ANNUAL REPORT

2017-18

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, KANCHEEPURAM

CONTENTS

Director's Message (2017-18)

I am pleased to share with you some of notable accomplishments of IIITDM Kancheepuram during the past one year. In general, Institute has witnessed a phenomenal growth with respect to infrastructure, teaching-learning and research since it has been established in year 2007. The Institute is offering IT enabled Design and Manufacturing in all the disciplines offered by the Institute. In addition to the Institutional core courses like Problem *Solving and Computer Programming, Data Structure Fundamentals and Logical Thinking, Concepts of Engineering Design, Design Realization, Sociology of Design, Intelligent Product Design*, the students work on design related projects in their own departmental core and elective courses. The Institute thrusts on interdisciplinary course work and project, where faculty and student of different discipline work together. Faculty work on cutting edge research problems and associate the both UG and PG students for their project work.

The Institute has recruited additional sixteen (16) competent faculty in Feb, 2018 having qualifications from institutes of repute both in India and abroad. This enhances our regular faculty strengths to Forty (40). In addition, we have experienced faculty from academia and institutes of repute in adjunct and visiting mode. In the institute incubation cell "MaDeIT Foundation", there are eight (8) different incubates working on the state of the art problems. One incubate has successfully graduated from MaDeIT foundation in Sep, 2018. MaDeIT conducted a workshop for CEOs of various SMEs in Ambattur Industrial Estate.

The Teaching Learning Centre, better known as TLC funded by MHRD under Pandit Madan Mohan Malviya National Mission for Teachers and Training (PMMMNMIT) Scheme, working to design and develop e-learning materials and common Do-it-

Yourself (DIY) and Build Your Own (BYO) low-cost laboratory institution models for adoption and use in engineering universities, colleges and polytechnics. The modules are built using inexpensive commercial off-the-shelf components, open source software and hardware making them affordable.

We have signed a MoU with SRF Foundation and Cognizant solutions to supply some low-cost devices to various schools in Chennai and Bangalore through TLC. TLC has conducted two training programmes for school and college students in this year. TLC at IIITDM has been declared as "National Resource Centre (NRC)" on Design and Manufacturing.

Design Innovation Centre has been established in the year 2017 with almost a 1.5 core from DST. Its objectives are to inculcate, facilitate and spread the centre of innovation among students and Faculty. It has conducted special training workshops, offered internships on product design, invited seminars by experts and organised design competitions.

During the last convocation, we had an Alumni meet where most of our Alumni have participated and deliberated to contribute for Institute growth. A corpus of 10 Lakhs has been generated within one financial year and I am sure we will have more contributions and support from Alumni in future.

In the present reporting period IIITDM has shown a growth in research and consultancy. Faculty have received sponsored projects of worth Rs. 2.5 Cores from various agencies and Industrial consultancy of Rs 12 Lakhs has been undertaken by our faculty from various industries.

Finally, it gives me immense pleasure and enormous satisfaction that IIITDM is in the right track of fulfilling its mandate for which it has been established. Students have been placed in core companies and have performed well in national level exam like GATE. I am sure with increased faculty and student participation, the Institute will progress by leaps and bounds and will be seen as Centre of Excellence in design and manufacturing with highest industry participation across the globe.

Prof. Banshidhar Majhi

Director

I. General Information

Vision

To become a premier institution of excellence in Design and Manufacturing that would create and develop a new generation of engineers and technologists with the ability and mindset to lead Indian industries in globally competitive economic environment.

Mission

To be a world class apex centre of excellence in education, research, development and training in Design and Manufacturing.

Charter

- To provide education and training, at both undergraduate and postgraduate levels, to persons of outstanding abilities who would provide leadership to Indian industry in globally competitive economic environment.
- To carry out advanced research and development activities in design and manufacturing technologies, both on its own and on sponsorship basis for the industry.
- To provide distance learning and continuing education programmes for faculty / scholars from other institutions and industry personnel.
- To organize conferences, seminars, workshops and such other activities for the dissemination of knowledge to industry.

The full pledged campus of IIITDM Kancheepuram

Board of Governors

Title		Name	Affiliation
Chairman		Prof M S Ananth	Former Director IIT Madras
Members		Shri BS Raghavan	Former Advisor to UN, Author & Educationist Former Chief Secretary Govt. of TN
		Shri T K Ramachandran	Secretary to Government Dept of Information Technology, Govt. of TN
		Smt Rina Sonowal Kouli	Director (ICR) Dept of Higher Education, MHRD, Govt. of India
		Prof Bhaskar Ramamurthi	Director IIT Madras
		Shri B K Murthy	Joint Secretary (HRD), Ministry of Electronics and Information Technology, Govt. of India

Finance Committee

Title		Name	Affiliation
Chairman		Prof M S Ananth	Chairman BoG, IIITDM Kancheepuram
Members		Prof. Banshidhar Majhi	Director & Registrar i/c IIITDM Kancheepuram
		Dr S Murugiah	Former Principal Acct General, TN
		Shri Anil Kumar	Director (Finance), MHRD, GoI
		Prof S Narayanan	Emeritus Professor IIITDM Kancheepuram
Secretary		Mr A Chidambaram	Deputy Registrar (Accounts), IIITDM Kancheepuram

Building and Works Committee

Title		Name	Affiliation
Chairman		Prof. Banshidhar Majhi	Director & Registrar i/c IIITDM Kancheepuram
Members		Prof S Narayanan	Emeritus Professor, IIITDM Kancheepuram
		Prof P Alagusundarmoorthy	Professor, Dept of Civil Engineering, IIT Madras
		Shri P. Suresh Kumar	Supt Engineer, TNEB-TANGEDCO Chennai
Secretary		Shri A Manickavasagam (till 24 July 2017)	Consultant Engineer (Civil), IIITDM Kancheepuram
		Shri. K. Sundaresan (since 25 July 2017)	Consultant Engineer (Civil), IIITDM Kancheepuram

Senate

Title		Name	Affiliation
Chairman		Prof. Banshidhar Majhi	Director & Registrar i/c IIITDM Kancheepuram
Members		Prof P Chandramouli	Professor, Dept of Mech Engg, IIT Madras
		Prof V Jagadeesh Kumar	Professor, Dept of Electrical Engg, IIT Madras
		Prof Krishnamoorthy Sivalingam	Professor, Dept of Computer Engg, IIT Madras
		Dr M Sathya Prasad	M/s Ashok Leyland, Chennai

		Dr G Venkatesh	M/s Sasken Communication Tech Ltd
		Dr Anand Lakshmanan	M/s Ericsson India Global Services
		Dr S Rajasekara Pandian Dean (Plannig)	Associate Professor IIITDM Kancheepuram
		Dr Sudir Varadharajan Dean (Design, Innovation and Incubation)	Visiting Faculty, IIITDM Kancheepuram
		Dr Sreekumar Dean (Faculty Affairs)	Associate Professor IIITDM Kancheepuram
		Dr Binsu J Kailath Dean (Academics)	Associate Professor IIITDM Kancheepuram

		Dr Selvaraj Dean (Sponsored Research)	Associate Professor IIITDM Kancheepuram
		Dr Naveenkumar Vats Dean (Student Affairs)	Associate Professor IIITDM Kancheepuram
		Dr Selvajyothi K. HoD (ECE)	Assistant Professor IIITDM Kancheepuram
		Dr Jayavel S HoD (Mechanical Engineering)	Associate Professor IIITDM Kancheepuram
		Dr Sadagopan N HoD (CSE)	Assistant Professor IIITDM Kancheepuram
		Dr Tapas Sil HoD (Physics)	Associate Professor IIITDM Kancheepuram
		Dr Vijayakumar S HoD (Mathematics)	Assistant Professor IIITDM Kancheepuram

Institute Administration

	Prof. Banshidhar Majhi Director	Director, IIITDM Kancheepuram
	Dr S Rajasekara Pandian Dean (Planning)	Associate Professor IIITDM Kancheepuram
	Dr Sudir Varadharajan Dean (Design, Innovation and Incubation)	Visiting Faculty, IIITDM Kancheepuram
	Dr SreeKumar Dean (Faculty Affairs)	Associate Professor IIITDM Kancheepuram
	Dr Binsu J Kailath Dean (Academics)	Associate Professor IIITDM Kancheepuram

	Dr Selvaraj Dean (Sponsored Projects)	Associate Professor IIITDM Kancheepuram
	Dr Naveenkumar Vats Dean (Student Affairs)	Associate Professor IIITDM Kancheepuram
	Dr Selvajyothi K. HoD (ECE)	Assistant Professor IIITDM Kancheepuram
	Dr Jayavel S HoD (Mechanical Engineering)	Associate Professor IIITDM Kancheepuram
	Dr Sadagopan N. HoD (CSE)	Assistant Professor IIITDM Kancheepuram
	Dr Tapas Sil HoD (Physics)	Associate Professor IIITDM Kancheepuram
	Dr Vijayakumar S HoD (Mathematics)	Assistant Professor IIITDM Kancheepuram

Administrative Staff

				
Shri A Chidambaram Joint Registrar	Shri R Gunasekaran DR (Administration)	Shri. K. Sundaresan Consulting Engineer	Shri G Ravi Kumar Assistant Registrar	Shri K Chandrasekaran Internal Audit Officer
				
Shri M V R Seshagiri Corp Relation Officer	Smt S Rajalakshmi Junior Superintendent	Kum G Subashini Junior Superintendent	Shri S Pandiyan Junior Engineer (Civil)	Shri Ramkumar R Junior Engineer (Electrical)
				
Shri P Alaguraj Physical Training Instructor	Shri G Perumal Senior Lib Info Asst	Shri R Parthasarathy Senior Assistant	Shri S Karthikeyan Junior Assistant	Smt P Kavitha Junior Assistant
				
Shri K Dinesh Kumar Junior Assistant	Shri G Venkatesh Junior Assistant	Shri R Balaji Junior Assistant		

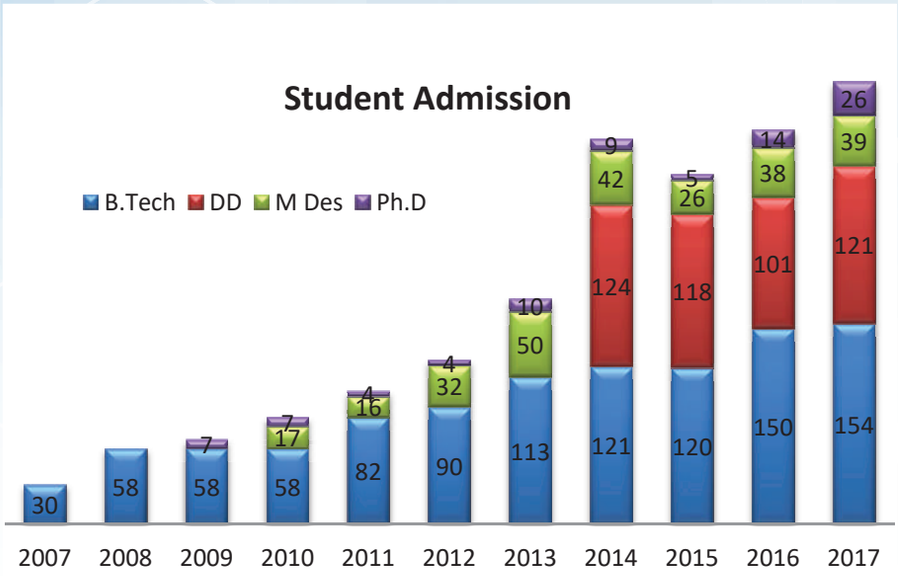
Technical Staff

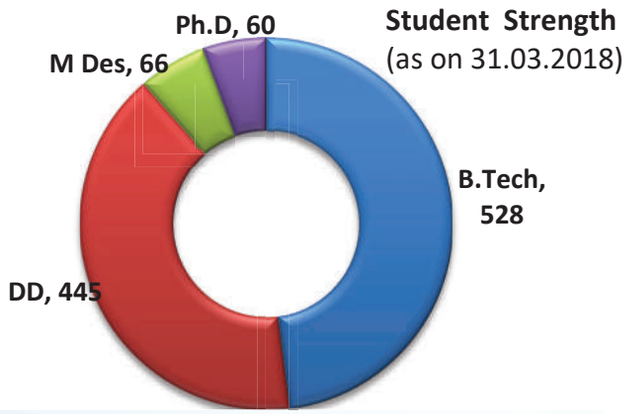
				
Shri. C. Gurunathan Technical Officer	Shri. P. M. Sriram Bhaskar Jr. Tech. Suptd.	Shri. K. Saravana Kumar Jr. Tech. Suptd.	Shri. A. Vigneshwaran Jr. Tech. Suptd.	Smt. K. Manimegalai Junior Technician
				
Shri. G. Manigandan Junior Technician	Shri. M. Ashwinraj JuniorTechnician	Kum. P. Pavithra Junior Technician	Shri. R. Dharmarasu Junior Technician	Shri. K. Kanagaram Junior Technician
				
Shri A Vijaya Bharathi Junior Technician				

Coordinators for Academic Year 2017-18

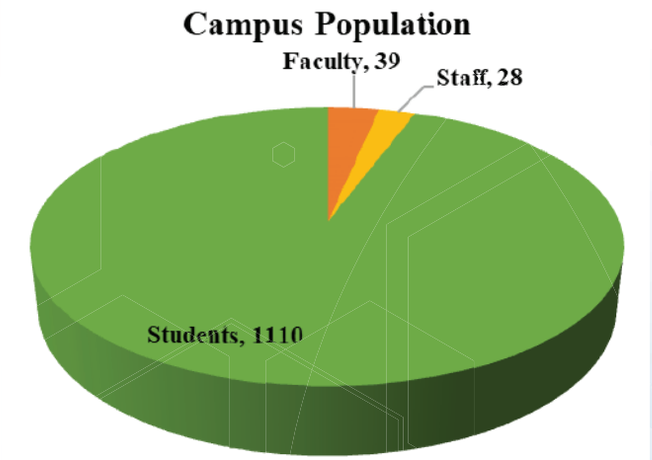
Portfolio	Name
Chief Warden	Dr. Noor Mahammad S K
Warden	Dr. S S Karthikeyan, Dr. Umarani. J
Disciplinary Committee (Academics)	Prof. P. Ganesan – Chairman Members : Dr. Sree Kumar M, Dr. Selva Jyothi K , Dr. Eswaramoorthy
Disciplinary Committee (Hostel)	Prof. P. Ganesan – Chairman Members : Dr. Sadagopan N, Dr. Jayavel S, Dr. Umarani. J
Stores and Purchase Committee	Dr. Shahul Hamid Khan B Dr. Vijaya Kumar S Dr. Pandithevan P
Scholarship/Weaker section/Hindi Section	Dr. Naveen Kumar Vats
Social Service Group	Dr. Venkata Timmaraju Mallina
Sports	Dr. Siva Selvan B
TBI Centre & Industry Interaction	Dr. Sudhir Varadharajan
Web Page	Dr. Senthil Kumaran K
Women Welfare	Dr. Binsu J. Kailath
All Ranking & Survey (NIRF Ranking/AISHE, etc.)	Dr. Prem Kumar K
Anti ragging & Student body	Dr. Masilamani V
Cultural activities	Dr. Priyanka kokil
CVO Coordinator	Dr. Naveen kumar Vats
Design Innovation Centre	Dr. Naveen kumar Vats
Designers Club	Dr. Shumugham R.Pandian
Guidance and Counseling	Dr. Sadagopan N
Institute Mail Administration	Dr. Siva Selvan B
Library	Dr. M .D. Selvaraj
Networking	Dr. Noor Mahammad S K
News Letter (Margdarshan)	Dr. Jayabal K
OBC Coordinator	Dr. Damodharan P
Placements Coordinator	Dr. Senthil Kumaran K
Research Coordinator	Dr. Prem Kumar K

Campus Demography



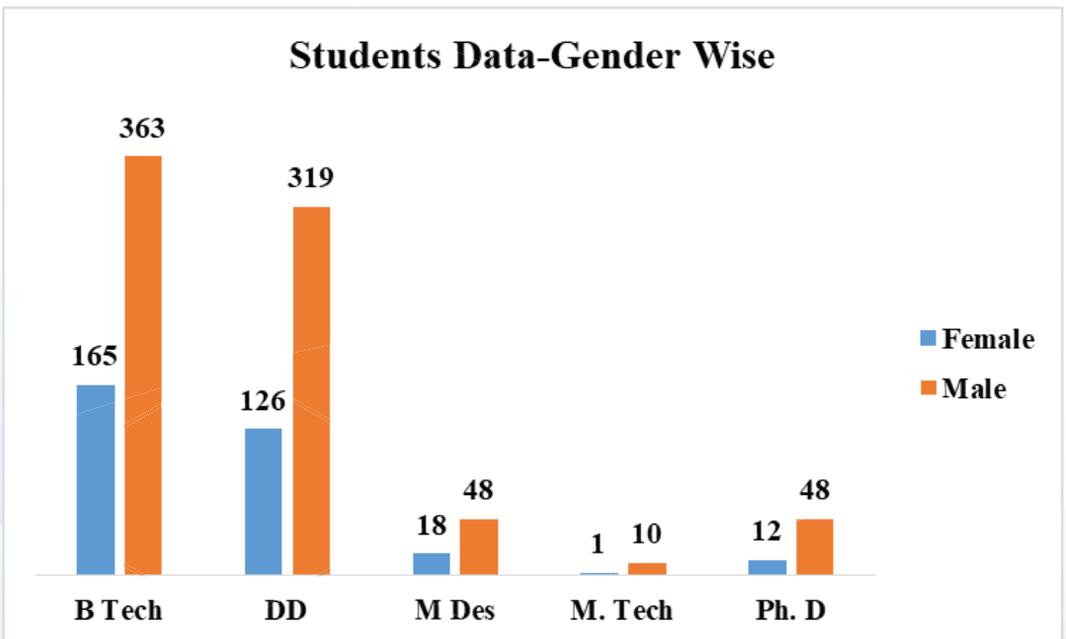


Student Strength
(as on 31.03.2018)

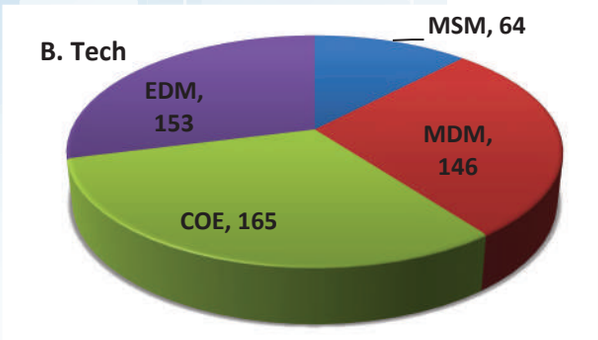


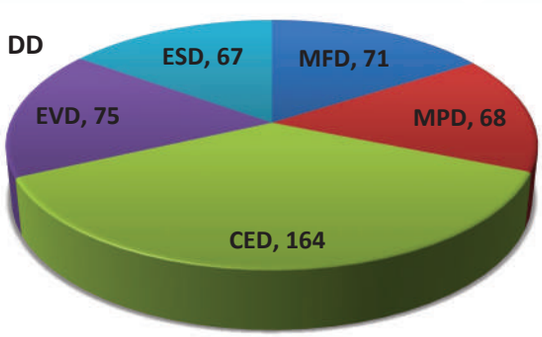
Category wise Student Distribution (as on 31 March 2018)

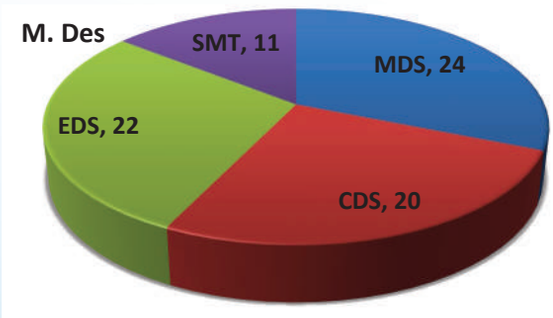
Category	B Tech	DD	M Des	M. Tech	Ph. D	Grand Total
DASA	8	21	--	--	--	29
OBC	147	122	18	2	26	315
OBC-NCL(PwD)	3	1	--	--	--	4
OP	246	197	35	7	28	513
Open(PwD)	6	5	--	--	--	11
SC	78	64	10	2	6	160
ST	40	35	3	--	--	78
Grand Total	**528**	**445**	**66**	**11**	**60**	**1110**

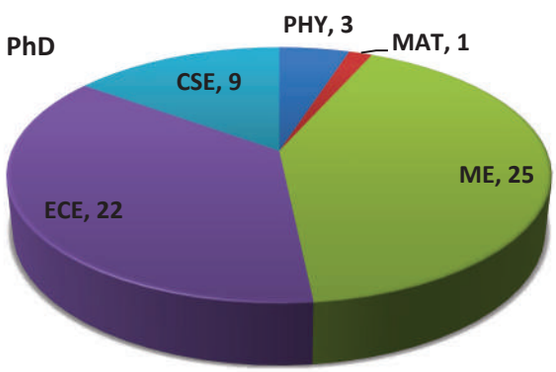


Specialization Wise Student Distribution

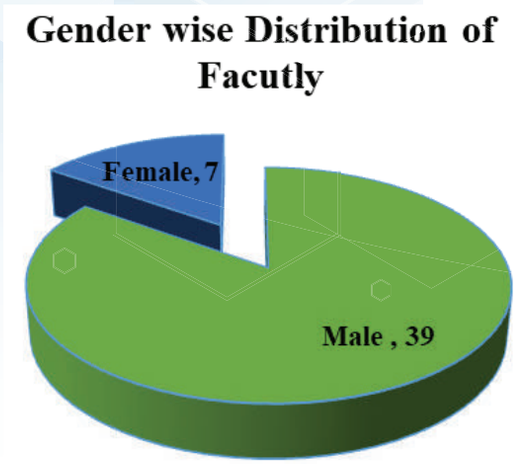


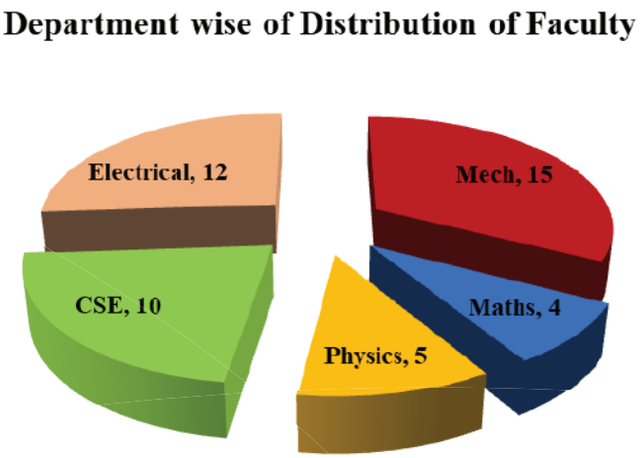






Faculty Information





II. ACADEMICS-General

Design-Centric Academic Programs

At IIITDM Kancheepuram, the academic programmes were crafted after a series of brainstorming sessions with industry experts and renowned academicians from various regions and expertise in various fields to bridge the gap between the academia and industry. In these modern times, many young engineers graduating from educational institutions possess fundamental knowledge but find it difficult to apply their knowledge to solve real-world problems. The innovative design centric academic programme introduced at IIITDM Kancheepuram has courses in design and management that will help them to be more innovative and industry ready and fulfil the role of a design and manufacturing engineer. Design, Manufacturing, and Product Development are integral part of each programme in the institute, and basically satisfy the following criteria:

- Societal impact - Engineering's primary value to society is the ability to deliver products and solutions that improve quality of life. Other benefits shall include enhanced comfort, safety, convenience, cost-effectiveness, usability, functionality, and marketability. The curriculum is enriched with interdisciplinary courses blended with management, environment professional ethics science, etc. In addition, students have to design and develop a product or prototype as a part of their course works as most of the courses are integrated with practice sessions.
- Intellectual challenges – For any product to be competitive technically and economically, it must incorporate the appropriate latest technologies and to be refined using leading-edge modelling, simulation, and experimental methods. The curriculum imparts strong fundamental knowledge in basic sciences and engineering to the students so that the students can tackle complex design problems.

Academic Programs Offered

The motto of the institute is "Learning by Doing". It is put into practice in IIITDM Kancheepuram in terms of its teaching. The institute envisages significant amount of emphasis for practice courses as theory ethical concepts are explored along with the relevant laboratory courses. All the programs are highly interdisciplinary and students are free to choose their specializations. The institute also follows its vision of developing engineers with design and manufacturing skills. The following are the programmes currently being offered by IIITDM Kancheepuram.

BTech

Computer Science and Engineering
Electronics and Communication Engineering
Mechanical Engineering
Mechanical Engineering (Spl: Smart Manufacturing)

M.Tech

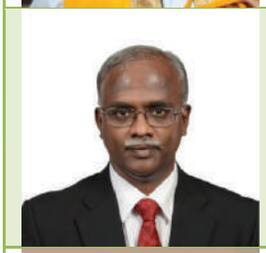
M. Tech. in Mechanical Engineering
(Spl: Mechanical Systems Design)
M. Tech. in Electronics and Communication Engineering
(Spl: Electronics Systems Design)
M. Tech. in Electronics and Communication Engineering
(Spl: Communication Systems Design)
M. Tech. in Mechanical Engineering (Spl: Smart Manufacturing)

Dual Degree (B Tech + M Tech)

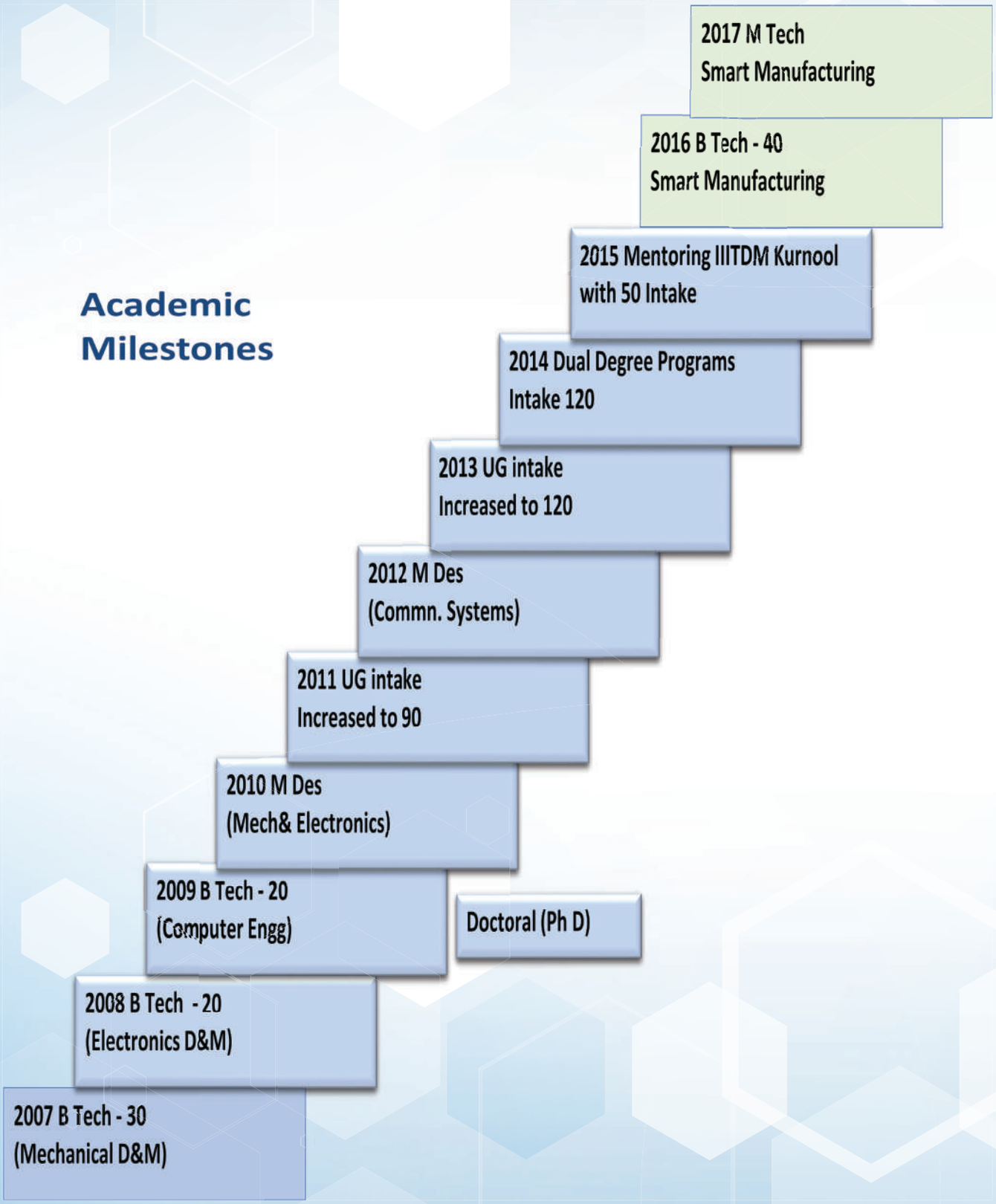
B Tech Computer Science and Engineering + M.Tech Computer Science and Engineering (Spl: Systems Design)
B. Tech. Electronics and Communication Engineering + M. Tech. in Electronics and Communication Engineering (Spl: VLSI Design)
B. Tech. Electronics and Communication Engineering + M. Tech. in Electronics and Communication Engineering (Spl: Communication Systems Design)
B Tech Mechanical Engineering + M. Tech. in Mechanical Engineering (Spl: Product Design)
B Tech Mechanical Engineering +M. Tech. in Mechanical Engineering (Spl: Advanced Manufacturing)

PhD

All Basic Sciences and Engineering

		Shri B Santhanam	President – Flat Glass, South Asia, Egypt, Managing Director Saint Gobain Glass
		Shri Krishna GV Giri	Former Managing Director & Vice Chairman, Accenture
		Prof David Koilpillai	Dean (Planning) IIT Madras
		Prof S Narayanan	Emeritus Professor IIITDM Kancheepuram
Member & Secretary i/c		Prof. Banshidhar Majhi	Director & Registrar i/c IIITDM Kancheepuram

Academic Milestones



FEE STRUCTURE FOR THE NEW ADMISSSIONS (2017 BATCH)

Description	B.Tech / Dual Degree	M. Des / M. Tech.	Ph.D.
I. Institute Fees			
A. One time Fees:			
Admission Fee	200	200	200
Certificate/Thesis Fee	400	400	1500
Student welfare fund	500	500	500
Infrastructure Development Fee	600	600	600
Alumni Life Membership Fee	500	500	500
Publication Fee / Library Fee	300	300	300
Total (A)	**2500**	**2500**	**3600**
B. Semester Fees:			
Tuition fee (*)	49000	25000	19000
Examination fee	500	500	500
Registration	300	500	500
Sports Fee	1000	1000	1000
Medical Fee	1000	1000	1000
Student Amenities	2000	2000	3000
Total (B)	**53800**	**30000**	**25000**
C. Deposits (Refundable):			
Institute &Library Deposit	2500	2500	2500
Total (C)	**2500**	**2500**	**2500**
D. Medical Insurance Premium (per annum)			
Medical Insurance premium p.a.	575	575	575
Total (D)	**575**	**575**	**575**
Grand Total [A+B+C+D]	**59375**	**35575**	**31675**
II. Hostel Fees			
A. Deposits (Refundable)			
Hostel Deposit	2000	2000	2000
Total (A)	**2000**	**2000**	**2000**
B. Hostel Fees & Mess Charges per semester			
Hostel Admission fee	200	200	200
Hostel Seat Rent	1500	1500	1500
Hostel Maintenance Charges	6500	6500	6500
Advance dining charges	14000	14000	14000

Establishment B Charges	500	500	500
Total (B)	**22700**	**22700**	**22700**
Grand Total (A+B)	**24700**	**24700**	**24700**
Hostellers	**84075**	**60275**	**56375**

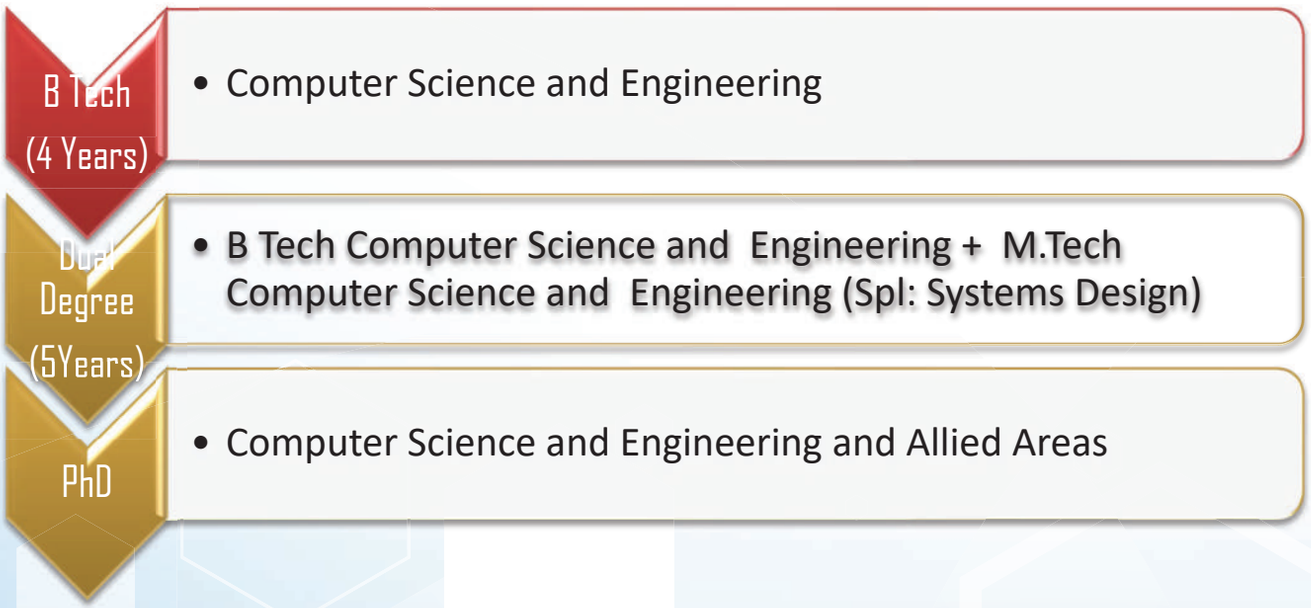
Note:

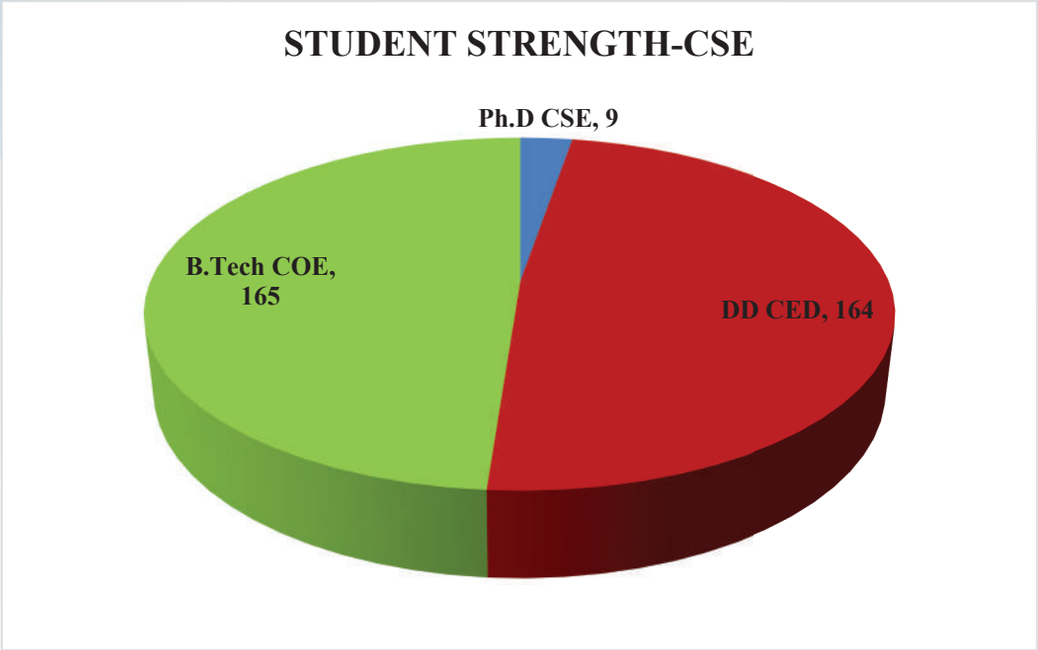
1. *SC/ST students are exempted from payment of tuition fee irrespective of their parental income.
2. Hostel is compulsory for all B Tech/DD students. If exemption is granted by the Institute, then day scholars will have to pay the above mentioned Institute fees (Except Hostel Fees).

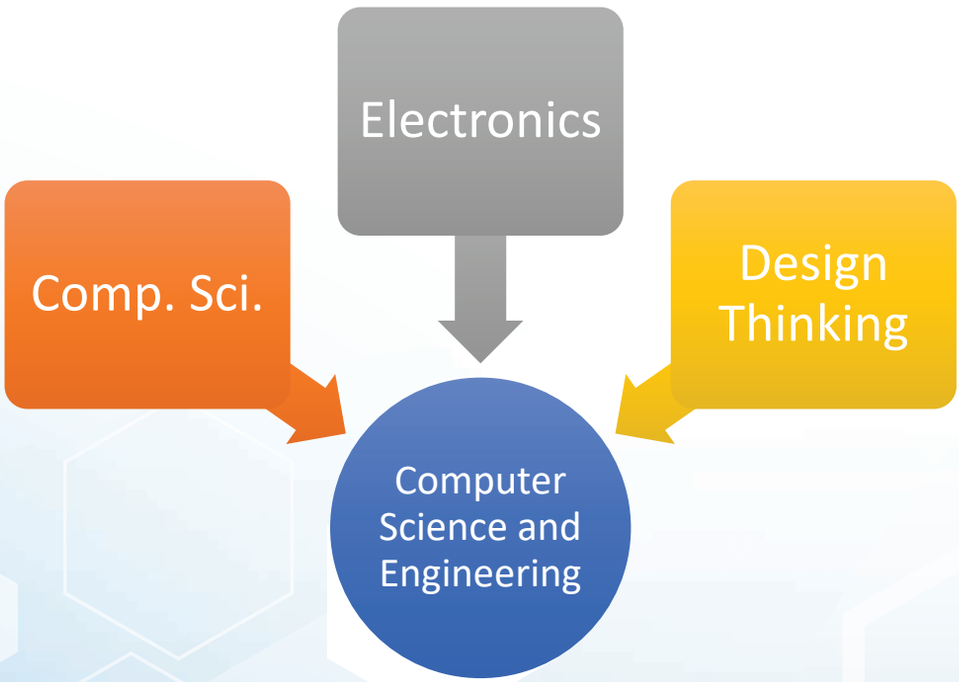
III. Academic Streams

Computer Science and Engineering

The first of its kind engineering programs offered in India with a right blend of courses from computer and electronics streams, the B.Tech and Dual Degree Computer Engineering curriculum at IIITDM Kancheepuram are modelled on the ACM (Association for Computing Machinery) recommendations. These programs are aimed at producing engineers equipped with skills required for developing efficient hardware-software interaction. In addition to courses offered by the conventional Computer Science curriculum, these novel programs offer core courses such as Embedded Systems, Human Computer Interaction, Simulation & Modelling, Signals & Systems, Product Design etc., that equip the students with both computing and electronics engineering skills very much required for the successful creation of products requiring hardware-software interactions.




STUDENT STRENGTH-CSE
Ph.D CSE, 9
B.Tech COE, 165
DD CED, 164


Electronics
Comp. Sci.
Design Thinking
Computer Science and Engineering

Faculty

<table>
<tr>
<td>  </td>
<td>Banshidhar Majhi
PhD (NIT Rourkela)
Research Interests:
Image Processing,
Data Compression,
Cryptography and Security,
Parallel Computing and
Soft Computing</td>
<td>  </td>
<td>Masilamani V.
PhD (IIT Madras)
Research Interests:
Image Processing,
Computer Vision,
Data Structures and
Algorithms</td>
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<td>  </td>
<td>Noor Mahammad S. K.
PhD (IIT Madras)
Research Interests:
Software for VLSI Design,
Evolvable Hardware,
Open Flow Networks,
Network-on-Chip (NoC)</td>
<td>  </td>
<td>Sivaselvan B.
PhD (NIT Trichy)
Research Interests:
Knowledge and Data
Engineering,
Usability Engineering,
Human Computer Interaction</td>
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<tr>
<td>  </td>
<td>T.S.Narayanan (Hari)
Ph.D(Concordia
University,CANADA)
Research Interests:
Big Data & Data Mining,
Internet of Things,
Software Defined
Networks,
Mobile Networks,
Cloud Computing and
Information Security</td>
<td>  </td>
<td>Vasumathi K Narayanan
(Concordia
University,CANADA)
Research Interests:
Formal methods, Automata,
Concurrency Theory,
Temporal Logics,
Model-checking algorithms
and analysis</td>
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<td>  </td>
<td>Umarani J.
PhD (IIT Kanpur)
Research Interests:
Biometrics,
Pattern Recognition,
Computer Vision and
Digital Image Processing</td>
<td>  </td>
<td>Sadagopan N.
PhD (IIT Madras)
Research Interests:
Graph Theory and
Combinatorics,
Data Structures and
Algorithms, Computer
Networks, Database Systems</td>
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<td>  </td>
<td>Jagadeesh Kakarla
PhD (NIT Rourkela)
Research Interests:
Wireless Sensor
Networks,Adhoc Networks
and Internet of Things</td>
<td>  </td>
<td>Munesh Singh
PhD (NIT Rourkela)
Research Interests:
WSNs, IOT, Robotics,
Connected Cars, Cloud
Computing, and Sensors</td>
</tr>
</table>

Research Scholars	Topic of Research
Ayesha SK	Hardware Implementation of Image Security Algorithms
Manikandan V.M	Digital Image Security Through Watermarking
Nilu R. Salim	Image Processing and Biometrics
Oswald C	Frequent Pattern Mining(FPM) perspective of Data Compression
Renjith P.	Hamiltonian Problem and Generalization
Sameera Shaik	
Shanmugakumar M	Programmable Network System Design For High Speed Packet Classification
Subin Sahayam M	Machine Learning and Medical Image Processing
Veeramani S	High Speed IP Lookup For Software Defined Networks
Vegesna S.M. Srinivasavarma	High Performance VLSI Architectures and Algorithms for Multimatch Packet Classification for Network Intrusion Detection Systems

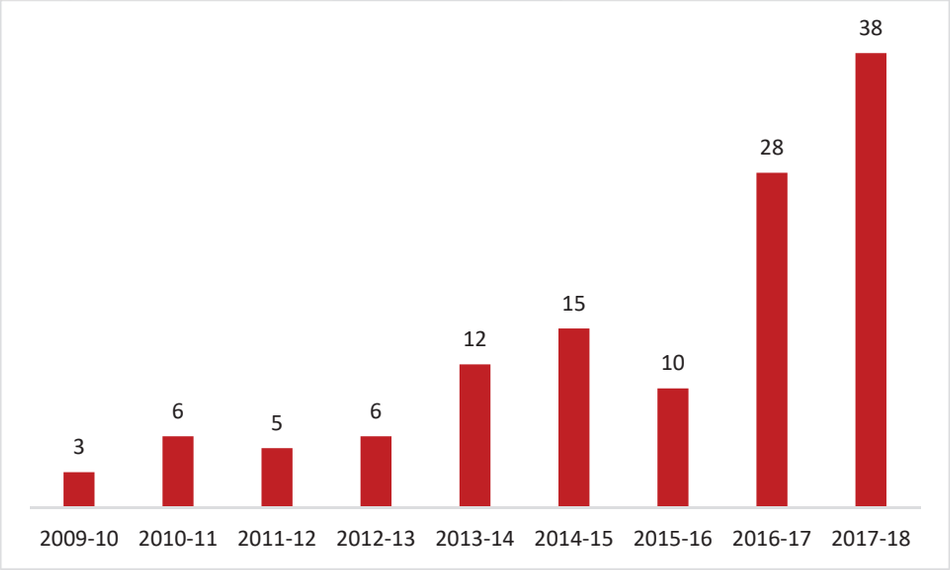
Core courses

- Digital and Analog Circuits Design
- Object Oriented Algorithm Design and Analysis
- Database Systems
- Computer Organization and Design
- Computer Networking
- Operating Systems
- VLSI System Design
- Computer Architecture
- Embedded Systems
- Data Structures and Algorithms

Elective Courses

- Wireless Communication
- Data Communication Networks
- Electromagnetic Interference and Compatibility
- Design of SMPS
- VLSI Data Converters
- Advanced Communication Networks

Publications



Overview of few Ongoing Projects

Image Reconstruction from Coin Box - M Aishwarya

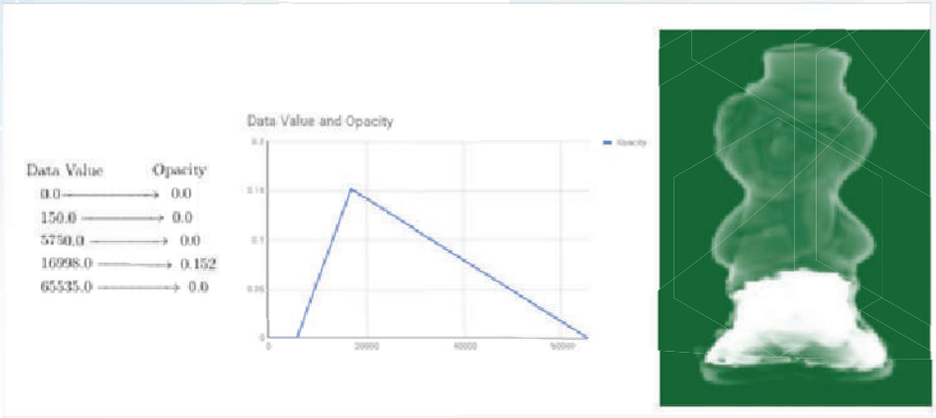
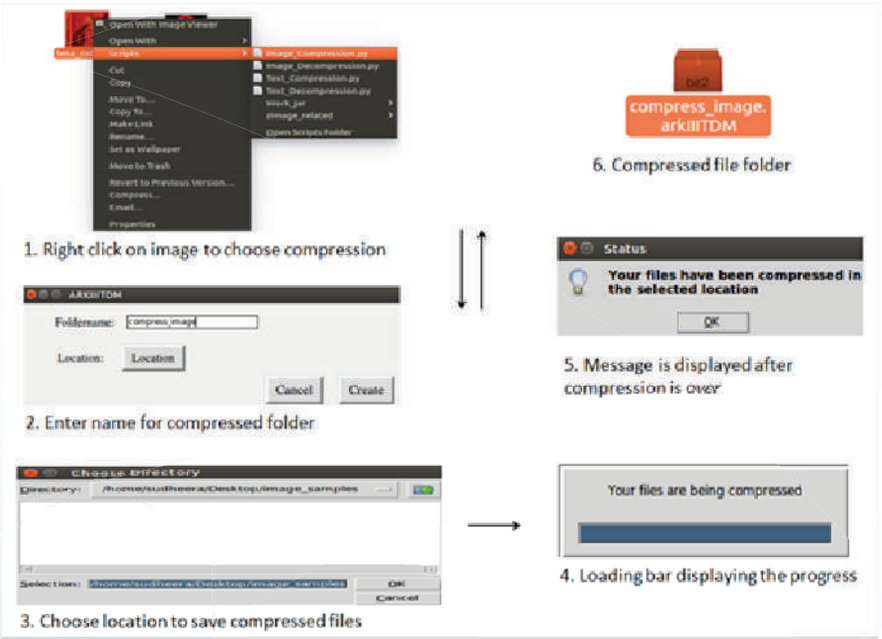
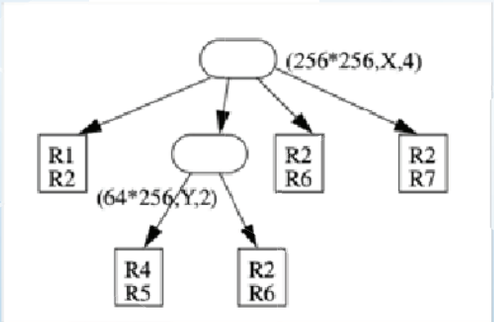


Image Compression using Mining Techniques - Sudheera Daggumalli, Inchara.K.M - Sirisha Kona-

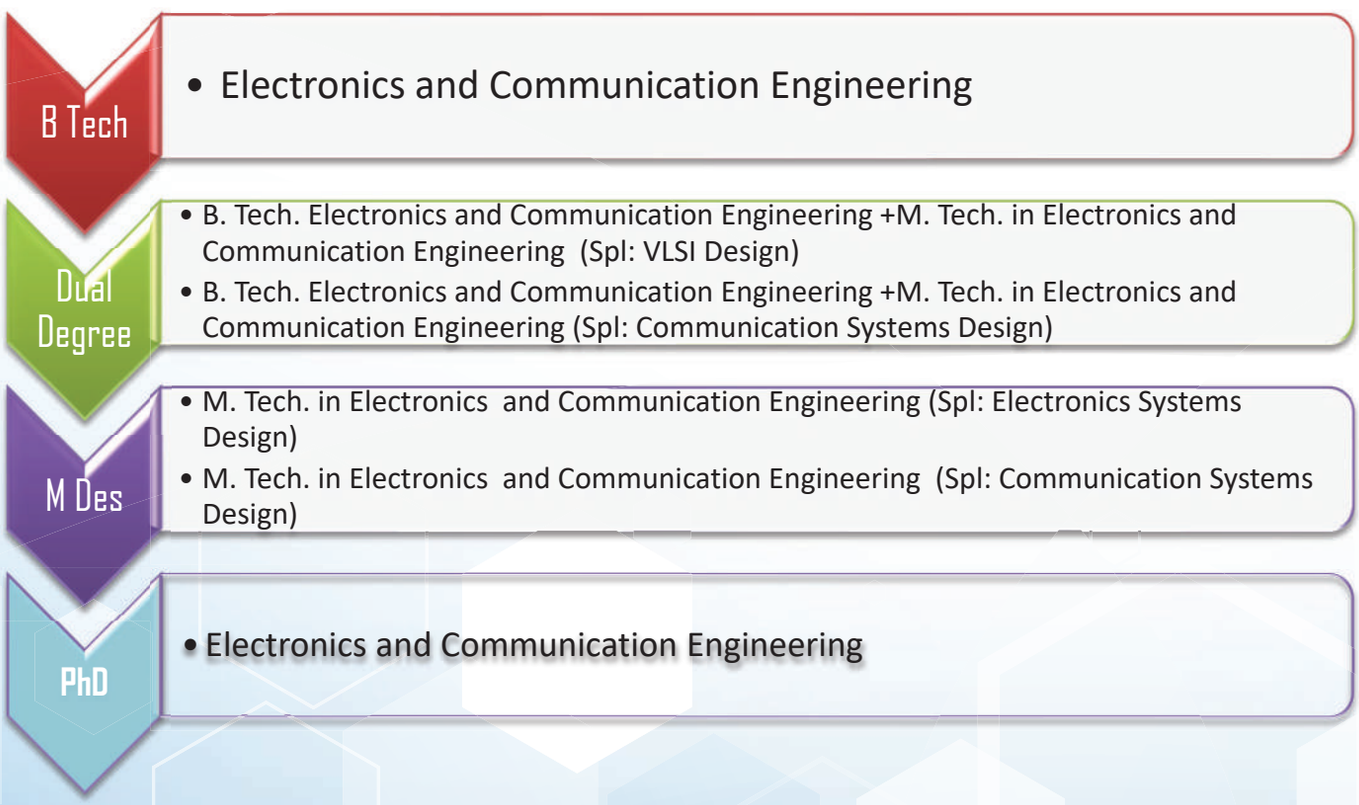


Packet Classification Using Hierarchical Intelligent Cuttings - Sai Likitha Lagudu

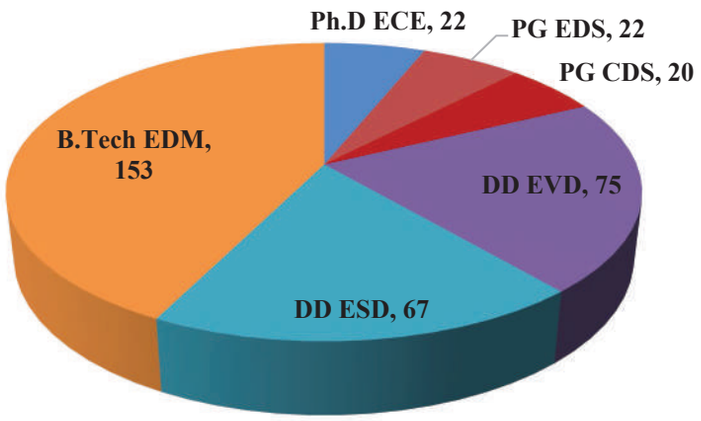


Electronics and Communication Engineering

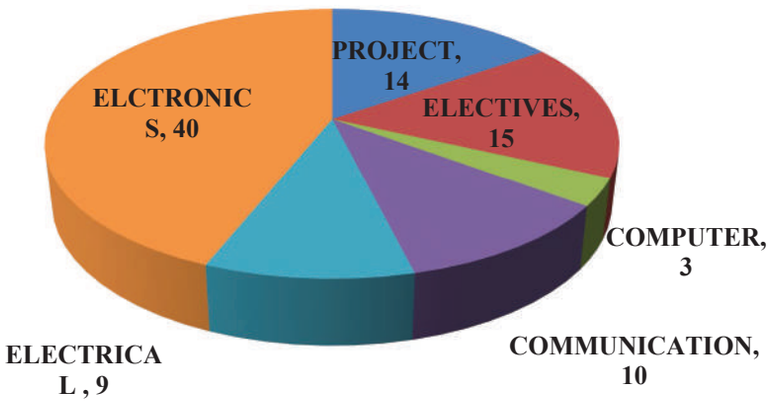
In today's competitive scenario, electronic product design and development requires the skillful blend of expert hardware and software engineering knowledge with a spirit of creativity and innovation, tempered by the practical concerns of manufacturability, cost consciousness and reliability. The Undergraduate (B.Tech), Dual Degree (B.Tech + M. Tech) and Postgraduate (M.Des) programs offered are designed to provide advanced theoretical and practical knowledge on all aspects relevant to design, development and production of modern electronic systems. The innovative programs offered supplement the conventional core curriculum courses with specialized design courses required for practicing designers both from product design and domain areas.



STUDENT STRENGTH-ECE



CORE ENGINEERING CREDIT DISTRIBUTION- ECE



Faculty

	**Binsu J. Kailath** PhD (IIT Madras) **Research Interests:** VLSI Design, MOS Device Modeling and Technology, MEMS		**Priyanka Kokil** PhD (NIT Allahabad) **Research Interests:** Nonlinear System, Delayed System, Multidimensional System
	**Damodharan P.** PhD (IIT Madras) **Research Interests:** Power Electronics and Drives, Permanent Magnet Brushless DC and AC Drives		**Selvajyothi K.** PhD (IIT Madras) **Research Interests:** Power Electronics, Drives and Control, DSP Realization of Control Algorithms in Power Electronics, FPGA/DSP Hardware
	**S. R. Pandian** PhD (IIT Delhi) **Research Interests:** Autonomous Underwater Robots, Robot Design, Electromechanical Systems		**Selvaraj M. D.** PhD (IIT Delhi) **Research Interests:** Wireless Communications, Cooperative Diversity, Mobile Communications
	**Premkumar K.** PhD (IISc Bangalore) **Research Interests:** Scheduling in Networks, Social Networks, Cognitive Radio, Internet of Things, Big Data Analytics		**Asutosh Kar** Ph.D (BIT Mesra) **Research Interests:** Advanced Signal Processing, Adaptive Filter Theory, Acoustic Echo and Feedback Signal Analysis, Hearing-Aids, Acoustic Noise Analysis.

	**Vijayakumar K** Ph.D (National Institute of Technology (NIT), Trichy)		**B.Chitti Babu**Ph.D (National Institute of Technology Rourkela)
	Research Interests: Power Electronics, Instrumentation and Control, Embedded Controllers, Industrial Electronics, Renewable Energy Systems, Home Energy Management System, Smart Grid, Application of IoT in Energy System		**Research Interests:** Power Electronics applications in smart distribution grids containing renewable energy resources. Design of low power photovoltaic (PV) energy system for portable applications
	**Kumar Prasannajit Pradhan** Ph.D (National Institute of Technology Rourkela)		**Prerna Saxena** Ph.D (Visvesvaraya National Institute of Technology Nagpur)
	Research Interests: Modeling & Simulation of Nanoscale Devices, SOI MOSFETs, FinFETs, Negative Capacitance FETs, Radiation Hardened Devices		**Research Interests:** Antenna Design, Metamaterials, Smart Antennas, Antenna Array Pattern Synthesis, Soft Computing Techniques in Electromagnetics, Computational Electromagnetics

Research Scholars	Topic of Research
Akhila K	
Ananth A	Cooperative Perspective of Spatial Modulation
Arun K	Estimation and Control of Grid Parameters under Harmonically Distorted Environment
Chandu D S	Design And Development of Ultra wideband Microstrip Antennas
D.Tharani	RF and Microwave antennas
Dhayalakumar M	High Performance VLSI Architectures for High Efficiency Video Coding (HEVC)
Dinesh G	Switched Capacitor based Sigma Delta ADC Design
Dony J Muttath	Content Filtering in Social Networks
Kirubakaran S	Wireless Communication
Maheswaran P	Investigations on the Performance of Spatial Modulation and Cooperative Communication Systems
Manikandan S	Control System, Time delay electrical systems
Moupuri Satish Kumar Reddy	Solid state batteries
Mr. Gadamsetty. Muralidhar	Switched capacitor circuit Simulators development
Papanasam E	Fabrication and characterization of SiC MIS capacitor with high-K dielectric
Parthipan C G	Design, Development and Control of Unmanned Aerial Vehicles with Multilink Manipulators
R. Adeline Mellita	
Rusan Kumar Barik	Design of multi-band RF/Microwave components
Santhosh Kumar M	Resource Allocation in Cognitive Radio Networks
Shobana V M	Mixed Signal IC Design
Simhadri Ravishankar	Communications
Skandha DeepsitaS	Approximate Computing Hardware Architectures for Real Time Image/Video Processing
Srinivasulu Jogi	Analysis and Design of Discrete-Time State Delayed Systems
Vijay Prabhu J	Development of High Step up DC-DC converter for Renewable Energy Applications.
Xavier Arockiaraj S	Elimination of overflow oscillations in fixed point digital filters with disturbances

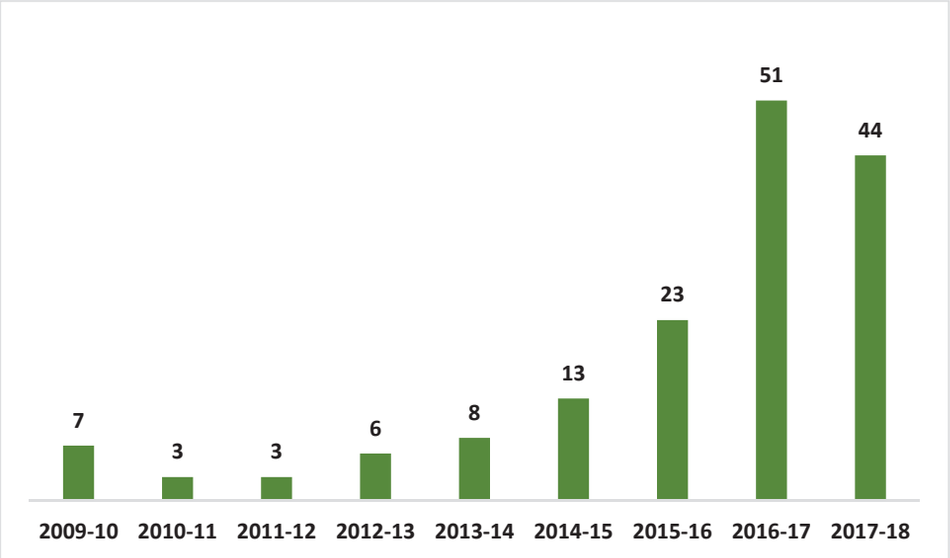
Practical courses

- Electrical Drives
- Analog Circuits
- Digital Signal Processing
- Sensor and Instrumentation
- Digital Logic Design
- Microprocessors and Microcontrollers
- Communication Systems
- PCB Design
- VLSI Design
- Embedded Systems

Elective Courses

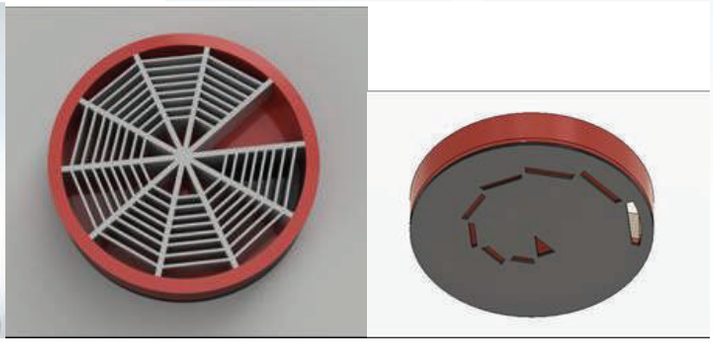
- Electromagnetic Interference and Compatibility
- Wireless Communication
- Data Communication Networks
- Design of SMPS
- VLSI Data Converters
- Advanced Communication Networks

Publications

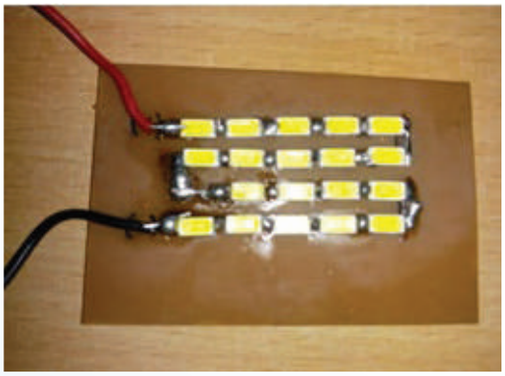


Some Ongoing Student Projects

Post-discharge Remote monitoring of Angioplasty for Outpatients



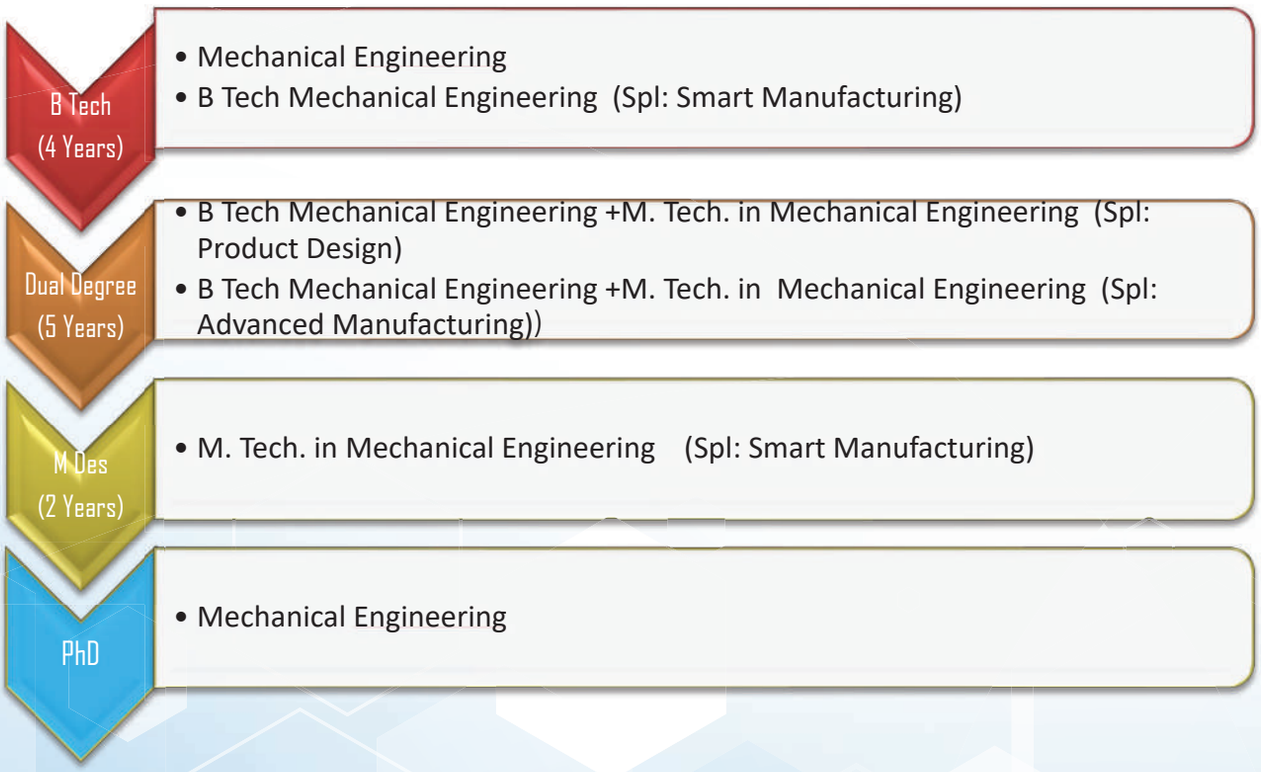
\odel of Automatic Pill Dispenser

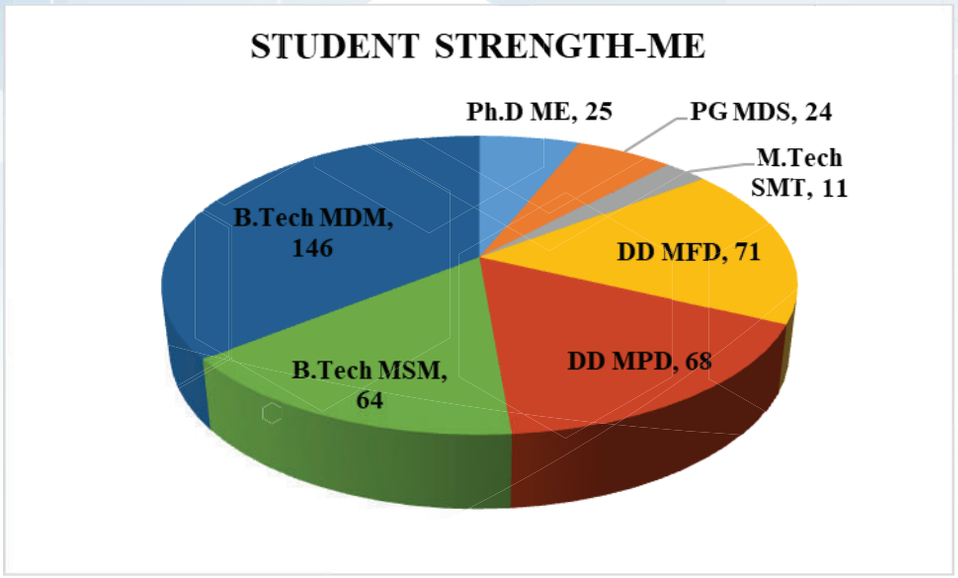


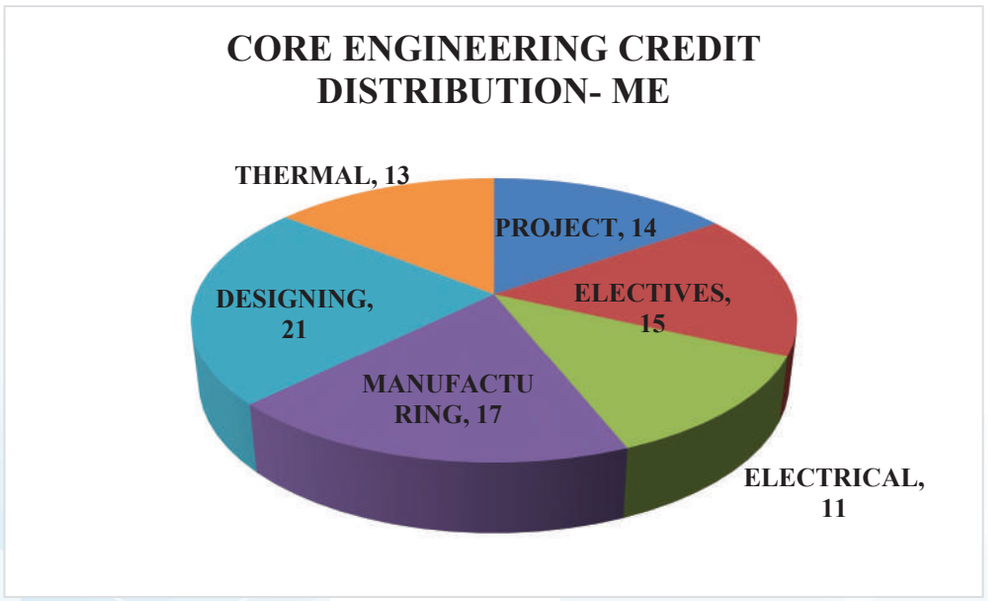
Design and Development of LED Driver Circuit

Mechanical Engineering

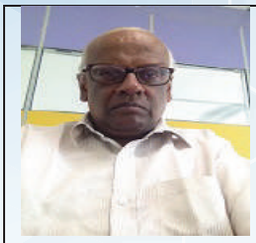
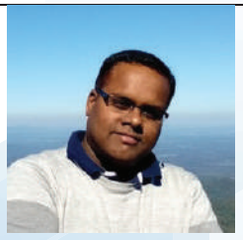
Equipped with well-structured instruction and learning resources and research facilities, the institute aims to disseminate education in the inter-disciplinary areas of mechanical design and manufacturing engineering. The UG, Dual Degree, PG, PhD programs offered by the Mechanical Engineering stream augment the existing Mechanical Engineering curricula offered by IITs with design courses on conceptualization, visualization and engineering simulations. Design visualization imparted through graphic art practice and product design practice enables students to conceptualize, design, simulate and develop tangible products.

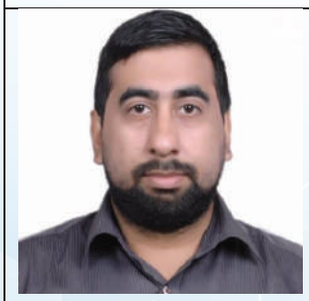



STUDENT STRENGTH-ME
Ph.D ME, 25
PG MDS, 24
M.Tech SMT, 11
DD MFD, 71
DD MPD, 68
B.Tech MSM, 64
B.Tech MDM, 146


CORE ENGINEERING CREDIT DISTRIBUTION- ME
THERMAL, 13
PROJECT, 14
ELECTIVES, 15
ELECTRICAL, 11
MANUFACTURING, 17
DESIGNING, 21

Faculty

	**Venkateshan S P** PhD (IISc) **Research Interests:** Space Heat Transfer, Inverse Methods in Heat Transfer, Cooling of Electronic Components, Instrumentation		**Narayanan, S,** PhD (IIT Kanpur) **Research Interests:** Vibrations and Acoustics, Dynamical Systems, Smart Structures.
	**Karthic Narayanan** PhD (NTU, Singapore) **Research Interests:** Manufacturing Process Mechanical behavior of nano materials Solar PV stress analysis		**Pandithevan P.** PhD (IIT Guwahati) **Research Interests:** Medical Image based Reconstruction, Bio-mimetic Design & Tissue Engineering.
	**Jayabal K.** PhD (IIT Madras) **Research Interests:** Computational Mechanics, Finite Element Methods, Material Modelling		**Raja B.** PhD (Anna University, Chennai) **Research Interests:** Nanofluids, Enhanced Heat Transfer, Electronic Cooling Systems
	**Jayavel S,** PhD (IIT Madras) **Research Interests:** Computational Fluid Dynamics, Fluid and Thermal Sciences, Heat Transfer		**Senthilkumaran K.** PhD (IIT Delhi) **Research Interests:** Additive Manufg, Sustainable & Smart Manufg, Design Manufg Integration,

	**Shahul Hamid Khan** PhD (NIT Trichy) **Research Interests:** Multi Objective Optimisation, Supply Chain Management, Metaheuristics		**Sudhir Varadarajan,** PhD (IIT Madras) **Research Interests:** Complex responsive processes in design and innovation, Product/service innovation, Conceptual design
	**Sreekumar M.** PhD (IIT Madras) **Research Interests:** Robotics & Automation Serial, Parallel & Compliant Mechanisms, Smart Materials Manufacturing & IOT		**Venkata Timmaraju Mallina** Ph.D (IIT Madras) **Research Interests:** Modeling of Materials Behavior, Fatigue and Fracture, Design with Polymers and Composites
	**Shubhankar Chakraborty** PhD (Indian Institute of Technology Kharagpur) **Research Interests:** Heat Transfer, Multiphase flow, Multisensor measurement and data fusion, image processing		**Siva Prasad AVS** PhD (IIT Kanpur) **Research Interests:** Damage Mechanics Dynamic Behaviour of Materials Meshless Methods

	**Gowthaman Swaminathan** PhD (North Carolina A&T State University)	
	Research Interests: Polymers and composites, Nanomaterials, High temperature foams, Experimental mechanics	

Research Scholars	Topic of Research
Anandakumar P	Polymer Composites
Badri Narayanan K B	A Multi-Agent Approach with Swarm Intelligence in Smart Manufacturing
Balaji K	Singularity identification and avoidance in parallel mechanisms
Deepakkumar.R	Numerical Investigation On Performance Of Finned-Tube Heat Exchanger With Hybrid Rows Of Tubes
Gopi G	Additive Manufacturing
Gurunathan C	Surface modification for polymer material for improved tribo performance
Hemnath A K	Experimental analysis on the properties of the products made from metal deposition technique.
Jayakrishnan J	Additive Manufacturing
Kartheesan S	Tribology
Madhanagopal M	Additive Manufacturing
Mathusuthanan M	Thermo-mechanical Investigation of Solar PV
Parthiban P	Fatigue behavior of multiscale thermoplastic composites
Pavan Kumar A	Design and Development of Collision Energy Absorption System
Prasanna Venkadesan V	Total Hip Arthroplasty-Surgery
Raj Kumar G	Robot Assisted Digital Reconstruction
Rajasekar K	Heat and Mass Transfer
Ramarajan J	CFD, Heat Transfer
Reginal Elvis P	Additive Manufacturing
Santhosh S	Modeling and Optimizing Closed-Loop Green Supply Chain Network Design with Disassembly Line Balancing
Satheeshkumar V	Multi-robot Path Planning in Constrained Environment
Sathish Kumar D	Heat Transfer, CFD
Sathish Kumar R	Development and Application of Material Models for Magnetostrictive Materials
Senthil Kumar R	Numerical and Experimental Study of Heat Transfer Enhancement in Electronic Systems
Siddharth Ramachandran	Solar thermal applications
Sivakumar K	Fatigue and Fracture
Srinivasan G	Mathematical Modelling and Experimental Study on Spin Freeze and Drying Process
Usha S	Robot Mechanisms / Smart Materials
Vinayaga Muruga Pandy N	Development Of A Computer-Assisted, Pre-Operative Surgical Methodology for Orthopaedic Applications
Vivek Kumar Chouhan	Supply Chain Management

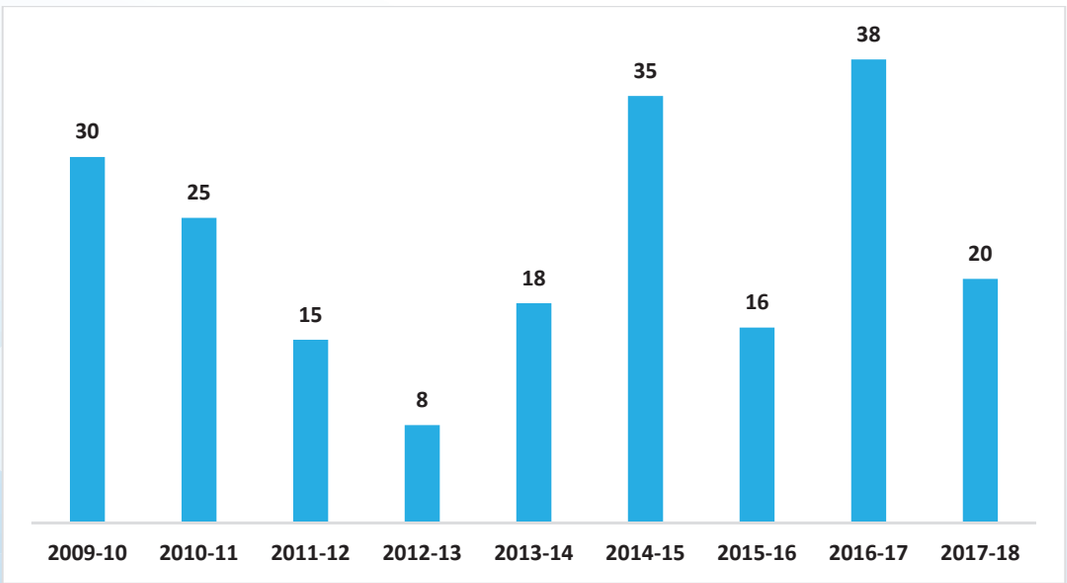
Core Courses

- Mechanical Design
- Quality Inspection and Product Validation
- Fluid Mechanics and Heat Transfer
- Thermal Engineering
- Sensors and Controls
- Manufacturing Automation
- Mechanical Design Simulation
- Product Design
- Product Realization
- Machine Drawing and Manufacturability Analysis

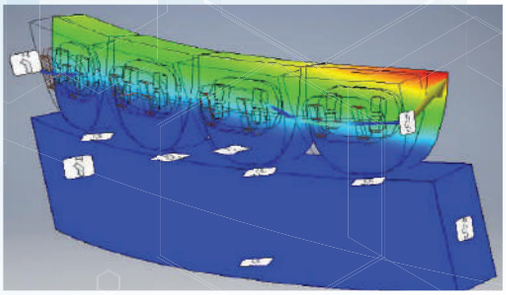
Elective Courses

- Advanced Geometric Modelling and CAD
- Advanced Mechanics of Materials
- CNC Technology and Programming
- Design for Electronic Cooling System and Packaging
- Design for Heat Exchanger
- Design for Vibration Control
- Design Optimization
- Smart Materials and Applications

Publications

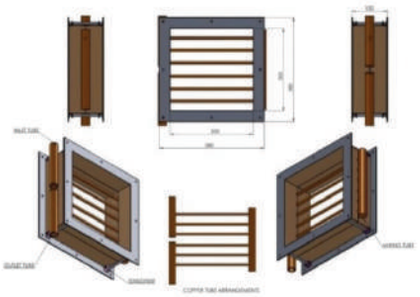


Some Ongoing Student Projects

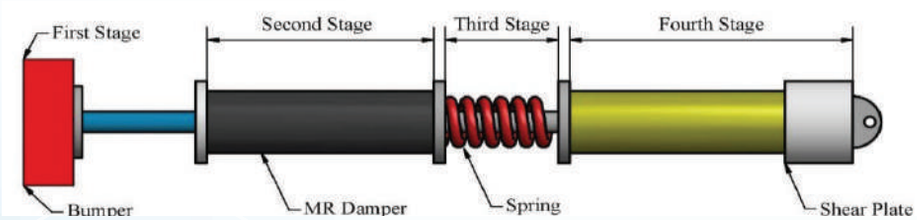


Study on orthodontic tooth movement for various orthodontic wires and forces

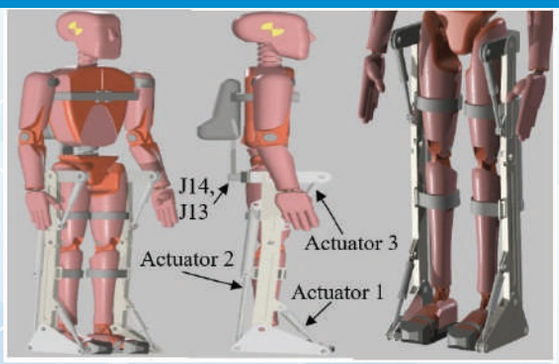
Design and Development of Vacuum Fryer



Design and development of compact heat exchanger using wire mesh



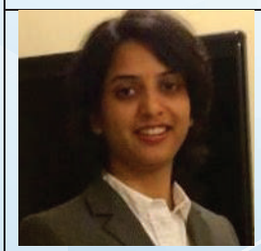
Development of 4-Stage Collision Energy Absorption System



Design of Wearable Exoskeleton Mechanism

Basic Sciences & Humanities

Faculty

<table>
<tr>
<td>  </td>
<td>Shalu M. A.
PhD (IIT Madras)
Research Interests:
Graph Theory, Algorithms, Metabolic Networks</td>
<td>  </td>
<td>Naveen Kumar
PhD (IIT Delhi)
Research Interests:
Fiber Optics, Solar Thermal Energy Applications, Renewable Energy Applications</td>
</tr>
<tr>
<td>  </td>
<td>Vijayakumar S.
PhD (IIT Madras)
Research Interests:
Algorithms, Combinatorial Optimization, Computational Complexity</td>
<td>  </td>
<td>Tapas Sil
PhD (VisvaBharati Univ)
Research Interests:
Giant Resonances of Nuclei, Relativistic Mean Field Theory in Nuclear Structure, Properties of Hot Nuclei</td>
</tr>
<tr>
<td>  </td>
<td>Nachiketa Mishra
PhD (IIT Madras)
Research Interests:
PDE, Numerical Analysis, Numerical Linear Algebra, Theory of Homogenization, Differential Algebraic Equations</td>
<td>  </td>
<td>Nil Kamal Hazra
PhD (IISER Kolkata)
Research Interests:
Reliability Theory, Applied Probability</td>
</tr>
<tr>
<td>  </td>
<td>Anushree P Khandale
PhD (RTM Nagpur University)
Research Interests:
Materials for Electrochemical Device Applications (Solid Oxide Fuel cells, Alkaline Fuel Cells, Sensors etc.) Electrochemical Impedance Spectroscopy</td>
<td>  </td>
<td>Jayachandra Bingi
PhD (IIT Madras)
Research Interests:
Photonics for Defence and medical applications (Photonic devices and sensors)
Bio-inspired research and development</td>
</tr>
</table>

	**Vivek Kumar** PhD (IIT Delhi) **Research Interests:** Photovoltaics, Semiconductor Nanostructures, Raman & Photoluminescence Spectroscopy; Electron transfer properties of metalloproteins		

Research Scholars	Topic of Research
Ashish Kumar	Optical Fiber Micro-Wire and Nano-Wire Based Sensors/Devices For Communication and Sensing Applications
Cyriac Antony	Graph Theory and Algorithms
Dhanalakshmi S	Study of Vertex Separators, Connectivity Augmentation and Constrained Vertex Separators
Manimegalai K	Study of properties of nuclei away from the line of stability and nuclei in the environment of neutron star
N N Subhashree Ojha	Fiber Optic Interferometric Sensor
Sandhya T P	Color domination and star coloring

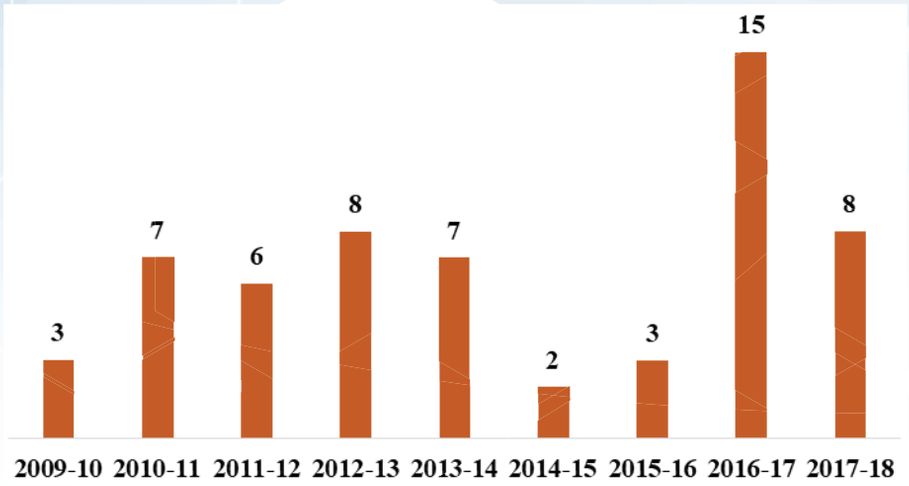
Core Courses

- Mechanics and Wave
- Electromagnetics & Quantum Mechanics
- Basic Materials and Mechanics
- Measurements and Data Analysis

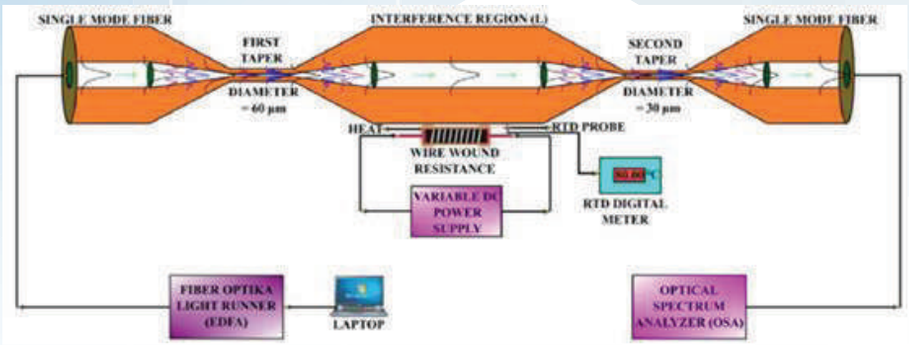
Elective Courses

Bio-Inspired Design

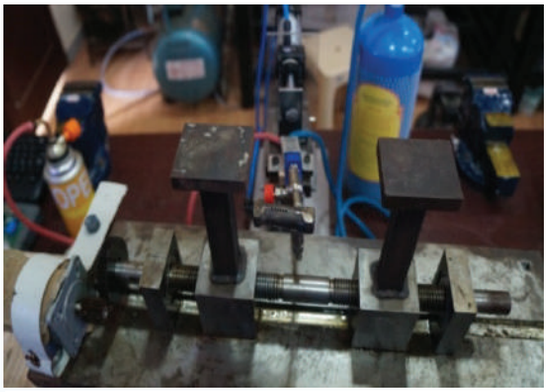
Publications



Some Ongoing Projects

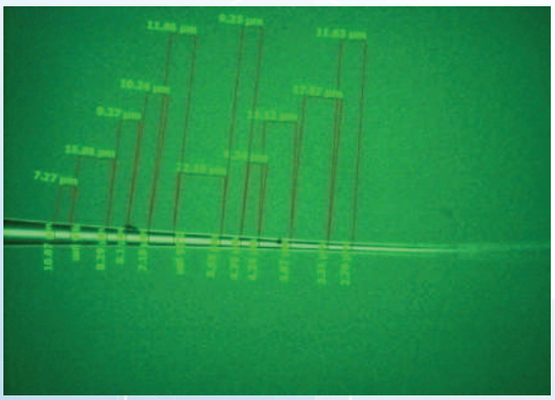


Development of single-mode single-fiber non invasive current sensor/temperature sensor

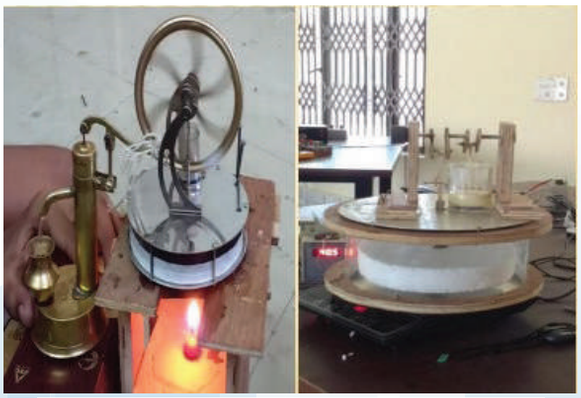


Fused fiber taper fabrication rig for sensing applications

Output fringe pattern measured on OSA of an all-fiber indigenously MZI in the lab



An in-house fabricated fiber taper



A low temperature difference solar Stirling engine for water pumping

IV. 5th Convocation

The 5th convocation of IIITDM Kancheepuram was held at the institute campus at Melakottaiyur, Chennai on 16th Sept 2017. A total of 141 students graduated and among them 109 are undergraduates, 25 are postgraduates and 7 are Doctorates. Prof. Sunil Kumar Sarangi (Former Professor Cryogenic Engineering and Former Director of NIT Rourkela) was invited as the Chief Guest for the convocation. The dais was filled with eminent personalities like Prof. M.S. Ananth (Chairman of the Board), Prof. BanshidharMajhi (The Director, IIITDM Kancheepuram), Prof S.Narayanan, Dr.Anand Lakshmananan (M/s Ericsson India Global Services Ltd.) and Board and Senate members.

SUMMARY OF GRADAUNDS

Sl.No	Degree	Discipline	No of Graduands
1	B.Tech	COE	35
		EDM	33
		MDM	37
2	B.Tech	Backlog Students	4
3	M.Des	CDS	7
		EDS	8
		MDS	10
4	Ph.D	Computer Science	1
		Electrical, Electronic and Communication	3
		Mechanical	2
		Mathematics	1
Total			**141**

LIST OF AWARD WINNERS – M.Des

Sl.no	Description of the awards	Students details
1	Institute Merit Prize	Idury Satya Krishna (CDS15M002)
2	Best Project Awards - CDS	Idury Satya Krishna (CDS15M002)
3	Best Project Awards - EDS	Gowshika. R (EDS15M004)
4	Best Project Awards - MDS	Giri Abhijeet Madhukar (MDS15M004)
5	Distinction	Divya. B (CDS15M001)
6	Distinction	Idury Satya Krishna (CDS15M002)
7	Distinction	Gowshika. R (EDS15M004)
8	Distinction	Meharthaj. H (MDS15M006)

LIST OF AWARD WINNERS – B. Tech

Sl.No	Description of the awards	Students details
1	Institute Merit Prize	L Vijay Sri (COE13B014)
2	Best Outgoing Student	Mallikarjun Akkenapally (EDM13B016)

3	Best Project Award	J. Muhamed Ashiq (COE13B010)
4	Best Project Award	Manne SaiSravan (EDM13B018)
5	Best Project Award	Mridul Gandhi (MDM13B015)
6	Distinction	L Vijay Sri (COE13B014)
7	Distinction	Moolam Hima Swetha(COE13B018)
8	Distinction	Shruti C Saraswati(COE13B030)
9	Distinction	M S Adarsh(EDM13B015)
10	Distinction	Manne SaiSravan(EDM13B018)
11	Distinction	Pooja Mahesh (EDM13B023)
12	Distinction	Tarigopula Homa Priya(EDM13B033)
13	Distinction	G V Balakrishna(MDM13B007)
14	Distinction	Sai Guruprasad Jakkala (MDM13B024)

B.TECH – AWARD WINNERS

BEST OUTGOING STUDENT	INSTITUTE MERIT PRIZE	BEST PROJECT AWARDS	BEST PROJECT AWARDS	BEST PROJECT AWARDS
 EDM13B016 A. Mallikarjun	 COE13B014 L Vijay Sri	 COE13B010 J. Muhamed Ashiq	 EDM13B018 Manne Sai Sravan	 MDM13B015 Mridul Gandhi

M.DES – AWARD WINNERS

INSTITUTE MERIT PRIZE	BEST PROJECT AWARDS	BEST PROJECT AWARDS	BEST PROJECT AWARDS
 CDS15M002 Idury Satya Krishna	 CDS15M002 Idury Satya Krishna	 EDS15M004 Gowshika. R	 MDS15M004Giri Abhijeet Madhukar

V. Institute Library

The fully equipped Library @ IIITDM Kancheepuram campus has an excellent collection of books, periodicals (Print magazine & Journals), e-books, e-journals, Book CDs, leading newspapers and softcopy of NPTEL course video contents are committed to support the institute's mission. The library is having subscription of Turnitin Anti-plagiarism software which helps students learn how to avoid plagiarism and to improve their academic writing. Also, the Library is one among the few in the world to issue Kindle, electronic book reader, for the needy students where a plenty of classical literature and technical books are available. The Library uses an automated Library and Information Management software, KOHA, with Integrated RFID Technology. All the registered users can access the institute Library from anywhere within the campus through LAN/WiFi.

The Library maintains a separate collection of reference books. The Library follows the Machine Readable Catalogue (MARC 21) standard for cataloguing and Universal Decimal Classification (UDC) scheme for classification of library documents.

Online Resources

Institute has e-Journals access for the list of 74 IEEE society packages. Also has a collection of prescribed text e-books published by Pearson. Institute has membership with e-ShodhSindhu which is a Consortium for Higher Education e-Resources which may provide selected e-Journal package based on the courses taught. Confirmation has been received for

the access to e-Journals such as ACM Digital Library, ASME Digital Library, SpringerLink and ISID databases from April 2018 onwards.

Library Resources	Total Numbers	Newly Added (Apr' 17 – Mar' 18)
Books	5241	57
Journals/Magazines (print)	50	01
News Papers	04	-
CD-ROM/DVDs	702	9
Theses and Dissertation	517	134
E-Books	22	1
E-Journals (IEEE Society packages)	74	74
Gratis	324	9

Book Fair 2017

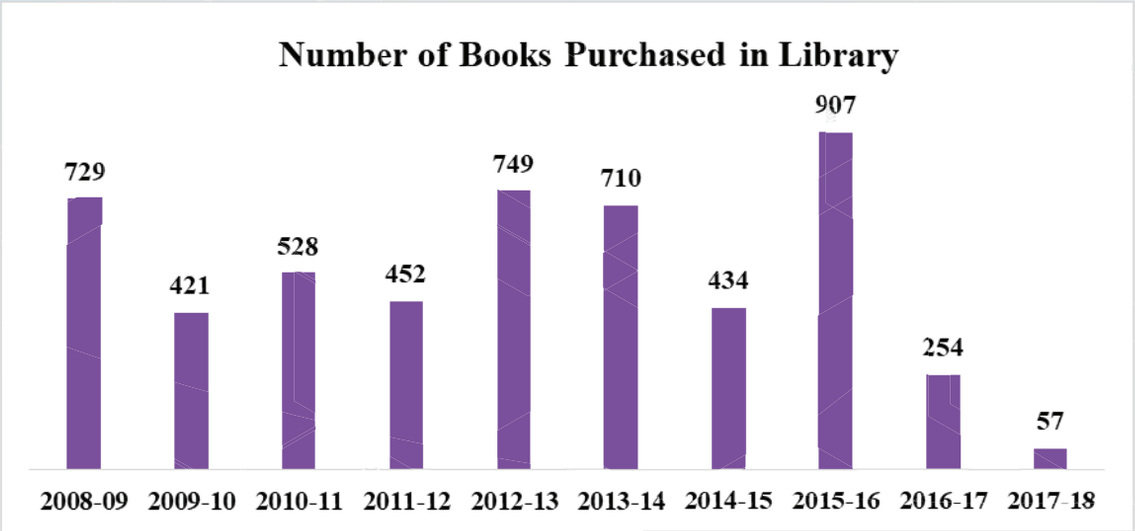
In order to encourage students to procure text books and other books for professional development, a Book Fair was organized during 10-11 of August, 2017.

Android App Released on Librarian's Day

An Android app on 12 August 2017 was released for IIITDM community users on the occasion of 125th Birth Anniversary of Dr.S.R.Ranganathan who is the Father of Library Science in India.

Android App

As the needs of the user grow, IIITDM Kancheepuram developed an android mobile App for accessing the library Intranet. It allows users to quickly access the library services anywhere anytime. Also, users can search library materials, book renewal, book reservation and other services may avail using this app. Moreover user can also check the newly purchased books, subscribed e-resources etc.


Number of Books Purchased in Library
729
421
528
452
749
710
434
907
254
57
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
2017-18

VI. Research and Innovation

Science is a way of life. Science is a perspective. Science is the process that takes us from confusion to understanding in a manner that is precise, predictive and reliable - a transformation, for those lucky enough to experience it, that is empowering and emotional.

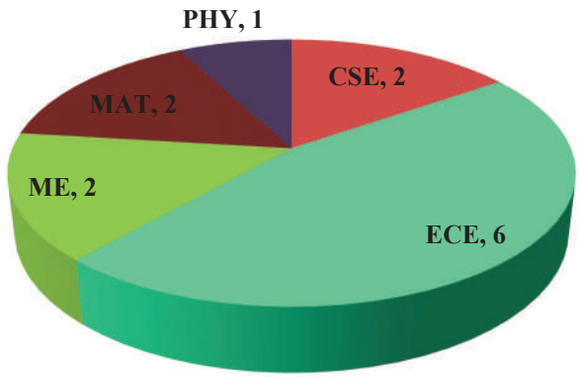
- Brian Greene

PhD Scholars @ IIITDM Kancheepuram

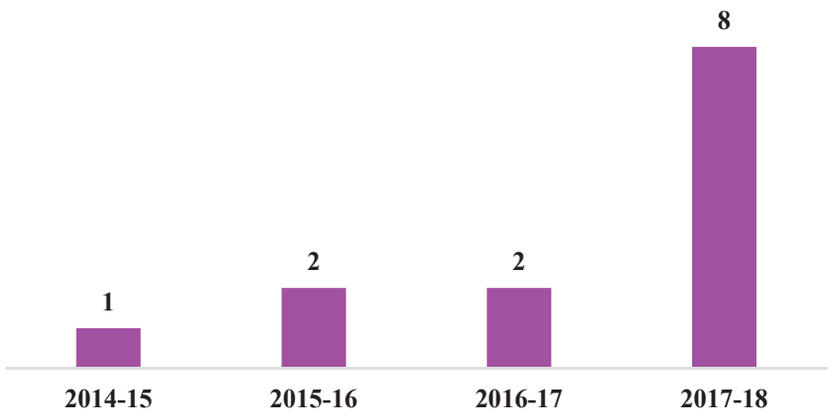
PhD Scholars who have defended their thesis till March 2018

Sl. No.	Roll No.	Scholar	Date of Defense	Supervisor	Title of the Thesis
1	EDM09D001	Madhevan B.	06/02/2015	Sreekumar M.	Implementation of Role Assignment in Multi Robots using Leader Follower Approach
2	PHY10D001	Ramachandran K.	23/12/2015	Naveen Kumar	Special Tailoring through Concatenated All-Fiber Interferometers for Communication and Sensing Applications
3	EDM10D002	Rajin M. Linus	20/01/2016	Damodharan P.	Study of Maximum Power Point Tracking Algorithms for Permanent Magnet Synchronous Generator based Wind Energy Conversion System
4	MAT10D001	Devi Yamini S.	23/06/2016	Shalu M. A.	The Maximum Independent Set Problem and its Counting Variant
5	COE12D001	Mohamed Asan Basiri M.	08/07/2016	Noor Mahammad S.	High Performance VLSI Architectures for Discrete Transformations
6	EDM12D001	Abdul Majeed K. K.	08/05/2017	Binsu J. Kailath	Composite PFD based Low Power Low Noise Fast Locking PLL with Dynamic Loop Bandwidth
7	EDM13D001	Phani Kumar K. V.	13/07/2017	Karthikeyan S. S.	Design, Analysis, and Implementation of RF/Microwave Planar Passive Deives for Wireless Applications
8	MDM12D001	Senthil Kumar R.	13/07/2017	Jayavel S.	Numerical and Experimental Study of Heat Transfer Enhancement in Electronic Systems
9	MAT11D001	Sandhya T. P.	27/07/2017	Shalu M. A., Vijayakumar S.	Graph Coloring and its Variants
10	COE10D001	Kanjar De	01/08/2017	Masilamani V.	Algorithms for assessing Image Quality without Reference
11	EDM09D002	Papanasam E.	04/08/2017	Binsu J. Kailath	High-k/SiC MIS Capacitors-Fabrication, Characterization and Extraction of Gate Leakage Current Mechanisms
12	MDM09D001	Usha S.	16/08/2017	Sreekumar M.	Investigations on the Effects of Surface Topography in the Actuation Performance of Stacked and Rolled Deap Actuator
13	EDM10D001	Arun K.	27/11/2017	Selvajyothi K.	Variable Sampling Period Based Frequency Locked Loops for Single Phase Grid Synchronization

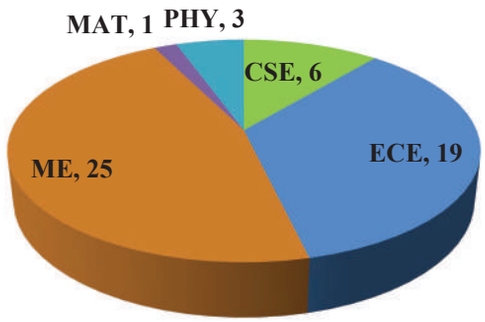
Thesis Defended (as on 31 March 2018)



Ph.D Scholars Passed out



Ongoing PhD-Department wise



Patents and Publications 2017-18

Patents:

1. Pankaj K. Sa, Ansuman Mohapatra, Banshidhar Majhi, "Systems and Methods for generating Synopsis of Multi-View Videos", Application No. 201731028957, 16-Aug-2017.
2. Banshidhar Majhi, Umarani Jayaraman, Avinash Ranganathan, Edwin Murari, Text Free Interface for Managing Contacts on Smart Mobile Phone, Application No. 2018 4100 4534, 07-Feb-2018.

International Journals:

1. Abdul Majeed, K.K. and Kailath, B.J., 2017. "Low power PLL with reduced reference spur realized with glitch-free linear PFD and current splitting CP", *Analog Integrated Circuits and Signal Processing*, 93(1), pp.29-39.
2. Abdul Majeed. and Binsu Kailath., 2017. "Novel PLL Architecture with a Composite PFD and variable Loop Filter" Accepted in *IET Circuits, Devices & Systems*,DOI: 10.1049/iet-cds.2017.0336.
3. Arockiaraj, S.X. and Kokil, P., 2017. "New Criteria for Output Strict and Input Strict Passivity for Interfered Digital Filters for Biomedical Applications". *Journal of Medical Imaging and Health Informatics*, *7*(2), pp.492-496. [SCI Indexed]
4. Arockiaraj, X., Kokil, P. and Kar, H., 2017. "Passivity Based Stability Condition for Interefered Digital Filters". *Indonesian Journal of Electrical Engineering and Computer Science*, *6*(2), pp.431-437. [SCOPUS Indexed]
5. Bakshi, S., Sa, P.K., Wang, H., Barpanda, S.S. and Majhi, B., 2017. "Fast periocular authentication in handheld devices with reduced phase intensive local pattern". *Multimedia Tools and Applications*, pp.1-29.
6. Barik, R.K. and Karthikeyan, S.S., 2017. "A novel design of ultra-high impedance transforming ratio quad-band matching network". *Microwave and Optical Technology Letters*, *59*(8), pp.2021-2026.
7. Barik, R.K. and Karthikeyan, S.S., 2017. "A novel quad-band impedance transformer with ultra-high transforming ratio". *AEU-International Journal of Electronics and Communications*, *78*, pp.157-161.
8. Barik, R.K. and Karthikeyan, S.S., 2017. "Design of dual/tri-frequency impedance transformer with ultra-high transforming ratio". *International Journal of Microwave and Wireless Technologies*, *9*(10), pp.1951-1960.
9. Barik, R.K. and Karthikeyan, S.S., 2017. "Dual-Frequency Impedance Transformer Using Coupled-Line for Ultra-High Transforming Ratio". *Radioengineering*, *26*(4), p.1067.

10. Barik, R.K., Phani Kumar, K.V. and Karthikeyan, S.S., 2017. "Design of a dual-band microstrip branch-line balun using T-shaped coupled lines". *Microwave and Optical Technology Letters*, *59*(5), pp.1197-1202.
11. Barik, R.K., Rajender, R. and Karthikeyan, S.S., 2017. "A Miniaturized Wideband Three-Section Branch-Line Hybrid With Harmonic Suppression Using Coupled Line and Open-Ended Stubs". *IEEE Microwave and Wireless Components Letters*, *27*(12), pp.1059-1061.
12. Dash, B., Rup, S., Mohapatra, A., Majhi, B. and Swamy, M.N.S., 2017. "Decoder driven side information generation using ensemble of MLP networks for distributed video coding". *Multimedia Tools and Applications*, pp.1-30.
13. De, Kanjar. and Masilamani, V., 2017. "No-reference image contrast measure using image statistics and random forest". *Multimedia Tools and Applications*, *76*(18), pp.18641-18656.
14. De, Kanjar. and Masilamani, V., 2017. "No-reference Image Quality Assessment for images degraded by Quantization Defects". *International Journal of Advance Computational Engineering and Networking*, 5(12), pp: 88-93.
15. Deepakkumar, R. and Jayavel, S., 2017. "Air side performance of finned-tube heat exchanger with combination of circular and elliptical tubes". *Applied Thermal Engineering*, *119*, pp.360-372.
16. Deepakkumar, R., Jayavel, S. and Tiwari, S., 2017. "A comparative study on effect of plain-and wavy-wall confinement on wake characteristics of flow past circular cylinder". *Sādhanā*, *42*(6), pp.963-980.
17. Deepakkumar, R., Jayavel, S. and Tiwari, S., 2017. "Cross Flow past Circular Cylinder with Waviness in Confining Walls near the Cylinder". *Journal of Applied Fluid Mechanics*, *10*(1).
18. Jayavel, S., 2017. "Influence of flow shedding frequency on convection heat transfer from bank of circular tubes in heat exchangers under cross flow". *International Journal of Heat and Mass Transfer*, *105*, pp.376-393.
19. Kokil, P. and Arockiaraj, S.X., 2017. "Novel Results for Induced l∞ Stability for Digital Filters with External Noise". *Fluctuation and Noise Letters*, *16*(04), p.1750032. [SCI Indexed]
20. Kokil, P. and Shinde, S., 2017. "A note on the induced l∞ stability of fixed-point digital filters without overflow oscillations and instability due to finite wordlength effects".*Circuits, Systems & Signal Processing, 36 (3),* pp.1288-1300.
21. Kokil, P., 2017. "An improved criterion for the global asymptotic stability of 2-D discrete state-delayed systems with saturation nonlinearities". *Circuits, Systems, and Signal Processing*, *36*(6), pp.2209-2222.
22. Krishna Mohan Reddy., Renjith.P. and Sadagopan N., 2017. "Enumeration of Spanning trees in Halin Graphs-Parallel Perspective". *Discrete mathematics algorithms and applications* (Accepted).

23. Krishna, I.S., Barik, R.K. and Karthikeyan, S.S., 2017. "A dual-band crossover using cross-shaped microstrip line for small and large band ratios". *International Journal of Microwave and Wireless Technologies*, *9*(8), pp.1629-1635.
24. Krishna, I.S., Barik, R.K., Karthikeyan, S.S. and Kokil, P., 2017. "A miniaturized harmonic suppressed 3 dB branch line coupler using H-shaped microstrip line". *Microwave and Optical Technology Letters*, *59*(4), pp.913-918.
25. Kumar, K.V.P. and Karthikeyan, S.S., 2017. "Highly compact wideband double-section rat-race hybrid with harmonic suppression using series and shunt stepped impedance transmission lines". *International Journal of Microwave and Wireless Technologies*, *9*(4), pp.797-803.
26. Kumar, M.K., Kokil, P. and Kar, H., 2017. "A new realizability condition for fixed-point state-space interfered digital filters using any combination of overflow and quantization nonlinearities". *Circuits, Systems, and Signal Processing*, *36*(8), pp.3289-3302.
27. Kumar, P., Narayanan, S. and Gupta, S., 2017. "Bifurcation analysis of a stochastically excited vibro-impact Duffing-Van der Pol oscillator with bilateral rigid barriers". *International Journal of Mechanical Sciences*, *127*, pp.103-117.
28. Lee, Y.T., Kumaraguru, S., Jain, S., Robinson, S., Helu, M., Hatim, Q.Y., Rachuri, S., Dornfeld, D., Saldana, C.J. and Kumara, S., 2017. "A classification scheme for smart manufacturing systems' performance metrics". *Smart and sustainable manufacturing systems*, *1*(1), p.52-74.
29. Manikandan, V M., Masilamani, V., 2017. "A Copy Move Forgery Detection using Histogram Based Package Clustering and Sorted Consecutive Local Binary Patterns&quot". *International Journal of Control Theory and Applications*, 10(13),pp. 29- 36.
30. Mishra, D., Majhi, B., Bakshi, S., Sangaiah, A.K. and Sa, P.K., 2017. "Single image super resolution for texture images through neighbor embedding". *Multimedia Tools and Applications*, pp.1-30.
31. Mishra, S., Majhi, B., Sa, P.K. and Sharma, L., 2017. "Gray level co-occurrence matrix and random forest based acute lymphoblastic leukemia detection". *Biomedical Signal Processing and Control*, *33*, pp.272-280.
32. Nanda, A., Sa, P.K., Chauhan, D.S. and Majhi, B., 2017. "A person re-identification framework by inlier-set group modeling for video surveillance". *Journal of Ambient Intelligence and Humanized Computing*, pp.1-13.
33. Nayak, D.R., Dash, R. and Majhi, B., 2017. "Development of pathological brain detection system using Jaya optimized improved extreme learning machine and orthogonal ripplet-II transform". *Multimedia Tools and Applications*, pp.1-29.
34. Nayak, D.R., Dash, R., Majhi, B. and Prasad, V., 2017. "Automated pathological brain detection system: a fast discrete curvelet transform and probabilistic neural network based approach". *Journal of Expert Systems with Applications*, *88*, pp.152-164.

35. Papanasam, E. and Binsu J Kailath., 2017. "Improvement on the electrical characteristics of Pd/HfO2/6H-SiC MIS capacitors using post deposition annealing and post metallization annealing" *Applied Surface Science*, 413,pp.66–71.
36. Ramachandran, K., Kumar, N. and Kim, D., 2017. "Miniaturized MMZI concatenated FLM for gain equalization of ASE response of an EDFA". *Optical Fiber Technology*, *36*, pp.195-198.
37. Raman, R., Sa, P.K., Bakshi, S. and Majhi, B., 2017. "Kinesiology-inspired estimation of pedestrian walk direction for smart surveillance". *Journal of Future Generation Computer Systems*.
38. Rani, P., Kokil, P. and Kar, H., 2017. "Suppression of Limit Cycles in Interfered Digital Filters with Generalized Overflow Nonlinearities". *Circuits, Systems, and Signal Processing*, *36*(7), pp.2727-2741.
39. Rani, P., Kokil, P.and Kar, H., 2017." New criterion for stability of interfered fixed-point state-space digital filters with quantization/overflow nonlinearities". *Circuits, Systems & Signal Processing, (Accepted for publication)*.
40. Sathyakumar, N., Kamal Prasath Balaji., Raja Ganapathi and Pandian, S.R., 2017. "A Build-Your-Own Three Axis CNC PCB Milling Machine", *Materials Today: Proceedings* (Accepted for Publication)
41. Satpathy, A., Addya, S.K., Turuk, A.K., Majhi, B. and Sahoo, G., 2017. "Crow search based virtual machine placement strategy in cloud data centers with live migration". *Journal of Computers & Electrical Engineering*.
42. Babu, N., Sujatha, S., Narayanan, S. and Balamurugan, V., 2018. "New approach for prediction of influence of vehicle dynamics parameters on instability of unmanned track vehicle using robotic approach". *Journal of Mechanical Science and Technology*, *32*(3), pp.1357-1365.
43. Barpanda, S.S., Majhi, B., Sa, P.K., Sangaiah, A.K. and Bakshi, S., 2018. "Iris feature extraction through wavelet mel-frequency cepstrum coefficients". *Optics & Laser Technology*.
44. Chandu, D.S. and Karthikeyan, S.S., 2018. "Broadband circularly polarized printed monopole antenna with protruded L-shaped and inverted L-shaped strips". *Microwave and Optical Technology Letters*, *60*(1), pp.242-248.
45. Dash, B., Rup, S., Mohapatra, A., Majhi, B. and Swamy, M.N.S., 2018. "Decoder side Wyner–Ziv frame estimation using Chebyshev polynomial-based FLANN technique for distributed video coding". *Multidimensional Systems and Signal Processing*, pp.1-31.
46. Dash, B., Rup, S., Mohapatra, A., Majhi, B. and Swamy, M.N.S., 2018. "Multi-resolution extreme learning machine-based side information estimation in distributed video coding". *Multimedia Tools and Applications*, pp.1-35.

47. Deepakkumar, R. and Jayavel, S., 2018. "Effect of local waviness in confining walls and its amplitude on vortex shedding control of the flow past a circular cylinder". *Ocean Engineering*, *156*, pp.208-216.
48. Kokil, P., Arockiaraj, S.X. and Kar, H., 2018. "Criterion for limit cycle-free state-space digital filters with external disturbances and generalized overflow non-linearities". *Transactions of the Institute of Measurement and Control*, *40*(4), pp.1158-1166.
49. Kokil, P., Arockiaraj, S.X., Jogi, S. and Kar, H., 2018. "New realizability criterion for digital filters with external disturbance and saturation arithmetic". *AEU-International Journal of Electronics and Communications*, *85*, pp.179-182.
50. Kokil, P., Jogi, S. and Ahn, C.K., 2018. "Stability analysis of digital filters subjected to interference using generalized overflow nonlinearities". *Signal Processing*, *148*, pp.1-8.
51. Kumar, A. and Kumar, N., 2018. "Simultaneous Measurement of Current and Temperature by Using an All-Fiber Interferometric Cost-Effective and Non-Destructive Sensing Scheme". *Optik*.
52. Kumar, M.K., Kokil, P. and Kar, H., 2018. "Novel ISS criteria for digital filters using generalized overflow non-linearities and external interference". *Transactions of the Institute of Measurement and Control*, p.0142331218759597.
53. Kumar, N. and Kumar, A., 2018. "Investigation on the impact of irregular fringe patterns of a single-fiber Mach-Zehnder interferometer on its sensing capabilities". *Optical Fiber Technology*, *43*, pp.131-136.
54. Kumar, R.S. and Jayavel, S., 2018. "Forced Convective Air-Cooling Effect on Electronic Components of Different Geometries and Orientations at Flow Shedding Region". *IEEE Transactions on Components, Packaging and Manufacturing Technology*, *8*(4), pp.597-605.
55. Madhevan, B. and Sreekumar, M., 2018. "Identification of probabilistic approaches and map-based navigation in motion planning for mobile robots". *Sādhanā*, *43*(1), p.8.
56. Mandal, S., Mohanty, S. and Majhi, B., 2018. "Cryptanalysis and Enhancement of an Anonymous Self-Certified Key Exchange Protocol". *Wireless Personal Communications*, *99*(2), pp.863-891.
57. Mohanty, F., Rup, S., Dash, B., Majhi, B. and Swamy, M.N.S., 2018. "Mammogram classification using contourlet features with forest optimization-based feature selection approach". *Multimedia Tools and Applications*, pp.1-30.
58. Nayak, D.R., Dash, R. and Majhi, B., 2018. "An Improved Pathological Brain Detection System Based on Two-Dimensional PCA and Evolutionary Extreme Learning Machine". *Journal of medical systems*, *42*(1), p.19.

59. Nayak, D.R., Dash, R. and Majhi, B., 2018. "Discrete ripplet-II transform and modified PSO based improved evolutionary extreme learning machine for pathological brain detection". *Neurocomputing*, *282*, pp.232-247.
60. Nayak, D.R., Dash, R., Majhi, B. and Wang, S., 2018. "Combining extreme learning machine with modified sine cosine algorithm for detection of pathological brain". *Computers & Electrical Engineering*, *68*, pp.366-380.
61. Oswald, C. and Sivaselvan, B., 2018. "An optimal text compression algorithm based on frequent pattern mining". *Journal of Ambient Intelligence and Humanized Computing*, *9*(3), pp.803-822.
62. Oswald, C. and Sivaselvan, B., 2018. "Text and Image Compression based on Data Mining Perspective". *Data Science Journal*, *17*.
63. Pandithevan, P., Pandy, N.V.M. and Palanivel, C., 2018. "Development Of In-Situ Temperature Prediction Models From Cadaveric Human Femur For Bone Drilling". *Journal of Mechanics in Medicine and Biology*, *18*(03), p.1850026.
64. Papanasam, E., Binsu J Kailath.,2018."Effect of Post Deposition Annealing and Post Metallization Annealing on Electrical and Structural Characteristics of Pd/Al_2O_3/6H-SiC MIS Capacitors". *Microelectronics International*, 35(2), pp 65-73.
65. Parthipan, C.G., Arockiaraj, X.S. and Kokil, P., 2018. "New passivity results for the realization of interfered digital filters utilizing saturation overflow nonlinearities". *Transactions of the Institute of Measurement and Control*, p.0142331217746491.
66. Raman, R., Boubchir, L., Sa, P.K., Majhi, B. and Bakshi, S., 2018. "Beyond estimating discrete directions of walk: a fuzzy approach". *Machine Vision and Applications*, pp.1-17.
67. Rani, P., Kokil, P. and Kar, H., 2018. "New Criterion for l 2–l∞ Stability of Interfered Fixed-Point State-Space Digital Filters with Quantization/Overflow Nonlinearities". *Circuits, Systems, and Signal Processing*, pp.1-18.
68. Renjith, P., Sadagopan, N., 2018."The Steiner Tree Problem in K 1,r -free Split Graphs - Dichotomy Results" - minor revision-likely accepted in Discrete Applied Mathematics 2018.
69. Sahoo, S.S., Mohanty, S. and Majhi, B., 2018. "An Improved and Secure Two-factor Dynamic ID Based Authenticated Key Agreement Scheme for Multiserver Environment". *Wireless Personal Communications*, pp.1-27.
70. Shalu, M.A., Vijayakumar, S., Sandhya, T.P.,2018. "On the complexity of CD-coloring of graphs". *Discrete Applied Mathematics* (Accepted).
71. Shalu, M.A., Vijayakumar, S., Yamini, S.D. and Sandhya, T.P., 2018. "On the algorithmic aspects of strong subcoloring". *Journal of Combinatorial Optimization*, *35*(4), pp.1312-1329.
72. Srinivasan, S. and Khan, S.H., 2018. "Multi-stage manufacturing/re-manufacturing facility location and allocation model under uncertain demand and return". *The*

International Journal of Advanced Manufacturing Technology, *94*(5-8), pp.2847-2860.

73. Umesh, V., Balavignesh, S. and Raja, B., 2018. "Single-Phase Convective Heat Transfer of Water and Aqua Ethylene Glycol Mixture in a Small-Diameter Tube". *Journal of Engineering Thermophysics*, *27*(1), pp.98-105.

Conference Publications:

1. Abhijeet M Giri, Jayabal, K., 2017, December. "A Simplified Approach for Modelling of Constant Pitch and Variable Pitch Wave Springs". *International Conference on Composite Materials and Structures*", (2147-2156), IIT Hyderabad, India
2. Aravind, K., Subramanian, R.B., Subramanian, V.S., Srivyassram, V., Hayakawa, Y. and Pandian, S.R., 2017, November. "An affordable build-your-own computer control system for electropneumatics education". In *Information and Communication Technology (CICT), 2017 Conference on* (pp. 1-6). IEEE.
3. Arockiaraj, S.X. and Kokil, P., 2017, March. "LMI based passivity analysis of digital filters". In *Wireless Communications, Signal Processing and Networking (WiSPNET), 2017 International Conference on* (pp. 1129-1132). IEEE. [Scopus Indexed]
4. Ashish Kumar., Naveen Kumar., 2017, November. "Miniaturized Single-Mode Single-Fiber MZI Based Refractive Index Sensor". *In Proc. Of International conference on Advances in Optics and Photonics* (ICAOP-2017) (XLI Conference of Optical Society of India) Guru Jambheshwar University of Science & Technology, Hisar, pp16
5. Ashish Kumar., Naveen Kumar.,2017, November. "Fabrication of Asymmetrically Corrugated Long Period Fiber Grating by Using CO2 Laser Engraving Machine". *In Proc. Of International conference on Advances in Optics and Photonics* (ICAOP-2017) (XLI Conference of Optical Society of India) Guru Jambheshwar University of Science & Technology, Hisar, PP17
6. Barik, R.K., Chandu, D.S. and Karthikeyan, S.S., 2017, October. "Broadband coupled-line matching network for two dissimilar port reference impedances. In *European Microwave Conference (EuMC), 2017 47th* (pp. 89-92). IEEE. (Received the Travel Grant from EuMA)
7. Baskaran, B., Radhakrishnan, K., Muthukrishnan, G., Prasath, R.N., Balaji, K.P. and Pandian, S.R., 2017, November. "An autonomous UAV-UGV system for eradication of invasive weed prosopis juliflora". In *Information and Communication Technology (CICT), 2017 Conference on* (pp. 1-6). IEEE.
8. Chandu, D.S., Barik, R.K. and Karthikeyan, S.S., 2017, October. "Triple-band circularly polarized antenna on a two-layered high impedance surface with two in-phase reflection bands". In *European Microwave Conference (EuMC), 2017 47th* (pp. 600-603). IEEE. (Received the Travel Grant from EuMA).
9. Deepak Ranjan Nayak., Ratnakar Dash. and Majhi, B., 2017. "Pathological Brain Detection using Extreme Learning Machine Trained with Improved Whale

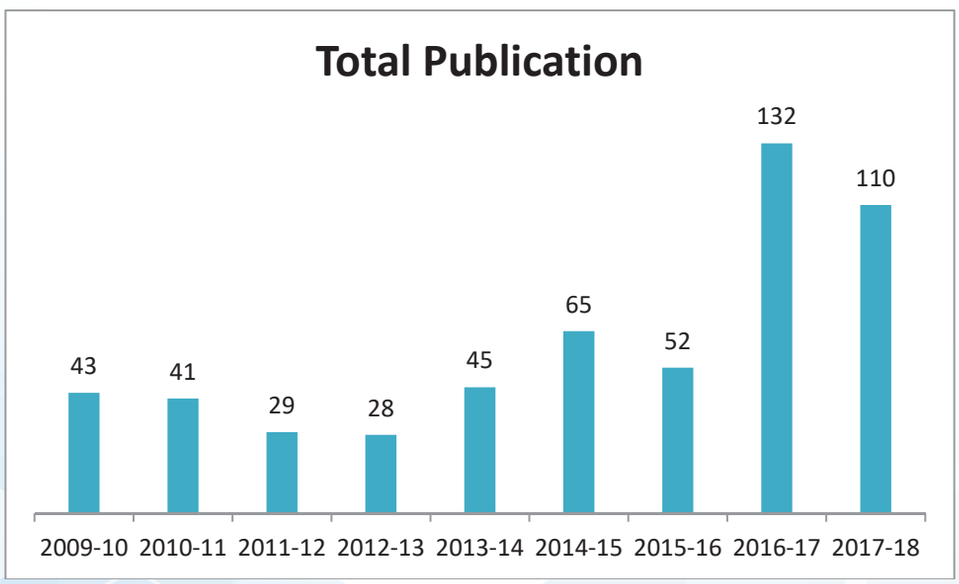
Optimization Algorithm". In *9th International Conference on Advances in Pattern Recognition (ICAPR 2017)*, ISI Bangalore.

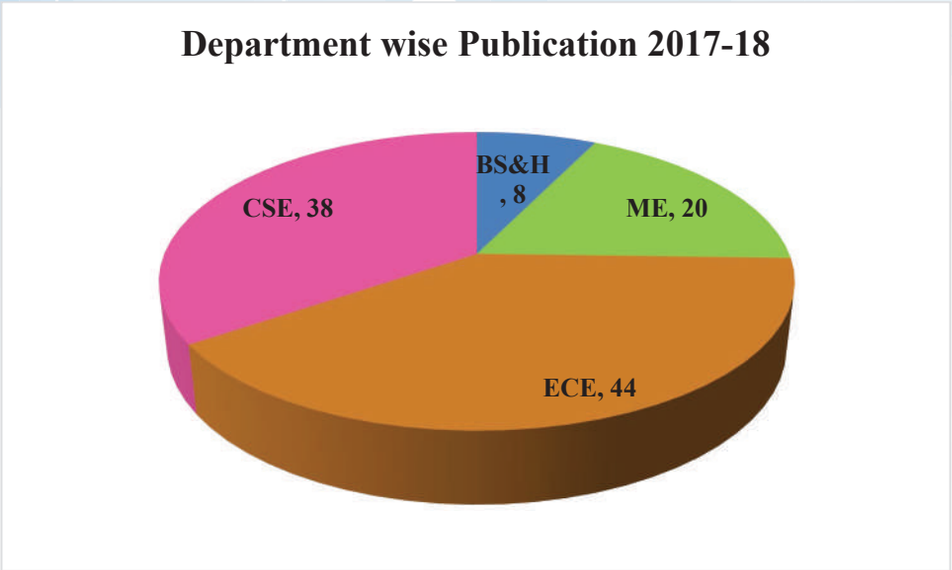
10. Dheepika, K., Jevasankari, K.S., Chandhar, V. and Kailath, B.J., 2017, June. "Realization of Multiplier Using Delay Efficient Cyclic Redundant Adder". In *International Symposium on VLSI Design and Test* (pp. 36-47). Springer, Singapore.
11. Ishibashi, N., Prathap, S.K.V. and Pandian, S.R., 2017, July. "Design and fabrication of a smart punching bag with micro energy generator". In *IEEE Region 10 Symposium (TENSYMP), 2017* (pp. 1-6). IEEE.
12. Karthik, M., Oswald, C. and Sivaselvan, B., 2017, December."Frequent Sequence Mining approach to Video Compression". *In International Conference on Computational Intelligence, Cyber Security and Computational Models 2017*.Springer.
13. Keerthi Sagar., Zlatanov, D., Zoppi, M., Nattero, C. and Muthuswamy, S., 2017, August. "Multi-Goal Path Planning for Robotic Agents With Discrete-Step Locomotion". In *ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*(pp. V05AT08A033-V05AT08A033). American Society of Mechanical Engineers.
14. Krishna Chaurasia., Sowmya Jain., Sivaselvan, B., and Oswald, C., 2017. "Automatic Ranking of CAPTCHAs based on Usability Measures", In Annual IEEE India Conference (INDICON), pp. 1-6. IEEE.
15. Magapati, V.M. and Kailath, B.J., 2017, August. "Switched capacitor circuit simulator for noise analysis using adjoint network approach". In *Microelectronic Devices, Circuits and Systems (ICMDCS), 2017 International conference on* (pp. 1-5). IEEE.
16. Mahesh, P. and Selvajyothi, K., 2017, August. "Impersonation detection in online examinations". In *Signal Processing, Informatics, Communication and Energy Systems (SPICES), 2017 IEEE International Conference on* (pp. 1-5). IEEE.
17. Manikandan, V M., Masilamani, V., 2017. "A Novel Data Encryption Scheme that Provides Data Encryption". *ICINS 2017*, Jagarta, Indonesia(Publication will come in Journal of Image and Graphics).
18. Mitabe, Y., Sathyakumar, N., Parthiban, C.G., Rajaganapathi, S. and Pandian, S.R., 2017, October. "A build your own robot manipulator for manufacturing education. In *Computer Applications". In Electrical Engineering-Recent Advances (CERA), 2017 6th International Conference on* (pp. 503-508). IEEE.
19. Moharana, S.R., Addya, S.K., Satpathy, A., Turuk, A.K., Majhi, B. and Jha, V.K., 2017. "Secure key-distribution in IoT cloud networks". *3rd International Conference on Sensing, Signal Processing and Security (ICSSS).*
20. Nayak, D.R., Dash, R. and Majhi, B., 2017, November. An improved extreme learning machine for pathological brain detection. In *Region 10 Conference, TENCON 2017-IEEE* (pp. 13-18). IEEE.

21. Neeraj, S., Sivaselvan, B. and Oswald, C., 2017. "A Novel Gamification based approach to Recommendation based Mobile Applications", *In 2017 International Conference on Advanced Computing* (ICoAC), pp. 1-8. IEEE.
22. Oswald, C., Kumar, I.A., Avinash, J. and Sivaselvan, B., 2017, December. A graph-based frequent sequence mining approach to text compression. In *International Conference on Mining Intelligence and Knowledge Exploration* (pp. 371-380). Springer, Cham.
23. Padhi, D.R., Mellita, R.A. and Sreekumar, M., 2017, January. "A Novel Frame Work of Design Realization Course at IIITDM Kancheepuram: Critical Evaluation". In *International Conference on Research into Design* (pp. 1039-1049). Springer, Singapore.
24. Pankaj Kumar., Narayanan, S. and Sayan Gupta., 2017, September. "Investigation of targeted energy transfer in stochastically excited system". *International Conference on Engineering Vibration (ICOEV)* Sofia (Bulgaria).
25. Prabhakar, G., Kailath, B., Natarajan, S. and Kumar, R., 2017, July. "Obstacle detection and classification using deep learning for tracking in high-speed autonomous driving". In *IEEE Region 10 Symposium (TENSYMP),* (pp. 1-6). IEEE.
26. Ranjan, S., Nayak, D.R., Kumar, K.S., Dash, R. and Majhi, B., 2017, January. "Hyperspectral image classification: A k-means clustering based approach". In *Advanced Computing and Communication Systems (ICACCS), 2017 4th International Conference on* (pp. 1-7). IEEE.
27. Sahoo, S.S., Mohanty, S. and Majhi, B., 2017, November. "A Light Weight Three Factor based Authentication Scheme for Multi-server Environment using Smart Cards". In *Proceedings of the 2017 the 7th International Conference on Communication and Network Security* (pp. 43-47). ACM.
28. Sathyakumar, N., Kamal Prasath Balaji., Raja Ganapathi. and Pandian, S R., 2017, "A Build-Your-Own Three Axis CNC PCB Milling Machine". *Proc. Advances in Materials and Manufacturing Applications,* Bangalore.
29. Satpathy, A., Addya, S.K., Turuk, A.K., Majhi, B. and Sahoo, G., 2017, January." A resource aware VM placement strategy in cloud data centers based on crow search algorithm". In *Advanced Computing and Communication Systems (ICACCS), 2017 4th International Conference on* (pp. 1-6). IEEE.
30. Satya Krishna, Idury., Rusan Kumar Barik, and Karthikeyan, S.S., 2017, December. "Analysis and Design of a Planar Crossover for Dual-Frequency Applications", *IEEE INDICON*, IIT Roorkee,
31. Shalu, M.A., Vijayakumar, S. and Sandhya, T.P., 2017, February. "A lower bound of the cd-chromatic number and its complexity". In *Conference on Algorithms and Discrete Applied Mathematics* (pp. 344-355). Springer, Cham.
32. Sravan, M.S., Moolam, S., Sreepathi, S. and Kokil, P., 2017, July. "Implementation of remote motion controller with visual feedback". In *Computing, Communication and*

Networking Technologies (ICCCNT), 2017 8th International Conference on (pp. 1-7). IEEE.[Scopus Indexed]

33. SubhamBiswas, Nikhil Chennu, HarshaValveti, C. Oswald, Sivaselvan B.,2017. "Lossy Image Compression using Frequent Pattern Mining based Huffman Encoding", *In 2017 Annual IEEE India Conference (INDICON)*, pp. 1-6. IEEE.
34. Yuvaraj, M., Kailath, B.J. and Bhaskhar, N., 2017, August. "Design of optimized MAC unit using integrated vedic multiplier". In *Microelectronic Devices, Circuits and Systems (ICMDCS), 2017 International conference on* (pp. 1-6). IEEE.
35. Balaji, K. and Khan, B.S.H., 2018, February. "Kinematic Analysis and Performance Evaluation of Novel PRS Parallel Mechanism". In *IOP Conference Series: Materials Science and Engineering* (Vol. 310, No. 1, p. 012007). IOP Publishing.
36. Keerthi Sagar., Dimiter Zlatanov., Cristiano Nattero. and Sreekumar Muthuswamy.,2018. "Orientation Planning for Multi-Agents with Discrete-Step Locomotion and Multiple Goals". *The second IEEE International Conference on Robotic Computing (IRC 2018)*, Under Review, California, USA.
37. Senthilkumaran., K. and Hemanth, A K (Book chapter).,2018. "Distortion in Metal Additive Manufactured Parts. In 3D Printing and Additive Manufacturing Technologies". (pp. 281-295). Springer, Singapore.





Awards and Guest Lecture by Faculty

Awards Received:

- Prof. S . Narayanan was awarded with "The Outstanding Teacher Award" for the year 2017 by the Indian National Academy of Engineering.

Guest Lectures/Other Activities:

1. Prof S. Narayanan: (i) Flow Induced Vibration, (ii) Nonlinear Vibration, (iii) Random Vibration, in the AICTE sponsored Faculty Development Programme on Vibration,Measurement and Control in St.Joseph Engineering College on 10-11-2017 and presided over the valedictory function.
2. Prof S Narayanan: Fokker Planck equation and its application in Energy Harvesting.. Lecture delivered in the GIAN course titles "Analysis and Design of Energy Harvesters", IIT Madras, 02-11-2017.
3. Prof S Narayanan: Served as Member of Steering Committee, Selection Committee of Young Engineer Award and Innovative Student Potential Award and INAE-AICTE Programme of the Indian National Academy of Engineering, Member of Faculty Selection Committee for IIT Indore, IIT Hyderabad ,IIT Dharwad and selection of

senior faculty as Emeritus Professor in IIT Bhubaneshwar. Served as Chairman of Domain Expert Committee III of projects under the Utchathar Avishikar Yogana(UAY) projects. Served as member of Curriculum Committee for B.Tech in Mechanical Engineering of AICTE.

4. Prof S Narayanan: Served as member in the Editorial Board of the Journal Probabilistic Engineering Mechanics (Elsevier)
5. Dr Naveen Kumar: Delivered invited lecture, titled, All-fiber Devices and Components for DWDM Optical Networks with demonstration and hands on experience on fiber splicing and connectors, at VIT University-Chennai Campus on 5 May 2017
6. Dr Naveen Kumar: Attended Doctoral committee meeting as DC member at VIT University-Chennai campus on 30 Jan 2018.
7. Dr K Selvajyothi: Delivered a keynote lecture on "Design and Implementation of Harmonic Estimator" during "National Seminar on Emerging Technologies in Engineering", at SRM Valliammai Engineering College, Chennai, on 1 April 2017.
8. Dr K Selvajyothi: Delivered a keynote lecture and acted as session chair for the International Conference on Innovations in Engineering and Sciences (ICIES'18) at JEPPIAAR SRR Engineering College, Chennai, on 23 March 2018.
9. Dr K Selvajyothi: Delivered a lecture on Reduction of Voltage Harmonics in Single Phase Stand Alone Inverters at St Joseph's College of Engineering, Chennai, on 17 February 2018.
10. Dr M Sreekumar: Served as External Examiner for Project Work Viva-voce examination, Final Year BE Material Sci and Engg students on 12 April 2017, Anna University, Guindy Campus.
11. Dr M Sreekumar: Guest Lecture, VIT University-Chennai Campus, Light Weight Parallel Manipulator with SMA Actuator and Fuzzy Controller, 13 April 2017
12. Dr M Sreekumar, Guest Lecture on Intelligent Robot Mechanisms and Smart Actuators, during the workshop organized by the Teaching Learning Centre-TLC of IIITDM Kancheepuram, 22 Sep. 2017
13. Dr M Sreekumar, Expert Speech on Smart Materials and Actuators for Serial and Parallel Robot Mechanisms, *AICTE sponsored Two Week FDP(22 Jan-2 Feb. 2018), GVP College of Engg, Visakhapatnam*, 31 Jan 2018.
14. Dr M Sreekumar: Examiner-PhD thesis, Amrita University-Ettimadai (Coimbatore) Campus, Student-Ms. Jasna S.B, Supervisor-Dr Supriya P, 7 Oct. 2017
15. Dr M Sreekumar: Served as Member-Board of studies, VIT-Bhopal campus, 2017-18
16. Dr T S Narayanan, Delivered expert lectures- 3-5 Aug.2017*Torry Harris Business Solution (THBS), Bangalore – IP Multimedia Systems (IMS) Workshop; 22-24 Nov 2017* Public Workshop on Software Defined Network (SDN) for Timmins Training &

Consulting, Kuala Lumpur, Malaysia; 27-28 Nov. 2017 and 5-7 Dec 2017 *Qualcomm, South Korea – Advanced IP Networking Workshop; 1 March 2018* Public Workshop on Software Defined Wide Area Network (SD-WAN) Timmins Training & Consulting, Kuala Lumpur, Malaysia; 22-23

17. Dr T S Narayanan-Seminars; IOT Big Picture-Digital India Organized by Indian International Science Festival (IISC), 13 October 2017, Chennai.
18. Dr T S Narayanan- Data Analytics - Digital India Organized by Indian International Science Festival (IISC), 16 October 2017, Chennai.
19. Dr K Jayabal, Invited talk on "Material Modelling using Advanced Finite Element Method" at TEQUIP sponsored QIP "Advanced Material Science and Engineering" on May 18, 2017 at Coimbatore Institute of Technology, Coimbatore.
20. Dr K Jayabal, Invited talk on "Advancements in modeling piezoelectric materials" at a short-term course on "Advances in Composite Materials" on December 9, 2017 at Coimbatore Institute of Technology, Coimbatore.
21. Dr K Jayabal, Invited lecture on "Micromechanical Modeling of Smart Materials with Advanced Finite Element Methods", National Finite Element Developers/FEAST Meet, ISRO Head Quarters, Bangalore, December 15, 2017.
22. Dr. K Jayabal: Served as a peer review committee member for "Design and Development of Landing Gear for 1st class UAV" for SWiFT UAV being developed by Combat Vehicles Research and Development Establishment (CVRDE), DRDO, on November 11, 2017.

Sponsored Research and Consultancy

Sponsored Research

(Ongoing and Sanctioned during 2017-18)

1. Early detection of Kidney abnormalities in noisy ultrasound images
   Principal Investigator : Dr. Priyanka Kokil
   Sponsor : DST-SERB
   Duration : 3 years (2017-20)
   Value : 21 lakhs
2. Early detection of cataract: An IoT based approach
   Principal Investigator : Dr. Priyanka Kokil
   Sponsor : DST-SERB
   Duration : 3 years (2017-20)
   Value : 16.8 lakhs
3. Investigations on the Cell Phone Tower Radiation and Mitigation Techniques
   Principal Investigator : Dr. M.D. Selvaraj
   Sponsor : DST-SERB
   Duration : 3 years (2018-21)
   Value : 32.5 lakhs
4. Design, Development, Manufacture, and Evaluation of Laser Cut Stent Patterns for Enhanced Performance and Life
   Principal Investigator : Dr M Sreekumar; Co-PI: Dr. K. Jayabal
   Sponsor : DST-AMT
   Duration : 2 years (2018-20)
   Value : 50 lakhs
5. Performance Evaluation and Modeling of Multi Agent Based Smart Manufacturing Integrated with Swarm Intelligence and IoT
   Principal Investigator : Dr M Sreekumar (PI); Co-PI: Dr. K. Premkumar
   Sponsor : DST-ICPS
   Duration : 3 years (2018-21)
   Value : 35 lakhs

6. Vertex Separators and its Variants: Structural and Algorithmic Study
   Principal Investigator : Dr Sadagopan
   Sponsor : National Board for Higher Mathematics (NBHM), DAE, GOI
   Duration : 3 years (2017-20)
   Value : Rs 16.23 lakhs
7. On Spanning Trees - Generalizations and Variants (Theory and Algorithms)
   Principal Investigator : Dr Sadagopan
   Sponsor : DST-SERB
   Duration : 3 years (2018-21)
   Value : Rs 16 lakhs

8. Photo Induced Excess Charge Mediated Fluoride Ion Filtration
   Principal Investigator : Dr. Jayachandra Bingi
   Sponsor : DST-SERB
   Duration : 3 years (2018-21)
   Value : Rs 25.2 lakhs
9. Projects under Visvesvaraya PhD Scheme for Electronics and IT

   Principal Investigators : Dr M Sreekumar and Dr Noor Mohammad
   Sponsor : Ministry of Electronics and IT, GOI
   Duration : 5 years (2016-21)
   Value : 101.874 lakhs

10. Control and Operation of Agents in a Multi-Agent Fixturing System with Swarm Control
    Principal Investigator : Dr M Sreekumar
    Sponsor : University of Genova, Italy
    Duration : 2 Years (2018-19)
    Value : 17000 Euro
11. Design Innovation Centre
    Principal Investigator : Dr. Naveen Kumar
    Sponsor : DST
    Duration : 3 years
    Value : 18.00 Lakhs

12. Development of a computer - Assisted Surgical Methodology for Orthopedic - Bone Surgery
    Principal Investigator: Dr. P. Pandithevan
    Sponsor : DST
    Duration : 3 years
    Value : 19.14 Lakhs
13. Special Manpower Development Program for Chips to System Design
    Principal Investigator: PI: Dr Noor Mohammad; Co-PI: Dr Binsu J Kailath
    Sponsor : MEITY, Govt. of India
    Duration : 3 years
    Value : 92.4 Lakh
14. Teaching Learning Centre under the scheme Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching
    Principal Investigator: Dr. S. Rajasekara Pandian
    Sponsor : DHE-MHRD
    Duration : 3 years
    Value : 150 Lakhs
15. Design and Development of energy efficient freeze dryer with multiport mini-channel shelf heat exchange
    Principal Investigator: PI: Dr. B. Raja Co-PI: Dr M. Sreekumar
    Sponsor: DST - SERB
    Duration: 3 Years (2014-17)
    Value: 23.3 Lakhs
16. People counter for Bus
    Principal Investigator: Dr.V.Masilamani ; Co-PI: Prof.Banshidhar Majhi
    Sponsor: Ms.Vamo Systems Private Limited, Chennai
    Duration: 1 Year (2018-19)
    Value: 2 Lakhs
17. Testing and Evalution of LoRA Modules
    Principal Investigator: PI: Dr.S.S.Karthikeyan Co-PI: Dr.K.V.Eswaramoorthy
    Sponsor: Ms.Ensemble Tech. Pvt. Ltd, Chennai
    Duration: 1 Year (2017-18)
    Value: 1.77 Lakhs

18. Machine Learning Algorithms for Security Applications & Image Processing
Principal Investigator: PI: Dr.V. Masilamani, Co-PI:Prof.Banshidhar Majhi, Dr.Noor Mahammad
Sponsor: Forensics Intelligence Surveillance and Security Technologies Pvt. Ltd. Chennai
Duration: 2 Years (2018-20)
Value: 6 Lakhs

Consultancy Projects

Sl. No.	Principal Investigator	Agency	Project Title	Amount, Rs.
1	Dr.T.S.Narayanan	Ms.Nanocell Networks Private Limited, Bangalore	IP Multimedia Training for Torry Harris Business Solutions	1,06,200
2	Dr.Karthik Narayanan and Dr.Suresh Varadharajan	Ms.Tube Investments of India Ltd, Chennai	Smart Manufacturing Pilot Project (Phase - I)	77,880
3	Dr.T.S.Narayanan	Ms.Timmins Training Consulting, Malaysia	Software Design Network (SDN) Workshop	98,000
4	Dr.T.S.Narayanan	Ms.Nanocell Networks Private Limited, Bangalore	IP Networking, Samsung, South Korea	1,15,640
5	Dr.T.S.Narayanan	Ms.Timmins Training Consulting, Malaysia	Software Defined Wide Area Network (SD-WAN) Workshop	28,800

Teaching Learning Centre (TLC)

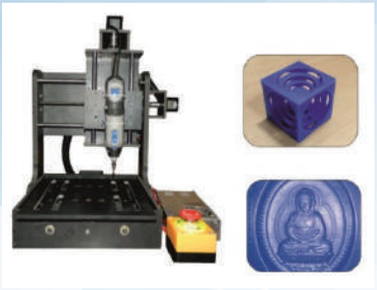
Teaching Learning Centre for Design and Manufacturing Education

The Teaching Learning Centre (TLC) is functioning under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) funded by the Ministry of Human Resource Development, since Oct. 2015. It is a five-year project continuing through 2019-20, and is expected to be self-sustaining thereafter. The project has received Rs 2.35 crores funding so far. The major objective of the TLC is the design, development and dissemination of innovative and extremely affordable manufacturing education technologies for universities, colleges, polytechnics, and industrial training institutes using Do It Yourself/Build Your Own (DIY/BYO) methodologies. The TLC is also active in schools outreach initiatives, to inculcate creative hands-on teaching learning pedagogies for high schools in the areas of design and manufacturing through robotics, electronics and coding.

The TLC has recently been approved as a **National Resource Centre for Design and Manufacturing** domain, by the MHRD. A new MOOC (massively open online course) on DIY Manufacturing Technology is the first online course to be developed by the TLC NRC under this initiative, for uploading to the SWAYAM platform. TLC has designed and developed several **very low-cost** manufacturing technology education equipments such as CNC (computer numerical control) mill, lathe, router, PCB (printed circuit board) machine, laser engraver, vinyl cutter, mobile robots, 3-link robot manipulator, acrylic bender, and so on.

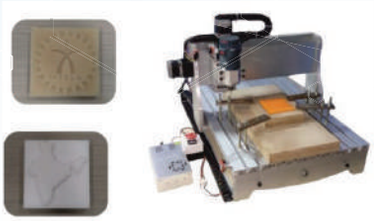
Investigators for the TLC Project:

Dr S R Pandian, Principal Investigator/Coordinator
Dr Masilamani, Co-investigator
Dr Senthil Kumaran, Co-investigator
Dr Venkata Timmaraju Mallina, Co-investigator
Dr Munesh Singh, Co-investigator
Dr Shubhankar Chakraborthy, Co-investigator
Mr Gurunathan, Co-investigator

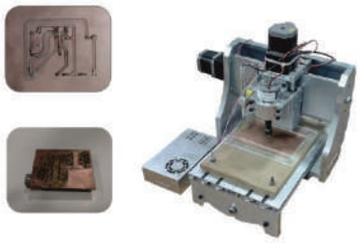


TLC CNC Mill

TLC CNC Lathe

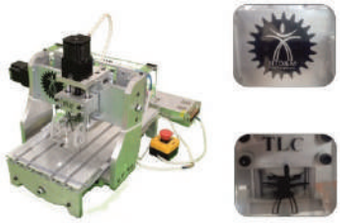


TLC CNC Router

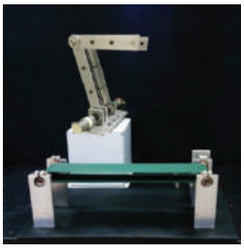


TLC PCB Machine

TLC Laser Engraver



TLC Vinyl Cutter Manipulator



TLC 3-link

Dissemination of the TLC-developed technologies is based on e-learning materials (manuals with complete step-by-step assembly instructions with bill of materials and how-to videos) on TLC website, in TLC and onsite hands-on workshops for university/college/polytechnic faculty and teachers, and internships for faculty and students.

TLC Internships: Students from outside colleges/polytechnics regularly do internships (unpaid) in TLC under the mentoring of TLC staff on replicating some of the DIY equipment designed and developed in TLC, for use in their college department labs. Some interns and their projects are shown below.

PACR Polytechnic Interns with their CNC machines (Left) and interns from Crescent Institute of Science and Technology, Chennai with their PCB machine (Right)

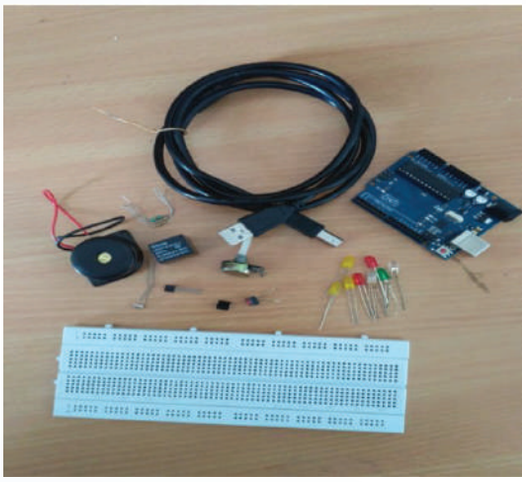
TLC Teacher Training Workshops: A hands-on workshop for teachers was held during Sept. 21-23, 2017. A practical problem faced by the TLC in workshops for the teachers has been the issue of participants availing leave. Therefore, it is planned to work with state-level directorates of Technical Education (DOTE) and state-level engineering universities (such as Anna University in TN), so that colleges and polytechnics can depute their faculty and the workshops can be organized in line with the academic calendar of these institutions. Photos from the Sept. 2017 session are shown below:

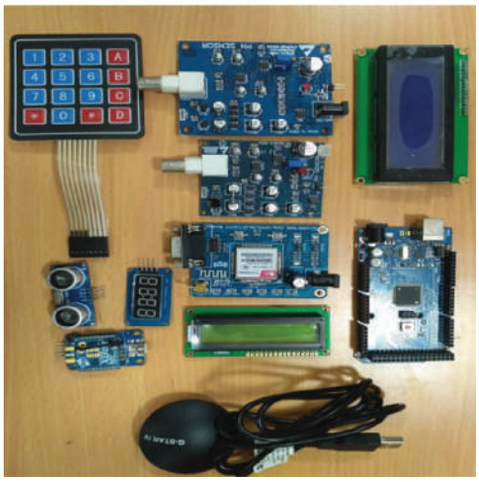
Hands-on Open Source Lab Development Workshop for Faculty

Collaboration with Other TLCs and DICs: Interaction with coordinators of other PMMMNMTT TLCs, FDCs, SOEs, and CESMEs at annual PMMMNMTT Review Workshops has led to fruitful multidisciplinary collaboration and future opportunities. For example, IIT Hyderabad TLC has requested help with fabricating our 3-link robot manipulator, while CESME, IISc has expressed interest in design and development of a DIY atomic force microscope (AFM) for school teachers.

Hands-on Workshop at TLC Pune University

Hands-on Workshop at TLC IIT BHU

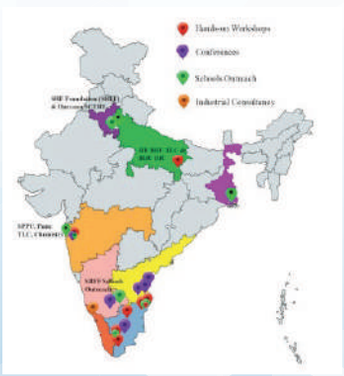




Hands-on Workshop kits, Day-1 (left) and Day-2 (right)

The TLC website attracts viewers from around the world, and TLC has active collaboration with universities/colleges/polytechnics, schools outreach, in addition to technology development for private industry.

World Map of TLC Website Visitors



National Map of TLC Collaborations

TLC and IIITDM are academic partners of SRF Foundation, Gurgaon and Capgemini Corporation, in helping set up innovative Tinkering Labs for STE(A)M (Science, Technology, Engineering, Arts and Math) Education in government high schools in Chennai, Bangalore, Trichy, Salem, Pune, Mumbai, Kolkata and Noida. The school teachers and students, as well as SRFF and corporate trainers, will be mentored by TLC in developing very low-cost and innovative hands-on instruction modules in design (CAD and CAM), manufacturing (3D printing and CNC), robotics, electronics, and coding. The Foundation has placed orders for our desktop CNC milling machines for use in the school labs.

Faculty and students from several colleges have, under the mentoring of TLC staff, refabricated TLC's equipment for their own use. TLC has also hosted student interns from Ritsumeikan University and Nagaoka University of Technology, Japan, and will soon host summer interns from Nagasaki University.

Participants to TLC ITP Workshop (May 7-31, 2018)

Smart Punching Bag Project by Japanese Intern

The innovative work by TLC Coordinator, staff, students and interns has led to publications in national and international conferences. TLC staff and interns are also providing technology development and consultancy work for a textile fabric industry in Kerala.

As Chennai is a major hub of manufacturing, IT and automobile industries, it is planned to diversify the expertise of TLC into training and skills development of local industry engineers and technicians. This can lead to fruitful collaboration in technology development with local industries, helping long-term vibrancy and sustainability of the TLC.

The TLC Coordinator receives frequent invitations to lecture at national conferences/seminars/workshops. Such occasions provide opportunities for networking with faculty, students, and scientists/engineers, and hence are useful to publicize the activities of, and potential for collaboration with, the IIITDM TLC. For instance, the Coordinator was the Chief Guest at ISRO Sriharikota on Sept. 5, 2017 Teachers Day celebrations, and discussed the potential of robots and innovations for playful learning

Teachers Day-2017 celebrations at ISRO, Sriharikota

A major motivation behind the establishment of the TLC has been to inspire and foster indigenous innovations and inventions in design and manufacturing technology education. Development and commercialization of the developed educational tools by licensing of the technologies, facilitating crowd sourcing and learning communities of design and manufacturing, providing Maker Spaces using the Centre infrastructure, and open sourcing through making the knowledge freely available for widespread adoption. Many affordable DIY (Do it Yourself) systems have been developed in TLC.

IIITDM TLC Projects in the News

Various innovative TLC projects have found extensive coverage in local and regional news media, and have led to requests for more information and collaboration from industry, engineering colleges and schools. Some of the news coverages are shown below.

MaDeIT Innovation Foundation

MaDeIT Innovation Foundation is a not-for-profit Section 8 Company under the Companies Act, 2013, incorporated on 10thAugust, 2016. It is a design-driven Technology Business Incubator promoted by the IIITDM Kancheepuram and supported by a grant from the Department of Science and Technology (NSTEDB Division), Govt. of India. MaDeIT encourages startups and SMEs in the manufacturing and healthcare sectors.

As on 1 Apr 2017, MaDeIT had two incubatee companies in its portfolio (CUEDIO Technologies and Olog Logistics). During the financial year 2017-18, MaDeIT added six more companies to its portfolio (Cavintek Software, Lucid Software, SSD Controls, ThoughtBit Technologies, Equad Engineering Services and Inoventric Sustainable Solutions). Most of these companies are in the thrust areas of manufacturing and healthcare, and the products being developed are aligned with IIITDM's competencies in mechanical, hardware and software components.

During the financial year 2017-18, MaDeIT organized a series of invited talks, industry events and sandbox programs to develop the pipeline of incubatees and attract good student interns for the incubatee clients. It also added another 3000 Sq Ft of physical infrastructure and developed its design studio by investing in rapid prototyping equipment for subtractive and additive manufacturing, cutting and welding tools and software for engineering and product design.

Organized an open house event called "Ehipassiko" where student groups were asked to showcase their concepts to external mentors. To support the design thinking initiatives of IIITDM, about 25 faculty members were also exposed to an introductory workshop on Design Thinking by the School of Design of Intellect Design Arena. In Sep 2017, Mr Kumaradevan, CIO of Saint Gobain India Ltd spoke about the imperative of Industry 4.0 for Indian manufacturing industry. In Jan 2018, Mr. Gautham Tambidorai, Distinguished Engineer, Google Inc. was invited to share his experience on working with Google and latest technology initiatives at Google. In Feb 2018, Dr. Bhuvaneshwar, Formerly with Sree Chitra Tirunal Institute delivered a talk on the challenges in medical device development and the history of the famous India made TTK Chitra heart valve. In late Feb 2018, Mr T Jayaraman, Director and

mentor of Equad Engineering Services, delivered a talk on LED manufacturing. In March 2018, Prof. Pushpavanam delivered a talk on medical devices.

Students of B.Tech 2015 Batch showcasing their Product Concepts in EHIPASSIKO Open House

Mr Arun Jain, Chairman of Intellect Design Arena addressing IIITDM Faculty

Shri Jay Panneerselvam, CTO of Olog Logistics receiving the Incubatee Graduation Certification from Prof. Majhi

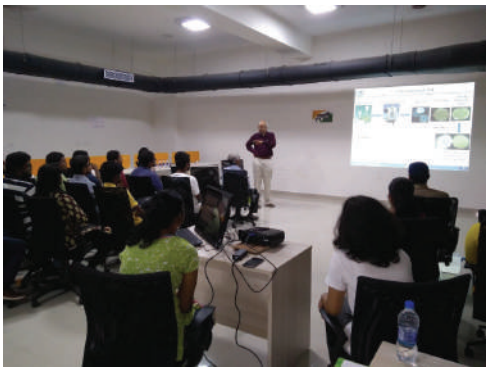
Mr Kumaradevan, CIO, Saint Gobain India being felicitated by Prof. Majhi

Mr Gautham Thambidorai, Distinguished Scientist, Google, speaking to IIITDM community

Dr Bhuvaneshwar addressing IIITDM community

MaDeIT also organized industry events such as "Interact to Innovate with SMEs" to invite representatives of the Ambattur Industrial Estate Manufacturer's Association to explore opportunities to collaborate with IIITDM and incubate with MaDeIT. In September 2017 MaDeIT organized a "Founders Meet" to facilitate interaction between incubatee companies and IIITDM faculty. MaDeIT also encouraged incubatee companies to involve IIITDM students as interns. In FY 2017-18, about 35 students worked as interns with the incubatee companies. Dr Usha Dixit, DST representative inaugurated the phase-2 facility (of about 3000 sq ft). In Dec 2017, MaDeIT also introduced a unique three-week Sandbox program to encourage pre-incubation activities among students and accelerate the product development of incubatee companies. About 20 students from IIITDM and other institutions participated in the program.

Mr T Jayaraman receiving a momento from Dr Hari Nayarayan



Prof. Pushpavanam delivering a talk to IIITDM students

Inauguration of Interact to Innovate event

Meeting between MaDeIT Incubatee Founders and IIITDM Faculty Members

Dr Usha Dixit, DST, inaugurating phase-2 of MaDeIT

An interactive session during Winter Sandbox

Design Innovation Center (DIC)

This Design Innovation Centre (DIC) has been established in 2017 to inculcate, facilitate and spread the culture of innovation among the students, faculty, aspirants and relevant stake holders through innovative engineering and industrial design oriented courses, special training workshops, internships on product design, seminars by experts, organizing design competitions, industrial visits and outreach activities.

DIC at IIITDM Kancheepuram has also been a part of MHRD initiative and is a DIC spoke with IIT Hyderabad as the hub. It is expected to receive an amount of Rs. 100 lakhs from the hub over a period of three years. DIC Kancheepuram has received so far an amount of Rs. 24 lakhs from IIT Hyderabad. The emphasis of the DIC at IIITDM Kancheepuram is on three major aspects (i) Discovery / Design (ii) Development, and (iii) Dissemination.

❖ Objective Of DIC

The objective of DIC can be classified into three broad categories as:

- Making of engineering education more users friendly, interactive and practical solution oriented for development of scientific mind set and engineering culture
- Creation of advanced and precision manufacturing facility and relevant ecosystem for product developments and testing, for helping local industry to meet its requirements
- Disseminating the culture of innovation at grass root level by educating the schools, ITI, polytechnics and local engineering students/faculty through organization and offering Training Programs / Workshops / Internships / Design Competitions with focus on self-reliance

❖ **Goal Of DIC**

To emerge as a hub of excellence in Design, Development, and Dissemination of engineering innovation, by revolutionizing the young minds to groom / culture themselves as leaders and self-reliant tech-savvy persons for overall inclusive and sustainable growth of the society and emergence of India as a true global center of learning.

❖ **Faculty @ DIC IIITDM Kancheepuram**

- Dr. Naveen Kumar, PI, Dean (Student Affairs), Ph.D. - IIT Delhi
- Dr. S Chitti Babu, Co-PI, Ph.D. - NIT Rourkela
- Dr. Munesh Singh, Co-PI, Ph.D. - NIT Rourkela
- Dr. Asutosh Kar, Co-PI, Ph.D. - BIT Mesra
- Dr. Kumar Prasannajit Pradhan, Co-PI, Ph.D. - NIT Rourkela
- Dr. Jagadeesh Kakarla, Co-PI, Ph.D. - NIT Rourkela

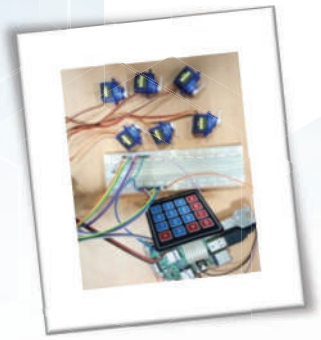
❖ **Facility Available:** CNC Router, Laser Engraving Machine, Table Saw Machine, Cut Create Crave, Computers and Softwares, Electronic Components, Raspberry pie, Arduino boards etc.

❖ **Activities at a Glance**

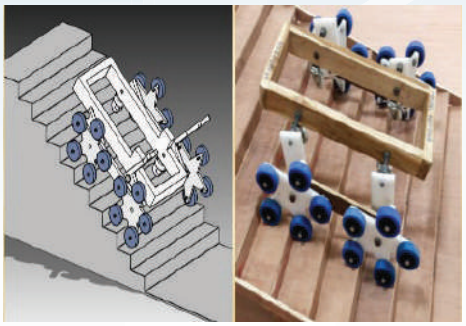
- Faculty development programs are being conducted annually for the faculty of engineering Institutes in around Chennai
- Students training program on Design Thinking are being conducted twice a year for the engineering students in around Chennai
- Design experts from Ashok Leyland, Royal enfield etc. visits the Institute for the same
- Two Faculty training programs have been conducted and around 48 faculty benefited from programs
- More than 150 students have attended the workshops conducted by DIC IIITDM Kancheepuram on Design Thinking in the year of 2017
- IIITDM Kancheepuram and EDII Chennai works together on such programs

❖ **Product Development @ DIC:**

Smart Locking System



Electronic Braille Reader



Self stair climbing platform

Low temperature solar Stirling engine for water pumping

Quad copter for agricultural application

Smart Water Management System

❖ **Events @ DIC:**

(i) Sept 21-23, 2017, 3-day hands-on workshop for faculty and students of universities, colleges and polytechnics by TLC on DIY Laboratory Development for Innovative Design and Manufacturing Education

(ii) Nov 9-10, 2017, 2-day workshop for science faculty, research scholars and PG students at Savitribai Phule Pune (SPPU) University Teaching Learning Centre on Open Source Hardware and Software for BYO Equipment for Education and Research

(iii) Dec. 8-10, 2017, 3-day exhibition on open source chemistry models at National Association of Science India Annual Conference at SPPU, Pune

International Collaborations

IIITDM Kancheepuram is actively collaborating with leading universities abroad in order to enhance its research and educational outcomes, as well as improve its visibility abroad and ranking nationally and internationally. The institute has regular student exchange programs with Nagaoka University of Technology (NUT), Japan. One of the visiting final year undergraduate students from NUT will be involved in ongoing project of TLC, in the area of renewable energy studies.

Recently, a visiting master's student from Ritsumeikan University, Japan, has been involved in the design, development and control of the low-cost, three-link articulated robot manipulator discussed earlier. A photograph of the Japanese graduate student working with the TLC staff on the low-cost 3-axis robot manipulator is shown below.

Figure 33. Collaboration by TLC engineers with visiting Japanese student interns from Ritsumeikan University (left) and Nagaoka University of Technology (right)

MOU with the University of Genova, Italy: IIITDM Kancheepuram received a research project, titled, Control and operation of agents in a multi-agent fixturing system with swarm control, for 17000 Euro. This project is basically to support a PhD scholar for two years (2017, 2018) under the joint supervision of Dr M Sreekumar (IIITDM) and Prof Matteo Zoppi (University of Genova).

VII. Student Activities and Achievements

Achievements in Academics

1. Akarsh Kale , Vivek Yadav , and Adithyan TR, secured 4th position in National Level Open Challenge Competition: "Solution to Problem" – DEFEXPO 18
2. Vamshi Gangadhar Chiluka secured AIR 62 in GATE 2018 CS paper
3. Mr. Md Sehzad Alli, a PG student wins best paper award in NHTFF18 held in NIT Warangal
4. Student teams from IIITDM Kancheepuram win competitions held at Caterpillar and TAFE
5. Dual Degree CS students Vignesh Sairaj, Vijayaraghavan and Sreeraj qualify for ACM ICPC Regional contest
6. Aneesh D.H (UG First year) secured 4th rank in Code Gladiators coding contest conducted by TechGig
7. Ms Manogna Jambhapuram, a PG student wins best research paper award in CSS-2017 held at IISc
8. Teja Balu, a third year Dual Degree student, wins Second Prize in Design for Automotive Challenge globally.
9. Shri Teja Balu secured 4th Place in International Autodesk Design for Space Challenge.
10. Gangisetty venkatesh MDS15m003 received PhD admission at IIT Madras in mechanical Engg dept.
11. Sowbarnika, a third year CS student was invited to deliver a performance talk at TEDx event held at NIT Trichy.

Stellar Student Achievements

1. Mr. Rusan Barik received the travel Grant From DST
2. Mr. Chandu DS received the travel grant form CSIR
3. Mr. Rusan Barik received the partial support From European Microwave association (EuMA) worth 500 Euros to present a paper at EuMC- 2017, Germany

4. Mr. Chandu DS received the travel grant from the partial support From European Microwave association (EuMA) worth 500 Euros to present a paper at EuMC- 2017, Germany
5. Mr. Chandu received the partial support from IEEE Madras section to present a paper at conference
6. Mr. Chandu received the travel support from IISc to participate in Indo-French Workshop on Microwave Nanotechnologies.
7. Mr. Rusan Barik received the student participation support form MTT-S for attending the IEEE International Microwave and RF Conference, Ahamedabad, India.
8. A Smart punching bag was designed and tested by Noriko Ishibashi, a student intern visiting from Japan
9. A collaborative AGV-UAV system for automated identification and eradication of invasive weed Prosopis juliflora, was developed by student interns from Sri Krishna College of Engineering and Technology
10. A build your own computer control system for pneumatic cylinders was developed by student interns from Sri Krishna College of Engineering and Technology.
11. Mr Y Ramkumar secured M Tech admission in the Department of Electrical Engineering, IIT Kharagpur.
12. Ms. Pooja Mahesh secured admission for Ph D in the department of Electrical Engineering, IIT Hyderabad.

Placements-2017 Graduating Batch

The placement year 2017-2018 began with imparting of soft skills training programme to the pre-final year students during February 2017. As soon as the academic year commenced in the month of August 2017, registrations for placements have been started. The details of branch wise students registered for placement are as follows:

Sl No	Branch	Total Registered
1	COE	40
2	EDM	26
3	MDM	26
	Total UG	92
4	CDS	9
5	EDS	9
6	MDS	9
	Total PG	27
	Ph.D	1
	Grand total UG , PG & Ph.D	120

After the completion of registrations, invitations were sent to more than 200 companies for campus drives. After a through follow up with the companies 19 **core** companies were accepted our invitation and visited our campus and gave a total of 80 offers altogether (as on 20 February 2017). A few companies are also expected companies to visit in the coming months. The statistics as on 20 February 2017 on campus placements is presented below.

Sl. No.	Branch	Total registered	Total placed	%	Double Offers
1	COE	40/41	26	65	6
2	EDM	26/38	10	36	2
3	MDM	26/35	13	50	
	Total UG	92/114	49	53	
4	CDS	9/12	2	22	
5	EDS	9/13	6	66	
6	MDS	9/10	8	88	1
	Total PG	27/35	16	59	
	Ph.D	1	1	100	
	Grand total, UG, PG & Ph.D	120/149	66	55	

As per the curriculum of the courses started from 2015 onwards, registrations for Internship have been started in the month of September 2017 and 227 students were registered for internship programme. All the companies to whom invitations were sent for campus drive were invited for conducting recruitment dive for internship positions. The soft skills training programme for the pre-final year students was conducted in February 2018.

Placement Statistics

Sl No	Name of the Company	Date of Visit	Under Graduation			Post Graduation				*Total	Package, Lakhs/ annum
		Programs	COE	EDM	MDM	CDS	EDS	MDS	Ph.D		
No. of students registered for placement			39	26	27	9	9	9	1	120	
1.	Inautix	04.01.2018	0	0	0	0	0	0	0	0	13
2.	Alation	08.02.2018	0	0	0	0	0	0	0	0	13
3.	Startsmarts Lab	PPOs	1	0	0	0	0	0	0	1	10
4.	Trimble	23.10.2017	2	0	0	0	0	0	0	2	9
5.	Buddihealth	02.12.2017	2	1	0	0	0	0	0	3	9
6.	Honeywell	28.02.2018	0	0	0	**0**	**0**	**0**	**0**	**0**	8
7.	Tejas Networks	13.03.2018	0	0	0	**0**	**0**	**0**	**0**	**0**	8
8.	Saint Gobain	20.10.2017	0	0	0	0	0	0	0	0	7
9.	Coviam	24.02.2018	1	0	0	0	0	0	0	1	6.75
10.	Zoho	16.11.17/ 20.11.17	3	0	0	0	0	0	0	3	6.5
11.	IVTL	17.11.2017	1	0	0	0	0	0	0	1	6.5
12.	Vassar Labs	01.11.2013	1	0	0	0	0	0	0	1	6
13.	Interface	PPOs	2	0	0	0	0	0	0	2	6
14.	Entrayn	09.01.2018	2	1	1	0	0	0	0	4	6
15.	Evive Software	05.02.2018	2	0	0	0	0	0	0	2	5.52

Title		Name	Affiliation
Chairman		Prof. Banshidhar Majhi	Director & Registrar i/c IIITDM Kancheepuram
Members		Prof P Chandramouli	Professor, Dept of Mech Engg, IIT Madras
		Prof V Jagadeesh Kumar	Professor, Dept of Electrical Engg, IIT Madras
		Prof Krishnamoorthy Sivalingam	Professor, Dept of Computer Engg, IIT Madras
		Dr M Sathya Prasad	M/s Ashok Leyland, Chennai

Companies visited during 2017-2018 for campus drive:

Activities of Social Service Group (SSG)

The SSG promotes the concept of contributing to the society and the country at large. Social Service Group of IIITDM Kancheepuram, in addition to conventional forms of societal contributions, focuses primarily on training volunteers in novel areas. The SSG emphasizes on inculcating social responsibility towards the environment by conducting garbage cleaning, rain water drain clearing and tree plantation activities within the campus. It also focuses in cultivating a quality of consideration to others in volunteers by conducting training programmes in humanities and sciences for neighboring school students and orphanages, and, to prepare posters on importance of girl child education, hygiene, sanitation, stopping of public evacuation, consequences of drug, alcohol and smoking addiction, etc. Periodic campus cleaning activities were organized with a basic theme of maintaining our surroundings neat and tidy. Tree plantation activity was organized particularly during rainy season to improve the greenery within the campus. Many saplings were planted at selected spots across the campus. Volunteers have also taken the responsibility of watering and maintaining them later on. For the present year 2017-18 Dr. B. Raja and Dr. Venkata Timmaraju Mallina served as the Co-ordinators and there were volunteers from IIITDM Kancheepuram from IIITDM Kurnool.

Beach Cleaning: The SSG conducted a cleaning activity in the nearby Kovalam beach on 21st January 2017. The activity was between6.30am and 10.00 am. The volunteers and coordinators were taken in a bus and reached. The volunteers were divided into a group of 5 and a coordinator was assigned for each group. The volunteers were provided with required utilities like gloves and covers to collect the plastic. Each group was assigned a particular zone to clean. All the collected waste was disposed into the municipality trucks.

Digitization awareness rally: The students conducted a rally on19thFebruary 2017. This topic for the rally was chosen keeping in mind the current scenario in the country. The volunteers were intimidated through mail and asked to prepare slogans or posters. The information regarding demonetization were typed out in the local language and printouts were distributed to the shops located in Kandigai and other adjoining villages.

Turtle walk: In order to save Oliver Ridley's nest on behalf of SSG students, on March 9, 2017 a turtle walk was conducted along with the Covelong Point Surfing School. The activity was started at 8:45 pm till 12.00 pm in the East coast beaches. The students searched for nest and eggs by walking over 3 km by walk between Kovalam Beach and Crocodile Bank. The students were accompanied by faculty members also.

Blood Donation: On 22nd March 2017 as part of the SSG activities a Blood Donation camp was organized jointly with Cancer Institute at our campus. The activity started at 10:00a.m. and was completed by 2:30 p.m. All the necessary precautions to donate blood were mentioned to everyone 3 days prior to the camp. Coordinators and volunteers were assigned for both morning and afternoon sessions.

All the necessary arrangements were done day before the camp. Each of the co-ordinators took care of writing certificates, helping the donors to fill the forms, to give refreshments and to take care of them while donating blood. The donors were permitted for the process after a medical checkup by the doctors. Refreshments were given for each donor soon after donating the blood and were monitored by the team for 10 to 15 mins. A certificate was issued to the donors immediately. A total of 156 donors have donated their blood.

Garbage cleaning within the campus on 14th October 2017

Garbage cleaning within the campus on 21st October 2017

Garbage cleaning within the campus on 22nd October 2017

Tree Plantation within the campus on 21st and 22nd October 2017

Activities of IEEE Student Chapter

IIITDM Kancheepuram, inaugurated its IEEE Student Branch on 27th October 2016. IEEE SB organized a guest lecture on "Emerging Technologies in IoT" on 28th October, 2017 by Dr. Vijayanand, Vice President (Engineering), Aricent Global Design and Engineering Company. An one-day workshop on "Python With Raspberry Pi" on 4 th November, 2017. 38 students from various institutes benefitted from the workshop organized by N Laxmi; SB Chair, and Ms K Dheepika. A 90-minute technical session on report writing and presentation using LaTeX on 9th November, 2017 by research scholar Mr. P. Renjith. A distinguished lecture program on "Advancements in Signal Processing and Wireless Communication" on 20th January, 2018. The technical talk was given by Dr. Vijayanand, Vice President (Engineering), Aricent Global Design and Engineering Company. IEEE SB also organized an one-day workshop on printed antennas. The Women's Day was celebrated on 8th March, 2018 by arranging a panel discussion on Women Entrepreneurship. A panel discussion was arranged with Dr. Kalaivani Ganesan (Joint Director, Innovation and Incubation , Entrepreneurship Development Cell and Innovation Institute, Chennai) and Ms. Vaishnavi Vignesh Raja (Director E-Quad Engineering Services).

Guest Lecture on Emerging Technologies in IoT

One Day Workshop on Python with Raspberry

Technical Session on Report Writing and Presentation using LaTeX

Talk by Dr Vijayanand

Workshop on Printed Antennas

Panel discussion on Women Entrepreneurship

First Alumini Meet 2017

The first Alumni Meet of IIITDM was held on September 17 2017. Apart from the immediate passed out students, students from 2015 and 2016 batch also participated enthusiastically. Alumni traveled from various places like Bangalore, Hyderabad Calcutta to participate in the alumni meet. The Director, Prof. Banshidhar Majhi addressed the Alumni and stressed the importance of Alumni participation for the institute growth , placements, institute - industry relation etc. Dr.K.Selvajyothi, Dr. Sivaselvan, Dr.Senthilkumaran and Dr.Raja also addressed the gathering among others and spoke about the need of everlasting ties of Alumni with the institute. A profound need of such meets arranged by the institute was also felt by the Alumni, which also reflected in their Alumni speech.

Office for Alumni Affairs and Relation (OAAR) was also set in IIITDM Kancheepuram with the primary objective to facilitate interaction between the alumni and institute.

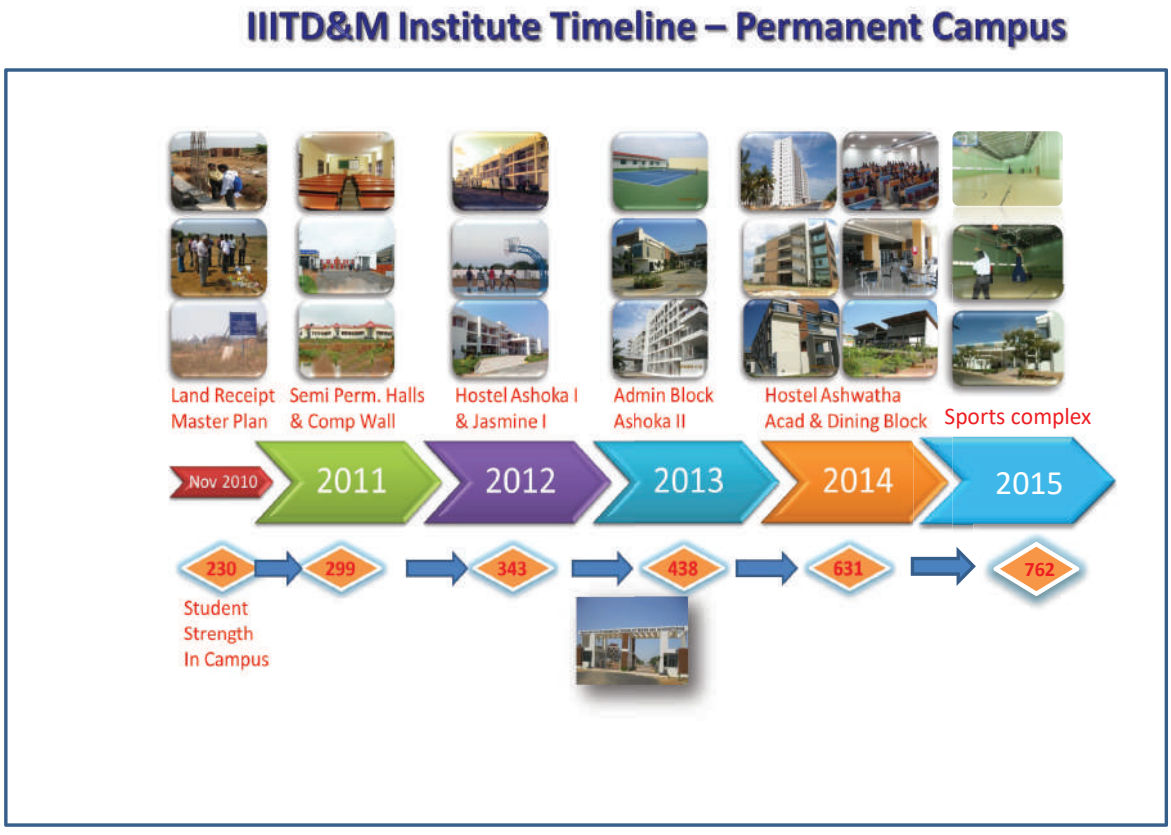
VIII. Infrastructure

Infrastructure Development, an Overview

The land allotted in Nov 2010 by the Govt of Tamilnadu, 51.75 acres, has paved way for the infrastructure development at the permanent campus. The construction activities in the permanent campus have seen steady progress commensurate to the budget granted from the time of the institute's inception. A comprehensive masterplan has been developed by experts after a series of brainstorming sessions with the stake holders of the Institute, faculty and students, in 2011. Considering the precious space available for the campus development, a comprehensive and energy efficient masterplan has been developed that can accommodate about 1200 students in Phase I and 5000 students, ultimately. A well thought growth plan was evolved to develop the state of art infrastructure on campus without disturbing the academic and student life. About 6000 sqm was constructed within five months from the land

allotment and the institute started functioning from Aug 2011 in its own academic and hostel buildings. The student intake was gradually increased with the completion of necessary infrastructure in successive years and, in the academic year 2015-16, about 300 students were admitted. At present 75% of the development under Phase-I has been completed.

Year	Building Name	Area in Sq Meters
2011-12	PEMS	6300 : Total 6300
2012-13	Boys Hostel 1 Girls Hostel Admin Bldg	2600 2876 4775 : Total = 10251
2014-15 2015-16 2016-17	Lecture Hall Boys Hostel 1 Dining Hall Cafeteria Sports Complex Boys Hostel 2	10408 18011 3784 385 2828 12802 15282 :Total 63,500



Major Infrastructure Facilities

i) Admin Block and Senate Hall

Overall Spec	:	G+3 Floors with centralized A/C.
Plinth Area	:	4775 sq. m
Ground floor	:	Offices for Dean-Students, Placements, Security, Engineering unit, Store and Purchase, Admin-1, Conference halls (3nos.), Pantry rooms, AHU rooms, Patch room, Main Electrical room and Rest rooms.
First floor	:	Offices for Academic PG, Academic UG, Dean-Academics, Dean-Admin, Registrar, Audit, Admin-2, Conference hall (1no.), Staff lunch room, Pantry rooms, AHU rooms, Patch room, Electrical room, UPS/Battery room and Rest rooms.
Second floor	:	Director's cabin, Dy. Director cabin, Industrial research, Conference hall (3nos.), Staff lunch room, Pantry rooms, AHU rooms, Patch room, Electrical room, UPS/Battery room and Rest rooms.
Third floor	:	Offices for Dean planning, Dean examination, Dean office-1, Dean office-2, AHU room, store, pantry, Rest rooms.
Senate block	:	132 seating capacity senate hall, store, Rest rooms, AHU room, security and surveillance room at first floor.
No. of lifts	:	2 nos.

ADMIN BLOCK

ii) Academic Block

Overall Spec	:	G+4 Floors
Plinth area	:	10408 sq. m
Ground floor	:	Lecture Halls of 200 seating capacity-1no. (A/C), 100 seating capacity-3nos., 60 seating capacity-1no., Industrial relationship Centre, Main electrical room, AHU room, patch room and Rest rooms.
First floor	:	60 seating capacity -6nos., services same as in ground floor.
Second floor	:	200 seating capacity-1no., 60 seating capacity -6nos., services same as in ground floor.
Third floor	:	60 seating capacity -6nos., services same as in ground floor.
Fourth floor	:	60 seating capacity -1no., Research lab-2 nos., Labs-4 nos. and services same as in ground floor.
No. of lifts	:	6 nos.

LECTURE HALL

ii) Academic Block

Overall Spec	:	G+4 Floors
Plinth area	:	10408 sq. m
Ground floor	:	Lecture Halls of 200 seating capacity-1no. (A/C), 100 seating capacity-3nos., 60 seating capacity-1no., Industrial relationship Centre, Main electrical room, AHU room, patch room and Rest rooms.
First floor	:	60 seating capacity -6nos., services same as in ground floor.
Second floor	:	200 seating capacity-1no., 60 seating capacity -6nos., services same as in ground floor.
Third floor	:	60 seating capacity -6nos., services same as in ground floor.
Fourth floor	:	60 seating capacity -1no., Research lab-2 nos., Labs-4 nos. and services same as in ground floor.
No. of lifts	:	6 nos.

LECTURE HALL

iii) Laboratory Block

Overall Spec	:	G+6 Floors (at present G+2 completed and occupied)
Plinth Area	:	36166 sq. m
Basement floor	:	Substation, Pump room, store room, Fire sump.
Ground floor	:	No. of labs-7 nos., Library and other services
First floor	:	No. of labs-8 nos., Seminar halls-2nos., library and other services
Second floor	:	No. of labs-3 nos., No. of faculty cabins, HOD cabin-., Discussion rooms-2nos., Research scholar workstation., library and other services

iv) Boys Hostel (Block 1;)

Overall Spec	:	G+14 Floors
Plinth area	:	18297 sq. m
Ground floor	:	No. of single room-13nos., No. of double room-7nos. , No. of Guest room-2nos., Warden room-1no., Warden office, Office room, Indoor games, Library, Gymnasium, TV room and other services.
First floor & typical	:	No. of single room-22nos., No. of double room-13nos. and other services.
Total No. of rooms	:	Single room 346, Double room:189, Common room:15 (Total bed :724)
No. of lifts	:	3 nos.

BOYS HOSTEL BLOCK-1

v) Boys Hostel (Block 2;)

Overall Spec	:	G+14 Floors
Plinth Area	:	12,522 sq.m
Ground floor	:	No. of single room-10nos., No. of Guest room-2nos., Warden room-1no., Warden office, Office room, Indoor games, Library, Gymnasium, TV room and other services.
First floor	:	No. of single room-25nos., and other services.
Second floor & typical	:	No. of single room-28nos., and other services.
Total number of rooms	:	Single room 386, Common room:15 (Total bed :386)
No. of lifts	:	2nos.

BOYS HOSTEL BLOCK-2

vi) Dining Block

Overall Spec	:	G+3 Floors
PLINTH AREA	:	3784 sq. m
Ground floor	:	Dining hall with 206 seating capacity, Kitchen and other services.
First floor & Typical	:	Dining hall with 206 seating capacity and 100 seating capacity, Terrace Dining area and other services.
No. of lifts	:	1

DINING BLOCK

vii) Cafeteria

Overall Spec	:	Single Storied
Plinth Area	:	385 sqm
Ground floor	:	Dining hall with 206 seating capacity, Kitchen and other services.

CAFETERIA

viii) Indoor Sports Complex

Overall Spec	:	G+1 Floor
Plinth Area	:	2828 sq.m
Amenities	:	Multipurpose hall, Basketball, badminton, weight lifting, squash court, table tennis, Gym, office etc.

SPORTS COMPLEX

ix) Other Infrastructure Facilities

PEMS HOSTEL	: 2800 SQ.M
BANYAN Hostel	: 100 BED
LOTUS Hostel	: 50 BED
PEMS ACADEMIC COMPLEX	: 3600 Sq. m

x) Infrastructure Facilities under Development

FACULTY QUARTERS: SILT+10 FLOOR; 14197 SQ.M
GIRLS HOSTEL (G+14)=13060 SQ.M
PART OF LABORATORY BUILDING from third floor onwards

IX. Events Organized

Life is what you celebrate. All of it. Even its end.

- Joanne Harris

International Yoga Day Celebrations

United Nations General Assembly has declared June 21st as the International Day of Yoga. IIITDM celebrated the international yoga day in the campus, and several students, faculty and staff participated enthusiastically. A one hour Interactive Yoga Demonstration was conducted on June 21, 2017 for the benefit of the students, staff and faculty members of the institute. The session was coordinated by the institute physical training instructor and demonstrations of various asanas ranging from padmasana, bhujangasana, sarvangasana, etc. were given by practitioners from Saradha Yoga Academy. For each asana that was demonstrated an interactive description was given and the audience also joined in performing the asana under the guidance of the instructor. The session was well attended with over 70 members and was well received. The demonstration session was followed up by a session wherein the protocol video circulated by the Ministry was played for the benefit of the audience. A Handbook of Basic Asanas was prepared by the Institute for circulation amongst the institute fraternity.

Sports and Yoga on Orientation Day (July 2017)

As part of the institute orientation programme for fresher admitted in July 2017, sessions were conducted to encourage fitness and sporting culture amongst students. A Yoga session was organized for around 300 students in the indoor sports complex Arjuna. Services of a Yoga expert from the nearby sports university was hired for the conduct of the session. The session was well received and the subsequent NSO classes conducted for first year students as part of the curriculum saw increased

registrations for Yoga as an elective. The sports section also conducted karate sessions for boys and self-defense sessions girls with the objective for safety training for first year students. For the first time in the orientation programme, mediation sessions were introduced. Experts from the Heart fullness foundation, Chennai conducted 3 session spread across three days that emphasized the importance of mediation, moral and ethical practices, etc.




Japan Higher Education Fair

Japan Higher Education and Research Fair were organized on the August 3, 2017 at the Institute campus in collaboration with The University of Tokyo and Japanese Ministry of Education (MEXT), for the aid of students.

The fair, which was attended by students of 15 Colleges, comprised concurrent organization of Seminar and Individual Consultations by the representatives of several leading Japanese higher education Institutions and the Japan Science and Technology Agency. An enlightening Key Note Speech was delivered by Prof.

Masakazu Okazaki from Department of Mechanical Engineering, Nagaoka University of Technology about "Re-Inventing Japan and India through Collaborative Education". Meanwhile representatives from Hokkaido University, Nagaoka University of Technology (NUT), Ritsumeikan University, The University of Tokyo, Waseda University and Yokohama National University provided one-to-one consultation and advised on numerous aspects of Post Graduate and Doctoral education in Japanese Universities.

Inter Departmental Student Sports Tournament

The sports unit regularly conducts inter department sports events in indoor and outdoor events for students. The period under report saw the conduct of events in Cricket, Football, Volley Ball, Basket Ball, Tennis, Futsal (5 a side football) for Boys and Basket Ball, Tennis, Throwball for girl students of the institute. Indoor games in Carroms, Chess, Badminton, Table Tennis were conducted for both boys and girls. The events were a huge success and these tournaments serve as the feeder for the various institute teams that participate at various state and national level sports meets.

Students v/s Employee Friendly Match on Jan 26, 2018- Republic Day Celebrations

It has been an annual affair at our institute to organize employee v/s students friendly matches on the eve of national festivals such as Independence and Republic Day. This year republic day saw the conduct of a T20 match between All Students vs Employees (Faculty & Staff) and the event served as a great stress buster for all.

Inter College Student Sports Meet

Institute teams participated in the inter college events organized by VIT Chennai, Agni College of Technology and IIT Madras Sports Fest. The cricket contingent secured 4th position in the events organized by VIT Chennai and Agni College. At the IIT Madras sports fest, the institute TT Girls team secured silver medal, while Boys Chess contingent secured fourth position. The TT Girls team also did proud at the VIT Chennai event securing silver medals. These sporting events see stiff competition with participation from top notch engineering and science colleges and the institute team's exposure to such competition prepared them well for the ensuing Inter IIIT Sports Meet.

Institute Table Tennis Team Participated in the VIT Chennai Inter Collegiate Sports Fest and Secured **Silver**

- Best of 3 i.e. Singles, doubles, reverse singles. Each match was of best of 5 sets.
- TEAM: Sanchi Bhaley (COE15B010) Sriram Vaishnavi (COE16B036) Saranya (MPD15I010)
- Coach :Alaguraj P, PTI, IIITDM Kancheepuram

Inter IIIT Sports Meet-Participation

The institute regularly participates in the inter IIIT Sports meet conducted on a rotational basis by IIITs. It is pertinent to mention here that the institute hosted the pioneering edition of the meeting in the preceding year and secured first position in boys, girls and overall categories respectively. For the period under report, IIITM Gwalior hosted the meet (2nd Edition) during March 2018. Our contingent participated in both indoor and outdoor events (Men and Women categories) and secured the **overall second position** in the medals tally, with details of team finishes in winners and runners position as below.

Overall Championship 2nd Position (958 points)

Medal Tally

Gold	Silver	Bronze
11	02	8

Games Results:

1. Tennis – Men - Winner
2. Cricket – Men - Winner (Joint Winner with Gwalior)
3. Volleyball – Men - Runners-Up
4. Badminton – Women - Winner
5. Table-Tennis – Women - Winner
6. Squash – Women - Winner
7. Triathlon – Men - Bronze




Athletics Results:

1. 100 M – Men - Gold
2. 200 M – Men - Gold
3. 400 M – Men - Bronze
4. 800 M – Men - Bronze
5. Marathon – Men - Bronze
6. 4 x 100 M Relay – Men - Gold
7. 4 x 400 M Relay – Men - Gold
8. 100 M – Women - Gold
9. 100 M – Women - Bronze
10. 200 M – Women - Silver

11. 400 M – Women - Bronze
12. 800 M – Women - Bronze
13. 4 X 100 M Relay – Women- Gold

Swimming Results

1. 4 X 25 M Relay – Men - Bronze

Inter Hostel Sports Tournaments (April 2017)

Hostel students are grouped into 6 houses namely Nilgiris, Udayagiri, Shivalik, Sahaydri, Vindhyas, Aravalli composed of both the boys and girls hostel inmates. Each house is managed by a House Captain (Boys) and Vice Captain (girls) and this time it was the second edition of an exclusive hostel tournament on house basis. The events promoted a fair sense of rivalry and camaraderie, snapshots of which is give below.

Samgatha, 9-11, March 2018

Samgatha, the annual techno-cultural celebration of IIITDM, witnessed three phenomenal days extending from March 9-11, 2018. This year, the fest revolved around the theme "Magic in Everything". More than 40 events, were organized by the student body of Samgatha. The fest was inaugurated by The Director, Prof. BanshidharMajhi. The first day of Samgatha included compelling activities that required participants to apply their skills and test their knowledge, such as Junkyard Wars, Code Auction, Lawyer Up, Go Logic Yourself, Triviosity and Fun Events like Blur. The mind-blowing energy continued to day 2 with events like war of Watts Chakravyuha, Science Fair for school students, Relay Design and Tech Talks, covering the technical aspects of the fest. The final day of Samgatha saw some really amazing events like Clean the Space, Mask Making, Pitch Please Tech4Help, Eloquent and the Anonymous Writer Workshop.

NSO Evaluation (2017-18 Batch of Students)

The institute curriculum mandates the regular engagement of students in either sports or social service related activities during the first year study period. The course is a mandatory one and all students should opt for either NSO (Sports) or SSG (Social Service Group) during the orientation programme. As part of the NSO activities, official training is given in various indoor and sports events for the first year student by the institute physical training instructor with assistance from senior level team captains. This inculcates a good sense of fitness awareness and team bonding amongst the first year students. The training also involves a mandatory Yoga skills training for all (around 300 students) and an option sport training chosen by the student such as cricket, table tennis, etc. Based on the skills imparted during the one year period, a final evaluation test with a fitness and skill component is conducted as part of the curricular requirements.

Workshops/STTP Organized

One Week STTP on Integration of IoT in Robotics and Automation (10-15 July 2017)

An one week short term training programme on *Integration of IoT in Robotics and Automation*, was organized by the mechanical engineering faculty, Dr M Sreekumar, inside our campus during 10-15 July 2017 with the support of Industrial partners, Siemens Ltd., and Vi Microsystems Pvt. Ltd. There were 20 registered participants who have attended the programme and they are faculties working with Manipal Institute of Technology, NIT Raipur, NIT Warangal, VNIT Nagpur, MCT Rajiv Gandhi Institute of Technology, Mumbai and a few others were faculties and students from various Institutes in Tamilnadu including IIITDM Kancheepuram.


Design Thinking Workshop (11-12/12/2017)

Two 2days workshops entitled "Design Thinking" were conducted on Dec. 07-08, 2017 and Dec. 11-12, 2017 by Design Innovation Centre at IIITDM Kancheepuram in association with Entrepreneurship Development and Innovation Institute for training the engineering students. The workshop was inaugurated by Prof. S. K. Sarangi (former Director NITR) in the presence of Prof. B.Majhi, Director IIITDM Kancheepuram. After inauguration, the workshops were introduced by Mr.V.D. Anandan (Deputy Director, EDI). A igniting presentation about "Design projects to design products and Entrepreneurship" was given by DR.S R Pandian (Dean, Planning IIITDM) and followed by this a great presentation about "DIC at IIITDM" was given by Dr. Naveenkumar . A topic about "Design product from conceptualization to final manufacturing" was presented by Mr. Shah And the second day the pleasant morning started with the presentation about "Seeing, Listening and Connecting" by Dr. Sudhir Varadarajan and followed by this a topic about 'DCS for student /Faculty/SME" was taken by Dr.V.D. Anandan, in between of the theoretical sessions interactive sessions also conducted. After a classroom learning we enhanced the workshop by giving the practical knowledge by taking the students to the DIC/TLC labs giving a demonstration about developed products in the labs, by this the student had learned to produce their designed products effectively. Students who are doing implementing their innovative ideas through internship projects program at DIC IIITDM Kancheepuram also interacted with the participants. The participants was stayed in hostel and they got every facility to make them comfort .They enjoyed the environment of IIITDM .There were a total of about 60 participants benefitted from the program. Total expenditure was about Rs. 124000

One Day Workshop

One day training program was conducted for the students/faculty/scientists etc. on design of share auto/future share transport vehicles. The design experts from different leading automobile manufacturers viz. Ashok Leyland, General Motors, Royal Enfield etc. trained and guided the participants in design of future share transport vehicles. More than 120 participants took part in the event. The event was well covered by the famous Tamil Magazine Viktan motors. Society of Indian Automobile Manufacturers workshop on Future Transport Solutions on Jan 21, 2018

Hands-on Workshop by TLC on Sept. 21-23, 2017 organized by Dr S R Pandian

- 16/2/2018 – One day workshop on AR & VR by Tremble Reps – Himanshu, Shubam & Roopesh

- 18th Jan 2018 Talk by Alumnus and Doctoral Candidate at Boston University P Ramesh Krishnan on Sublinear algorithms and Higher Studies Prospects abroad.
- Interaction with Zoho Rep DrAnand – 13/2/2018 – Internship Opportunities – 3 Dual students offered 5 month internships @ ZohoTenkasi Unit

X. Calendar Events-Institute Celebrations

National Handloom Day, 7th August 2017

The Ministry of I & B and the Ministry of Textile, Govt of India has selected Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram to conduct a Special Outreach Programme (SOP) to popularize handlooms amongst the youth. This was a part of 70 such SOPs organized by the Ministry of I& B and the Ministry of Textile, Govt of India throughout the country as a part of the National Handloom Day program. The significance of the day is to highlight the contribution of handloom to the socioeconomic development of the country and promote handlooms to increase income of weavers and also enhance their pride. The date August 7 was chosen to commemorate the Swadeshi Movement which was launched on this date in 1905 in the Calcutta Town hall to protest against partition of Bengal by the British Government. The movement had aimed at reviving domestic products and production processes. Events such as share your idea and sketching/ painting were also conducted as a part.

Independence Day, 15th August 2017

IIITDM celebrated 71stIndependenceday of our nation on August 15th 2017. The program commenced with flag hoisting by the Director, Prof Banshidhar Majhi, followed by students displaying their national spirit through various art forms. Students made the function colorful through music, songs, dances, band performances and speeches.

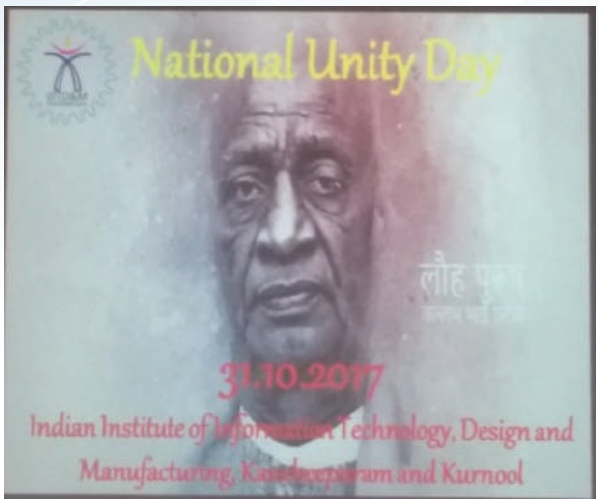
Teachers' Day, 5th September 2017

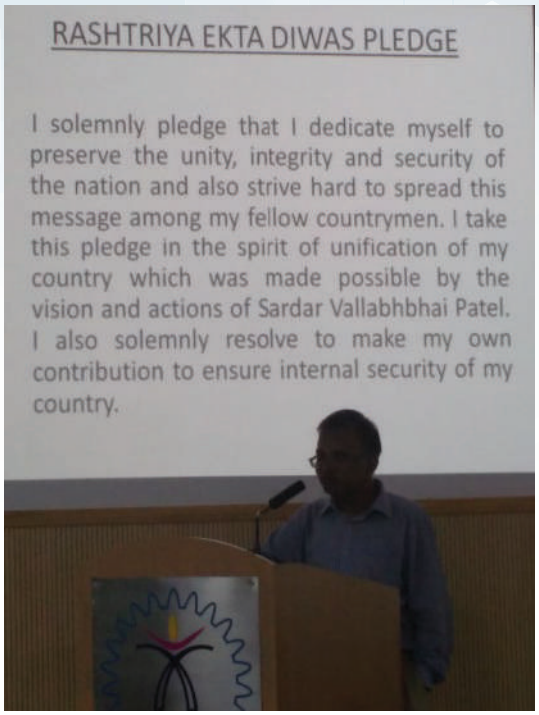
Teachers' Day is a special day intended to recognize and appreciate teachers. In India we celebrate the birthday of Sarvepalli Radhakrishnan as Teachers' Day on the fifth day of September, to celebrate the significance of their journey of education. The event was well-organized with a session attended by many professors and students making the evening a memorable one. The director Prof. Banshidhar Majhi delivered a sublime speech covering all his life experiences with his teachers and professors. Dr. Sreekumar and Dr. Raja Balakrishnan also shared their thoughts about their teacher's right from their school days. A few students also delivered

talks highlighting the importance of student-teacher relationship which plays a vital role in the success of any student. Indoor and outdoor friendly matches between faculty, staff and students were organized.

Rashtriya Ekta Diwas (National Unity Day), 31st October 2017

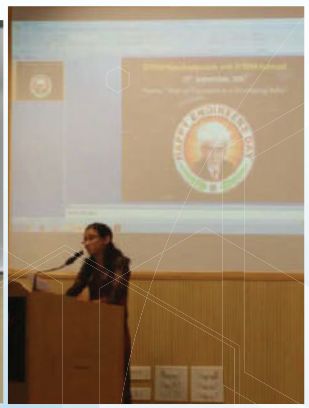
The birth anniversary of SardarVallabhbhai Patel, October 31, was celebrated as RashtriyaEktaDiwas (National Unity Day) in the institute. The celebration of EktaDiwas was announced by Prime Minister NarendraModi in 2014. The occasion provided an opportunity to reaffirm the inherent strength and resilience of our nation to withstand the actual and potential threats to the unity, integrity, and security of our country.





Engineers' Day celebration, 15th September 2017

Institute celebrated 50th Engineers' Day celebration in our Institute on 15.9.2017 (Friday) The theme for this year's Engineers day is "Role of Engineer in a Developing India". On this occasion our chief guest Prof S V Mani, Proprietor, PI Water BCS Technology India, Retired Vice President, Tata Consultancy Services shared his view. He is also a member of the Academy Advisory Board of International Institute of Health Management and Research, New Delhi.



Constitution Day, 26th November 2017

As per the honorable HRM, the institute observed the constitution day on November 26th 2017. The preamble to the constitution and a few fundamental duties in the constitution was readout, and a lecture on the importance of them was delivered by Dr Sreekumar. Earlier, the important events happened in the life of Dr. B R Ambedkar, and his contributions to the Indian constitution and in other fields were remembered by Dr Priyanka Kokil during her speech.

Pongal Celebrations, 12th January 2018

Students, staff and faculty of the institute celebrated Pongal Festival on January 12 2018 near Library block. Pongal is a harvest festival celebrated as a kind of thanksgiving ceremony for the year's harvest. On this occasion, the Director, a few faculty and staff remembered the sacrifices made by farmers to feed a large country like ours.

One Day Workshop

One day training program was conducted for the students/faculty/scientists etc. on design of share auto/future share transport vehicles. The design experts from different leading automobile manufacturers viz. Ashok Leyland, General Motors, Royal Enfield etc. trained and guided the participants in design of future share transport vehicles. More than 120 participants took part in the event. The event was well covered by the famous Tamil Magazine Viktan motors. Society of Indian Automobile Manufacturers workshop on Future Transport Solutions on Jan 21, 2018

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National Science Day, 28th February 2018

The institute celebrated national science day on 28th Feb 2018. National Science Day is celebrated in India on 28 February each year to mark the discovery of the Raman effect by Indian physicist Sir Chandrashekhara Venkata Raman on 28 February 1928.

The theme for year 2018 was Science and Technology for a sustainable future. Students had participated with great enthusiasm in National Science Day and they discussed about Introduction, significance and importance of national science day followed by a brief presentation on the development and adaptation of science and technology, etc.

Ek Bharat Shrestha Bharat

On the theme of "Ek Bharat Shrestha Bharat" we conducted various cultural events and Ethnic day in the college campus on 10th November 2017. The event revolved around the idea of understanding cultural importance and acknowledging the unique culture and diversity to our nation, through

1. Cultural dances
2. Regional songs
3. Speech

On the theme of "*Ek Bharat Shrestha Bharat*" we conducted group discussion session with a skit in the college campus on 30th January 2018. The event revolved around the idea of understanding their importance and acknowledging the unique culture and diversity they bring to our nation, through a skit where main highlight was cultural positive points about India. Nearly 50 participants participated in various events for which prizes were distributed. Served as a platform for learning and growing through constructive interactions between the professors and the students. Various cultural events were conducted in the campus on 11th March 2018. The event revolved around the idea of understanding cultural importance and acknowledging the unique culture and diversity to our nation, through Dances, Violin, Art events such as face painting, mask making, kolam etc., Drama, Skit etc.






Ek Bharat
Shreshta Bharat

"एक भारत
श्रेष्ठ भारत"