendent, Academic Section (Research) on 11 July 2017. The external audit was conducted by external auditors on 6-7 March 2017.

Findings: The Quality Systems and Procedures manual of security section was perused, wherein the organisational structure and the roles and responsibilities of the security personnel are clearly defined.

- The primary and secondary responsibilities of the Security section are defined in a lucid manner.
- The complaint register has been verified.
- The feedback of customers with the sealing has been verified.

54th Convocation - 21 July 2017

During the convocation, the security section ensures the following arrangements:

- Security and fire safety arrangements made at the main venue (SAC) and AC Annexure



- Security gadgets like HHMD and mobile jammer installed at both the places; faculty and student volunteers detailed to carry out various tasks under the chairmanship of Prof. Koshy Varghese
- Police and fire service personnel present during the programme
- Band party from Officer's Training Academy (OTA) arranged for rehearsal and convocation days

Training on Professional Development

A half-day training programme on Motivation and Professional Development was conducted on 31 July 2017 at Department of Management Studies for institute's security personnel. The programme emphasised the importance of management of emotions and stress and, more importantly, professionalism in the workplace and ethical behaviour in day to day work. Prof. T. J. Kamalanaban spoke on all the aspects in professional development and Dr. Vijayalakshmi V. conducted a session on management of emotions and stress. A similar programme was conducted in February 2018.



Independence Day Celebrations

The celebration of India's 71st Independence Day was held at Manohar C. Watsa Stadium on 15 August 2017. A part of the celebration was the ceremonial parade with eight

contingents. There was also a sports contingent of institute students and a band team of Vanavani School students with 20 participants. The best marching contingent in the march past was Vanavani School.



CCTV Coverage

Additional cameras have been installed at Research Park and Mandakini gates, and the video link has been extended to Duty room for monitoring. The EU and CC have provided pole erection, power supply and net cable, respectively. The security section is periodically checking the cameras installed at the gates, academic, hostel and residential areas.



Fire Fighting Training to Security Guards

Twelve security guards underwent firefighting training at State Training Centre, Tamil Nadu Fire and Rescue Services, Tambaram for 10 days from 20 November to 1 December 2017. Similarly, the second batch of nine security guards had their training from 4-15 December 2017.



Training on Basic Fire Safety/Seminars on Fire Safety

Sl. No	Date	Organiser	Title/Programme
1	16 November 2017	M/S Usha Fire Safety	Basic fire safety and emergency preparedness

52nd Inter IIT Sports Meet for Students/24th Inter IIT Sports Meet for Staff

- Sports Meet for Students: 15-23 December 2017
- Sports Meet for Staff: 26-30 December 2017
- Security personnel were deployed at sports field as per the requirements of Gymkhana.

March past practice was given to student contingents with effect from 5-13 December 2017; for staff, the practice was held with effect from 15-25 December 2017.

Achievements of Security Staff in Athletics

Sl.No.	Name	Events	Medals
1.	S. Sakthivel	400 m/800 m/1500 m	Silver
2.	C. Sri Sandosh	400 m - Long jump\ high jump	Gold Silver
3.	R. Kamalesh	200 m	Silver
4.	Subathra Kumaresan	Long jump	Silver
5.	S. Santhosh	200 m	Bronze
6.	R. Muthukumar	1500 m	Bronze
7.	S. Thamarai Kannan	Shotput	Bronze
8.	N. Poornima	Shotput	Bronze



Achievements in Games by Security Staff

Volleyball team bagged the first place. The team had

- A. Kathiravan
- S. Thamarai kannan
- S. Santhosh
- R. Kamallesh
- S. Sakthivel

Football team was placed fourth. The team had

- T. Seliyan
- T. Kumaresan
- J. Johnson
- G. K. Lokesh
- R. Deepan
- S. Thamarai Kannan
- C. Sri Sandosh

ISO-Internal Audit

- The Internal Audit for security section was conducted by Mr. P Hariharan, Technical Superintendent, Central Workshop on 4 January 2018.

Shaastra 2018 (4-7 January)

The Security section successfully handled the Shaastra and Saarang this year and managed the crowds well. Elaborate security arrangements were made during the mega festival. In addition, the following tasks were carried out:

Traffic Management

- Security personnel were deployed in GC, Y Junction to control traffic near the event areas.

Temporary Fire Points Areas

- SAC
- OAT
- KVS Ground
- Stall Areas

IIT lady security personnel was deployed in Sharavathi hostel to verify and ensure that the outside students were well accommodated.

Saarang 2018 (10-14 January)

Traffic Management

- To minimise the traffic inside the campus, temporary parking arrangements were set up in CLRI and Main Gate.
- Temporary barricades were set up to control the speed limit and restrict vehicles' entry in the busy areas.
- Handheld night light indicators and reflector jackets were used to make traffic control more effective.

Temporary Fire Points Areas

- SAC
- OAT
- KVS Ground
- Stall Areas

CLT

Outsourced Security Agency

With effect from 17 January 2018, the following new security agencies took over duties:

- Hostel Zone: M/s Security Intelligence Services (SIS)
- Residential Zone: M/s Central Investigation and Security Services (CISS)
- Academic Zone: M/s Bavani Security and Night Patrol (BSNP)

Assessment of Private Security

Physical fitness check and document verification as per terms and conditions of the contract were carried out on 16 February 2018 and 19 February 2018, respectively, for the above agencies.

Republic Day Celebration 2018

69th Republic Day was celebrated on 26 January 2018 at Manohar C. Watsa stadium. Nine contingents participated in the ceremonial parade along with two schools (Kendriya Vidyalaya and Vanavani with band team). Cash award for the best turn out personnel was awarded during the function. The best marching contingent was also selected, and the NCC contingent of Kendriya Vidyalaya IIT won the prize.

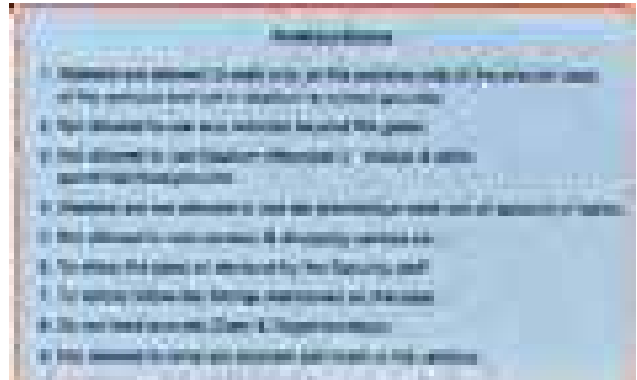


Fire Protection System

The fire protection system existing in the campus is checked by the security section periodically in coordination with Engineering Unit to ensure that the system is in order. The record with this effect is maintained properly.

Computerisation of Pass Section

The walker's pass with QR code provision is being issued for the year 2018. The specimen of the pass is attached below. We are in the process of computerisation of pass section to avoid paper work. In addition to the walker pass, the passes for school children parents (vehicle pass), project staffs, and alumni are under progress.



14 Finance and Accounts

The financial year of the institute corresponds with that of the Government of India (1 April to 31 March of the following year). The accounts of the institute are annually audited by the Principal Accountant General (Tamil Nadu and Puducherry), Chennai on behalf of the Comptroller and Auditor General of India.

The 86th Finance Committee of the institute in its meeting held on 24 November 2017 recommended revenue expenditure revised estimates of Rs.613.34 crore (gross) for the year 2017–2018 and budget estimates of Rs.606.80

crore (gross) for the year 2018–2019 under revenue expenditure head. The committee also recommended a revised estimate of Rs.214 crore for 2017–2018 and budget estimates of Rs.157 crore under capital expenditure. The same were approved by the Board of Governors of the institute in their 235th meeting held on December 2017.

The following is a summary of the revised estimates for 2017–2018 and budget estimates for 2018–2019 under the revenue expenditure and capital expenditure, as approved by the board.

(Figures in crore of Rs.)

Item	Budget Estimate 2017-2018	Revised Estimate 2017-18	Budget Estimate 2018-19
Grant under OH-36 and OH31			
Institute income projected	78	80.02	89.14
Grant projected for Salary (OH-36)	204.50	273.23	275
Grant projected for Pension and Retirement Benefits (OH-31)	87.30	134.81	112
Grant for non-salary component (OH-31)	36.20	119.30	125.80
Grant expected under OH-36 and OH-31	328	527.34	512.80
Grant under OH-35			
Grant for Scholarships	75	86	94
Grant for Asset creation	259	214.59	157
Grant expected under OH-35	334	300.59	251

Audit

The annual accounts of the institute for 2016–2017 were audited by the Principal Accountant General (Tamil Nadu and Puducherry) during June–July 2017, and a certified copy of the annual accounts with the audit report was sent

to Ministry of Human Resource Development (MHRD) after the annual accounts were duly adopted by the Board of Governors of the institute on 1 December 2017 to enable the MHRD to arrange for placing the same before both the Houses of Parliament during the winter session.

Summary of provisional plan and non-plan grant utilisation for 2017–18

(Figures in crores of Rs.)

Item	Amount
Grant under OH-35	
Opening balance	-36.59
Grant received under OH-35	271.21
Total funds available under OH-35	234.62
Expenditure under OH-35	
Building and construction	185.51
Academic equipment	43.80
Equipment for specialised centre	-
Infrastructure (furniture/computers, etc.)	5.48
Periodicals/journals/books for library	11.19
Scholarship payments (HTTA/HTRA/PDF) and Revenue expenditure	76.22
Total Expenditure under OH-35	322.20
Grant under OH-31 and OH-36	
Opening balance	-6.53
Grant received under OH-31 and OH-36	434.20
Institute Income	79.76
Total funds available under OH-31 and OH-36	507.43
Expenditure under OH-31 and OH-36	
Salary and related items (OH-36)	248.08
Pension and other terminal benefits (OH-31)	74.75
Non-salary, non-pension items (other components) (OH-31)	111.76
Total Expenditure under OH-31 and OH-36	434.59

The balance of the corpus fund as on 31 March 2018 is Rs.224.36 crore, and the balance of the institute endowment account as on 31 March 2017 is Rs.97.44 crore.

15 Publications

Papers published in national and international journals

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- Dr. Upendra Kumar Maurya. Exploring the linkages of customer intimacy with relationship benefits, and customer loyalty: Do contact and experience matter in services relationships? 2017. *IIM Indore*
- Dr. Chandramouli P. Planar multi-body dynamics of a tracked vehicle using imaginary wheel model for tracks. 2017. *Future Technologies for Combat Vehicles*
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