



ANNUAL REPORT **2019-2020**

**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY
DESIGN AND MANUFACTURING, KANCHEEPURAM**





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Director's Message

Dear Colleagues and Friends,

IIITDM Kancheepuram has successfully completed the journey of 13 years since its inception in 2007. It has nurtured a pool of young minds during its journey on the foundations of the vibrant community of faculty and staff.



Presently, the institute has a regular faculty strength of 50 with 1550 students pursuing UG, PG and Ph.D. programs supported by 40 administrative and technical staffs. IIITDM Kancheepuram is excelling in IT driven undergraduate and postgraduate education with focus on Design and Manufacturing as two major verticals. The curriculum also encourages students to pursue inter-disciplinary projects in emerging engineering areas. The overall research outcomes of the institute by the faculty and research scholars has increased from the previous year as is evident from the publications. The products and patents are being developed in consonance with the projects-based learning curriculum. Various research projects worth Rs. 3.00 crores were received from government and private funding agencies by the faculty members of the institute. It is to put on record that the institute placement has improved considerably as the number of core companies visiting the campus for placements and internship has steadily increased.

To empower the young engineers of India with specialized skill sets and to face the technological challenge of future, the institute has started three new M.Tech programs in Advance Robotics, Power Electronics System Design and Computer Science and Engineering.

The 7th convocation of the institute was held on 13th July, 2019 and the event was graced by Dr. Koppillil Radhakrishnan, Chairman, Board of Governors, IIT Kanpur, and Former Chairman, Indian Space Research Organization (ISRO) as Chief Guest. During the event, 118 UG, 116 DD, 41 PG and 13 Ph. D scholarstotaling 288 graduands received their degrees.

In line with the institute mandate, the Teaching Learning Centre (TLC) develops e-learning resources and creates low cost laboratory equipment for adoption and use by engineering colleges and universities of the country. The institute has supplied low-cost devices to various schools in and around Chennai and Bangalore through TLC and it has been declared as a "National Resource Centre (NRC)" on Design and Manufacturing. The institute incubation cell, MaDeIT, presently supports 17 startups which includes 07 under incubation and 10 under accelerator. Another 10 startups are in the pipeline. One of the incubate companies has been recognized among the top 10 Agri-tech startups in the country in a recent poll. The institute also houses a Design Innovation Centre (DIC), established in the year 2017 withRs. 1.50crores grant from DST. The cell inculcates, facilitates, and spreads the idea of Design Thinking & Innovation among students and faculty of the institute and conducts workshops regularly.



The Centre for AI, IoT and Robotics and Centre for Smart Manufacturing are the two Centres of Excellence established by the Institute in 2019 and collaborative research plans have been initiated with industries by these centres. Short term training and skill developments programs are being organized by these centres besides publishing research outcomes in reputed journals and conferences.

On the infra-structure front, the construction of second phase of Faculty Housing is nearing completion as the first phase became operational in 2019. The housing facility would enhance the academic and research ambience in the campus.

The identity of being an independent country is to make the country self-sustained in every aspect. The Government of India is encouraging the self-sustainability efforts through various schemes such as Digital India, Make in India, Unnat Bharat Abhiyan, Ek Bharat Shrestha Bharat (EBSB), Fit India movement and Skill India etc. The young minds of IIITDM Kancheepuram with the support of faculty contribute to this scheme by combining their strategies and skills towards making the country self-reliant.

The institute has navigated the recent pandemic situation effectively and the institute ensured departure of the students to their homes before onset of the lockdown and the institute has adopted the online teaching for effective learning process. I am glad to mention that the academic plans for the ensuing semester will be completed on time and the graduating classes will complete their exams by first week of June 2020 and their provisional degree will be issued by end of June 2020.

I am confident that faculty, staff and scholars with their dedication and sincerity would synchronize their effort during this testing time and emerge with novel contributions as Alain de Botton said, "A good half of the art of living is resilience".

Prof. Banshidhar Majhi
Director

01 General Information

1.1 Mandate

IIITDM Kancheepuram was set up in the year 2007 and is one of the three Institutes in India to offer innovative design centric engineering programs. The programs are distinct from the programs offered by other institutions as it blends engineering design and manufacturing with a set of institutional core courses in Information Technology, Product Design and Prototyping. In addition, these courses promote a problem-based learning pedagogy demanding a strong industry domain experience and inter-disciplinary expertise. The unique curriculum imparts strong fundamental knowledge with design centric features so that students can handle complex design problems. Design and Manufacturing is incorporated in the charter of the institution and the same is as under.

1.2 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.

1.3 Mission

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

1.4 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

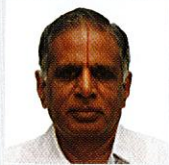




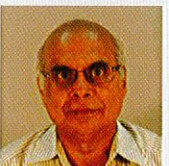



1.5 Board of Governors


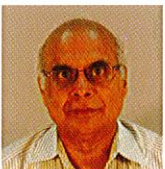


Title		Name	Affiliation
Chairman		Prof S Sadagopan	Director IIIT Bangalore
Member		Shri BS Raghavan	Former Advisor to UN, Author & Educationist Former Chief Secretary Govt. of TN
Member		Shri Santhosh Babu, IAS	Secretary to Government Dept of Information Technology, Govt. of TN
Member		Prof Bhaskar Ramamurthi	Director IIT Madras
Member		Dr Jaideep Kumar Mishra	Joint Secretary (HRD), Ministry of Electronics and Information Technology, Govt. of India
Member		Shri B Santhanam	Chairman and Managing Director Saint-Gobain India Private Limited

Title		Name	Affiliation
Member		Shri Krishna GV Giri	Former Managing Director & Vice Chairman, Accenture
Member		Prof David Koilpillai	Dean (Planning) IIT Madras
Member		Prof S Narayanan	Emeritus Professor IIITDM Kancheepuram
Member		Prof Banshidhar Majhi	Director IIITDM Kancheepuram
Secretary		Shri A Chidambaram	Registrar IIITDM Kancheepuram

1.6 Finance Committee

Title		Name	Affiliation
Chairman		Prof S Sadagopan	Chairman BoG, IIITDM Kancheepuram
Member		Prof Banshidhar Majhi	Director IIITDM Kancheepuram
Member		Dr S Murugiah	Former Principal Acct General, TN
Member		Shri Anil Kumar	Director (Finance), MHRD, Gol
Member		Shri. Prashant Agarwal	Director(IIT & IIIT), MHRD, Gol
Member		Prof S Narayanan	Emeritus Professor IIITDM Kancheepuram
Secretary		Shri Chandan Kumar Prusty	Assistant Registrar IIITDM Kancheepuram





1.7 Building and Works Committee

Title		Name	Affiliation
Chairman		Prof Banshidhar Majhi	Director IIITDM Kancheepuram
Member		Prof S Narayanan	Emeritus Professor, IIITDM Kancheepuram
Member		Prof P Alagusundarmoorthy	Professor, Dept of Civil Engineering, IIT Madras
Secretary		Shri K Sundaresan	Consultant Engineer (Civil), IIITDM Kancheepuram

1.8 Senate




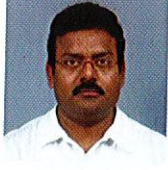

Title		Name	Affiliation
Chairman		Prof Banshidhar Majhi	Director IIITDM Kancheepuram
Member		Prof P Chandramouli	Professor, Dept of Mechanical Engg, IIT Madras
Member		Prof V Jagadeesh Kumar	Professor, Dept of Electrical Engg, IIT Madras
Member		Prof Krishnamoorthy Sivalingam	Professor, Dept of Computer Engg, IIT Madras
Member		Dr G Venkatesh	M/s Sasken Communication Tech Ltd
Member		Dr Anand Lakshmanan	M/s Ericsson India Global Services
Member		Dr S Rajasekara Pandian Dean (Plannig)	Associate Professor IIITDM Kancheepuram

Title		Name	Affiliation
Member		Dr Sudhir Varadharajan Dean (Design, Innovation and Incubation)	Associate Professor IIITDM Kancheepuram
Member		Dr Sreekumar M Dean (Faculty Affairs)	Associate Professor IIITDM Kancheepuram
Member		Dr Binsu J Kailath Dean (Academics)	Associate Professor IIITDM Kancheepuram
Member		Dr Selvaraj M D Dean (Sponsored Research)	Associate Professor IIITDM Kancheepuram
Member		Dr Naveenkumar Vats Dean (Student Affairs)	Associate Professor IIITDM Kancheepuram
Member		Dr Priyanka Kokil HoD (ECE)	Assistant Professor IIITDM Kancheepuram
Member		Dr Raja B HoD (Mechanical Engineering)	Associate Professor IIITDM Kancheepuram

Title		Name	Affiliation
Member		Dr Sadagopan N HoD (CSE)	Assistant Professor IIITDM Kancheepuram
Member		Dr Tapas Sil HoD (Physics)	Associate Professor IIITDM Kancheepuram
Member		Dr Vijayakumar S HoD (Mathematics)	Assistant Professor IIITDM Kancheepuram
Secretary		Shri A Chidambaram	Registrar IIITDM Kancheepuram

1.9 Institute Administration

Title		Name	Affiliation
Chairman		Prof Banshidhar Majhi Director	Director, IIITDM Kancheepuram
Member		Dr S Rajasekara Pandian Dean (Planning)	Associate Professor IIITDM Kancheepuram
Member		Dr Sudhir Varadharajan Dean (Design, Innovation and Incubation)	Associate Professor IIITDM Kancheepuram
Member		Dr SreeKumar M Dean (Faculty Affairs)	Associate Professor IIITDM Kancheepuram
Member		Dr Binsu J Kailath Dean (Academics)	Associate Professor IIITDM Kancheepuram
Member		Dr Selvaraj M D Dean (Sponsored Projects)	Associate Professor IIITDM Kancheepuram
Member		Dr Naveenkumar Vats Dean (Student Affairs)	Associate Professor IIITDM Kancheepuram

Title		Name	Affiliation
Member		Dr Priyanka Kokil HoD (ECE)	Assistant Professor IIITDM Kancheepuram
Member		Dr Raja B HoD (Mechanical Engineering)	Associate Professor IIITDM Kancheepuram
Member		Dr Sadagopan N. HoD (CSE)	Assistant Professor IIITDM Kancheepuram
Member		Dr Tapas Sil HoD (Physics)	Associate Professor IIITDM Kancheepuram
Member		Dr Vijayakumar HoD (Mathematics)	Assistant Professor IIITDM Kancheepuram

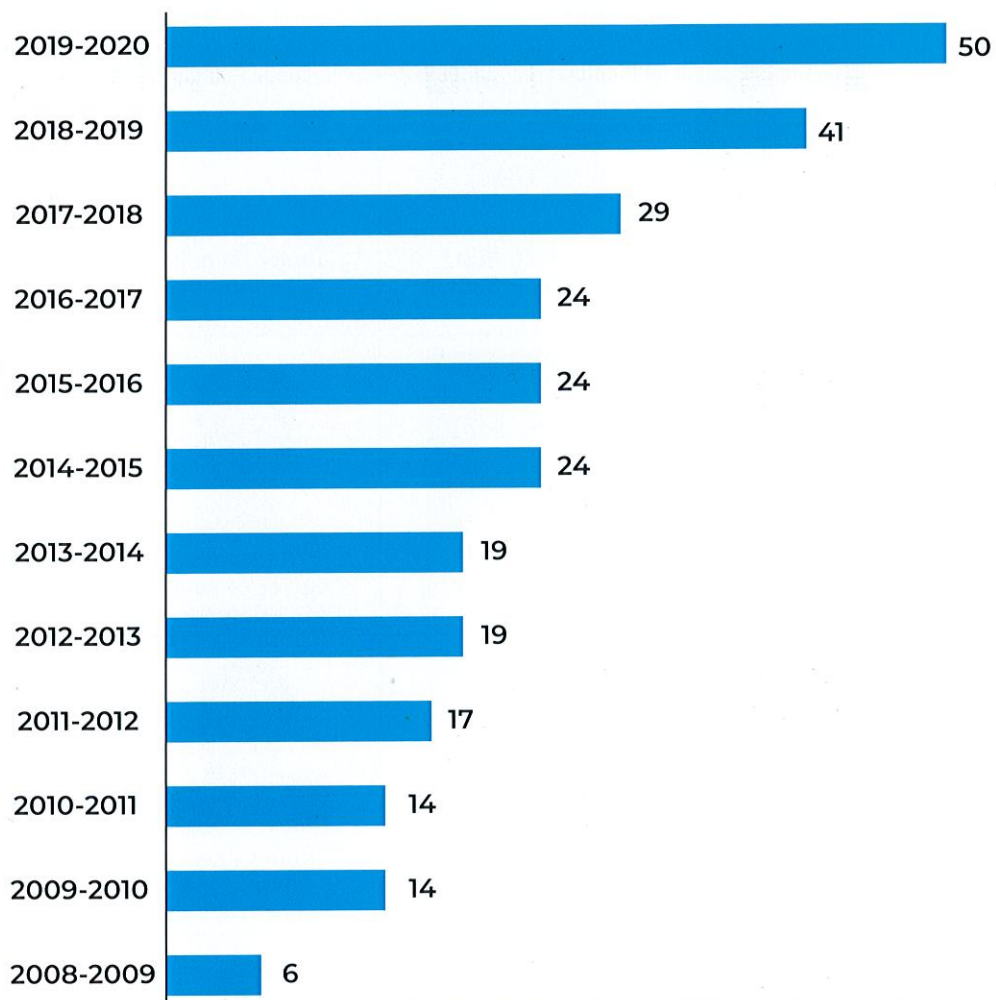
1.10 Administrative Staff

 <p>Shri A Chidambaram Registrar</p>	 <p>Shri R Gunasekaran Joint Registrar</p>	 <p>Shri K Sundaresan Consulting Engineer</p>	 <p>Shri G Ravi Kumar Assistant Registrar</p>	 <p>Shri K Chandrasekaran Internal Audit Office</p>
 <p>Shri Chandan Kumar Prusty Assistant Registrar</p>	 <p>Smt S Rajalakshmi Superintendent</p>	 <p>Smt G Subashini Superintendent</p>	 <p>Shri S Pandiyan Assistant Engineer (Civil)</p>	 <p>Shri Ramkumar R Junior Engineer (Electrical)</p>
 <p>Dr P Alaguraj Senior Physical Training Instructor</p>	 <p>Shri G Perumal Senior Library Information Assistant</p>	 <p>Shri S Karthikeyan Senior Assistant</p>	 <p>Shri K Dinesh Kumar Senior Assistant</p>	 <p>Smt P Kavitha Junior Assistant</p>
 <p>Shri G Venkatesh Junior Assistant</p>	 <p>Shri R Balaji Junior Assistant</p>	 <p>Shri Thailam Shivanagadurga vinodkumar Junior Engineer (Electrical)</p>	 <p>Shri S Venkatesh Junior Assistant</p>	 <p>Shri Vivek R Junior Assistant</p>
 <p>Kum S Harshini Junior Assistant</p>				

1.11 Technical Staff

 <p>Shri C Gurunathan Technical Officer (SS)</p>	 <p>Shri P M Sriram Bhaskar Technical Superintendent</p>	 <p>Shri K Saravana Kumar Technical Superintendent</p>	 <p>Shri A Vigneshwaran Junior Technical Superintendent</p>	 <p>Smt K Manimegalai Senior Technician</p>
 <p>Shri G Manigandan Senior Technician</p>	 <p>Shri M Ashwinraj Senior Technician</p>	 <p>Kum P Pavithra Junior Technical Superintendent</p>	 <p>Shri R Dharmarasu Junior Technical Superintendent</p>	 <p>Shri K Kanagaram Junior Technician</p>
 <p>Shri A VijayaBharathi Junior Technician</p>	 <p>Kum Rakshana A Junior Technician</p>	 <p>Kum Sindhu S Junior Technician</p>	 <p>Kum Universe Jasmine A Junior Technician</p>	 <p>Shri Vivek M P Junior Technician</p>
 <p>Shri Sanmati Jinendran Jain Junior Technician</p>	 <p>Shri Aravindan S Junior Technician</p>	 <p>Smt Tamilmani D Junior Technical Superintendent</p>	 <p>Shri Krishna Prasad N Junior Technical Superintendent</p>	

1.12 Cumulative Faculty (Regular) Strength



1.13 Administrative Responsibilities for Faculty

Portfolio	Incharge	PIC
Academics	Dean (Acad)	Dr. Jayabal K - Examination & Results
Disciplinary Committee (Academics)		Dr. Gowthaman Swaminathan Dean (Acad) (Chairman), PIC (Exam), all HoD
Guidance and Counseling		Dr. Sadagopan N (PIC) Dr. Prerna Saxena
All Ranking & Survey (NIRF Ranking/AISHE, etc.)		Dr. Prem Kumar K
QIP/NPTEL		Dr. Venkata Timmaraju Mallina
Disciplinary Committee (Hostel and Others)	Dean (SA)	Dean (SA) (Chairman), All Wardens
Sports		Dr. K.P Pradhan
Hindi Section		Dr. Nachiketa Mishra
Scholarship		Dr. Anushree P. Khandale
Social Service Group		Dr. Vijaya Kumar K
Anti-Ragging & Student body		Dr. Sivaselvan B
Cultural Activities		Dr. Umarani J Dr. Kalpana P
Weaker Section		Dr. Pandithevan P
Designers Club		Dr. Chitti Babu B
Web Page		Dean (FA)
Institute Mail Administration	Dr. Siva Selvan B	
Networking	Dr. Munesh Singh	
News Letter (Margdarshan)	Dr. Jayachandra Bingi	
Stores and Purchase Committee	Dr. Siva Selvan B (Chairman)	
Infrastructure Advisory Committee	Dean (FA)	
Guest House	Dean (FA)	
Sponsored Research/Industrial Consultancy/Society of Automotive Engineering	Dean (SRICCE)	Dr. Shubankar Chakraborty
Conferences/Workshops/Short Term Courses/IEEE Student Branch		Dr. Chitti Babu B
Industrial Visit/Guest Lecture		Dr. Jayavel S
Library		Dr. Vivek Kumar
MOU		Dean (SRICCE)

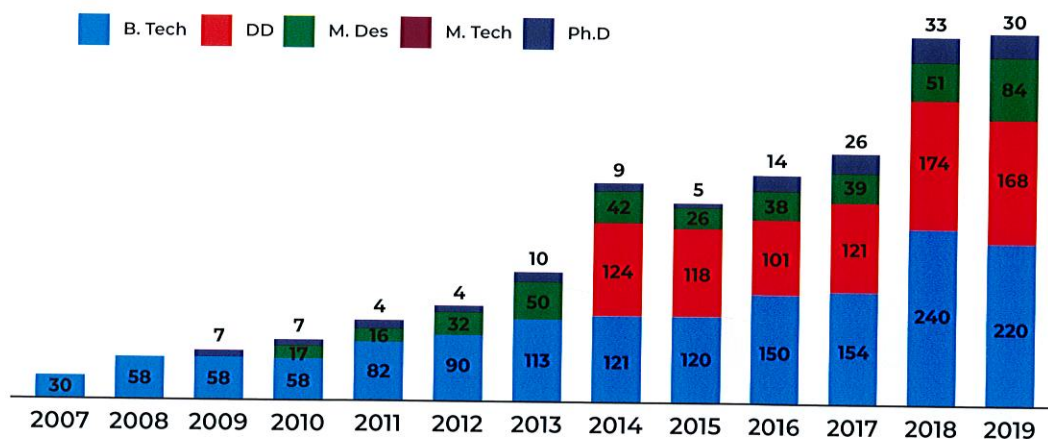
Centres	PIC
TBI Centre & Industry Interaction	Dr. Sudhir Varadharajan Dr. Jayachandra Bingi
Teaching and Learning Centre	Dr. S. R. Pandian Dr. Senthil Kumaran K
Design Innovation Centre	Dr. Naveen kumar Dr. Kumar Prasannajit Pradhan
Placement	Dr. Jayabal K Dr. AsutoshKar Dr. Munesh Singh
Institute Security/Campus Health Care	Dr. Masilamani V
Accreditation	Dr. Sivaselvan B Dr. VenkataTimmarajuMallina Dr. Shalu M A Dr. Noor Mahammad S K

HOSTEL	
Chairman, Committee of Wardens	Dr. Naveen Kumar
Warden/Mess	Dr. AVS Siva Prasad Dr. Jagadeesh Kakarla Dr. Kalpana P

1.14 Campus Demography

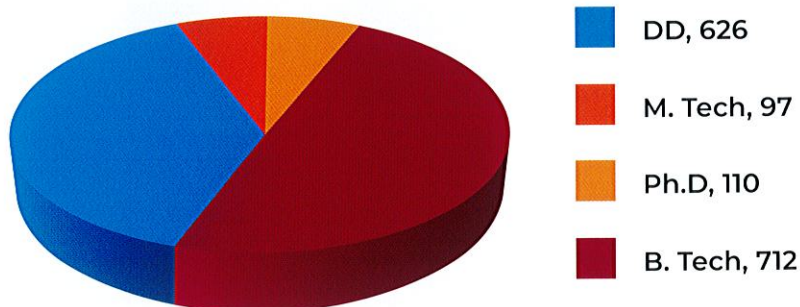
STUDENT STRENGTH AS ON 31.03.2020							
Degree	2014	2015	2016	2017	2018	2019	Grand Total
B Tech			147	143	226	196	712
COE			40	43	63	52	198
EDM			39	34	53	52	178
MDM			37	29	59	48	181
MSM			31	31	51	44	155
DD		114	97	113	159	143	626
CED		40	41	41	55	53	230
ESD		19	11	19	26	24	99
EVD		20	16	18	28	26	108
MFD		18	15	20	24	21	98
MPD		17	14	15	26	19	91
M. Tech					46	51	97
CDS					10	12	22
EDS					10	16	26
MDS					13	15	28
SMT					13	8	21
Ph. D	2	3	14	23	27	41	110
COE		1		3	7	7	18
EDM	2	1	5	8	9	13	38
MAT			1		3	3	7
MDM		1	7	12	3	16	39
PHY			1		5	2	8
Grand Total	2	117	258	279	458	431	1545

Student Admission

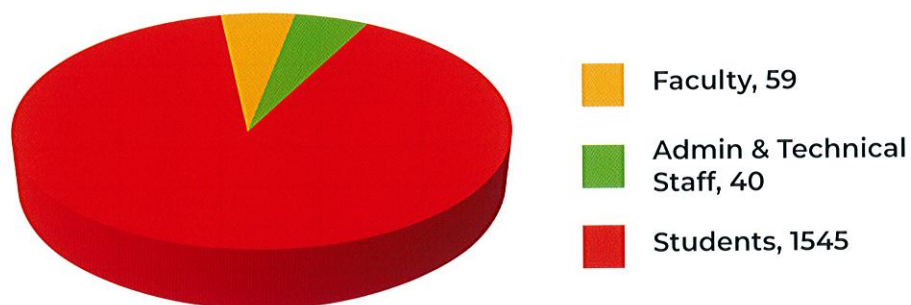


Student Strength as on 31.03.2020

Total Students - 1545 (as on 31.03.2020)



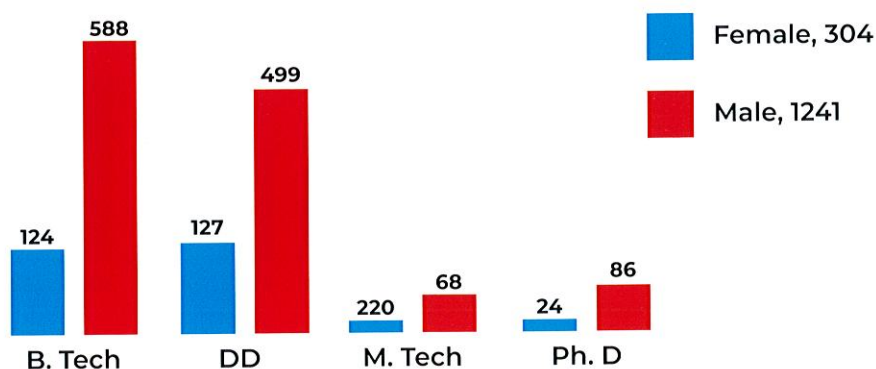
Campus Population



Category wise Student Distribution (as on 31 March 2020)

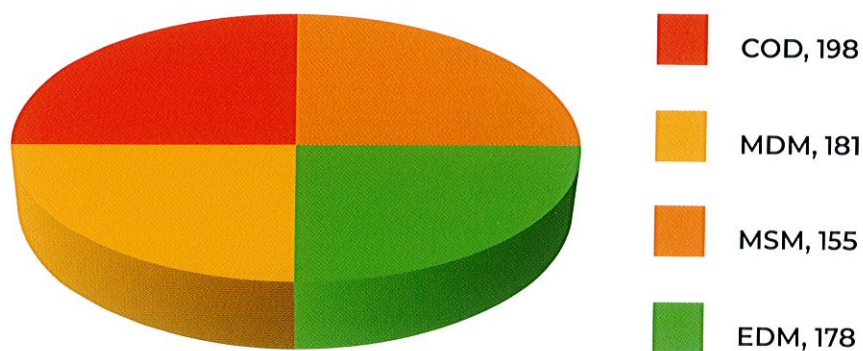
Degree	B.Tech	DD	M.Tech	Ph.D	Grand Total
OBC	195	171	17	58	441
Open	324	277	62	42	705
SC	104	90	15	10	219
ST	53	51	3		107
DASA	19	25			44
EWS	17	12			29
Grand Total	712	626	97	110	1545

Students Data-Genderwise

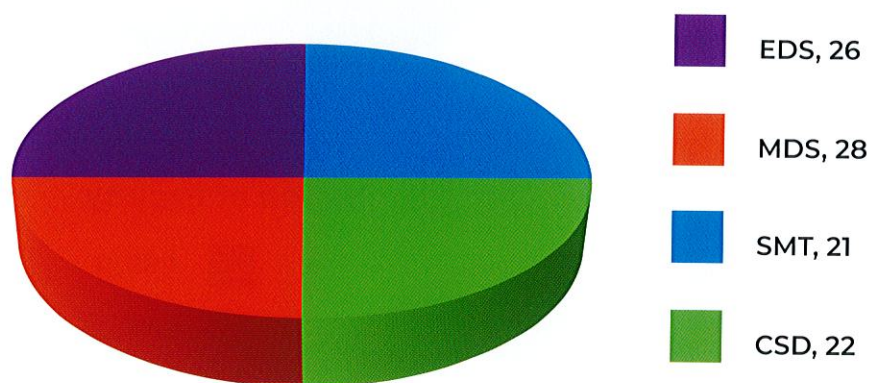


Student Strength as on 31.03.2020

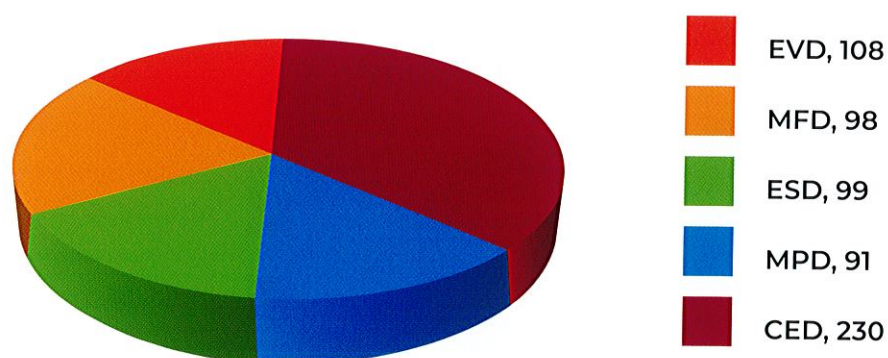
B. Tech (712)



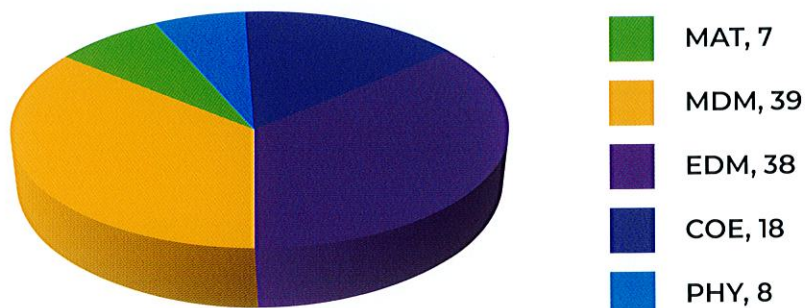
M. Tech (97)



DD (626)

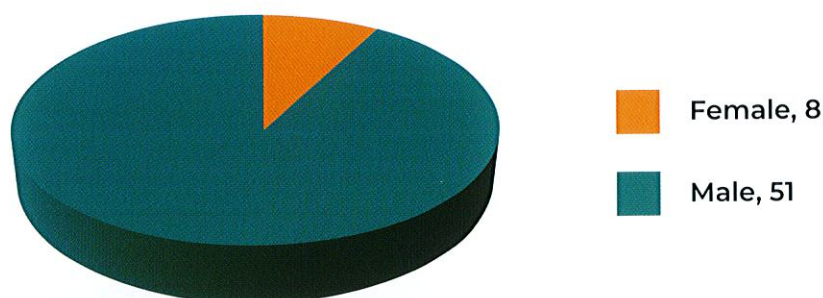


PhD (110)

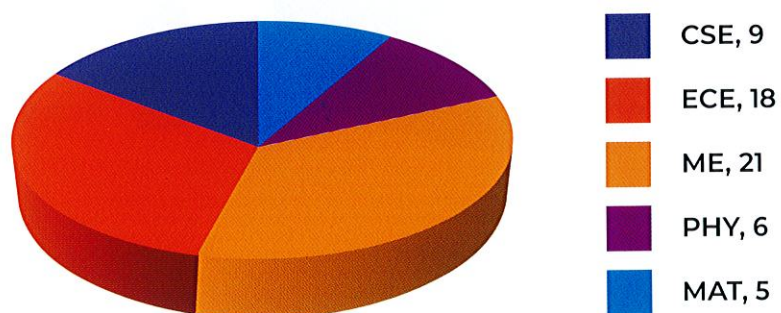


Faculty Information

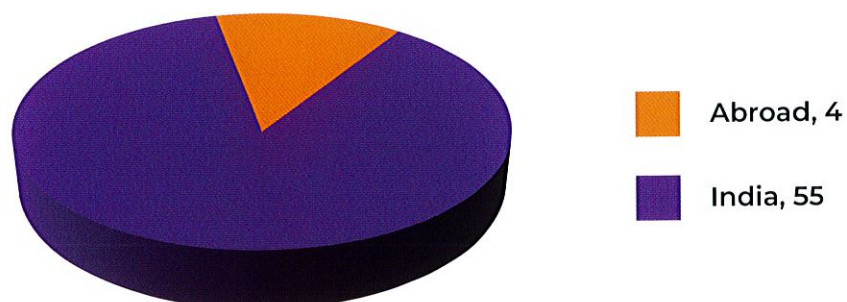
Gender wise Distribution of Faculty



Departmentwise Distribution of Faculty



Doctoral of Faculty



02 Academics - General

2.1 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 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.

Basic Sciences

Core Engg.

Design
Concepts

Interdisciplinary
Knowledge

Management



2.2 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.

B Tech

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) M Tech (By-Research)

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

2.3 Academic Milestones

2020 M Tech - PESD
M Tech - CSE
M Tech - Adv. Robotics

2019 Post-Doctoral
Fellowship,
M Tech (By-Research)

2017 M Tech
Smart Manufacturing

2016 B Tech - 40
Smart Manufacturing

2015 Mentoring IIITDM
Kurnool with 50 Intake

2014 Dual Degree
Intake 120

2013 UG intake
Increased to 120

2012 M Des
(Comm. Systems)

2011 UG intake
Increased to 90

2010 M Des
(Mech. & Electronics)

2009 B Tech - 20
(Computer Eng.)

2008 B Tech - 20
(Electrical D&M)

2007 B Tech - 30
(Mechanical D&M)

Doctoral (Ph D)

2.4 Fee Structure for the New Admissions (2019 Batch)

Description	B.Tech / Dual Degree	M.Tech	Ph.D.
I. Institute Fees			
A. One-time Fees :			in Rupees
Admission Fee	500.00	500.00	500.00
Certificate/Thesis Fee	500.00	500.00	1,500.00
Student welfare fee	1,000.00	1,000.00	1,000.00
Infrastructure Development Fee	1,000.00	1,000.00	1,000.00
Alumni Life Membership Fee	500.00	500.00	500.00
Publication Fee / Library Fee	1,000.00	1,000.00	1,500.00
Cultural Fee	500.00	500.00	-
Total (A)	5,000.00	5,000.00	6,000.00
B. Semester Fees :			
Tuition fee (*)	6,000.00	25,000.00	24,000.00
Examination fee	500.00	500.00	500.00
Registration	300.00	500.00	500.00
Sports Fee	1,000.00	1,000.00	1,000.00
Medical Fee	1,000.00	1,000.00	1,000.00
Student Amenities	2,000.00	2,000.00	3,000.00
Total (B)	64800	30000	30000
C. Medical Insurance Premium (per annum)			
Medical Insurance premium p.a.	500.00	500.00	500.00
Total (C)	500.00	500.00	500.00
Grand Total [A+B+C]	70,300.00	35,500.00	36,500.00
II. Hostel Fees			
A. Hostel Fees & Mess Charges per semester			
Hostel Admission fee	700.00	700.00	700.00
Hostel Seat Rent	3,500.00	3,500.00	3,500.00
Hostel Maintenance Charges	9,000.00	9,000.00	9,000.00
Dining charges - Advance	14,000.00	14,000.00	14,000.00
Establishment B Charges	1,000.00	1,000.00	1,000.00
Development Fee	1,000.00	1,000.00	1,000.00
Total (A)	29,200.00	29,200.00	29,200.00
Hostellers (I & II)	99,500.00	64,700.00	65,700.00

Note :

- *SC/ST students are exempted from payment of tuition fee irrespective of their parental income.
- 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).

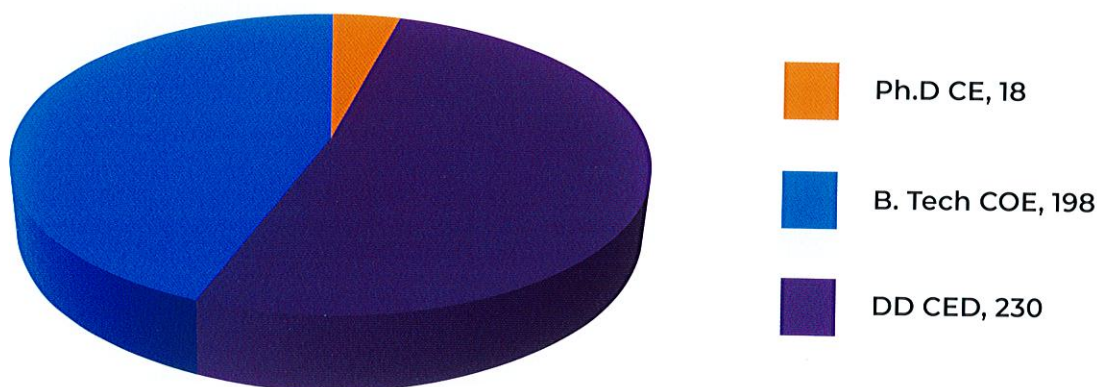
03 Academic Streams

3.1 Computer Science and Engineering (CSE)

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.

B. Tech (4 Years)	<ul style="list-style-type: none"> • Computer Science and Engineering
Dual Degree (5 Years)	<ul style="list-style-type: none"> • B Tech Computer Science and Engineering + M.Tech Computer Science and Engineering
Ph D	<ul style="list-style-type: none"> • Computer Science and Engineering and Allied Areas

Student Strength-CSE



Laboratories

- 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
- Product Design

Faculty

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

Research Scholars	Topic of Research
Isunuri B Venkateswarlu	Medical Image Processing
Joshi Pratik	Machine Learning Approaches for Abnormal Activity Detection Using Video Surveillance
Kiruthika S	Machine Learning Algorithms for Image / Vidor Quality Prediction
Mahendra Kumar R	Study of Some Special Graph Classes
Mohanapriya	Theoretical Computer Science
Nilu R. Salim	Image Processing and Biometrics
Sameera Shaik	Network Intrusion Detection Systems
Santosh Kumar Uppada	Data Mining / Analysis
Shree Prakash	Machine Learning, Pattern Recognition, Digital Image Processing

Research Scholars	Topic of Research
Subin Sahayam M	Machine Learning and Medical Image Processing
Vegeesna S.M. Srinivasavarma	High Performance VLSI Architectures and Algorithms for Multimatch Packet Classification for Network Intrusion Detection Systems
Debarati Bhattacharjee	Classifying Hand Gestures for Prosthetic Arms by Identifying EMG Signals with Machine Learning and Deep Learning
Kaushik R	Data analytics
Mercy Faustina J	Data analytics
Siva Rama Lingham N	Localization in Wireless Sensor Networks
Anjali T	Computer Vision - face recognition at distance
P.N.Karthikayan	Image Processing
Syed Zubair Ahmed Hussainy	In Memory Computing

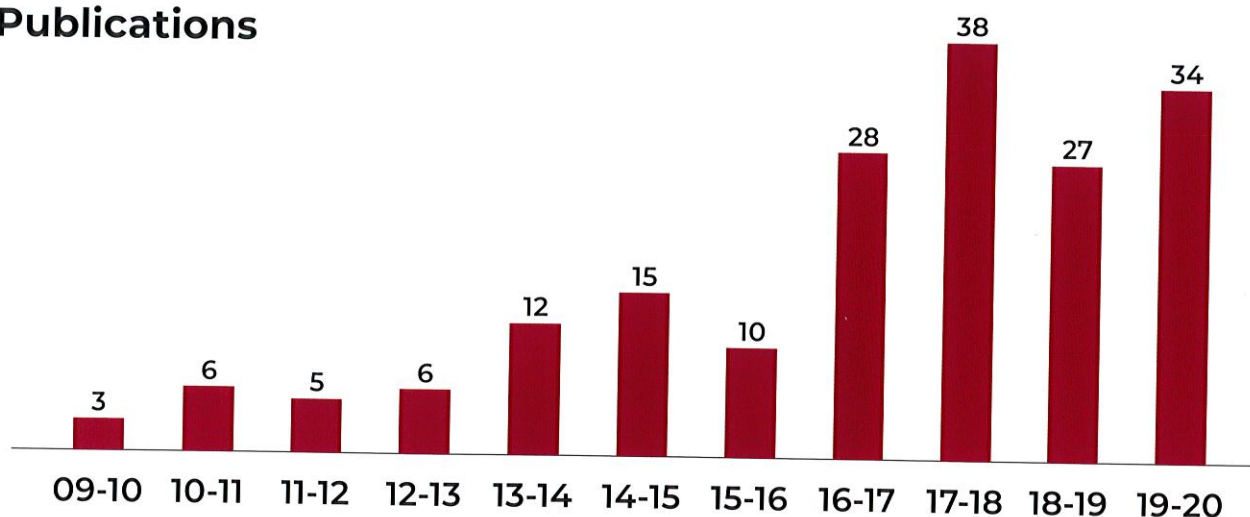
Core Courses

- 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

- Advance Data Structures and Algorithm
- Analytics & System of big data
- Database systems
- Digital Image Processing
- Pattern recognition
- Reconfigurable computing
- Device Drivers

Publications

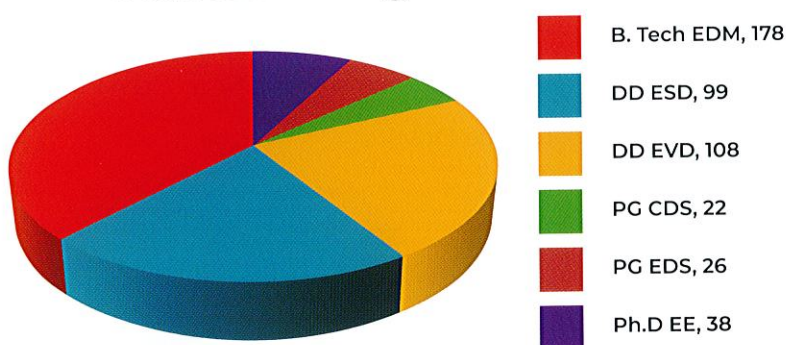


3.2 Electronics and Communication Engineering (ECE)

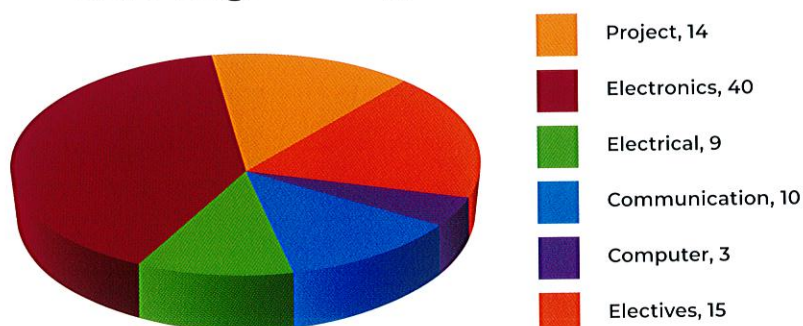
In today's competitive scenario, electronic product design and development requires the skillful blend of expert hardware and software engineering knowledge with a spirit of creativity and innovation, tempered by the practical concerns of manufacturability, cost consciousness and reliability. The Undergraduate (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.

B. Tech	<ul style="list-style-type: none"> • Electronics and Communication Engineering
Dual Degree	<ul style="list-style-type: none"> • 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)
Dual Degree	<ul style="list-style-type: none"> • M. Tech. in Electronics and Communication Engineering (Spl : Electronics Systems Design) • M. Tech. in Electronics and Communication Engineering (Spl : Communication Systems Design)
PhD	<ul style="list-style-type: none"> • Electronics and Communication Engineering

Student Strength-ECE



Core Engineering Credit Distribution-ECE



Faculty

	<p>Dr Binsu J Kailath PhD (IIT Madras)</p> <p>Research Interests : VLSI Design, MOS Device Modeling and Technology, MEMS.</p>		<p>Dr Priyanka Kokil PhD (NIT Allahabad)</p> <p>Research Interests : Nonlinear System, Delayed System, Multidimensional System.</p>
	<p>Dr Damodharan P PhD (IIT Madras)</p> <p>Research Interests : Power Electronics and Drives, Permanent Magnet Brushless DC and AC Drives.</p>		<p>Dr Selvajyothi K PhD (IIT Madras)</p> <p>Research Interests : Power Electronics, Drives and Control, DSP Realization of Control Algorithms in Power Electronics, FPGA/DSP Hardware</p>
	<p>Dr S R Pandian PhD (IIT Delhi)</p> <p>Research Interests : Autonomous Underwater Robots, Robot Design, Electromechanical Systems.</p>		<p>Dr Selvaraj M D PhD (IIT Delhi)</p> <p>Research Interests : Wireless Communications, Cooperative Diversity, Mobile Communications.</p>
	<p>Dr Premkumar K PhD (IISc)</p> <p>Research Interests : Scheduling in Networks, Social Networks, Cognitive Radio, Internet of Things, Big Data Analytics</p>		<p>Dr Asutosh Kar Ph.D (BIT Mesra)</p> <p>Research Interests : Advanced Signal Processing, Adaptive Filter Theory, Acoustic Echo and Feedback Signal Analysis, Hearing-Aids, Acoustic Noise Analysis.</p>
	<p>Dr Vijayakumar K Ph.D (NIT Trichy)</p> <p>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.</p>		<p>Dr B Chitti Babu Ph.D (NIT Rourkela)</p> <p>Research Interests : Power Electronics applications in smart distribution grids containing renewable energy resources. Design of low power photovoltaic (PV) energy system for portable applications.</p>
	<p>Dr Kumar Prasannajit Pradhan Ph.D (NIT Rourkela)</p> <p>Research Interests : Modeling & Simulation of Nanoscale Devices, SOI MOSFETs, FinFETs, Negative Capacitance FETs, Radiation Hardened Devices.</p>		<p>Dr Prerna Saxena Ph.D (VNIT Nagpur)</p> <p>Research Interests : Antenna Design, Metamaterials, Smart Antennas, Antenna Array Pattern Synthesis, Soft Computing Techniques in Electromagnetics, Computational Electromagnetics.</p>

	<p>Dr Srijith K PhD (IIT Madras)</p> <p>Research Interests : Fiber optic sensors, Fiber Bragg grating based sensors, Distributed optical fiber sensors, Signal processing for sensor applications.</p>		<p>Dr Appina Balasubramanyam PhD (IIT Hyderabad)</p> <p>Research Interests : Multimedia Quality Assessment, Image and Video Processing, Display Technologies.</p>
	<p>Dr Tejendra Dixit PhD (IIT Indore)</p> <p>Research Interests : Nanoelectronics, Optoelectronics, Plasmonics, 2D Semiconductors, Organic Electronics, Memristors, Optical Memory.</p>		<p>Dr Bhupendra Singh Reniwal PhD (IIT Indore)</p> <p>Research Interests : Microelectronics & VLSI Design.</p>
	<p>Dr Vasundhara PhD (IIT Bhubaneswar)</p> <p>Research Interests : Application of adaptive signal processing tools and techniques for feedback and occlusion cancellation in hearing aids. Acoustic echo cancellation and active noise control in distributed scenario.</p>		<p>Dr Pandiyarasan Veluswamy PhD (National University Corporation Shizuoka University, Japan)</p> <p>Research Interests : Wearable Devices for self-powered (Thermoelectric, Solar, Nano generator), Materials for Electronics applications, Textile nanotechnology and smart fibers of energy harvesting Self-power generation for physiological sensors Nanoelectronics and Nanosensors.</p>

Research Scholars	Topic of Research
Ajay Shankar	Development of and Energy Management System Using Low Voltage DC Nano grid
Akhila K	Power Electronics Control of Electric Vehicle
Burra Venkata Srikanth	Signal and Image Processing
Chandrasekar L	Explorations of 2D Material Based Nono Electronics Devices to Support Ballistic Transport
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
Gadamsetty. Muralidhar	Switched capacitor circuit Simulators development
K Sridharan	Grid-Integration of Energy Systems

Research Scholars	Topic of Research
Kirubakaran S	Wireless Communication
Manikandan S	Control System, Time delay electrical systems
Moupuri Satish Kumar Reddy	Solid state batteries
Mukkapati Ashok Bhupathi Kumar	Analysis and Development of High Voltage Gain Quadratic Boost Converter with Reduced Voltage Stress
Pallepogu Prasanna Kumar	Design of High Gain, Area Efficient Structures for Millimeter wave Applications
Parthipan C G	Design, Development and Control of Unmanned Aerial Vehicles with Multilink Manipulators
R. Adeline Mellita	Design, Analysis and Implementation of Printed Periodic Structures for Microwave Applications
S. Sudharson	Biomedical Image Processing
Santhosh Kumar M	Resource Allocation in Cognitive Radio Networks
Simhadri Ravishankar	Communications
Skandha Deepsita	Approximate Computing Hardware Architectures for Real Time Image/Video Processing
Srinivasulu Jogi	Analysis and Design of Discrete-Time State Delayed Systems
Turimerla Pratap	Image Processing, Machine Learning
Vanamadi Ravi	Acoustic Signal Enhancement in Hearing AIDS & Mobile Audio Devices
Vijay Prabhu J	Development of High Step up DC-DC converter for Renewable Energy Applications
Keerthana K	Wireless Communication
Rajasekaran M	A Family of Advanced Adaptive Filtering Algorithms for Improved Hybrid Active Noise Cancellation
Rameez Raja Shaik	Modeling and Simulation of Nanoscale devices
Reji G	Acoustic Signal Processing
Subham Kumar Jalan	Grid-tied Solar PV Integration
Anisha Natarajan	Home Energy Management using IoT
Barkavi K	DC-DC Converters for Electric Vehicle
Chandrasekaran R	Electric Vehicle, Power Electronics and Control
Janani C	PV array modelling and MPPT Techniques
Johnson Antony A	Energy Management System for Electric Vehicle
Marimuthu M	Energy Storage Devices
Sivagami K	Design and Development of Wireless Charging Station for E-Vehicles

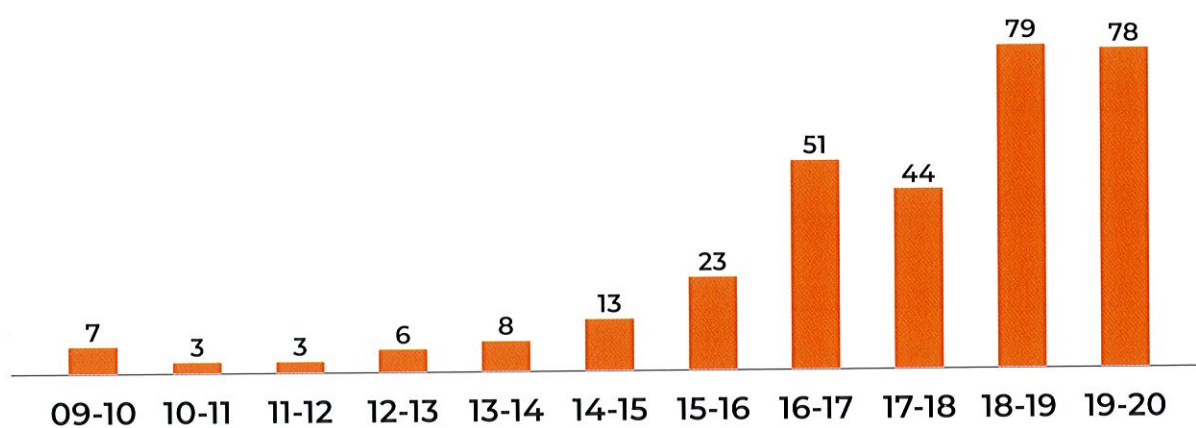
Practical Courses

- 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
- Fibre optics & communication
- Microelectro mechanical
- Detection & estimation theory
- Advanced digital signal processing
- Digital system engineers
- VLSI Technology
- Advanced Communication Networks

Publications

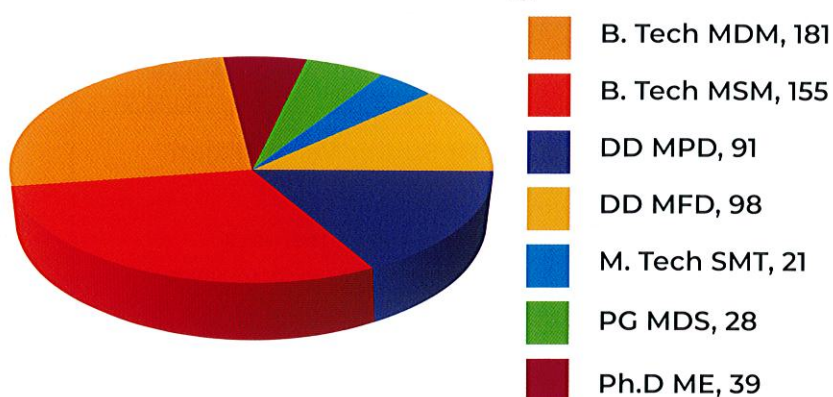


3.3 Mechanical Engineering (ME)

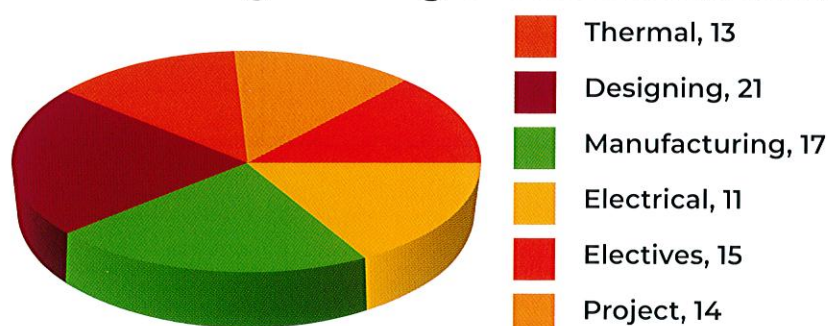
Equipped with well-structured instruction and learning resources and research facilities, the institute aims to disseminate education in the inter-disciplinary areas of mechanical design and manufacturing engineering. The UG, Dual Degree, PG, PhD programs offered by the Mechanical Engineering stream 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.

B. Tech (4 Years)	<ul style="list-style-type: none"> • Mechanical Engineering • Smart Manufacturing
Dual Degree (5 Years)	<ul style="list-style-type: none"> • B. Tech. Mechanical Engineering +M. Tech. in Mechanical Engineering (Spl : Product Design) • B. Tech. Mechanical Engineering +M. Tech. in Mechanical Engineering (Spl : Advanced Manufacturing)
M Des (2 Years)	<ul style="list-style-type: none"> • M. Tech. Mechanical Engineering (Spl : Smart Manufacturing)
PhD	<ul style="list-style-type: none"> • Mechanical Engineering

Student Strength-ME



Core Engineering Credit Distribution-ME



Faculty

	<p>Prof Venkateshan S P PhD (IISc)</p> <p>Research Interests : Space Heat Transfer, Inverse Methods in Heat Transfer, Cooling of Electronic Components, Instrumentation.</p>	 <p>Prof Narayanan S PhD(IIT Kanpur)</p> <p>Research Interests : Vibrations and Acoustics, Dynamical Systems, Smart Structures.</p>
	<p>Dr Karthic Narayanan PhD (NTU, Singapore)</p> <p>Research Interests : Manufacturing Process Mechanical behavior of nano materials Solar PV stress analysis.</p>	 <p>Dr Pandithevan P PhD (IIT Guwahati)</p> <p>Research Interests : Medical Image based Reconstruction, Bio-mimetic Design & Tissue Engineering.</p>
	<p>Dr Jayabal K PhD (IIT Madras)</p> <p>Research Interests : Computational Mechanics, Finite Element Methods, Material Modelling.</p>	 <p>Dr Raja B PhD (Anna University, Chennai)</p> <p>Research Interests : Nanofluids, Enhanced Heat Transfer, Electronic Cooling Systems.</p>
	<p>Dr Jayavel S PhD (IIT Madras)</p> <p>Research Interests : Computational Fluid Dynamics, Fluid and Thermal Sciences, Heat Transfer.</p>	 <p>Dr Senthilkumaran K PhD (IIT Delhi)</p> <p>Research Interests : Additive Manufg, Sustainable & Smart Manufg, Design Manufg Integration.</p>
	<p>Dr Shahul Hamid Khan PhD (NIT Trichy)</p> <p>Research Interests : Multi Objective Optimisation, Supply Chain Management, Metaheuristics.</p>	 <p>Dr Sudhir Varadarajan PhD (IIT Madras)</p> <p>Research Interests : Complex responsive processes in design and innovation, Product/ service innovation, Conceptual design.</p>
	<p>Dr Sreekumar M PhD (IIT Madras)</p> <p>Research Interests : Robotics & Automation Serial, Parallel & Compliant Mechanisms, Smart Materials Manufacturing & IOT.</p>	 <p>Dr Venkata Timmaraju Mallina Ph.D (IIT Madras)</p> <p>Research Interests : Modeling of Materials Behavior, Fatigue and Fracture, Design with Polymers and Composites.</p>

	<p>Dr Shubhankar Chakraborty PhD (IIT Kharagpur)</p> <p>Research Interests : Heat Transfer, Multiphase flow, Multisensor measurement and data fusion, image processing.</p>		<p>Dr Siva Prasad AVS PhD (IIT Kanpur)</p> <p>Research Interests : Damage Mechanics Dynamic Behaviour of Materials Meshless Methods.</p>
	<p>Dr Gowthaman Swaminathan PhD (North Carolina A&T State University)</p> <p>Research Interests : Polymers and composites, Nanomaterials, High temperature foams, Experimental mechanics.</p>		<p>Dr P Kalpana PhD (IIT Madras)</p> <p>Research Interests : Operations Research, Supply Chain Coordination, Logistics and Distribution Systems Management, Transport Network Optimization, Scheduling, Forecasting, Inventory Management, Game theory.</p>
	<p>Dr Raguraman Munusamy PhD (IISc)</p> <p>Research Interests : Multi-Scale Modelling, Advanced Numerical Simulations, Design for Extreme Scenarios (Blast, High velocity projectile impacts, Bird Strike & Fan blade off), Design for X - Tolerance stack-up analysis of precision assemblies, Additive Manufacturing, Systems Engineering, Robust Design, Project Management.</p>		<p>Dr Karthick S PhD (IIT Madras)</p> <p>Research Interests : Microscale flows, Bio-Microfluidics, MEMS</p>
	<p>Dr Chetan PhD (IIT Delhi)</p> <p>Research Interests : Sustainable Machining, Machining of Superalloys, Modeling of Machining processes.</p>		<p>Dr Avinash Kumar PhD (IIT Delhi)</p> <p>Research Interests : Fabrication technologies, Fluid flow and heat transfer at Micro/Nano scale, MEMS and Bio-devices.</p>
	<p>Dr N Rino Nelson PhD (IIT Madras)</p> <p>Research Interests : Machine Design.</p>		

Research Scholars	Topic of Research
Anandakumar P	Polymer Composites
Anton Kumanan S A	
Badri Narayanan K B	A Multi-Agent Approach with Swarm Intelligence in Smart Manufacturing
Deiva Ganesh A	Supply Chain Management
Dileep R Sekhar	Studies on ZnO Nano Wires Integrated Composite Materials
Gopi G	Additive Manufacturing
Hemnath A K	Experimental analysis on the properties of the products made from metal deposition technique
Jagatheeshkumar S	Simulation and Prediction of Residual Stresses in the Additive Manufactured Metallic Parts Suitable for Aerospace Applications
Jayakrishnan J	Additive Manufacturing
Kalimuthu T	Data Analytics and Supply Chain Management
Kartheesan S	Tribology
Madhanagopal M	Additive Manufacturing
Manikandanbabu K	COMPOSITE MATERIALS
Mathusuthanan M	Thermo-mechanical Investigation of Solar PV
Murugesan M	Additive Manufacturing of Electronics Circuits
Pallavi Paturu	Product Service Systems
Parthiban P	Fatigue behavior of multiscale thermoplastic composites
Pavan Kumar A	Design and Development of Collision Energy Absorption System
Penumuru Durga Prasad	Interdisciplinary Cyber-Physical Systems with Swarm Intelligence and IoT in Smart Manufacturing
Pothi Raj R	Electric Vehicle Battery Cooling System
Prakash A	THEORETICAL AND APPLIED FRACTURE MECHANICS
Prasanna Venkadesan V	Total Hip Arthroplasty-Surgery
Raj Kumar G	Robot Assisted Digital Reconstruction
Rajalingam A	Heat Transfer Enhancement in Micro-Channel Heat Sink
Rajasekar K	Heat and Mass Transfer
Rajendra Kumar R T P	Surface Engineering and Finite element analysis

Research Scholars	Topic of Research
Ramarajan J	CFD, Heat Transfer
Ravindranaidu Ganta	Continuum Damage Mechanics of High Temperature Materials
Reginal Elvis P	Additive Manufacturing
Saravanan M K	Constitutive Modelling of Polyurea for High Strain Rate Applications
Satheeshkumar V.	Multi-robot Path Planning in Constrained Environment
Sathish Kumar D	Heat Transfer, CFD
Siddharth Ramachandran	Solar Thermal Applications
Sivakumar K	Development of composite material for wear applications
Solaiprakash V	A Prognostic Approach for Structure-Property Correlation of an Aero Engine Blade Repair and Experimental Validation
Srinivasagan M	Design and Development of Laser Cut Stent Patterns for Enhanced Performance and Life
Varun Kumar	Microfluidics
Vivek Kumar Chouhan	Supply Chain Management
Vrijesh Kunwar	Natural Circulation Loop

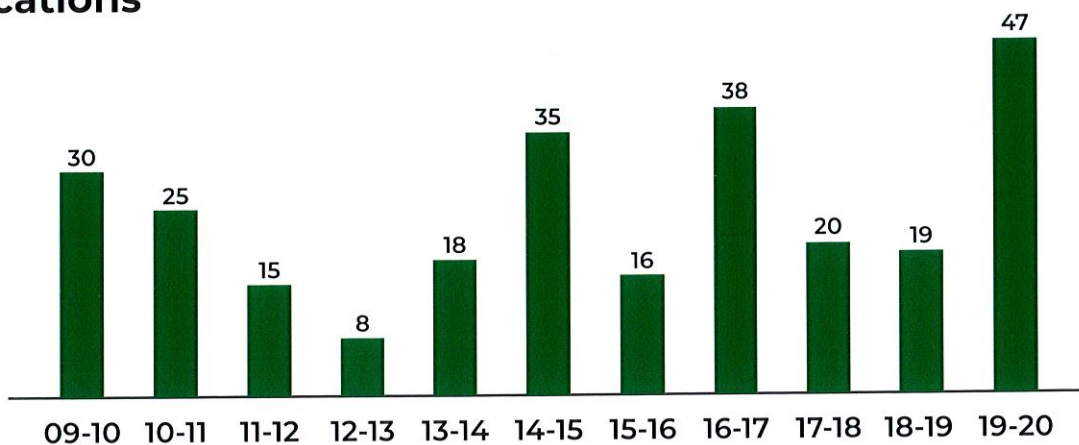
Core Courses

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

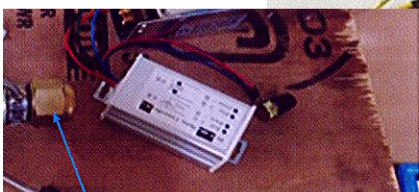
Elective Courses

- Electrochemical energy conversion & shortage
- Advanced mechanics of materials
- CNC technology and programming
- Special manufacturing process
- Computational few dynamics
- Processing of polymers & composites
- Design optimization
- Inverse problem in mechanical

Publications



Products Developed

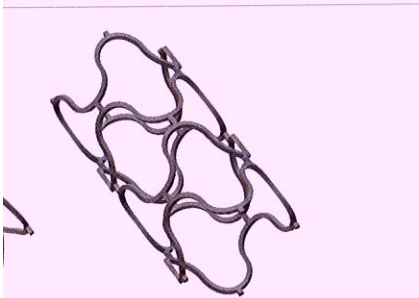


Die

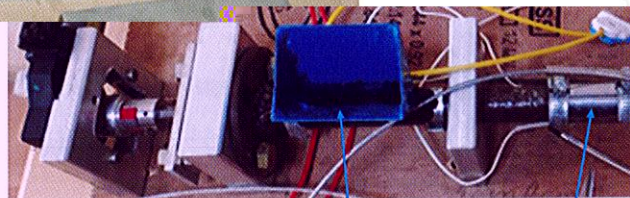
Patterns for 3D Printing



Thermo-Electric Based Portable Refrigerator



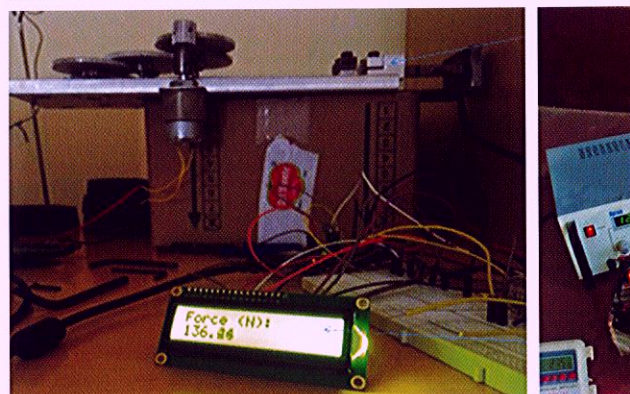
Patterns



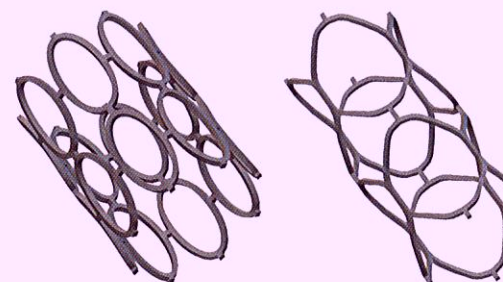
Hopper

Extruder

Low Cost Extruder for Plastic Filament



Micro Tensile Tester



New Stent Designs and

3.4 Basic Sciences & Humanities (Maths & Physics)

Faculty

	<p>Dr Shalu M A PhD (IIT Madras)</p> <p>Research Interests : Graph Theory, Algorithms, Metabolic Networks.</p>		<p>Dr Naveen Kumar PhD (IIT Delhi)</p> <p>Research Interests : Fiber Optics, Solar Thermal Energy Applications, Renewable Energy Applications.</p>
	<p>Dr Vijayakumar S PhD (IIT Madras)</p> <p>Research Interests : Algorithms, Combinatorial Optimization, Computational Complexity.</p>		<p>Dr Tapas Sil PhD (VisvaBharati Univ)</p> <p>Research Interests : Giant Resonances of Nuclei, Relativistic Mean Field Theory in Nuclear Structure, Properties of Hot Nuclei.</p>
	<p>Dr Nachiketa Mishra PhD (IIT Madras)</p> <p>Research Interests : PDE, Numerical Analysis, Numerical Linear Algebra, Theory of Homogenization, Differential Algebraic Equations.</p>		<p>Dr Nil Kamal Hazra PhD (IISER Kolkata)</p> <p>Research Interests : Reliability Theory, Applied Probability.</p>
	<p>Dr Anushree P Khandale PhD (RTM Nagpur University)</p> <p>Research Interests : Materials for Electrochemical Device Applications (Solid Oxide Fuel cells, Alkaline Fuel Cells, Sensors etc.) Electrochemical Impedance Spectroscopy.</p>		<p>Dr Jayachandra Bingi PhD (IIT Madras)</p> <p>Research Interests : Photonics for Defence and medical applications (Photonic devices and sensors) Bio-inspired research and development.</p>
	<p>Dr Vivek Kumar PhD (IIT Delhi)</p> <p>Research Interests : Photovoltaics, Semiconductor Nanostructures, Raman & Photoluminescence Spectroscopy; Electron transfer properties of metalloproteins.</p>		<p>Dr Y Ashok Kumar Reddy PhD (Sri Venkateswara University)</p> <p>Research Interests : Thin film coatings technology, Materials Science.</p>
	<p>Dr M Subramani PhD (CMI)</p> <p>Research Interests : Algebraic and Analytic number theory, Mathematical Cryptography</p>		

Research Scholars	Topic of Research
Cyriac Antony	Graph Theory and Algorithms
Harisankar P C	Nuclear Equation of States and Symmetry Energy
Hemalatha V	Photonics Based Water Purification
Joyashree Mondal	Algorithms Design
Madhab Barman	Numerical Analysis to Differential Equation
N N Subhashree Ojha	Fiber Optic Interferometric Sensor
Pritam Pradeep Shetty	Phase Structured Coherent Light Beams for Sensing Applications
Sagar Zephania C F	Quantum Thermodynamics
Snigdhashree Nayak	Numerical Analysis to Partial Differential Equations
T Anusuya	Investigation on Graphene Quantum Dots for Sensing and Energy Applications
Divya D	Algorithms Design
Kirubakaran V K	Graph Theory
Penna Venkata Karthik Yadav	Metal oxide thin films for photodetector application
Sridhar T	Number Theory
Vinoth Kumar R	Solid Oxide Fuel Cell

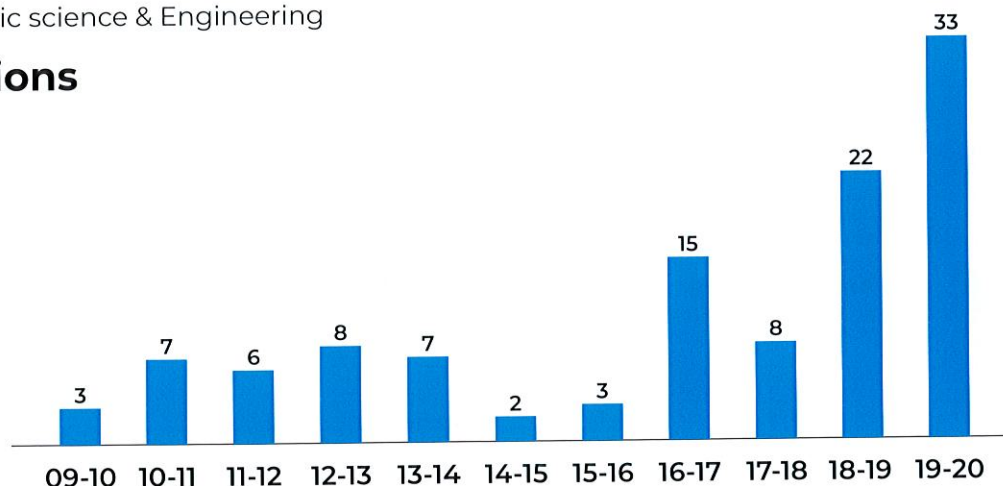
Core Courses

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

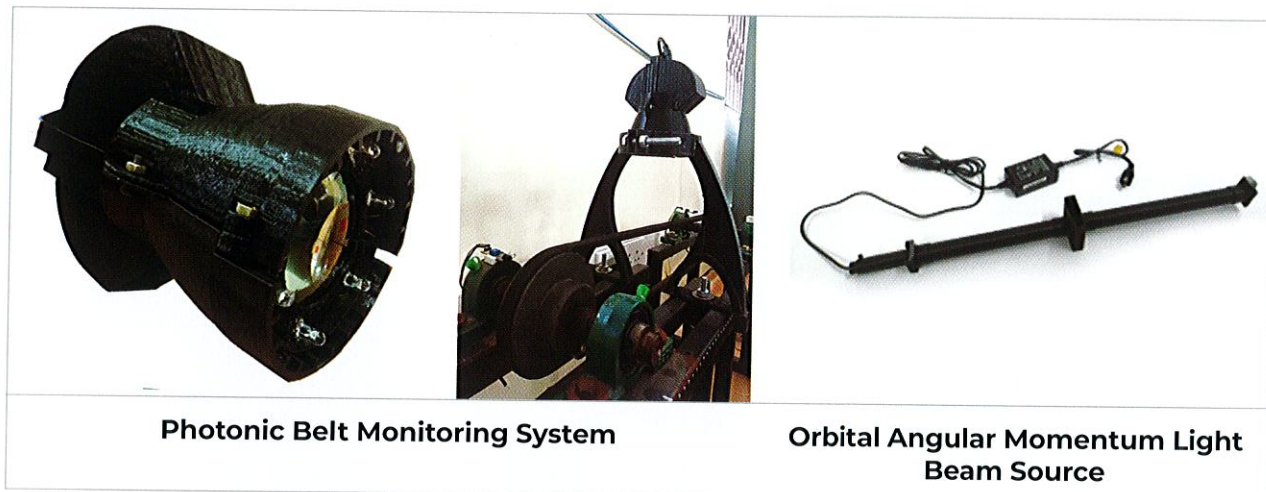
Elective Courses

- Bio-Inspired design
- Material Fabrication & characterization techniques
- Solid State Devices
- Photo voltaic science & Engineering

Publications



Elective Courses



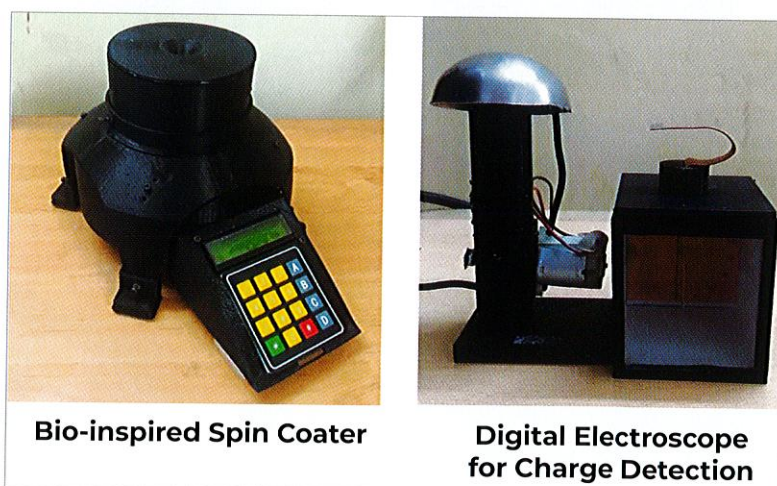
Photonic Belt Monitoring System

Orbital Angular Momentum Light Beam Source



Portable Photon Counter

Milk Fat and Adulteration Detector

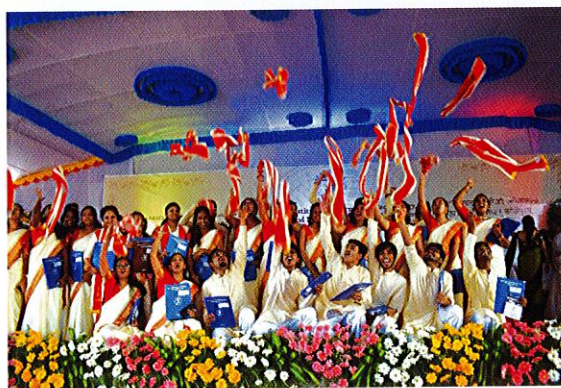
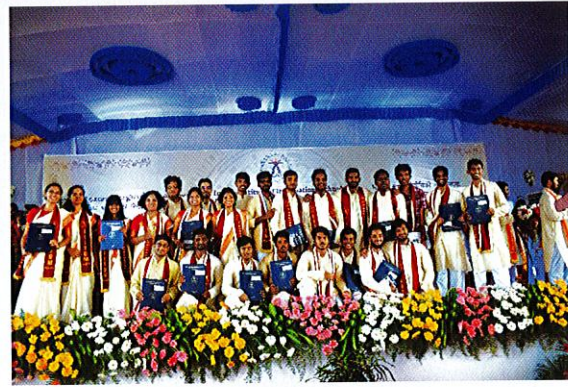


Bio-inspired Spin Coater

Digital Electroscope for Charge Detection

04 7th Convocation

The 7th convocation of the institute was held on 13th July, 2019 and the event was graced by Dr. Koppillil Radhakrishnan, Chairman, Board of Governors, IIT Kanpur, and former chairman, Indian Space Research Organization (ISRO) as Chief Guest. During the event, a total of 288 students, including 13 PhD scholars received their degrees.



Summary of Gradaunds

Sl. No.	Degree	Discipline	No. of Students
01	B. Tech	COE	40
02		EDM	38
03		MDM	40
04	DD	CED	45
05		ESD	17
06		EVD	18
07		MFD	17
08		MPD	19
09	M. Tech	CDS	8
10		EDS	9
11		MDS	14
12		SMT	10
13	PhD	CE	5
14		EE / EC	3
15		ME	3
16		MAT	1
17		PHY	1
Total			288

Medals and Prizes

ACADEMIC PROFICIENCY		
Roll No.	Student Name	Prize
EVD14I009	K. DHEEPIKA	Institute Gold Medal for the All Rounder of the Graduating Batch
MDM15B026	SURYA PRAKASH T K	Institute Gold Medal for the Best Graduate across B Tech
CED14I043	SHIVA GANESH M	Institute Gold Medal for the Best Post Graduate across Dual Degree
CDS17M007	SHWETA KUMARI	Institute Gold Medal for the Best Post Graduate across M Tech and M Des
COE15B003	PRANAVE S	Institute Medal for the Best Graduate in B Tech, Dept. of CSE
EDM15B039	SADHANA S	Institute Medal for the Best Graduate in B Tech, Dept. of ECE
MDM15B026	SURYA PRAKASH T K	Institute Medal for the Best Graduate in B Tech, Dept. of ME

ACADEMIC PROFICIENCY		
Roll No.	Student Name	Prize
CED14I043	SHIVA GANESH M	Institute Medal for the Best Dual Degree Graduate from CED, Dept. of CSE
ESD14I013	SULTHANA SHAMS	Institute Medal for the Best Dual Degree Graduate from ESD, Dept. of ECE
EVD14I021	NAKKA LAXMI	Institute Medal for the Best Dual Degree Graduate from EVD, Dept. of ECE
MFD14I005	K BHAVANA	Institute Medal for the Best Dual Degree Graduate from MFD, Dept. of ME
MPD14I021	ATREYEE ACHARYA	Institute Medal for the Best Dual Degree Graduate from MPD, Dept. of ME
CDS17M007	SHWETA KUMARI	Institute Medal for the Best Post Graduate from CDS, Dept. of ECE
EDS17M008	NAYANA FATHIMA. I.S	Institute Medal for the Best Post Graduate from EDS, Dept. of ECE
MDS17M003	ARSHDEEP SINGH	Institute Medal for the Best Post Graduate from MDS, Dept. of ME
SMT17M002	GADHIRAJU BALAJI	Institute Medal for the Best Post Graduate from SMT, Dept. of ME

BEST PROJECTS AWARD			
Roll No.	Student Name	Prize	Project Title
EDM15B035	PHYRDHA ANUSHA	Institute Gold Medal for the Best Interdisciplinary Project across B Tech	Milk Fat Detection Device
MFD14I005	K BHAVANA	Institute Gold Medal for the Best Interdisciplinary Project across Dual Degree	A Bio-Inspired Patch to Harvest Waste Heat into Electricity and Help in Cooling of Vehicles
COE15B042	R SOWBARNIKA	Institute Medal for the Best Project in B Tech, Dept. of CSE	Karam-Intelligent Application for Online Course Moderation
EDM15B039	SADHANA S	Institute Medal for the Best Project in B Tech, Dept. of ECE	Reconfigurable Packet Classification Engine
MDM15B009	GOLI BALA SAI VENKATA YASWANTH	Institute Medal for the Best Project in B Tech, Dept. of ME	Design and Prototyping of Stair Climbing Wheel Chair
CED14I044	NAVYA BORRA	Institute Medal for the Best Project in Dual Degree from CED, Dept. of CSE	Application of Deep Features for Glaucoma Screening using Retinal Fundus Images



BEST PROJECTS AWARD			
Roll No.	Student Name	Prize	Project Title
ESD14I013	SULTHANA SHAMS	Institute Medal for the Best Project in Dual Degree from ESD, Dept. of ECE	Algorithms for Channel Sensing and Access in Cognitive Radio Networks
EVD14I021	NAKKA LAXMI	Institute Medal for the Best Project in Dual Degree from EVD, Dept. of ECE	Proposal and Analysis of New Approaches on InGaN Based PV Cells
MFD14I002	DARA SASI KUMAR	Institute Medal for the Best Project in Dual Degree from MFD, Dept. of ME	Endothermic Cooling Module for Emergency Electronic Cooling
MPD14I018	ARJUN ROHILLA	Institute Medal for the Best Project in Dual Degree from MPD, Dept. of ME	User-Centric Mechanical Design of Electric Bicycle
CDS17M004	SOWMYA K M	Institute Medal for the Best Project in M Des from CDS, Dept. of ECE	Packet Scheduling for Wireless Mesh Networks
CDS17M007	SHWETA KUMARI	Institute Medal for the Best Project in M Des from CDS, Dept. of ECE	Distributed Detection in Cognitive Radio Networks
EDS17M010	RAMEEZ RAJA SHAIK	Institute Medal for the Best Project in M Des from EDS, Dept. of ECE	Investigation on Performance and Irradiation effects on Electrically-Modified FD-SOI
MDS17M005	VARUN GUPTA	Institute Medal for the Best Project in M Des from MDS, Dept. of ME	Design of Rotor for Savonius Type Vertical Axis Wind Turbine
SMT17M002	GADHIRAJU BALAJI	Institute Medal for the Best Project in M Tech from SMT, Dept. of ME	Material Modelling and Characterization of Aloe Vera Fibre by Nano indentation Technique

HONOURS WITH DISTINCTION		
Roll No.	Student Name	Degree
COE15B003	PRANAVE S	Bachelor of Technology (Honours) in Computer Engineering with Distinction
COE15B039	SHREYA SURESH	
EDM15B039	SADHANA S	Bachelor of Technology (Honours) in Electronics and Communication Engineering with Specialization in Design and Manufacturing with Distinction
MDM15B003	S. NITIN	Bachelor of Technology (Honours) in Mechanical Engineering with Specialization in Design and Manufacturing with Distinction
MDM15B026	SURYA PRAKASH T K	
MDM15B028	THOUTI SRAVAN KUMAR	

HONOURS WITH DISTINCTION		
Roll No.	Student Name	Degree
CED14I043	SHIVA GANESH M	Bachelor of Technology (Honours) and Master of Technology in Computer Engineering with Distinction
ESD14I010	SACHIN P R	Bachelor of Technology (Honours) in Electronics and Communication Engineering with Specialization in Design and Manufacturing and Master of Technology in Signal Processing and Communication Systems Design with Distinction
ESD14I013	SULTHANA SHAMS	
EVD14I021	NAKKA LAXMI	Bachelor of Technology (Honors) in Electronics and Communication Engineering with Specialization in Design and Manufacturing and Master of Technology in VLSI and Electronic Systems Design with Distinction

DISTINCTION		
Roll No.	Student Name	Degree
CDS17M001	NIKKY SABU	Master of Design in Communication Systems with Distinction
CDS17M004	SOWMYA K M	
CDS17M007	SHWETA KUMARI	
CDS17M008	GUNJAN KUMARI	
EDS17M002	VANI SUDHAKAR	Master of Design in Electronic Systems with Distinction
EDS17M008	NAYANA FATHIMA. I.S	
MDS17M001	PRITHVI SHUKLA	Master of Design in Mechanical Systems with Distinction
MDS17M003	ARSHDEEP SINGH	
MDS17M005	VARUN GUPTA	
MDS17M006	VRIJESH KUNWAR	
MDS17M011	JANNATUL BASHAR	
SMT17M002	GADHIRAJU BALAJI	Master of Technology in Smart Manufacturing with Distinction
SMT17M003	SATYA CHAITHANYA DUGGSETTY	
SMT17M010	PATEL ZEEL BHARATKUMAR	
SMT17M011	SHREESHAIL S TIGADIKAR	
CED14I045	S VIJAYA RAGHAVAN	Bachelor of Technology and Master of Technology in Computer Engineering with Distinction

DISTINCTION		
Roll No.	Student Name	Degree
MFD14I005	K BHAVANA	Bachelor of Technology in Mechanical Engineering with Specialization in Design and Manufacturing and Master of Technology in Advanced Manufacturing with Distinction
MPD14I021	ATREYEE ACHARYA	Bachelor of Technology in Mechanical Engineering with Specialization in Design and Manufacturing and Master of Technology in Product Design with Distinction
COE15B008	P KOWSIKA	Bachelor of Technology in Computer Engineering with Distinction
COE15B013	ARZA SRI ESHITA	
COE15B017	K V SHIV VIDHYUT	
COE15B027	AISHWARYA R	
COE15B042	R SOWBARNIKA	
EDM15B012	PHARANDE ADITYA RAJENDRA	Bachelor of Technology in Electronics and Communication Engineering with Specialization in Design and Manufacturing with Distinction
EDM15B027	BANDE PRASANTHI	Bachelor of Technology in Mechanical Engineering with Specialization in Design and Manufacturing with Distinction
MDM15B027	KAIPA HARICHANDANA	
MDM15B030	MANDAPAKA LALITHA NAGA ANEESHA	

05 Institute Library

The library is fully equipped with excellent collection of resources in the form of books, periodicals (Print magazine & Journals), e-books, e-journals, CD ROMs, leading national newspapers and NPTEL course video contents related to Engineering, technology, humanities, and management are committed to support the institute's mission. Our Library is one among the few in the world to have Kindle, an electronic book reader which contains a plenty of classical literature and technical books for the use of students. Also, the Library has the subscription of Anti-plagiarism software (Turnitin) which helps to students learn how to avoid plagiarism and improve their academic writing. The Library is using an automated Library and Information Management software KOHA. All the registered users (Students, Faculty members, Staff) can access the institute Library from anywhere within the campus through LAN/Wi-Fi and also outside the campus through their personal network.

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.

Resources	Total Numbers	Newly Added (Apr' 19 - Mar' 20)
Books (Text & References)	6229	683
Journals/Magazines (print)	37	01
News Papers	04	-
CD-ROM/DVDs	753	71
Theses and Dissertation	533	9
E-Books	22	-
E-Journals (IEEE, ACM, ASME etc.)	3129	-
Gratis	559	125

ONLINE RESOURCES THROUGH E-SHODH SINDHU CONSORTIUM

We are one of the members of e-Shodh Sindhu consortium and we have access to the following three e-Journal resources. It facilitates unlimited users with unlimited download access. The total number of e-Journals increased to 2911. The details of the resources are listed below.

Resources	Total Number of Journals
ACM Digital Library	1153
ASME Journals Online	29
Springer Link + Nature Journal	1729

ONLINE RESOURCES SUBSCRIPTION

IIITDM library subscribed IEEE IEL Online package with unlimited users' access apart from the resources available through e-ShodhSindhu consortium. It contains 218 Journals & Magazines, 1725 conference titles and more than 3900 approved and published IEEE standards. Also, we have a collection of prescribed text e-books published by Pearson publishers.

LIBRARY AUTOMATION

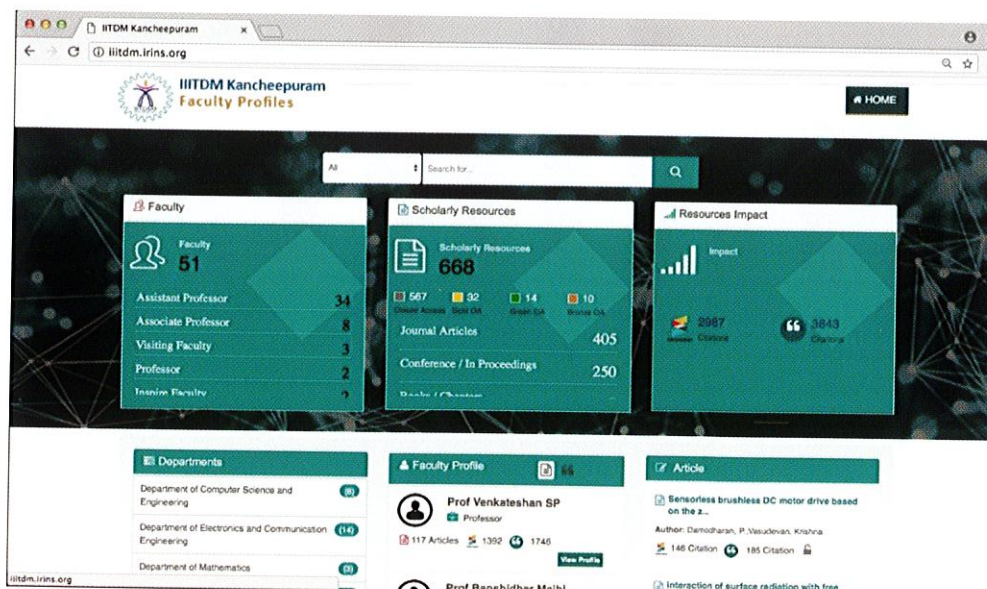
We have procured a new computer server for library with the latest configuration of Intel Xeon Processor, 128 GB RAM and 32 TB of storage. The server has been upgraded to the latest version of Koha 18.11.04 – Library automation software with Linux Ubuntu 18.04 LTS. It contains all library book details, faculty and student membership details, circulation details etc. It is also connected with the Library Intranet (web portal of library) and WebOPAC.

SMART MANUFACTURING E-MAGAZINE SUBSCRIPTION

Our institute is offering both B.Tech and M.Tech programs in smart manufacturing. Considering this, we have subscribed Smart Manufacturing e-Magazine for the benefit of the student's community.

IRINS (INDIAN RESEARCH INFORMATION NETWORK SYSTEM) PORTAL

We have created our own IRINS portal with the help of INFLIBNET centre. It is web-based Research Information Management (RIM) service developed by the Information and Library Network (INFLIBNET) Centre in collaboration with the Central University of Punjab. The portal facilitates academic, R&D organizations and faculty members, scientists to collect, curate and showcase the scholarly communication activities and provide an opportunity to create the scholarly network. Our institute web portal can be accessed through <http://iiitdm.irins.org/>



URKUND ANTI-PLAGIARISM SOFTWARE

Based on the recommendation of a Sub-Committee, National Steering Committee (NSC) of eShodh Sindhu., the MHRD, Govt. of India has initiated a programme "Shodh Suddhi" which provides access to Plagiarism Detection Software (PDS) to all universities/Institutions in India. Under this initiative, URKUND a Web Based Plagiarism Detection Software system, is being provided to all Users of universities/Intuitions in the country. Institute also joined this program and got access to URKUND software. Also, we have arranged a training session for all the research scholars who are the main users of this software.

BOOK FAIR 2019

In order to encourage students to purchase text and other books for their personal and professional development, a Book exhibition was arranged during 5 & 6th of August, 2019.



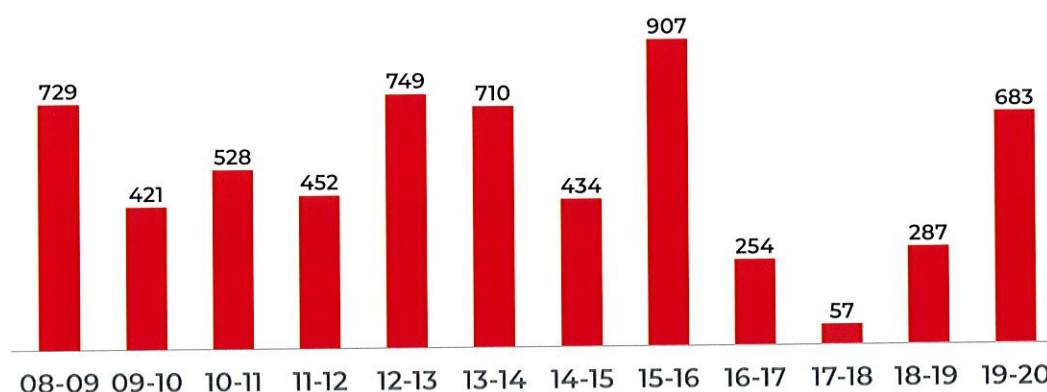
EXTENDED WORKING HOURS

The working hour of the library is 09.00 AM to 10.00 PM in weekdays and 09.00 AM to 05.30 PM in Saturdays. Also, functioning of library is extended on Sundays during Quiz and other Examinations.

NEWLY RECRUITED LIBRARY STAFF MEMBERS

Ms. Sindhu and Mr. Sanmati have been recruited as Junior Technician (Library) this year.

Number of Books Purchased in Library



06 Research and Innovation

Never stop fighting until you arrive at your destined place - that is, the unique you. Have an aim in life, continuously acquire knowledge, work hard, and have perseverance to realize the great life.

- Dr A. P. J. Abdul Kalam

6.1 PhD Scholars @ IITDM Kancheepuram

PhD Scholars who have Defended their Thesis as on 31.03.2020					
No.	Roll No.	Scholar	Date of Defense	Supervisor	Title of the Thesis
01	EDM09D001	Madhevan B	06/02/2015	Dr. Sreekumar M	Implementation of Role Assignment in Multi Robots using Leader Follower Approach
02	PHY10D001	Ramachandran K	23/12/2015	Dr. Naveen Kumar	Special Tailoring through Concatenated All-Fiber Interferometers for Communication and Sensing Applications
03	EDM10D002	Rajin M. Linus	20/01/2016	Dr. Damodharan P	Study of Maximum Power Point Tracking Algorithms for Permanent Magnet Synchronous Generator based Wind Energy Conversion System
04	MAT10D001	Devi Yamini S	23/06/2016	Dr. Shalu M.A	The Maximum Independent Set Problem and its Counting Variant
05	COE12D001	Mohamed Asan Basiri M	08/07/2016	Dr. Noor Mahammad S	High Performance VLSI Architectures for Discrete Transformations
06	EDM12D001	Abdul Majeed K. K	08/05/2017	Dr. Binsu J. Kailath	Composite PFD based Low Power Low Noise Fast Locking PLL with Dynamic Loop Bandwidth
07	EDM13D001	Phani Kumar K. V	13/07/2017	Dr. Karthikeyan S.S	Design, Analysis, and Implementation of RF/ Microwave Planar Passive Deives for Wireless Applications

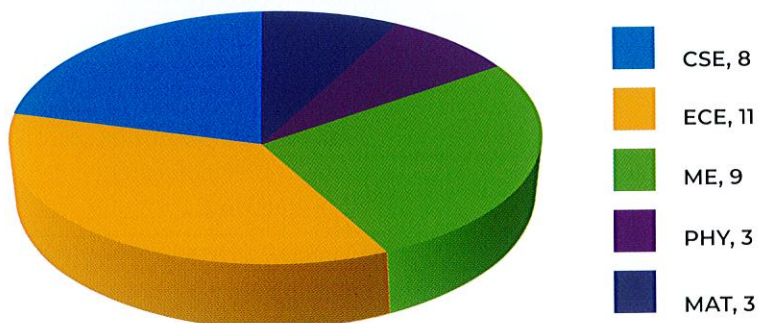
PhD Scholars who have Defended their Thesis as on 31.03.2020

No.	Roll No.	Scholar	Date of Defense	Supervisor	Title of the Thesis
08	MDM12D001	Senthil Kumar R	13/07/2017	Dr. Jayavel S	Numerical and Experimental Study of Heat Transfer Enhancement in Electronic Systems
09	MAT11D001	Sandhya T. P	27/07/2017	Dr. Shalu M. A Dr. Vijayakumar S	Graph Coloring and its Variants
10	COE10D001	Kanjar De	01/08/2017	Dr. Masilamani V	Algorithms for assessing Image Quality without Reference
11	EDM09D002	Papanasam E	04/08/2017	Dr. Binsu J. Kailath	High-k/SiC MIS Capacitors-Fabrication, Characterization and Extraction of Gate Leakage Current Mechanisms
12	MDM09D001	Usha S	16/08/2017	Dr. Sreekumar M	Investigations on the Effects of Surface Topography in the Actuation Performance of Stacked and Rolled Deep Actuator
13	EDM10D001	Arun K	27/11/2017	Dr. Selvajothi K	Variable Sampling Period Based Frequency Locked Loops for Single Phase Grid Synchronization
14	MDM13D002	Deepakkumar R	05/04/2018	Dr. Jayavel S	Computational Study of Vortex Shedding Control for Flow Past Circular Cylinder
15	EDM13D002	Maheswaran P	05/07/2018	Dr. M. D. Selvaraj	Investigations on The Performance of Spatial Modulation Systems
16	COE13D002	Ayesha S K	16/07/2018	Dr. V. Masilamani	Robust Multiplicative Watermarking Schemes for Digital Image Security
17	COE14D001	Manikandan V M	27/07/2018	Dr. V. Masilamani	Data Hiding Methods for Digital Image Security
18	COE14D002	Renjith P	03/08/2018	Dr. Sadagopan N	On Spanning Trees - Constraints, Variants and Generalizations (Theory, Algorithm and Dichotomy)
19	MDM13D001	S Santhosh	09/10/2018	Dr. Shahul Hameed Khan	Design and Optimization of Closed Loop Supply Chain
20	EDM15D003	Rusan Kumar Barik	17/10/2018	Dr. Karthikeyan S.S	Design and Implementation of Wideband and Multi-Band RF/Microwave Components

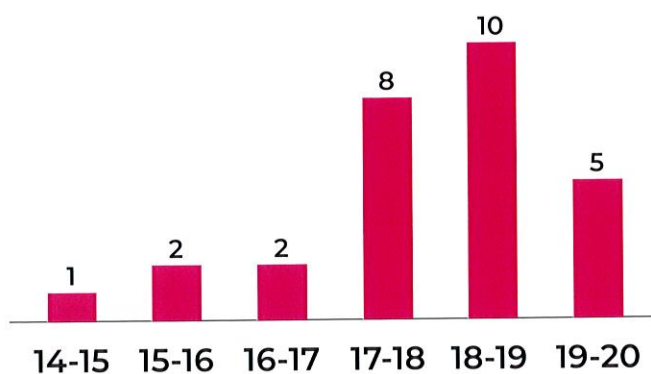
PhD Scholars who have Defended their Thesis as on 31.03.2020

No.	Roll No.	Scholar	Date of Defense	Supervisor	Title of the Thesis
21	COE13D003	Oswald C	14/11/2018	Dr. B. Sivaselvan	Efficient Algorithms for Text and Image Compression Based on Knowledge Engineering
22	PHY12D001	Manimegalai K	25/03/2019	Dr. Tapas Sil	Dynamics of the anharmonic oscillators
23	COE13D004	Shanmugakumar.M	29/03/2019	Dr. Noor Mahammad S	On the Development of Novel High Performance Packet Classification Architectures
24	MDM15D001	Sathish Kumar R	28/05/2019	Dr. Jayabal K	Micromechanical Modelling of Magnetostrictive Materials using Polygonal Finite Elements
25	EDM14D002	Chandu D S	07/06/2019	Dr. Karthikeyan S.S	Investigations and Implementations of Novel Methods in the Design of Circularly Polarized Printed Antennas
26	EDM14D001	A Ananth	21/06/2019	Dr. M D Selvaraj	Error Analysis of Space Shift Keying Systems
27	COE13D001	S Veeramani	04/07/2019	Dr. Noor Mahammad S	Novel High Speed IP Look Up Techniques
28	MAT12D001	Dhanalakshmi S	04/07/2019	Dr N Sadagopan	Subset Problems in Higher Chordality and 2K2-Free Graphs Structural and Algorithmic View
29	MDM14D002	Srinivasan G	05/07/2019	Dr. B Raja	An investigation of heat and mass transfer characteristics of spin freezing and drying process
30	MDM11D003	Mr C Gurunathan	04/12/2019	Prof R Gnanamoorthy Dr S Jayavel	Thermo-Tribological Characteristics Of Particle And Network Reinforced Polymer Composites
31	MDM13D003	Mr Vinayaga Muruga Pandya N	16/12/2019	Dr Pandithevan P	Development of a minimally-invasive drilling methodology to control temperature and cutting force in femur reconstruction surgery : A methodology for better pullout strength of fixations in human cortical bone
32	EDM14D004	Mr. Xavier Arockiaraj S	09/03/2020	Dr. Priyanka Kokil	Criteria For Limit Cycle Free State-Space Digital Filters With External Disturbance

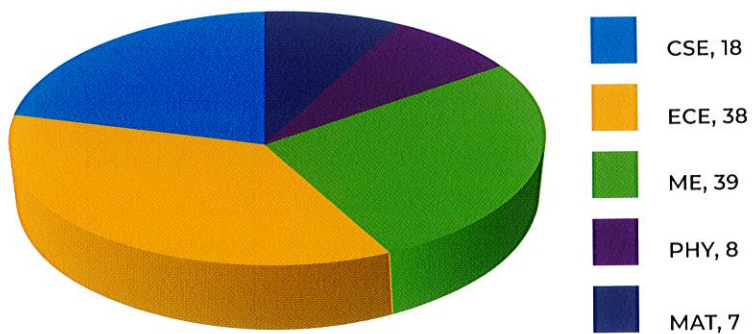
Ph.D Scholars - Thesis Defended (as on 31.03.2020)



Ph.D Scholars Passed Out



Ongoing PhD - Departmentwise



6.2 Patents and Publications, 2019-20

Patents (Till Date) :

01. Pankaj K. Sa, Ansuman Mohapatra, Banshidhar Majhi, "Systems and Methods for generating Synopsis of Multi-View Videos", Application No. 201731028957, 16-Aug-2017.
02. 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.
03. Shahul Hamid Khan, IOT Enabled Hydraulic Controlled Multi-Directional Lifting & Dropping Dumper, Application No. 201841028867, 1 Aug. 2018.
04. M Sreekumar and Others, Robot Race Track, Application No.: 314718-001 Dtd.6 Feb 2019.
05. Jayabal K. "A Stent Design with Varying Geometry and Thickness along the Circumferential Direction". Patent No : 202041008482.
06. Raguraman Munusamy. "Portable bottle holder and cap cutting device". Patent No: 325164 - 001. 28-Jan-2020.
07. Raguraman Munusamy. "Bottle cap opener and skirt cutter with four jaws". Patent No: 325164-002. 03-Feb-2020.
08. Raguraman Munusamy. "Round shaped bottle holder with two jaws". Patent No: 325337-001. 19-Feb-2020.
09. Raguraman Munusamy. "Bottle holder and cap cutting device". Patent No: 325337-002. 11-Feb-2020.
10. Raguraman Munusamy. "Bottle holder with four jaws". Patent No: 325337 - 003. 19-Feb-2020.
11. Shahul Hamid Khan. B. "Solar Powered Multi-terrain robot". Patent No: 321832 - 001.
12. Bingi, J., Anusha. P., and Sudhir Varadarajan., 2019. "Single line spectroscopy for milk fat and adulteration detection", 201941018939, TEMP/E-1/19883/2019-CHE.
13. Bingi, J., Bhavana., 2019. "Thermal to electric feedback cooling patch", 201941018940 TEMP/E-1/19855/2019-CHE.

Journals :

CSE

01. Nayak, D.R., Dash, R., Majhi, B. and Acharya, U.R., 2019. "Application of fast curvelet Tsallis entropy and kernel random vector functional link network for automated detection of multiclass brain abnormalities". *Computerized Medical Imaging and Graphics*, 77, p.101656.
02. Nayak, D.R., Dash, R., Majhi, B. and Zhang, Y., 2019. "A hybrid regularized extreme learning machine for automated detection of pathological brain". *Biocybernetics and Biomedical Engineering*, 39(3), pp.880-892.
03. Das, D., Nayak, D.R., Dash, R. and Majhi, B., 2019. "Backward-Forward Algorithm: An Improvement towards Extreme Learning Machine". *arXiv preprint arXiv:1907.10282*.
04. Chowdhury, D.P., Bakshi, S., Sa, P.K. and Majhi, B., 2019. "Semantic ear feature reduction for source camera identification". *Multimedia Tools and Applications*, pp.1-17.
05. Kumar, G., Bakshi, S., Sa, P.K. and Majhi, B., 2020. "Non-overlapped blockwise interpolated local binary pattern as periocular feature". *Multimedia Tools and Applications*, pp.1-33.
06. Mandal, S., Mohanty, S. and Majhi, B., 2020. "CL-AGKA: Certificateless authenticated group key agreement protocol for mobile networks". *Wireless Networks*, pp.1-21.
07. Kataria, M., Oswald, C. and Sivaselvan, B., 2019. "A Novel Rare Itemset Mining Algorithm Based on Recursive Elimination". In *Software Engineering, Advances in Intelligent Systems & Computing*, Springer, pp 221-233, 2019
08. Jyoti Bhola, Surender Soni, Jagadeesh Kakarla, 2019. "A scalable and energy-efficient MAC protocol for sensor and actor networks", *International Journal of communication systems*, Wiley, Vol 32, Issue 13, 2019.
09. Ahmed, Mohd Yamani, Saadia, Noor, Noorzaily Bin, Jagadeesh Kakarla, Amiri, "Secure and Energy-efficient data aggregation method on an Access control method" *IEEE ACCESS*, Vol 7, Pp. 164327-164343.
10. Bhoi, SK., Sahu, PK., Singh, M., Khilar, PM., Sahoo, RR., and Swain, RR., "Local Traffic Aware Unicast Routing Scheme for Connected Car System," in *IEEE Transactions on Intelligent Transportation Systems*. doi:10.1109/TITS.2019.2918161 (SCI, Scopus), IF=5.744.
11. Veeramani, S., and Noor Mohammad, SK., 2019. "An Approach to Place Sink Node in a Wireless Sensor Network (WSN)", *Wireless Personal Communications*, pp 1-11.

12. Srinivasavarma Vegesna, SM., Ashok Chakravarthy Nara and Noor Mahammad, Sk., 2019. "A Novel Rule Mapping on TCAM for Power Efficient Packet Classification", *ACM Transactions on Design Automation of Electronic Systems (ACM TODAES)*, Vol. 24, no. 5, pp. 48:1-48:23.
13. Veeramani S and Noor Mahammad Sk, 2019. "Controller Load Balancing using Graph Theoretic Approach for OpenFlow Network", *Caribbean Journal of Science*, Vol. 53, no. 2, pp. 823-833.
14. Kowsika, P., Divya, V., and Sadagopan, N., 2019. "Hamiltonicity in convex bipartite graphs", *Int J Adv Eng Sci Appl Math*, 11(1), 40-52. (Scopus)
15. Harshita Kona, Sadagopan, N., 2019, "On some combinatorial problems in cographs", *Int J Adv Eng Sci Appl Math*, 11(1), 25-39. (Scopus)
16. Umarani Jayaraman, Phalguni Gupta, Sandesh Gupta, Geetika Arora, Kamlesh Tiwari. 2019. "Recent Development in Face Recognition", *Neurocomputing*, (InPress), Elsevier.

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09. Chandrasekar, L. and Pradhan, K.P., 2020, April. Carrier Density and Quantum Capacitance Model for Doped Graphene. In 2020 4th IEEE Electron Devices Technology & Manufacturing Conference (EDTM) (pp. 1-4). IEEE.

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ME

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13. Muneeshwaran M., Srinivasan G., Wang C. C., and Raja B., 2020. "Numerical analysis of heat and mass transfer behaviour of mannitol during freeze drying in vial". International Conference on Innovations in Thermo-Fluid Engineering and Sciences (ICITFES), NIT Rourkela, India.
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25. Prasannavenkadesan, V. and Pandithevan, P., 2019, July. Empirical model for the prediction of Thrust Force in Drilling Cortical-Bone. Indian Conference on Applied Mechanics (INCAM-2019), IISc Bangalore, India.
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Mathematics

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02. Shalu, MA., Vijayakumar, S., and Sandhya, TP., 2019. "The induced star partition of graphs", Lecture notes in computer science 11394, 16-28.
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Physics

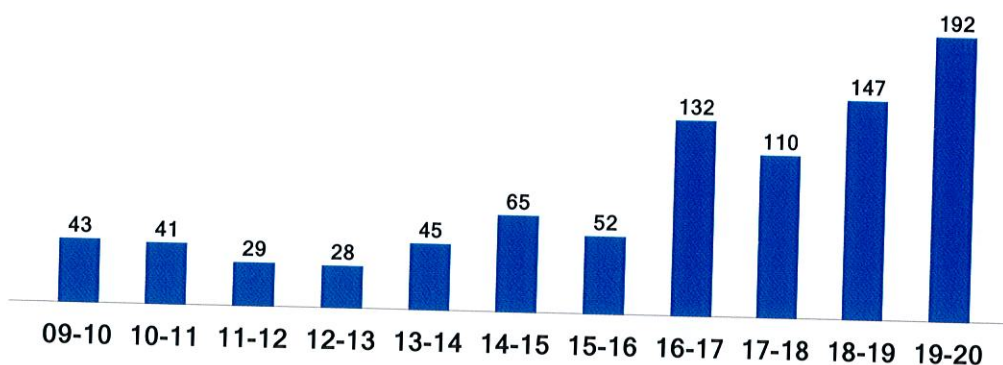
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02. Karthik Yadav, P.V., and Ashok Kumar Reddy, Y., 2020 "Influence of Nb doping on photodetector performance of TiO₂ films". International Conference on Material Science for Societal Advancement (MSSA 2020), Osmania University, Hyderabad.
03. Subhashree Ojha, N. N., Ashish Kumar., and Naveen Kumar.,2019. "Sensitivity Enhancement by Varying the Orientation of Phase Shifters based on Non-reciprocal phase shift in Fiber Loop Mirror Configuration". In Proc. International Conference on Optics and Electro-Optics 2019 (ICOL-2019), IRDE Dehradun.

04. Subhashree Ojha, N. N., Ashish Kumar., and Naveen Kumar., 2019. "Refractive Index Sensitivity Enchantment of a Fiber Filter by MZI Cascaded Sagnac Interferometer". In Proc. Workshop on Recent Advances in Photonics 2019 (WRAP-2019), IIT Guwhati.
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06. Subhashree Ojha, N. N., Hemalatha, V., Naveen Kumar., Jayachandra, Bingi., and Ashok Reddy., 2019. "Single-Fiber Mach-Zehnder Interferometer based Detection of Fluoride Ion Contamination in Water". In Proc. Workshop on Recent Advances in Photonics 2019 (WRAP-2019), IIT Guwhati.
07. Ramachandran, S., Kumar, N., Mallina, V.T., 2019. "Parametric Study of a Low-Temperature Differential Stirling Engine for Low-Grade Thermal Energy Recovery", 25th National and 3rd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2019) , IIT Roorkee, Roorkee, India.
08. R. Siddharth, N. Kumar and M. V. Timmaraju., 2019. "Effect of top losses and imperfect regeneration on power output and thermal efficiency of a solar low delta-T stirling Engine". 7th International Conference on Advances in Energy Research (ICAER 2019), IIT Bombay.
09. Aravind, C.B., Ramachandran, S., Kumar., N., 2020. "Numerical Realization of Thermodynamic Low Delta-T Stirling Engine Cycle by Runge-Kutta (RK4) Method". International Conference on Numerical Heat Transfer and Fluid Flow (NHTFF-2020) NIT Warangal, India.
10. Bhavana, Komaraju., Anudeep, Bhattu., Pava Kumar, K., Sudhir, Varadarajan., Jayachandra, Bingi.,2020. "Design and manufacturing of Mimosa Pudica inspired smart window and analysis of scale dependent constraints, ICAME 2020, SRM University, Chennai, India.
11. Mahalingam Babu., Pritam, Shetty., Jayachandra, Bingi.,2020. "Study of Optical Switching in MoS₂ Nanosheets based on Spatial Self Phase Modulation". National Photonics Symposium NPS-2020, CUSAT, Cochin, Kerala, India.
12. Hemalatha, V., Jayachandra, Bingi., 2019. "Electro adsorption Based Fluoride Ion Removal using Anodised Alumina, SEEC 2019_061, IV International conference on Sustainable Energy and Environmental Challenges, NEERI, Nagpur, India.
13. Pritam, Shetty., Krupakhar, G., and Jayachandra, Bingi., "Multi-inspirational Design for additively Manufacturable Products". International Conference on Research into Design (ICoRD'21), Accepted.
14. Anusuya, T., and Vivek Kumar.,2019. "Raman microscopy of Graphene oxide under thermal reduction: Spectral analysis and structural information" , 6th International conference on Advanced Nanomaterials and Nanotechnology (ICANN 2019), IIT Guwahati.

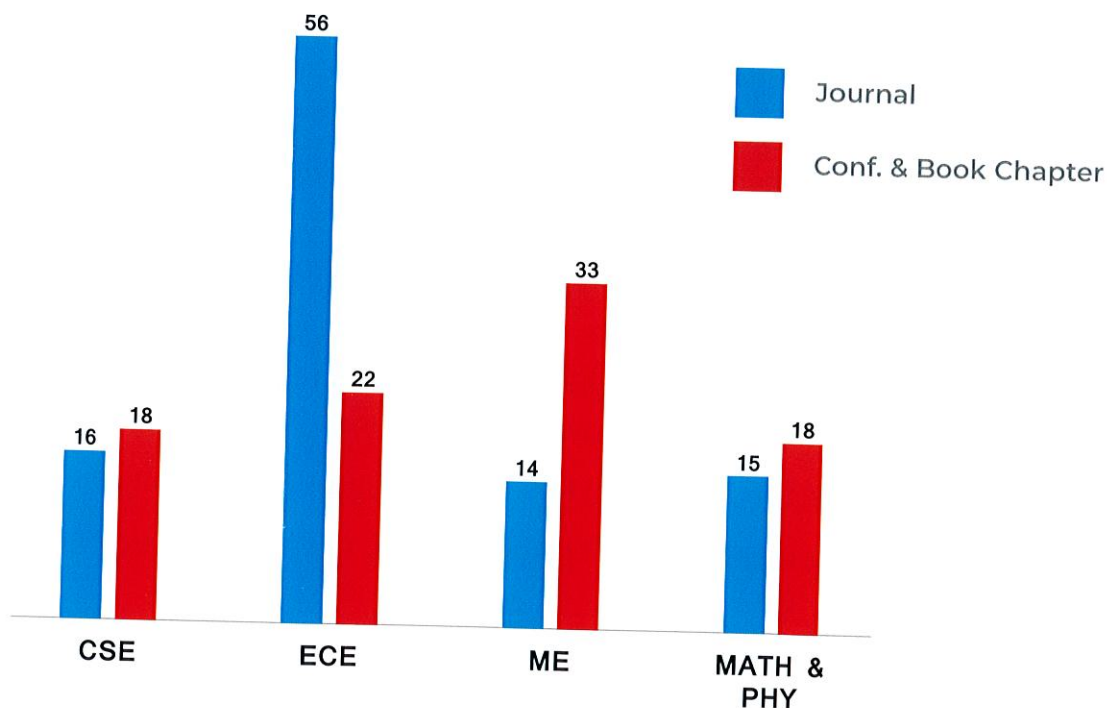
News Articles :

Dr. Sudhir Varadharajan, Threads of change: relevance of Gandhi's charakha today, The Hindu (Edge), 28 Sep 2019; Think beyond boundaries, The Hindu (Edge), 23 Feb 2019; Advantage Internships, The Hindu (Edge), 20 Jul 2019.

Total Publications



Departmentwise Publications, 2019-2020



6.3 Faculty Accomplishments

Awards :

01. Dr. Chitti Babu is a recipient of prestigious **"Young Systems Scientist Award 2019"** for the significant contribution in the area of Application of System Science & Engineering sponsored by Systems Society of India (SSI), Dec 2019.
02. Jannatul Bashar and Jayabal K, conference paper presented at the International Conference at NIT Warangal conducted in May 2-4, 2019, was awarded **"The Overall Best Paper"** under Design category.

Recognitions :

01. Dr. Chitti Babu, Associate Editor, Electrical Engineering (Journal), Springer.
02. Dr. Binsu J Kailath, Member, Board of Studies; Dept. of ECE, IIITDM Kurnool; Dept. of ECE, PSG College of Technology, Coimbatore; Dept. of ECE, Saveetha Engineering College, Chennai.
03. Dr. M Sreekumar, Editorial Board Member: Journal of Advancements in Robotics; Journal of Coupled System Mechanics.
04. Dr. M Sreekumar, Member, Board of Studies; Dept. of Mechanical Engineering, VIT Bhopal University; Dept. of Production Engineering, PSG College of Technology, Coimbatore.
05. Dr. Sudhir Varadharajan Member of the CII-Southern Region Committee on MADE, July 2017-Till Date.
06. Dr. Jayabal participated as Peer Review Committee (PRC) member for a CVRDE project on 22 Jan, 2020
07. Dr. Jayabal, Member, Board of Studies, Dept. of Mechanical Engineering, Paavai Engineering College, Namakkal; Dept of Mechanical Engineering, Kongunadu Engineering College, Trichy.
08. Dr. Chitti Babu, Lead Editor, Special Issue on RES, Energy Sources (Part-A), Oct 2019.
09. Dr. Chitti Babu, Lead Guest Editor, SI on Energy Systems, Renewable Energy Focus, Elsevier (Scopus), Oct 2019.
10. Dr. Selvaraj MD, Associate Editor - Elsevier Computer and Electrical Engineering.
11. Dr. Selvaraj MD, Board of Studies - Rajalakshmi Engineering College, GCT – Coimbatore, SRM Valliammai Engineering College, Sathyabama Institute of Science and Technology, K.S.R College of Engineering, Tiruchenkodu.
12. Dr. M A Shalu, Editorial board member, American Journals of optics and Photonics, Science Publishing Group.

13. Dr. Sudhir Varadharajan, Chairman of the Technical Committee of the Innovation Voucher Program, EDII, Govt of TN, Sep 2018-Till Date.
14. Dr. Sudhir Varadharajan, panelist on “Academic institutions are goldmines for entrepreneurship”, organized by the Pan IIT association PALS, 16 Mar 2019; “Implications of Industry 4.0 for MSMEs”, organized by EDII on the International MSME day, 27 Jun 2019.
15. Dr. Sudhir Varadharajan, conducted CII-MADE CEO Breakfast meeting on Industry 4.0, 23 Nov 2019; Co-ordinated a survey of MSMEs and their readiness for Industry 4.0, Aug 2019.
16. Dr. Damodharan, Co-founded a Startup company at MaDeIT, Ms. ExTech Innovations Pvt. Ltd.

Foreign Assignments:

01. Dr. M Sreekumar was deputed as Visiting Researcher to the University of Genova, Italy, to carry out collaborative research with Prof Matteo Zoppi, during June-July 2019 for about two weeks.
02. Dr. Chitti Babu was deputed as a visiting scientist, Yildiz Technical University, Istanbul, Turkey funded by Scientific and Technological Research Council of Turkey (TÜBİTAK), Dec 2019.

Guest Lectures / Invited Talk Delivered:

01. Dr. Sudhir Varadharajan: plenary talk on role of academia in industry 4.0, TN Manufacturing Summit, organized by CII, 23 Dec 2019; talk on Innovation is key to new product development, given to mechanical engineering experts of GEEDS, Valeo India, Jul 2019; webinar on “Operational Intelligence” for CII Members, Jun 2019; talk on Futuristic Technologies, Systems Engineering and Innovation: The missing piece, Keynote talk at the symposium organized by ISRO & Indian Society of Systems for Science and Engineering, Coimbatore Chapter, PSG, 12 Jan 2019; invited talk on Design & Entrepreneurship as part of TLC-Faculty Development Program, Dec 2019; expert talk on Curiosity, Design and Entrepreneurship, to Incubation Managers and Faculty as part of the incubation awareness scheme, MSME DI, 22 Aug 2019; talk on Cultivating Curiosity, to engineering students, IIITDM Kurnool, 8 Aug 2019; talk on Curiosity and Design, to final year engineering students, SSN College, 1 Aug 2019; invited talk on Design Thinking as part of TLC training program, Jun 2019; invited Talk on Design as part of DIC trng program, 20 Feb 2019; invited Talk on Design as part of DIC trng program, 1 Feb 2019.
02. Dr. M A Shalu: invited talk on Class domination coloring of graphs, Indo-Taiwan conference on discrete mathematics (ITCDM-2019), IIT BHU, Nov15-18, 2019.

03. Dr. Jayabal: talk on strength of materials in FDP at Sri Venkatesware College of Engineering, Chennai, on 10/06/2019; talk on computer aided design and analysis of structures using FEM concepts in structural engineering in STTP at Eswari Engineering College, Chennai, on 18/06/2019; guest lecture on application of advanced FEM methods for smart materials at NPR Engineering College, Dindigul, on 30/07/2019; talk on advanced FEM in FDP at Sri Sai Ram Institute of Technology, Chennai, on 23/11/2019; talk on FEA in STTP at Anna University, Chennai, on 19/12/2019.
04. Dr. Pandiyarasan V : planetary talk on wearable thermoelectric devices, at the International Conference on Advanced Nanomaterials (ICAN-2019), Chettinad College of Engineering and Technology, Karur, Tamil Nadu, India, 12-13 Dec 2019; Guest Lecture, on Thermoelectric: Design, Materials, and Devices, National University of Science & Technology, Russia, 28 Oct 2019; guest Lecture on Smart wearable devices for electronics at SRM Institute of Science and Technology, Ramapuram Campus, Chennai, India, 16 Sep 2019; expert lecture on wearable electronics – Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai, India during 01 Aug – 30 Sep 2019; invited guest lecture on Self-powered wearable electronic devices – Sathyabama Institute of Science and Technology, Chennai, India, 04 Jul 2019; invited talk on Short Term Training Programme (STTP) for Microgrid and Renewable Energy Technology, IIITDM, 07 Jun 2019; invited talk on Electronics Technology for Electrical Vehicles & Renewable Technology for Electrical Vehicles-IET-FDP, Vel Tech, India, during 23-25 May 2019; invited talk on Nanostructured oxide semiconductors grown on fabric for the wearable thermoelectric power generator - National University of Science & Technology, on 04 April 2019.
05. Dr. Jayachandra Bingi: invited as Chief Guest & Keynote speaker for QUANTUM2K19, as Chief Guest and speaker, Bio-inspired Design Fest (BID Fest-2020), VIT Vellore, 11 – 12 Mar 2020.

keynote

6.4 Sponsored Research and Consultancy

A. Sponsored Research

A. Completed as on 31 March 2020

01. Development of a Nanofluid Coolant for high heat flux devices with Mini channel heat Exchanger.

Principal Investigator : Dr. Raja B
 Sponsor : DST-Fast Track
 Duration : 3 Years
 Value : 12.89 Lakhs

02. 5 axis STEP-NC (AP-238) Machining of Free Form/Irregular Contoured Surfaces.

Principal Investigator : Dr. Raja B
 Sponsor : DST-Fast Track
 Duration : 3 Years
 Value : 12.89 Lakhs

03. Design, development and characterization of all fiber interferometer for wavelength interleaving and temperature sensing applications.

Principal Investigator : Dr. Raja B
 Sponsor : DST-Fast Track
 Duration : 3 Years
 Value : 12.89 Lakhs

04. Design, development and performance evaluation of enhanced aircooling in electronic systems.

Principal Investigator : Dr. Raja B
 Sponsor : DST-Fast Track
 Duration : 3 Years
 Value : 12.89 Lakhs

05. Rural and Remote Ubiquitous Broadband Wireless Access.

Principal Investigator : Dr. M D Selvaraj
 Sponsor : UKIERI
 Duration : 2 Years
 Value : 15.84 Lakhs

06. Design and Development of energy efficient freeze dryer with multiport mini-channel shelf heat exchanger.

Principal Investigator : Dr. Raja B (PI),
 Dr. Sreekumar (Co-PI)
 Sponsor : DST-SERB
 Duration : 2 Years
 Value : 27.20 Lakhs

07. Control and operation of agents in a multi-agent fixturing system with swarm control.

Principal Investigator : Dr. M Sreekumar
 Sponsor : University of Genevo,
 Italy
 Duration : 2 Years
 Value : 11.67 Lakhs

08. Development of a Computer-Assisted Surgical Methodology for Orthopedic-Bone Surgery.

Principal Investigator : Dr. Pandithevan
 Sponsor : DST-SERB
 Duration : 3 Years
 Value : 21.54 Lakhs

09. Performance Enhancement and Reliable Operation of Wind-PV Distribution System Supplying AC/DC Loads with Remote Condition Monitoring.

Principal Investigator : Dr. Vijayakumar K
 Sponsor : DST-SERB
 Duration : 3 Years
 Value : 7.14 Lakhs

B. Outgoing and Sanctioned During 2019-20

<p>01. Scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT).</p> <p>Principal Investigator : Dr. S Rajasekara Pandian Sponsor : Dept. of Higher Education-MHRD Duration : 5 Years Value : 583.20 Lakhs</p>	<p>02. Special Manpower Development Programme for Chips to System Design under CEERI-Pilani.</p> <p>Principal Investigator : Dr. Noor Mahammad Shak, Dr. Binsu Kailath Sponsor : Deity-SMDP Duration : 5 Years Value : 53.88 Lakhs</p>
<p>03. MoU with IIT Hyderabad for Design Innovation Centre project.</p> <p>Principal Investigator : Dr. Naveen Kumar Sponsor : IITH-DIC Duration : Yet to Receive Value : 42.00 Lakhs</p>	<p>04. Early detection of Kidney abnormalities in noisy ultrasound images.</p> <p>Principal Investigator : Dr. Priyanka Kokil Sponsor : DST-SERB Duration : 3 Years Value : 21.91 Lakhs</p>
<p>05. Early detection of cataract : An IoT based approach.</p> <p>Principal Investigator : Dr. Priyanka Kokil Sponsor : DST-SERB Duration : 3 Years Value : 16.85 Lakhs</p>	<p>06. Investigations on the Cell Phone Tower Radiation and Mitigation Techniques.</p> <p>Principal Investigator : Dr. M D Selvaraj Sponsor : DST-SERB Duration : 3 Years Value : 32.51 Lakhs</p>
<p>07. Design, Development, Manufacture, and Evaluation of Laser Cut Stent Patterns for Enhanced Performance and Life.</p> <p>Principal Investigator : Dr. M Sreekumar (PI), Dr. K Jayabal (Co PI) Sponsor : DST-AMT Duration : 2 Years Value : 48.30 Lakhs</p>	<p>08. Performance Evaluation and Modeling of Multi Agent Based Smart Manufacturing Integrated with Swarm Intelligence and IoT.</p> <p>Principal Investigator : Dr. M Sreekumar (PI) Dr. K Premkumar (Co PI) Sponsor : DST-ICPS Duration : 3 Years Value : 32.90 Lakhs</p>
<p>09. Vertex Separators and its Variants: Structural and Algorithmic Study.</p> <p>Principal Investigator : Dr. Sadagopan Sponsor : National Board for Higher Mathematics (NBHM), DAE, GOI Duration : 3 Years Value : 11.33 Lakhs</p>	<p>10. Photo Induced Excess Charge Mediated Fluoride Ion Filtration.</p> <p>Principal Investigator : Dr. Jayachandra Bingi Sponsor : DST-SERB Duration : 30 Months Value : 23.75 Lakhs</p>

11. On Spanning Trees - Generalizations and Variants (Theory and Algorithms).

Principal Investigator : Dr. Sadagopan
Sponsor : DST-SERB
Duration : 3 Years
Value : 17.40 Lakhs

12. People counter for Bus.

Principal Investigator : Dr. V Masilamani (PI),
Prof. Banshidhar Majhi
(Co PI)
Sponsor : Ms.Vamo Systems
Pvt. Ltd. Chennai
Duration : 1 Year
Value : 2.00 Lakhs

13. Machine Learning Algorithms for Security Applications & Image Processing.

Principal Investigator : Dr. V Masilamani (PI),
Prof. Banshidhar Majhi
(Co PI), Dr. Noor
Mahammad (Co PI)
Sponsor : Forensics Intelligence
Surveillance & Security
Technologies Pvt. Ltd.
Chennai
IITH-DIC
Duration : 2 Years
Value : 6.00 Lakhs

14. "The phase structured coherent light beams for enhanced transmission."

Principal Investigator : Dr. Jayachandra Bingi
Sponsor : DST Bilateral
Duration : cooperation
Value : 2 Years
16.90 Lakhs

15. Development of novel deep learning, visual servoing approaches for improved detection of anti-tank mines using thermal vision assisted mobile robot.

Principal Investigator : Prof. Banshidhar Majhi
Sponsor (PI), Dr. Denis Ashok
Duration (VIT University) (Co PI)
Value : DST-TARE
3 Years
18.30 Lakhs

16. Development of 3D printed wearable Button Antenna for Soldier Performance Monitoring Applications.

Principal Investigator : Dr. K Senthilkumaran
(PI), Dr S Karthikeyan
(NIT Trichy) (Co-PI),
Dr. K V Eswaramoorthy
(IIITDM Kurnool) (Co-PI)
Sponsor : IMPRINT2
Duration : 3 Years
Value : 50.53 Lakhs

17. Investigation on the effect of ZnO Nanowire Interface on the Moisture Diffusion and Mechanical Performance of Composites.

Principal Investigator : Dr. S Gowthaman
Sponsor : DRDO- RIC - CARS
Project
Duration : 2 Years
Value : 9.87 Lakhs

18. Development of Novel Grid Synchronization Algorithm for Grid Interactive Photovoltaic Power Generation System.

Principal Investigator : Dr. B Chitti Babu
Sponsor : DST-SERB
Duration : 3 Years
Value : 34.54 Lakhs

19. Low cost and high efficiency portable thermoelectric cooler boxes for medicines, vaccines and bio-samples.

Principal Investigator : Dr. S Gowthaman
Sponsor : DST-Innovation Technology Development & Deployment
Duration : 2 Years
Value : 11.03 Lakhs

20. Development of an advanced electronic device for privacy in conversation over mobile phones using active noise control techniques.

Principal Investigator : Dr. Asutosh Kar
Sponsor : Global Mantra Innovations Pvt. Ltd.
Duration : 3 Years
Value : 29.88 Lakhs

21. Graphene-Silicon Nano-Wire Based Schottky Junction Solar Cells for Enhanced Light Harvesting.

Principal Investigator : Dr. Vivek Kumar
Sponsor : DST-SERB
Duration : 3 Years
Value : 51.57 Lakhs

22. Complexity of Star Colouring and its Restricted Version.

Principal Investigator : Dr. Shalu M A
Sponsor : DST-SERB
Duration : 3 Years
Value : 6.60 Lakhs

23. Feasibility study on Computer Vision Based Angular Measurement of Wheels Without Markers.

Principal Investigator : Manatec Electronics
Sponsor : Dr. V Masilamani
Duration : Years
Value : 1.41 Lakhs

24. Wearable Thermoelectric Power Generator.

Principal Investigator : Dr. Pandiyarasan V
Sponsor : DST Inspire
Duration : 5 Years
Value : 35.00 Lakhs

25. Metals Oxide based thin films for photodetectors.

Principal Investigator : Dr. Ashok Kumar
Sponsor : DST Inspire
Duration : 5 Years
Value : 35.00 Lakhs

26. Stability analysis of non-linear discrete dynamical systems subject to interference.

Principal Investigator : Dr. Priyanka Kokil
Sponsor : National Board for Higher Mathematics (NBHM), DAE, GOI
Duration : 3 Years
Value : 13.12 Lakhs

27. Simulation Study on Control System and Centralised Plant.

Principal Investigator : Dr. K Selvajothi
Sponsor : SRHVAC
Duration : 6 Years
Value : 1.95 Lakhs

28. Knowledge Graph for adverse drug reaction (ADR) association for safety signal detection using public safety database.

Principal Investigator : Dr. Masilamani (PI), Dr. Sivaselvan (Co PI), Dr. Munesh (Co PI)
Sponsor : Data Foundry Pvt Ltd, Bangalore
Duration : 1 Years
Value : 15.50 Lakhs

29. Awareness and Research Avenues in Computer Engineering.

Principal Investigator : Dr. Sivaselvan (PI),
Sponsor : Dr. Sadagopan (Co PI)
Duration : GAVS, Chennai
Value : 2 Years
: 2.10 Lakhs

30. Virtual energy storage based demand response algorithm to enhance the performance of the battery energy storage in smart grid.

Principal Investigator : Dr. Vijayakumar
Sponsor : DST TMD
Duration : 3 Years
Value : 27.49 Lakhs

31. Studies on the strenght and durability of ZnO Nano wire/T1000 carbon/epoxy composites for fly wheel energy storage.

Principal Investigator : Dr. Gowthman
Sponsor : DST TMD
Duration : 3 Years
Value : 41.25 Lakhs

32. Accelerated krylov subspace based solvers for Fourier-Galerkin based homogenization of periodic media & parallel implementations.

Principal Investigator : Dr. N Mishra
Sponsor : DSR SRG
Duration : 2 Years
Value : 31.90 Lakhs

33. Fast solvers for the large linear systems and their convergence analysis in application to PageRank problem".

Principal Investigator : Dr. N Mishra
Sponsor : SERB
Duration : 3 Years
Value : 22.02 Lakhs

34. Development of hyper visco-elastic material model in AUTODYN for polyurea and conduct validation studies through blast and ballistic experiments for neat and polyurea coated RCC and mild steel samples

Principal Investigator : Dr. Raguraman (PI),
Dr. AVS Prasad (Co PI)
Sponsor : DRDO ARMREB
Duration : 3 Years
Value : 31.09 Lakhs

35. Development of Fresh Water Pearl Culture Unit Based on IoT-Data Analytics.

Principal Investigator : Dr. Munesh
Sponsor : DST
Duration : 3 Years
Value : 16.40 Lakhs

36. Materials for Methanol Gas Sensor.

Principal Investigator : Anushree P Khandale
Sponsor : Industrial Project MNT
Duration : 2 Years
Value : 5 Lakhs

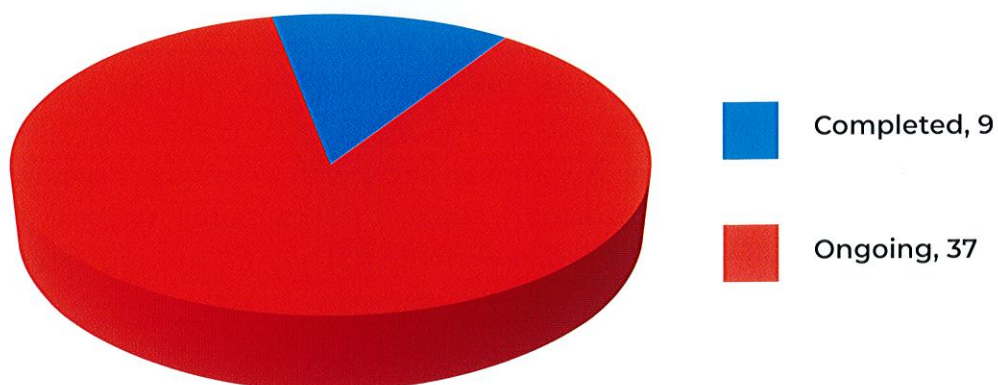
37. Detection and Diagnosis of Intentional Electromagnetic Interference Attack on Critical Network.

Principal Investigator : Dr. Prem Kumar (PI),
Dr. Perna Saxena
(Co PI).
Sponsor : SERB
Duration : 3 Years
Value : 80.87 Lakhs

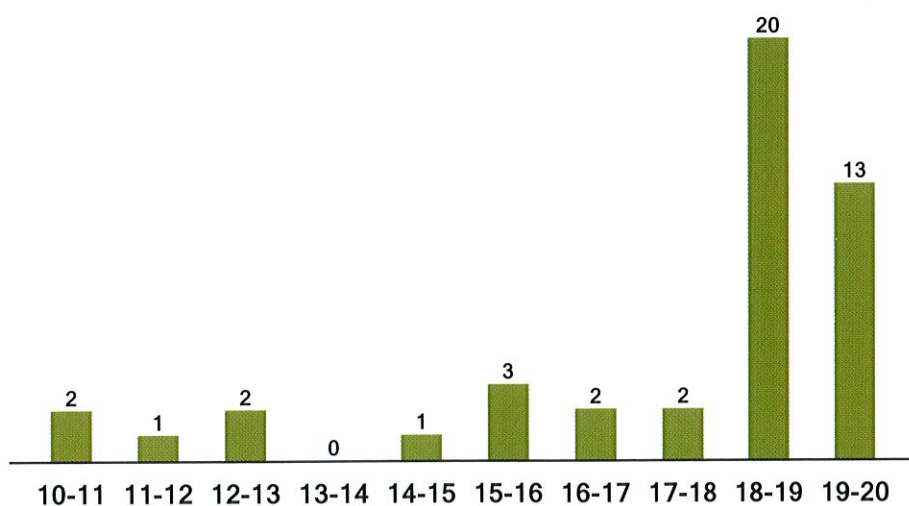
B. Consultancy Projects

No.	Principal Investigator	Agency	Project Title	Amount
01	Prof. R.Gnanamoorthy	M/s. Indus Elastomers, Chennai	Friction Analysis on Characteristics (wet and dry)of Plastic (HDPE) sample surface against Plastic	27,575
02	Prof. R.Gnanamoorthy	M/s. Indus Elastomers, Chennai	Friction Analysis on Characteristics (wet and dry)of Plastic (HDPE) sample surface against Rubber, Concrete & Steel	55,150
03	Prof. R.Gnanamoorthy	M/s. Henkel Chembond Surface Technologies Ltd, Navi Mumbai	Friction analysis of Automotive Steels	49,568
04	Prof. R.Gnanamoorthy	M/s. Harita NTI Ltd, Chennai	Coefficient of Friction analysis of different coatings	50,000
05	Dr.T.S.Narayanan	Ms.Nanocell Networks Private Limited, Bangalore	IP Multimedia Training for Torry Harris Business Solutions	106,200
06	Dr.Karthik Narayanan & Dr.Suresh Varadharajan	Ms.Tube Investments of India Ltd, Chennai	Smart Manufacturing Pilot Project (Phase - I)	77,880
07	Dr.T.S.Narayanan	Ms.Timmins Training Consulting, Malaysia	Software Design Network (SDN) Workshop	98,000
08	Dr.T.S.Narayanan	Ms.Nanocell Networks Private Limited, Bangalore	IP Networking, Samsung, South Korea	115,640
09	Dr.T.S.Narayanan	Ms.Timmins Training Consulting, Malaysia	Software Defined Wide Area Network (SD-WAN) Workshop	28,800
10	Dr Noor	M/s UCAL Fuel System Limited	LB CRG for others Training Programm of Microcontroller & Interface	67,850
11	Dr.T.S.Narayanan	Ms.Timmins Training Consulting, Malaysia	Software Defined Wide Area Network (SD-WAN) Workshop	52,800
12	Dr.T.S.Narayanan	Ms.Timmins Training Consulting, Malaysia	Software Defined Wide Area Network (SD-WAN) Workshop	88,000
13	Dr.T.S.Narayanan	Ms.Nanocell Networks Private Limited, Bangalore	Metro Enternet Workshop for TATA Tele Services	77,880
14	Dr.T.S.Narayanan	M/s Tata Elxsi, Trivandrum	Networking with IP-v6 and Linux IP TABLETS	1,18,118
15	Dr.T.S.Narayanan	Ms.Nanocell Networks Private Limited, Bangalore	SDN and NFV Workshop fpr L&P Technology	1,55,760
16	Dr.T.S.Narayanan	M/s Tata Elxsi, Bangalore	TCP/IP for Broadband Engineers	1,77,120
17	Dr.Raguraman	M/s Stree Man Ltd, Derby U.K	Consultancy charges done from 23.9.2019 to 11.10.2019	3,42,484

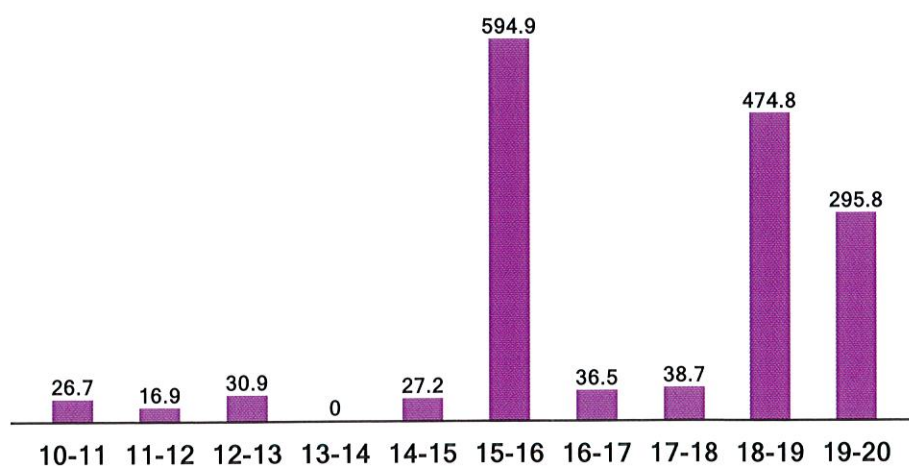
Funded Projects



Number of Funded Projects-Year wise



Value of Funded Projects (in Lakhs)-Year wise



6.5 International Collaborations and MoUs

IIITDM signed MoU's with reputed universities both in India and abroad. This enables the Institute to collaborate for research with renowned scientists. The students of the Institute are also getting opportunities to undergo internship at these places. The Institute is having MoU with Nagaoka University of Technology and Nagasaki University of Japan along with University of Genova, Italy and National University of Science and Technology (NUST), Moscow, Russia. During the year, 2019-20 the Institute signed MoU with Chettinad Hospital, Chennai and with National Design and Research Forum headed by Sh. Mylswamy Annadurai, program director Chandrayaan - 1, ISRO.



Signing of MoU with
Shri. Mylswamy Annadurai,
National Design and Research Forum

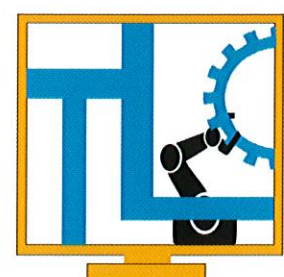


Signing of MoU with Chettinad Hospital for
Bio-Medical Research

6.6 Teaching Learning Centre (TLC)

Teaching Learning Centre for Design and Manufacturing Education

TLC is funded by the Ministry of Human Resource Development (MHRD) under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) scheme. It is a Centre for design, development and dissemination (& sale) of educational technology since lack of affordable and innovative hands-on laboratory instruction technologies is a major constraint for engineering education in India. This centre has developed low cost 3D printers, CNC mill and lathe, CNC router, Laser cutter, PCB Machine, etc. and these products have been purchased by IIT Hyderabad, and Vel Tech University. This centre has received funding Rs.6.105 crore so far from MHRD. The centre attracts students from Various Engineering colleges, Polytechnics and schools for hands on experience in developing these products.



Visit to Nagaoka University :

The Centre has also been mentoring 30 Govt. Higher Secondary Schools in Chennai, Bangalore, Trichy, Salem, Mumbai, Pune, Hyderabad, Kolkata and Noida and set up InnoSTE(A)M Labs in collaboration with SRF Foundation under Capgemini's CSR School Adoption Program. As a part of collaborative effort, Govt. school students also visited Nagaoka University along with faculty of IIITDM Kancheepuram.



College Students having hands on Experience in TLC

Visit by Foreign Delegates :

The institute is stream of visitors from foreign academic institutions. During the year, delegates from Govt. of Afghanistan, Azerbaijan, Bhutan, Egypt, Mauritius, Laos, Mali, Namibia, Philippines, Sri Lanka, Tanzania, Uganda and Zimbabwe visited the campus. The delegates were apprised about innovative design programme of the institute. The team also visited Teaching Learning Centre of the institute.



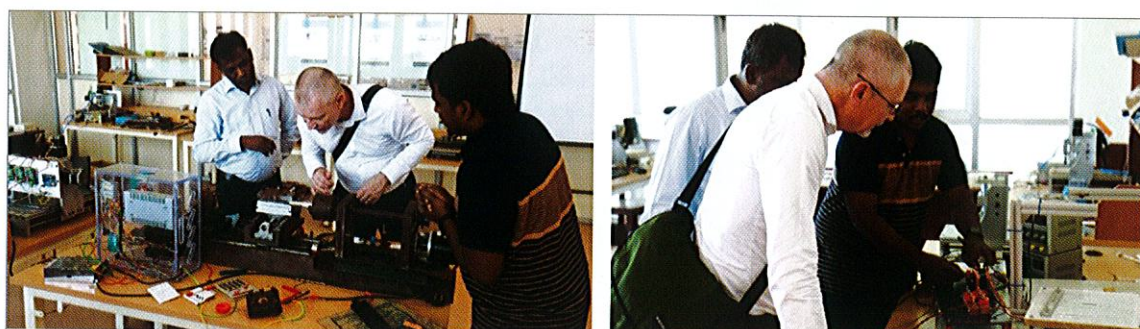
School students and students of the Institute during their Visit to Nagaoka University.



26 Nov 2019 : Foreign Delegates Visit to TLC



26 Nov 2019 : Foreign Delegates with Director and Faculty of the Institute



24 Feb 2020 : Visited by Dr Paul Wood, University of DERBY

Visit by Indian Delegates and Students :



10 Apr 2019 : Dr. A. Velayudham,
Scientist "F" CDVRDF Avadi



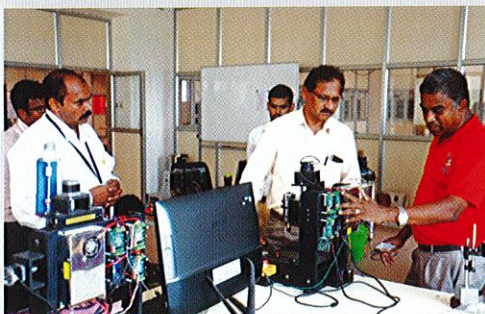
12 Apr 2019 : Industry Consultancy
Visit



1 May 2019 to 30 Jun 2019 : Summer
internships for college students



05 May 2019 : Vector from CEO



14 May 2019 : TCS Smartories
founders



21 May 2019 : MGR University
technical officer



22 May 2019 : Prof. Anupam Shukla
Director IIT Pune



22 May 2019 : Equad engineering
services staffs visit



22 May 2019 : PACR ITI, Ariyalur principal and faculty



28 May 2019 : Autodesk representatives visit



02 Jun 2019 : DMG Mori engineers visit



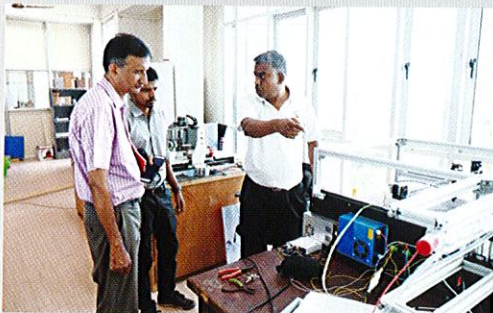
09 Jun 2019 : Industrial consultancy visit by MGH Labs stau



09 Jun 2019 : Chairman, Board of Governors of IIITDM visit



13 Jun 2019 : GKM Engineering College faculty workshop participants



16 Jun 2019 : Industry Representatives



24 Jun 2019 : Siemens Corporation engineers visit



28 Jun 2019 : IISc and IIT Bombay
faculty visit



28 Jun 2019 : St Peters Engineering
College faculty



01 Aug 2019 : RMK College of
Engineering & Technology
students visit



06 Aug 2019 : RMD College of
Engineering & Technology
students visit



06, 07 Aug 2019 : RMK College of
Engineering & Technology
students visit



08 Aug 2019 : St Peter's College of
Engineering & Technology
students visit



19 Aug 2019 : St Xavier's Catholic
College of Engineering, Kanyakumari



27 Aug 2019 : officials of Plan India
and GHS teachers from Hyderabad,
Telangana



29 Aug 2019 : Capgemini stau to TLC stall at schools Cluster Event



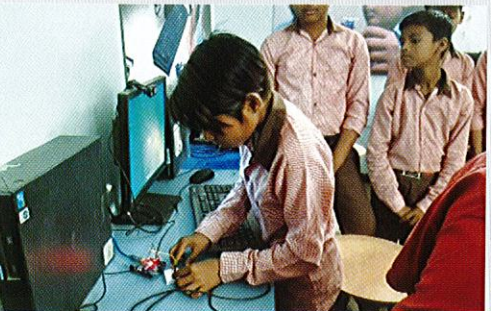
07 Sep 2019 : Teachers and students of Nandhivaram Boys HSS nnoSTE(A) M Lab



05 Sep 2019 : III BTech Biotech students of GKM College of Engg & Tech., Chennai



09, 10 Sep 2019 : BE CSE students and teachers of Adhi Parasakthi College of Engg, Melmaruvathur, Chennai



14 Sep 2019 : Chennai GHS InnoSTE(A)M Lab teachers and students



16-17 Sep 2019 : Faculty and III BE ECE students of Jeppiar Institute of Technology, Chennai



17,21 & 27 Sep 2019 : Faculty and BE ECE students of SA Engineering College, Chennai



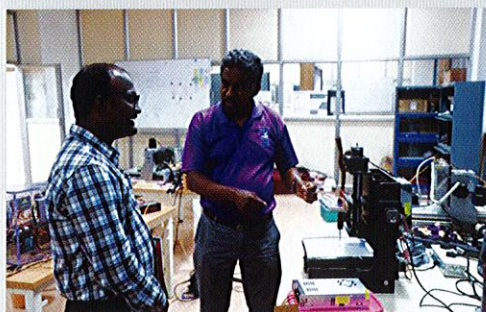
24, 25 & 26 Sep 2019 : Faculty and BE CSE and BE IT students of SA Engineering College, Chennai



25 Sep 2019 : Polytechnic Faculty from TN, Kerala, Karnataka, AP and TS



22 Oct 2019 : Visit of professors from Muthayammal Eng. College, Rasipuram



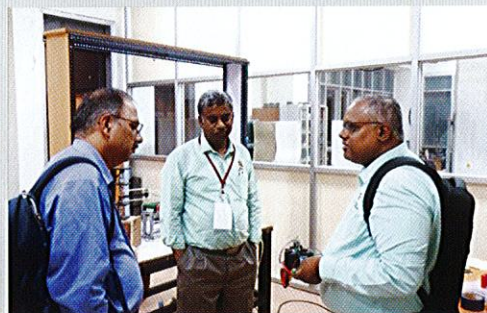
30 Oct 2019 : Industry personnel visit from Butterfly Industries, Hyderabad



31 Oct 2019 : Industry personnel visit from Indtam Engineering Pvt Ltd & Jayaparvathy Electronics, Chennai



08 Nov 2019 : Visit by officials from Mahalingam CET Pollachi, Nachimuthu Polytechnic College, Pollachi, and engineers from TVS Motors, Hosur



29 Nov 2019 : Visit by Prof. P V M Rao of IIT Delhi Department of Design



30 Nov 2019 : TLC Product Stall and Demos at LWA school robotics Exhibition and Competition



230 Nov 2019 : Visit by students from Sree Gokulam Public School, Maraimalai Nagar GHS, and Nandhivaram GBHSS



03, 06, & 08 Jan 2020 : Visit by faculty & III BE ECE students from SA



11-13 Feb 2020 : Visit by Bahubali College of Engineering



19, 24, 25, & 26 Feb 2020 : Visit by II Year ECE students, Rajalakshmi Eng. College, Chennai.



19 Feb 2020 : IIIT Una Director



24 Feb 2020 : Visited by 6 to 8th Grade students Thirupattur Govt high school



27 Feb 2020 : Visited by faculties from of Sri Eshwar Eng. College, Coimbatore



02 & 04 Mar 2020 : Visited by II BE ECE Students of Knowledge Institute of Technology, Salem



07 Mar 2020 : Visited by 9th grade Students from Kumuli Govt. school

Workshops / Seminars Organized by TLC :

- 10 Apr 2019 : Project-based Learning and Hands-on Laboratory Instruction, for IIITDM faculty.
- 10 Apr 2019 : Seminar on Integrating Project-based Learning in IIITDM Curriculum.
- 13 Apr 2019 : Project-based Learning for Innovation and Entrepreneurship, at Veltech University, Chennai.
- 13 Apr 2019 : Cognitive Skills, Design and Critical Thinking workshop.
- 02-05 May 2019 : Summer Internships training program for the students of Veltech University.
- 10-15 Jul 2019 : Summer Internships training program for the students of various Institutes.
- 15-29 Jun 2019 : Short-term Summer Internships training program for the students of Veltech University.
- 17 Jun 2019 : Seminar on Projects-based learning for I year students of Veltech University.



- 17-21 Jun 2019 : Hands-on Workshop on Innovative Design & Manufacturing Education.



- 20-22 Jun 2019: Workshop on CAD, CAM, CNC, and Robotics for school teachers & students.



- 24-26 Jun 2019 : Workshop on CAD, CAM, CNC, Robotics for school teachers & students.
- 01 Aug 2019 : Reverse Engineering demo for I year Mechanical Dual Degree students of IIITDM.



- 01 Aug 2019 : TN Entrepreneurship Development and Innovation Institute Workshop on "Design Aspects of Products and Value Addition" for Women Entrepreneurs.
- 13-14 Aug 2019 : Workshop on "Innovative Product Design and Value Addition" organized by Tamil Nadu Entrepreneurship Development and Innovation Institute, for women entrepreneurs of local self-help groups.
- 20 Aug 2019 : Seminar on Project Based Learning for Innovation and Entrepreneurship, to faculty and IV BTech Biomedical Engineering students of SRM University.
- 26 Aug 2019 : Workshop on Autodesk Fusion 360 Workshop for Engineering College Principals, HODs and Faculty.
- 31 Aug 2019 : Workshop on "Innovative Product Design and Value Addition" organized by Tamil Nadu Entrepreneurship Development and Innovation Institute, for tiny and small business entrepreneurs in Thoothukudi.
- 04 Sep 2019 : Workshop on Industry 4.0.



- 06 Sep 2019 : Workshop for III BE CSE students of GKM College of Engg & Tech. Chennai.



- 24 Sep, 01 Oct 2019 : Training Programs on Fabrication of TLC DIY Low-cost CNC Machines by IV BE Mechanical Students of Nitte Meenakshi Institute of Technology, Bangalore
- 26-27 Sep 2019 : AICTE Workshop on Industrial Robotics.



- 30 Sep - 01 Oct 2019 : 3D Printing Workshop at St Peters Institute of Higher Education, Chennai.



- 01 Oct 2019 : Fusion 360 CAM Workshop for College Students and Teachers, sessions handled by Autodesk India in SNS College of Technology, Coimbatore.



- 18,19 Oct 2019 : Workshop on CNC Milling Machine Design at Nitte Meenakshi Institute of Technology, Bengaluru.



- 25 Nov, 13 Dec 2019 : Faculty Induction Training Program.



- 03 Nov, 05 Dec 2019 : Training on CNC for II-year BTech Mechanical students from IIITDM Kurnool.



- 20, 26 Jan 2020 : Training program Bahubali College of Engineering Shivanabelagola, Karnataka.



- 31 Jan, 01 Feb 2020 : Workshop on Additive Manufacturing.



- 31 Jan, 01 Feb 2020 : Workshop on Maker Space Workshop at Thiagarajar College of Engineering college. Students participated from Mechanical, Civil Engineering, Architecture, Data science, ECE, CSE, EEE and IT departments.



- 27 Jan, 04 Feb 2020 : Training Program for Bahubali College of Engineering Shravanabelagola, Karnataka.



- 07 Mar, 16 Mar 2020 : Internship training programme on DIY CNC machine building for students of Sri Eshwar Engineering College, Coimbatore.

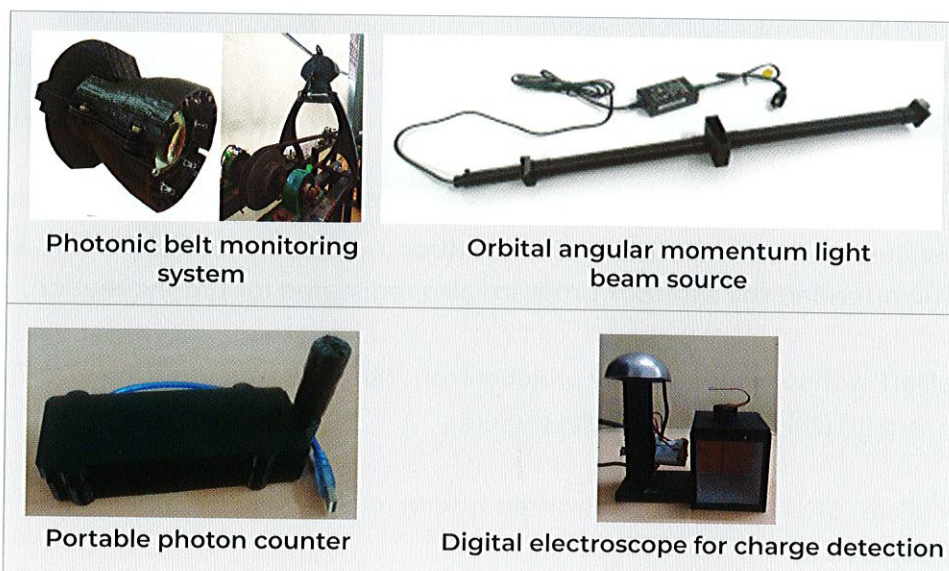
6.7 Bio-Inspired Research And Development (BIRD) Lab & Photonic Devices And Sensor (PDS) Lab

The research laboratories dedicated to bio-inspired and photonic based research have been inaugurated on 31 Jan. 2019 by honorable Director of IIITDM, Prof. BhansidharMajhi, Prof. C. Vijayan, Professor, IIT Madras and Prof. S.P. Venkateshan, Emeritus professor, IIITDM Kancheepuram. The laboratories are established with the unique combination of Bio-inspired engineering, Laser spectroscopy, Design and modelling, Electronics and Chemistry. The objectives ongoing works and long-term goals are explained to the dignitaries presented in the event.

31 Jan 2020 : Open day 2020-On the occasion of 1st anniversary of BiRD & PDS lab, an open day was organized to showcase on-going research in lab. Director, Faculty and students visited lab and interacted with students working in lab.



Products Developed



6.8 MaDeIT Innovation Foundation

MaDeIT Innovation Foundation, a design-driven Technology Business Incubator promoted by IIITDM Kancheepuram and supported and catalyzed by the NSTEDB division of the Department of Science and Technology, Govt. of India, has completed four years of operation since its inception in 2016.

In the financial year 2019-20 MaDeIT graduated three more companies and increased its portfolio of companies to 17 (seven companies under incubation and ten under accelerator) and another ten companies in the pipeline. One of the incubatee companies-Way2Grow - has been recognized among the top 10 Agri-tech startups in the country in a recent poll.

During the year, MaDeIT also bid and won three competitive grants to fund and support MSMEs and startups. One of the grants was used to develop a Manufacturing Accelerator Program (MAP) for MSMEs and startups in the Ambattur industrial estate. The program partners include AIEMA, TVS TS and NPedia Technologies. MaDeIT participated in a few industry events like the CII Startup Conclave and two half-day workshop in the industrial hub of Ambattur and Thirumudivakkam to socialize the process and benefits of MAP. About 30 MSMEs participated in each of the workshops. MAP was launched in Oct 2019 in partnership with TVS Training and Services. About ten manufacturing companies were on boarded into this 6-month accelerator program. Through a regular mentoring and program management process MaDeIT helped the ten companies achieve their goals w.r.t product development.

13-31 May 2019: MaDeIT organized the Fourth Sandbox Program for about 45 participants. This program had an exclusive three-day module on unlearning and rediscovering the creative self. The program included 15 women engineers who were sponsored by EDII as part of the initiative to support entrepreneurship among women in STEM. The program also included a few faculty members from external institutions that were interested in promoting design and entrepreneurship among students.



20 May 2019 : MaDeIT organized its eighth round of incubatee selection. One company headed by a woman entrepreneur who participated in the sandbox event was shortlisted for incubation. One IIITDM alumni who attended the sandbox program also registered for pre-incubation.

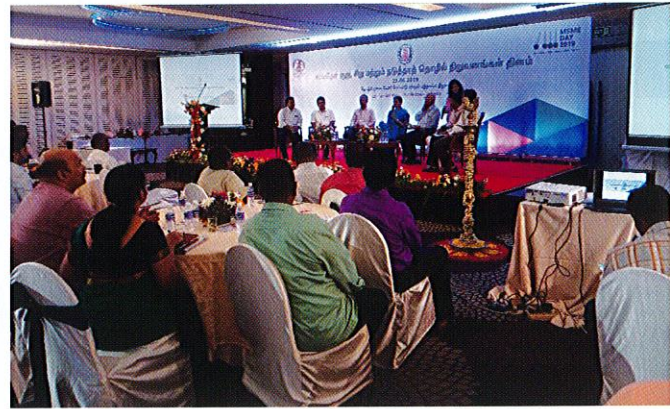
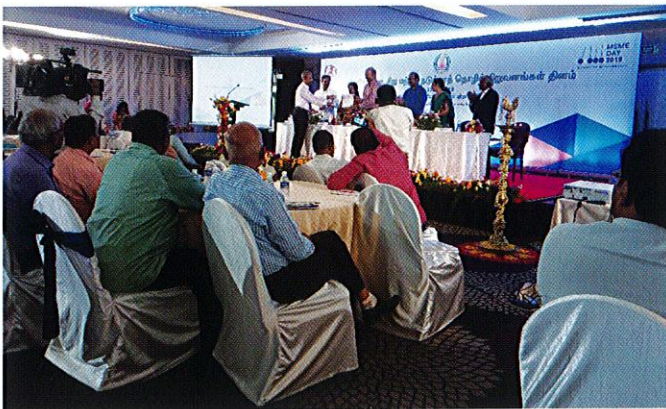
20 May 2019 : MaDeIT won two consultancy projects from M/S JK Fenner India. MaDeIT onboarded five student interns from IIITDM to work on these projects.

7-8 Jun 2019 : MaDeIT CEO selection committee interviewed a few candidates and shortlisted one candidate for the CEO role.

22 Jun 2019 : MaDeIT won a competitive bid to setup a manufacturing accelerator program for MSMEs and startups in Ambattur. The program partners include AIEEMA, TVS TS and NPedia Technologies.

19 June 2019 : As part of the initiative on Manufacturing and Digital Excellence, Dr Sudhir Varadarajan delivered a webinar on “Operational Intelligence” for CII Members. About 20 companies participated in the webinar.

27 Jun 2019 : MaDeIT signed a MoU with EDII to promote women entrepreneurs and innovation among MSMEs in manufacturing as part of the International MSME Day celebrations. EDII also recognized MaDeIT for its efforts to promote women entrepreneurs and MSMEs.



Incubation Activities :

1 Aug 2019 : MaDeIT setup a stall in the CII Startup Conclave to socialize the opportunities for incubation and the manufacturing accelerator programme.

10 Aug 2019 : MaDeIT organized a half-day workshop in the industrial hub of Ambattur to socialize the concept of the Accelerator Program. About 30 MSMEs participated in the workshop.

14 Aug 2019 : MaDeIT organized its ninth round of incubatee selection. A total of 8 companies out of 12 shortlisted applications were selected for incubation. Two of the companies have signed up for incubation and the rest six have signed up for pre-incubation and will be joining after completion of their company registration. At present, MaDeIT has ten companies in incubation and seven in pre-incubation.

14 Aug 2019 : MaDeIT selection committee evaluated applications for seed support from existing companies. Two out of four companies were recommended for seed support.



14 Sep 2019 : MaDeIT organized a second workshop in the industrial cluster to socialize the concept of Accelerator to industry associations like TIEMA. About 25 MSMEs participated in the event.



Digi20 - A portable circuit test device



Arhunika Engg. Solutions - Smart Lubrication System



Way2Grow Agritech LLP - Automated Hydroponics System & Smart Farm



SSD Controls LLP - Smart stabilizer



CY4 - Retrofit products



VNS Enviro - Dewatering system for vegetable waste



Efficienza Energy Solutions - effiBOT - High-Productivity Robotic Solution for Cleaning Solar Panels



Sigaram Technologies - Smart Speedo (Smart Speedometer)

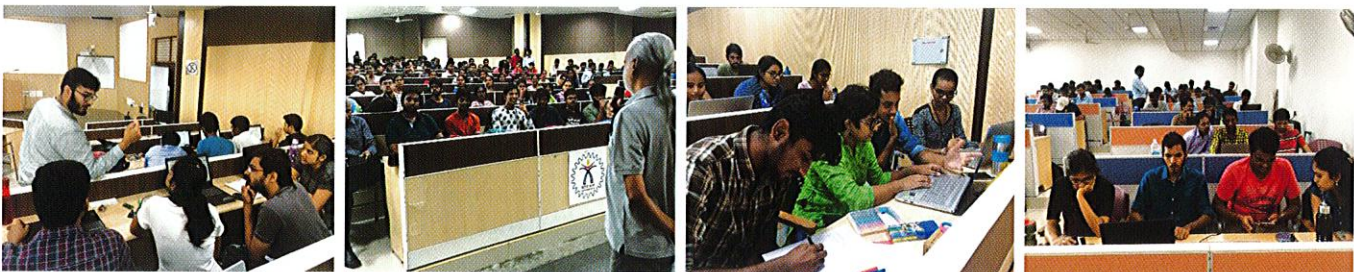
6.9 Institute Innovation Council (IIC)

The Institute Innovation Council (IIC) organized several events in the financial year FY 2019-20 to promote student led innovation. It includes a series of curated events aimed at promoting awareness and activities relating to need identification, system physics, giga-mapping, business model design, internships and IPR. These events were dovetailed with the unique design-centric engineering curriculum of IIITDM. The IIC also facilitated participation in the national initiatives such as the Atal Ranking of Institutions on Innovation Achievement (ARIIA 2020), Smart India Hackathon (SIH 2020) and the MHRD Innovation Challenge. One of the teams, AgrOracle, has been shortlisted for the grand finale of the Smart India Hackathon to be held in July 2020. The details of each event and their sequence is given below :

31 Jul 2019 : IIITDM IIC representatives (Dr Jayachandra Bingi and students) participated in the one-day workshop and PoC demo session organized by MHRD in Chennai.

3 Aug 2019 : About 230 3rd year students undergoing the course on Entrepreneurship & Management Functions were given an opportunity to interact with manufacturing MSMEs in Chennai.

21 Sep 2019 : A one-day workshop on “Need Identification” was organized for 350 2nd year students.



21 Sep 2019 : A one-day workshop on “Business Model Design” was organized for 3rd year students.

Jan 2020 : Agr Oracle team interacting with mentors during SIH 2020 evaluation.



Feb 2020 : Students participating in Giga-mapping to capture user scenarios.



Mar 2020: Students participating in the MHRD Innovation Challenge.

6.10 Design Innovation Center (DIC)

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. The following events were organized by the DIC in the year 2019-2020.

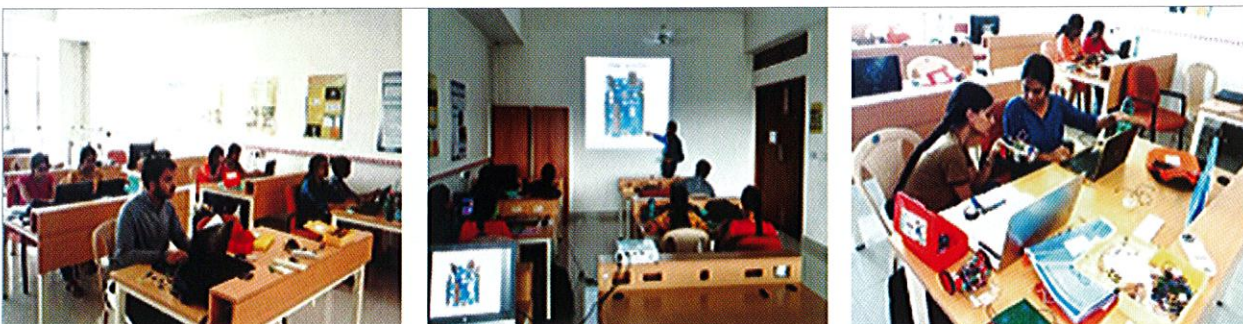
Workshops Organized

A Two-day Arduino Workshop was conducted on Nov 28, 2019 and Nov 29, 2019. 34 Students from various colleges in Tamil Nadu and Andhra Pradesh attended the workshop.



Two-day Arduino Workshop conducted on Nov 28, 2019 and Nov 29, 2019

A Two-day Arduino Workshop was conducted on Sep 21, 2019 and Sep 28, 2019. 10 Students of the Institute were exposed to Arduino fundamentals and advanced Arduino session covering practical hands on session and real time application implementation.



Two-day Arduino Workshop conducted on Sep 21, 2019 and Sep 28, 2019

Unnat Bharat Abhiyan (UBA)

DIC has taken the initiative to facilitate, teach and create awareness among the school students of Government School, Kumizhi on various aspects with the help of Vidhai student volunteers of IIITDM Kancheepuram.



Unnat Bharat Abhiyan at Kumizhi Govt. School

Sponsorship

DIC IIITDM Kancheepuram sponsored EHIPASSIKO (open house product exhibition) conducted on Apr 6, 2019 by MaDeIT at IIIT DM Kancheepuram. More than 200 students were allowed to showcase their ideas, prototypes and products, wherein industry experts gave their valuable input and feedback to the students regarding their product ideas.



Ehipassiko (Open House Product Exhibition) conducted on Apr 6, 2019

DIC IIITDM Kancheepuram sponsored the Need Identification Workshop conducted at by MaDeIT on Sep 22, 2019. More than 150 students participated in the events.



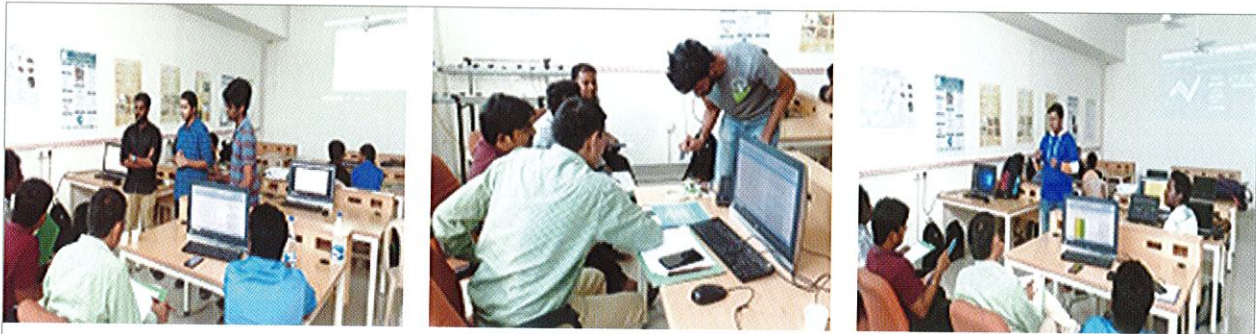
The Need Identification Workshop (sponsored by DIC) was conducted on Sep 21, 2019

DIC supported a technical workshop & the events conducted by Industrial Design Club (IDC) of the institute during the tech fest - Vashisht held between 18th, 20th October 2019.



Product Design Competition

A Product Design Competition was conducted on Jan 29, 2020 for facilitating the students with innovation design ideas. The selected students were provided financial and material support for implementing their ideas and converting them in working prototypes.

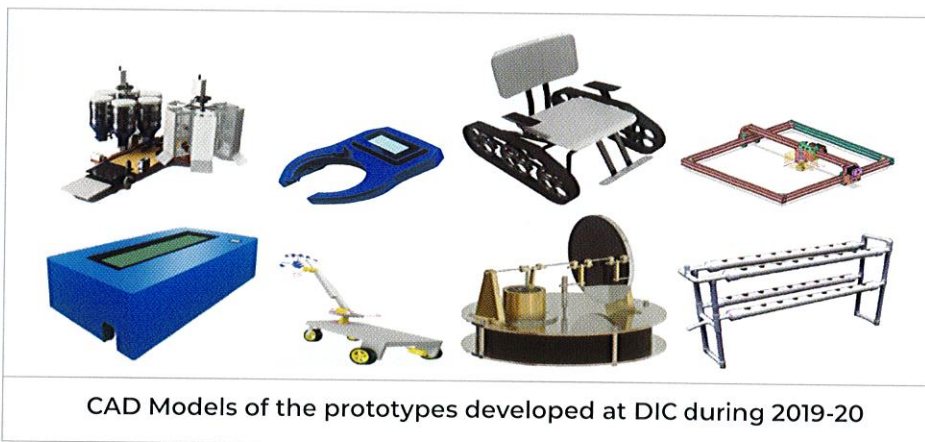


Product Design Competition conducted on Jan 29, 2020

Product Development

Students and staff working and sponsored by DIC IIITDM Kancheepuram have developed promising product deliverable prototypes with major focus on Smart Healthcare, Automation, E-Transportation, Hydroponics, Renewable Energy, etc.

Some of the important working designs/prototypes developed are Stair-Climbing Wheelchair, Automatic Sandwich Maker & Vendor, Smart Health Monitoring Gadget, Smart Hydroponics, Packman Adapting Packaging System, Smart Cycle Lock, Gesture Control-Palm on Wheels, etc.



CAD Models of the prototypes developed at DIC during 2019-20

Awards & Certifications

G B S V Yaswanth (MDM15B009), has won the Best Project Award at the Institute Convocation in 2019 for his project on Stair Climbing Platform designed and developed at DIC.

Subhajt Sinha (MFD16I016) participated in various events on Design & Startup Pitch conducted by Texas Instruments, IIT Madras, NIT Trichy and won prizes and awards for his innovative ideas and prototype on Agrimax – Smart Hydroponics developed at DIC.

Internships

DIC IIITDM Kancheepuram offers internships to students throughout the year and the interns with innovative designs and successful prototypes are felicitated with stipend, support and funding for the development of a working prototypes.

6.11 Centre for AI, IoT and Robotics

India holds over 5% percent of the global IoT market. Recognizing AI's potential to transform economies and the need for India to strategize its approach, NITI AAYOG established the National Program on AI, with a view to guiding the research and development in new and emerging technologies. The implementation of machine learning, internet of things, robotics and cognitive automation would help India to emerge as a Global leader in AI. To accomplish such a vision of the Government, IIITDM Kancheepuram has established the Center for AI, IoT, and Robotics in February 2019 which would also support GoI schemes such as Make in India, Digital India, Start-up India, Skill India and Smart City Scheme. The following are the accomplishments during the period of report.

Publications

Conferences :

01. Narayanan, K.B. and Sreekumar, M., 2019. "Modelling and Analysis of Multi-agent Approach for an IoT-Enabled Autonomous Manufacturing System". In *Advances in Computational Methods in Manufacturing* (pp. 643-653). Springer, Singapore.
02. Patel, ZB. and Muthuswamy, S., 2020. "A Machine Learning Scheme for Tool Wear Monitoring and Replacement in IoT-Enabled Smart Manufacturing". In: Deepak B., Parhi D., Jena P. (eds) *Innovative Product Design and Intelligent Manufacturing Systems. Lecture Notes in Mechanical Engineering*. Springer, Singapore.

Journals :

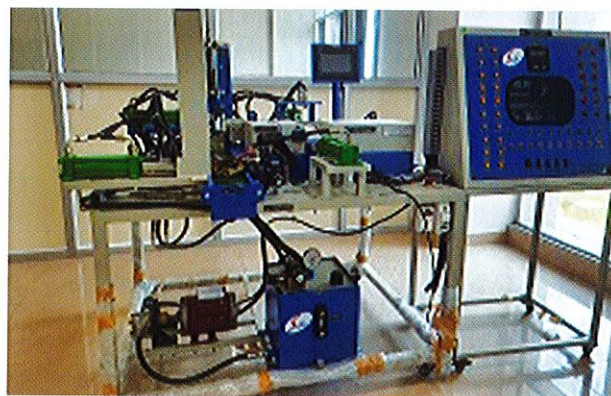
03. Gothandaraman, R. and Muthuswamy, S., 2020. "Robot-assisted 3D digital reconstruction of heritage artifacts: area similarity approach. *Industrial Robot*": the international journal of robotics research and application.
04. Penumuru, D.P., Muthuswamy, S. and Karumbu, P., 2019. "Identification and classification of materials using machine vision and machine learning in the context of industry 4.0". *Journal of Intelligent Manufacturing*, pp.1-13.
05. Veeramani, S., Muthuswamy, S., Sagar, K. and Zoppi, M., 2019. "Artificial intelligence planners for multi-head path planning of SwarmItFIX agents". *Journal of Intelligent Manufacturing*, pp.1-18.3.

Events Organized

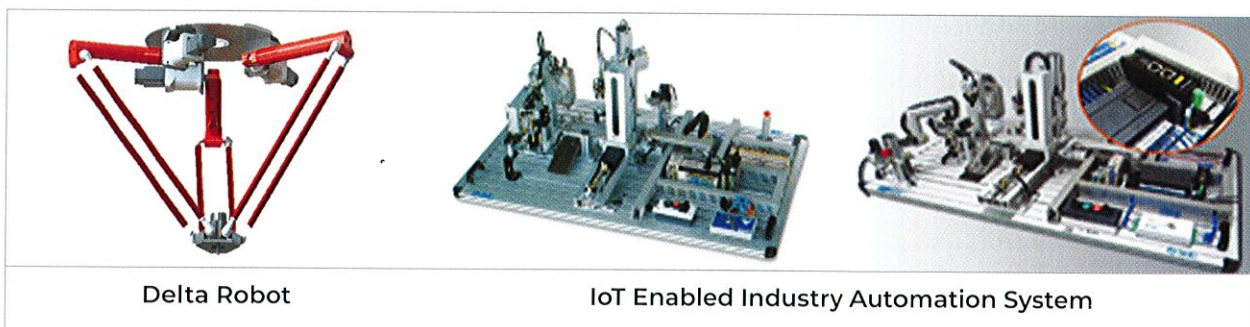
One-week Short Term Training Program on Kinematic Analysis and Synthesis of Robot Mechanisms, during 16-21 Dec. 2019 with 25 participants from various institutes and deemed universities such as IIT, NIT, IIITDM, Government engineering colleges, VIT, Satyabhama University, and SRM University.



Equipment recently installed



Equipment under procurement process



6.12 Centre for Smart Manufacturing

Centre for Smart Manufacturing is an inter-disciplinary research centre focused on IT enabled Design and Manufacturing at IIITDM Kancheepuram. This centre plan to develop IT products relevant to Industry 4.0 platform technologies such as Additive Manufacturing, Internet of Things, Augmented Reality and Virtual Reality, Cloud Manufacturing, Digital Thread and Digital Twin. The main objective is to study the interoperability issues in disparate information systems of life cycle, value chain and enterprise domain in an extended manufacturing enterprise. Further, the centre aims to bridge the gap between the human and digital world by interfacing human cognitive capabilities into IoT systems. Distributed manufacturing paradigms are vital to decentralize the manufacturing and the main the challenge we address is to evolve novel product architectures catering to need of such smart manufacturing systems. For these objectives, we have teamed up with major universities and leading industries for collaborative development of the technology and transfer to industry in the end.

Recent Publications :

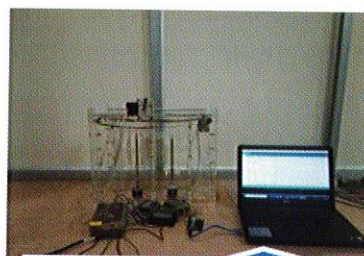
01. M. Ethirajan, J. Kandasamy, and S. Kumaraguru, (2020) "Connecting Engineering Technology with Enterprise Systems for Sustainable Supply Chain Management," Smart and Sustainable Manufacturing Systems 4. Published ahead of print, 5 August 2020, <https://doi.org/10.1520/SSMS20190037>.
02. Kumar H.A., Reginald Elvis P.F., Manoharan M., Jayapal J., Kumaraguru S. (2020) Tailored Support Structures for Additive Manufacturing. In: Shunmugam M., Kanthababu M. (eds) Advances in Additive Manufacturing and Joining. Lecture Notes on Multidisciplinary Industrial Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-32-9433-2_17.
03. Kumar H.A., Kumaraguru S. (2020) On Modeling the Thermal Behavior of Single and Quad Laser Melting of Powdered Nickel Alloy. In: Shunmugam M., Kanthababu M. (eds) Advances in Simulation, Product Design and Development. Lecture Notes on Multidisciplinary Industrial Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-32-9487-5_23.
04. Anandan Kumar H., Kumaraguru S. (2019) Distortion in Metal Additive Manufactured Parts. In: Kumar L., Pandey P., Wimpenny D. (eds) 3D Printing and Additive Manufacturing Technologies. Springer, Singapore. https://doi.org/10.1007/978-981-13-0305-0_24.

MoU signed	Sedaxis Pvt Ltd.,
Consultancy project	AM Process simulation for Wipro 3D, Bangalore.
Sponsored Project	3D printed antenna for performance monitoring (Imprint 2).
Workshop Conducted	Design for Additive Manufacturing workshop, May 2019.
Invited Talks Delivered	Ford Motors, IIT Madras, NIT Trichy, NIT Warangal, IndoUS workshop and many AICTE workshops.

Proposals submitted	CRG grant on AM process simulation, 2020, Under Review GIAN MOOC course on DfAM with Prof. Eric MacDonald, 2019, (Under review). Spoke for TIH under DST ICPS: VIT university, 2019 (Rejected) and NIT Trichy, 2020 (under review).
Lab set-up	Design for Additive Manufacturing Lab (http://dfam.in)
Products Developed	Micro dispensing system for 3D circuit printing Binder Jetting machine EnBoX (Energy Baseline of X) - an IoT device for monitoring energy baselines for ISO 50000 energy management certifications (http://enbox.co.in) https://doi.org/10.1007/978-3-319-99707-0_31
Professional service	Contributions to working group 5.7 of IFIP
Visiting Researchers	Dr Denis Ashok, VIT University working for a TARE
Visiting Interns	5 students from Meenakshi Sundaresan Engg. college, Chennai



DfAM workshop



Binder Jetting Machine



Microdispensing system

07 Student Activities and Achievements

7.1 Achievements in Academics

- Suyog Garg (mdm16b035) presented a poster on the title “Waldmeier Effect in Stellar Cycles” in Conference on Plasma Simulation (CPS), Institute of Plasma Research, Gandhinagar and 5th Asia-Pacific Solar Physics Meeting (APSPM), IUCAA, Pune on Jan and Feb 2020.
- S. Garg, B. B. Karak, R. Egeland, W. Soon, and S. Baliunas. “Waldmeier Effect in Stellar Cycles”. *Astro Physical Journal*, 886(2):132, Dec 2019,
- S. Garg and M. Bagchi. “A Negligible Tidal Effect in a Periastron Precession in Neutron Star–Black Hole (Stellar Mass) Binaries”. *Research Notes of the American Astronomical Society*, 3(9):125, Sep 2019.
- S. Bapat et al. “EinsteinPy : A Community Python Package for General Relativity”. arXiv e-prints, May 2020, 2005.11288.
- S. Garg. Evidence of Waldmeier Effect in Sun-like Stars. In Second International Conference on Applications of Mathematics to Non-linear Sciences, Pokhara, Nepal, June 2019.
- S. Garg. On the benefits of future space applications in weather monitoring & prediction. *Proceedings of LAMSYS 2018.ISSE & SDSC, ISRO, Apr 2018.*
- Ravikumar (mpd18i019) qualified as a Certified SolidWorks Professional.
- A team of 3, KrishnakumarThangavel (MSM17B026), Mohanahari S (MFD17I016), Nishanth Kumar P (MDS18M009) secured second runner-up of student innovator award (2019) at international centre for automotive technology (ICAT), Gurugram. Received price money of Rs. 20,000 and gift voucher of worth 300 Euro.



Team with Mr. Arjun Ram Mehwal
(Union Minister, India)
& Mr.DineshTyagi (Director, ICAT)

- Team of 3 members, Krishnakumar Thangavel (MSM17B026), Arshad Mohammad (COE17B003), Mohanahari S (MFD17I016) secured as Winner on FORD GME Hackathon on 6th & 7th April 2019, organized by Ford Motor Company, Chennai.



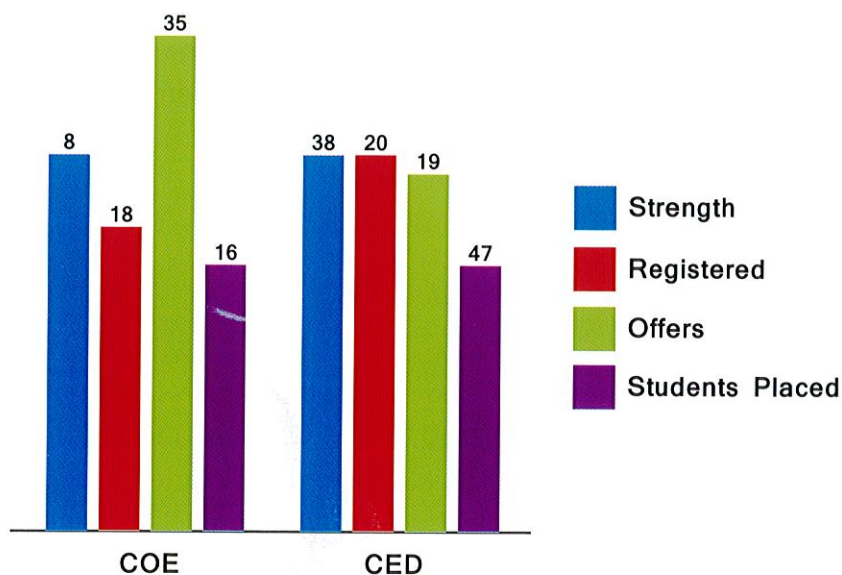
- Team members of Krishnakumar Thangavel – IIITDM Kancheepuram, Diksha Singh- IIT Hyderabad, and Vaibhav Agarwal- IIT Delhi was awarded as a honorable mention at NDIN design Competition at National Design Innovation Network & Indian Institute of Science, Bangalore on October, 2019 to January, 2020 through online. Received prize money of Rs. 3000.
- M Madhumitha (ced16i045) received Thinkswiss Research Scholarship 2020 conferred by Swissnex India, an initiative of the State Secretariat for Education, Research and Innovation (SERI) and is part of the Swiss Confederation's network abroad managed by the Federal Department of Foreign Affairs, Switzerland.
- Keerthanapriya (mfd17i013) received third prize in paper presentation at Sri Venkateswara College of Engineering on 7 June 2020.
- Arjun Vijaykumar (mfd19i011) secured first place and Aniket Rakesh Kumar Rochwani (msm19b020) secured second place in the NDIN competition which was conducted by IISC Bangalore from Nov19 to Jan20.
- Arjun Vijaykumar (mfd19i011) was selected as the delegate from India for SpaceGen United 2020 for NASA's Planetary Defense Coordination Office workshop.
- A team of 6 members, A.D. Vikas (edm19b004), Utkarsh Verma (edm19b038), Anurag Kar (msm19b021), AtharvaKadlag (coe19i015), AniketRochwani (msm19b020), ArjunVijaykumar (mfd19i011) qualified for stage 2 of Robocon (an Asian competition), organized by IIT Delhi every year for selecting national teams and scored 98/100 points.

7.2 Placements

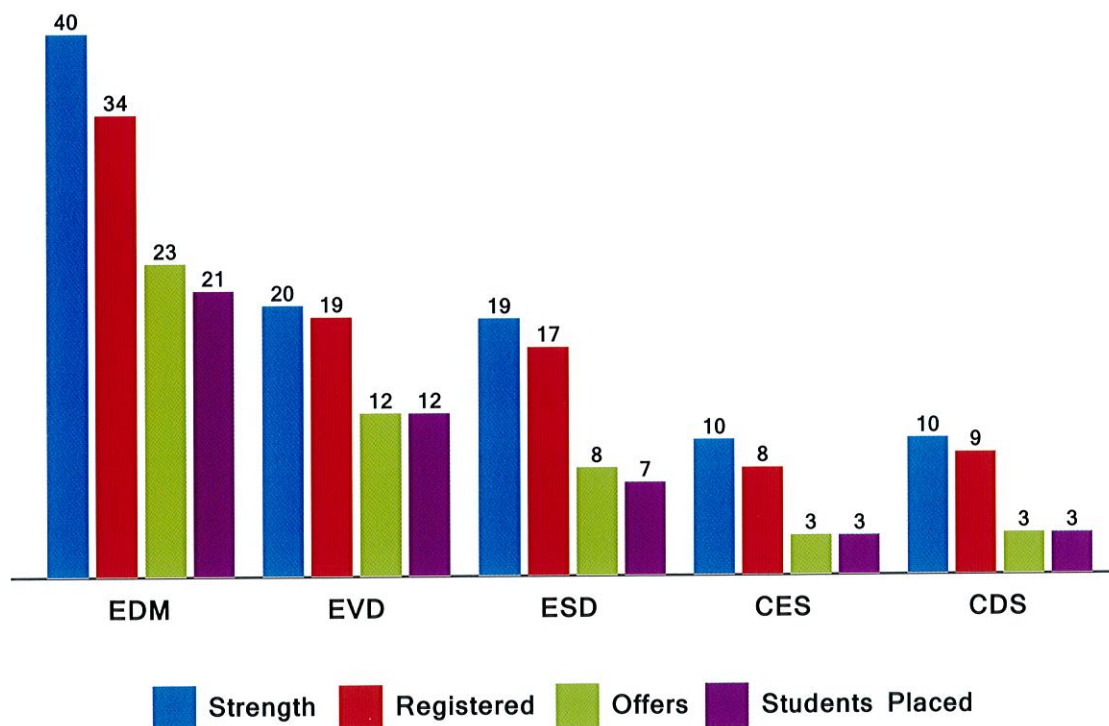
Every year, the Institute is adding new companies and there is increase in salary package offered by the companies. During the year, 108 Students are placed and some of the reputed recruited are Google, Microsoft, IBM, ZOHO, Saint-Gobain, Mathworks, TVS Motors etc. The Students secured a highest salary package of Rs.55 Lakhs from Google and Microsoft. The Median salary is Rs. 9 Lakhs. The percentage of Students who opted out of placement to pursue their higher studies in reputed institutions in India and abroad stands at 20%.

2019-20	Strength	Qualified	Project Title				No of Students	%
			PPO	Campus	Off-Camp	Total		
Computer Science								
COE	41	27	13	32	9	54	29	87.9
CED	41	37	11	22	6	39	29	70.7
Electronics and Communication Engineering								
EDM	40	29	0	22	1	23	21	61.8
EVD	20	19	0	10	2	12	12	63.2
ESD	19	17	1	7	0	8	7	41.2
EDS	10	3	0	3	0	3	3	37.5
CDS	10	9	0	3	0	3	3	33.3
Mechanical Engineering								
MDM	31	26	0	2	2	4	4	13.8
MSM	31	18	0	16	1	17	16	72.7
MPD	17	13	0	3	1	4	3	20.0
MFD	18	15	1	1	2	4	4	23.5
MDS	15	12	0	1	0	1	1	6.7
SMT	14	11	0	2	3	5	4	28.6
TOTAL	307	236	26	124	27	177	136.0	49.8

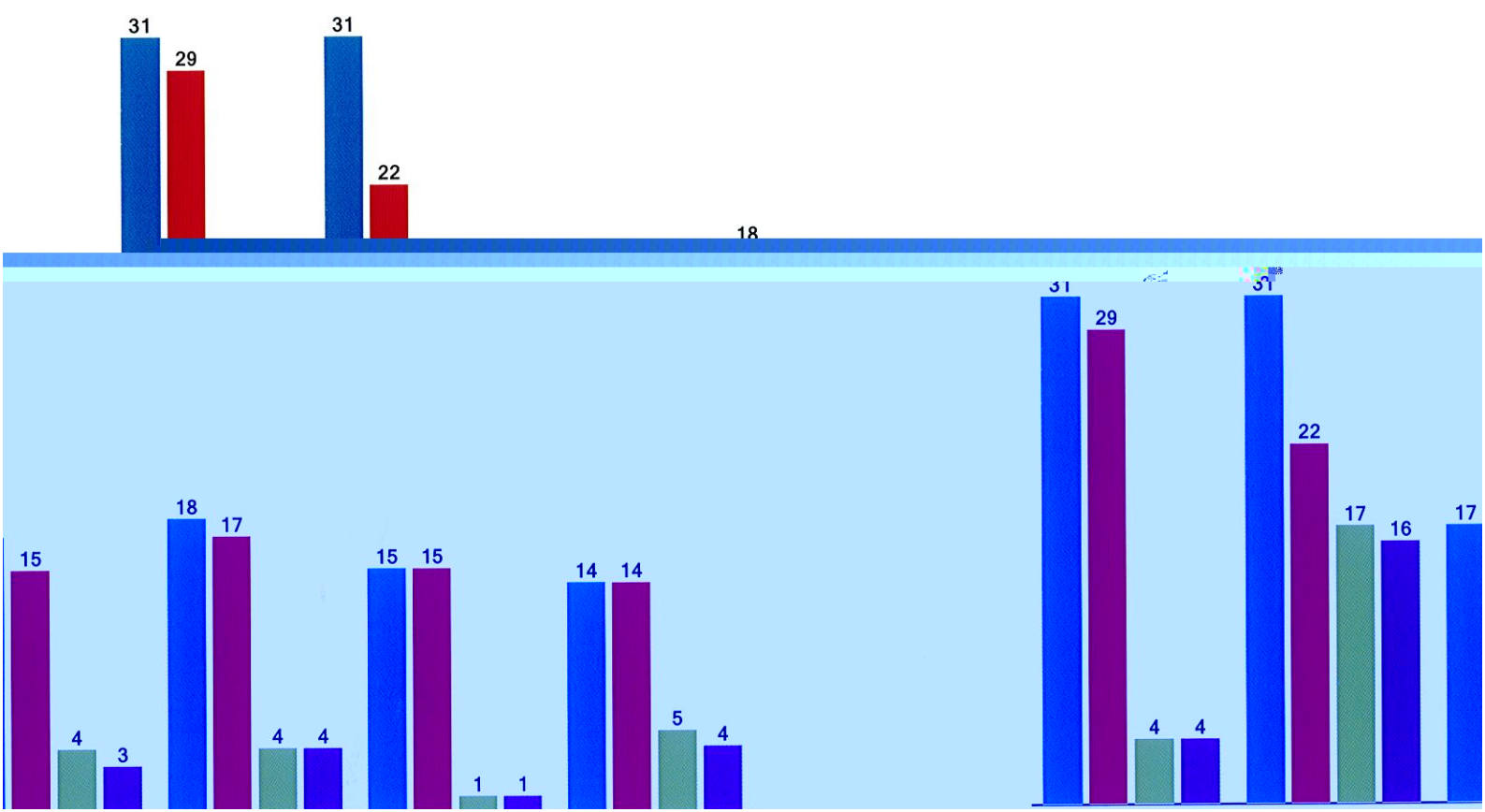
CSE



ECE



MECH



Companies visited during 2019-2020 for campus drive :



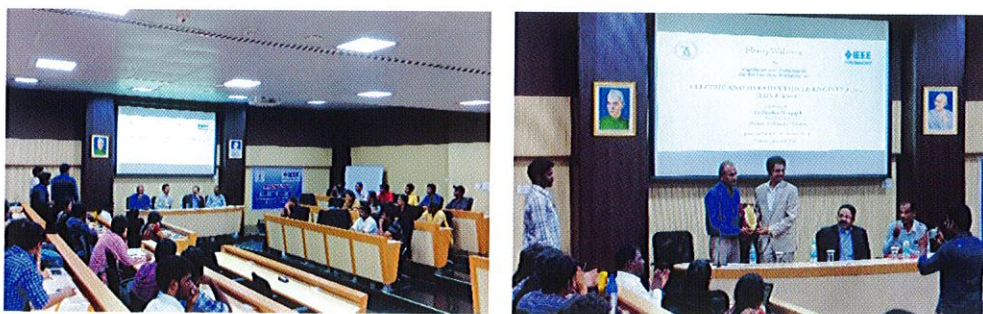
7.3 Activities of IEEE Student Chapter

IEEE Student Chapter @ IIITDM Kancheepuram organized various events during the period 2019-20 and the important events are listed below.

- Dr John Panneerselvam, Lecturer in Computing from University of Derby, United Kingdom has delivered a talk on Prescriptive Analytics for Energy Efficient Datacentres during 27th January 2020.



- The IEEE 2019 1st International Conference on Energy, Systems and Information Processing (ICESIP 2019) during July 04-06, 2019.
- Two-day workshop on “Electric and Hybrid Vehicle Engineering (EHVE 2019)”, 16-17 October 2019 at IIITD&M Kancheepuram.



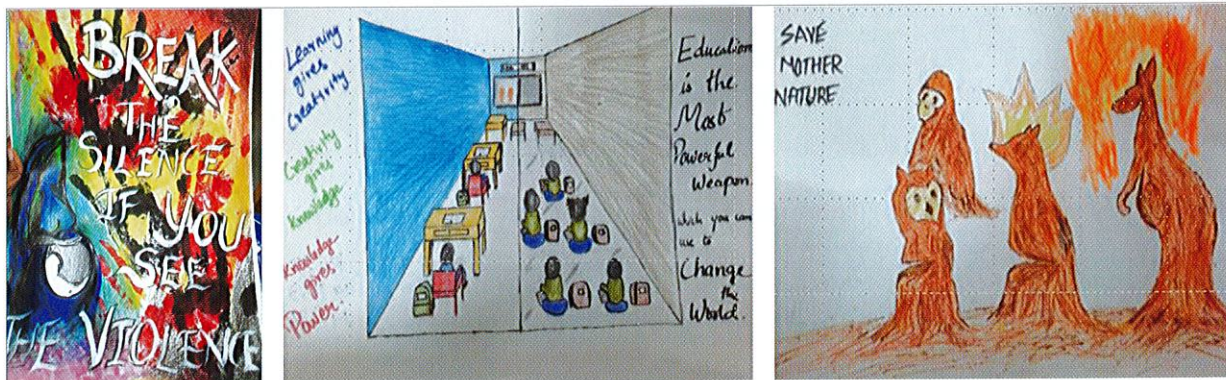
7.4 Activities of Social Service Group (SSG)

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.

Poster Making

The students are asked to design the poster on the following theme, 1. Women empowerment, 2. Present education scenario, 3. Energy conservation, 4. Side effects of smoking and drinking, 5. Eco-friendly Diwali, 6. Road safety, 7. Pollution, 8. Racism, 9. Human Rights, 10. Human Trafficking.



Poster Making : 29 October 2019

Tree Plantation

The team SEED explained the student about the plantations of saplings. Introduction speech was delivered by Dr. Vijayakumar, Department of ECE. The students planted saplings near the mess building and faculty quarters.



Tree Plantation on 4th October 2019

Introduction Session

The mentors gave their speech about SSG, the core explained about the activity in SSG and the coordinators regulated the session. The students were interactive and their doubts were solved by the core.

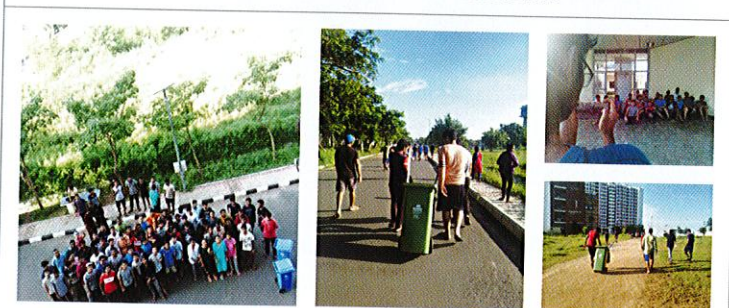


Session held on 20 & 27 September 2020

Campus Cleaning



Cleanliness Drive on 12.10.2019



Cleanliness Drive on 02.11.2019



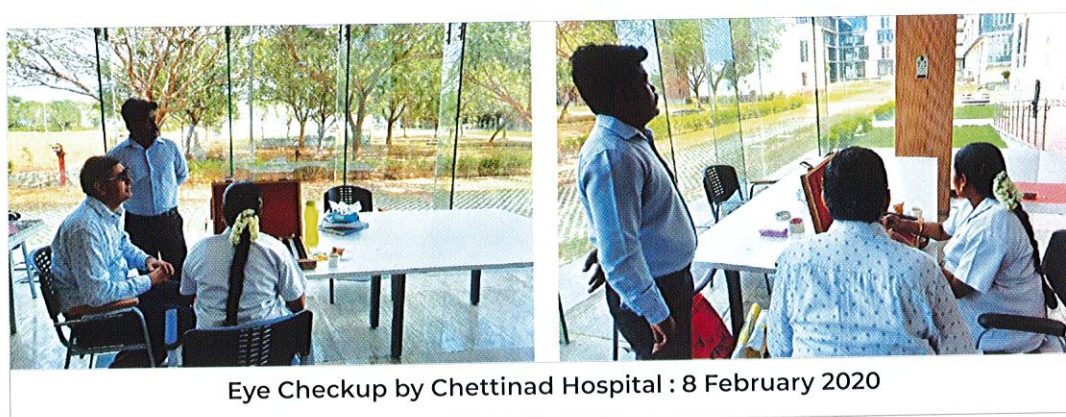
Cleanliness Drive on 11.01.2020

Blood Donation Camp

Every year Team SSG organizes a blood donation camp since its inception and the students and faculty actively participate in the humanitarian event. The camp started at designated time of 10:00 AM with all the accessories set up with the help of volunteers from SSG. After all the setup being completed, it was inaugurated by the director of IIITDM Kancheepuram. 151 unit of blood were collected from donors.



Eye Checkup



Personality Development

Audio and visual methods facilitate a interactive way of personality development through thorough character assessment and growth of people involved in the plot. In the view of the same, facilitators decided to conduct a movie streaming session. After the movie, the students were advised to introspect their characters and improve their personality based on inferences drawn from the movie.

Plantation Maintenance Session



Session held on 12 January and 8 March 2020

7.5 Students Activities

The students of the institute are getting admission for higher studies in reputed institute both in India and abroad. Some of the notable achievement during the year are :

- Ms. Nakka Lakshmi has got Ph.D admission in National University of Singapore with scholarship of S\$24000 with complete waiver of tuition fee.
- Another student, Sh. Anoop Krishnan U of Computer Science and Engineering is admitted for PhD program 2020 at Wichita State University, USA.
- Sh. Aneesh D H and Ms. M Anjani Sankar has received offer from Google India and Microsoft respectively.
- Sh. Rohith Reddy (Third Year CSE student) has received an Internship Offer from Microsoft.
- Rahul Narasimhan R (mdm16b025), selected for a Design project on Healthcare track conducted for MIT India Initiative and organized by WeSchool, Mumbai, during Jan 21-25, 2020.
- Rahul Narasimhan R (mdm16b025) and the team received runners up with a cash prize of Rs. 20000 for developing prototypes of prosthetics during “Shaastra”, organized by IIT Madras in Jan 2020.
- Rahul Narasimhan R (mdm16b025), received ISD Merit Scholarship from the University of Michigan's for doing Master's in Systems Engineering + Design starting Fall, 2020
- Ratnanjali Tiwari (mpd15i019) presented a research paper in the 46th National Conference on Fluid Mechanics and Fluid Power (FMFP2019) organized by PSG College of Technology, Coimbatore, during December 9-11, 2019.

7.6 Students Achievements in Sports

4th IIIT Sports Meet 2020 @IIITDM Jabalpur

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. For the period under report, IIITDM Jabalpur hosted the meet (4th Edition). Our contingent participated in both indoor and outdoor events (Men and Women categories). IIITDM Kancheepuram secure overall 2nd place.

Athletics Men				
No.	Name Of The Student	Roll No	Event	Place
01	Singireddy Manoj	MPD18I021	100 M	1st
02	Nikhil Gedam	MSM17B001	100 M	2nd
03	G Bhanuprasad	MDM18B017	200 M	1st
04	Nikhil Gedam	MSM17B001	200 M	2nd
05	Varun Purohit	MSM17B040	400 M	1st
06	Gunda Rishi	EVD16I005	400 M	3rd
07	Gunda Rishi	EVD16I005	800 M	1st
08	Krishnakumar T	MSM17B026	1500 M	1st
09	Krishnakumar T	MSM17B026	3000 M	2nd
10	Krishnakumar T	MSM17B026	5000 M	3rd
11	Aditya Gopakumar	CED17I036	Long Jump	1st
12	G Bhanuprasad	MDM18B017	Long Jump	2nd
13	B M Yuvaraj Nayak	EVD19I014	Triple Jump	1st
14	Varun Purohit	MSM17B040	Triple Jump	2nd
15	Mohamed Yousuf Ms	MDM17B049	High Jump	1st
16	Singireddy Manoj	MPD18I021	Javelin Throw	1st
17	Vineet Sengar	MPD17I018	400 M Hurdles	2nd
18	Varun Purohit	MSM17B040	4X400 M Relay	1st
19	Gunda Rishi	EVD16I005		
20	B M Yuvaraj Nayak	EVD19I014		
21	Vineet Sengar	MPD17I018		

Athletics Women				
No.	Name Of The Student	Roll No	Event	Place
01	Advytha Chapala	EDM17B044	100 M	2nd
02	Advytha Chapala	EDM17B044	200 M	1st
03	Sujitha Govindan	EDM18B018	5000 M	3rd
04	Advytha Chapala	EDM17B044	Triple Jump	1st
05	K Vennela	COE19B032	Shotput	1st
06	Sriram Vaishnavi	COE16B036	Shotput	3rd
07	Harsha Varghese	MSM18B017	Discuss Throw	1st
08	Sriram Vaishnavi	COE16B036	Javelin Throw	2nd
09	Sivarenjini T M	SMT19M008		1st
10	Badira Mahmood	MSM18B007	4X400 M Repay	
11	Sana	MPD16I012		
12	Advytha Chapala	EDM17B044		

Group Events		
No.	Event	Place Secured
01	Badminton - Men	3rd Place
02	Basketball - Men	2nd Place
03	Chess	2nd Place
04	Cricket - Men	2nd Place
05	Tennis - Men	2nd Place
06	Volleyball - Men	1st Place
07	Badminton - Women	2nd Place
08	Carrom - Women	3rd Place
09	Table Tennis - Women	1st Place



Photographs



Photographs

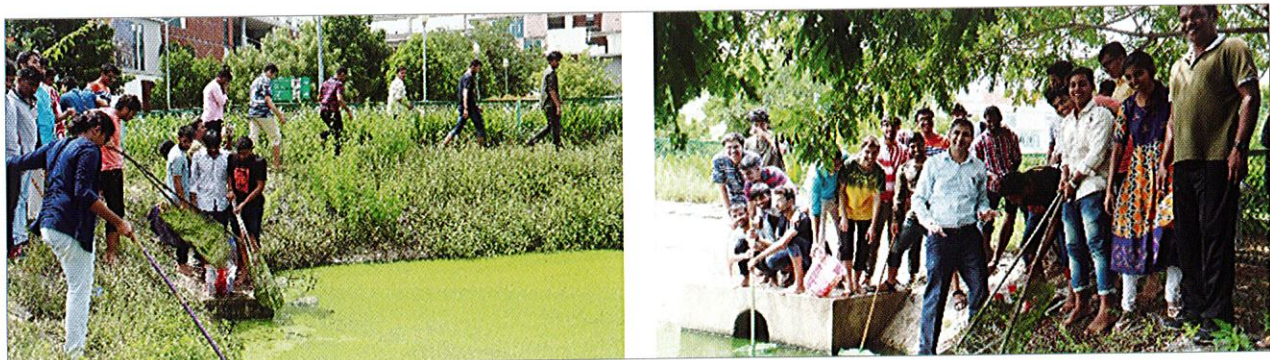
Sep 2019 Table-Tennis IIT Madras Sports Fest 2019

Our Table Tennis women team Vaishnavi, Harshini and Arul Lakshmi secured 3rd place and won bronze medal in IIT Madras Sports Fest 2019.



7.7 Activities Organized by Students

06 Sep 2019 Unnat Bharat Abhiyan - Pond Cleaning



18 Jan 2020 : Blustroducation

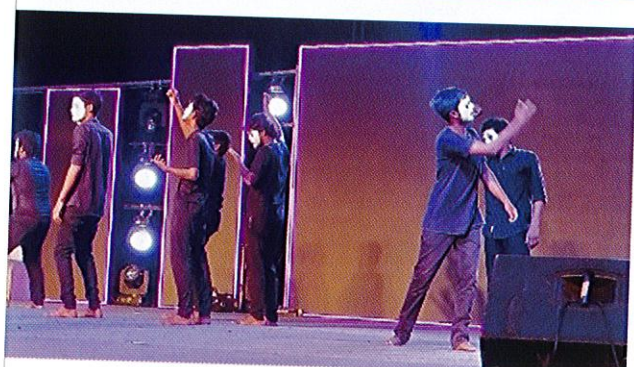
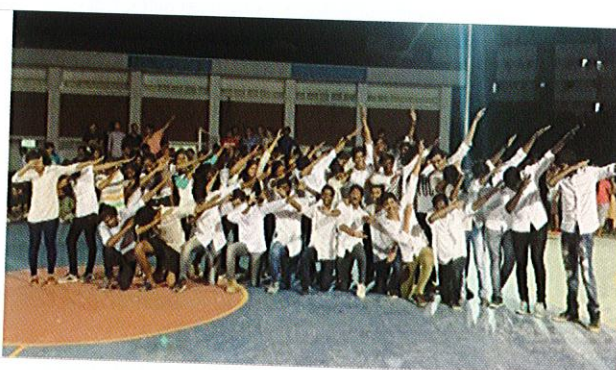
Dance club has organized the club inauguration event called blustroducation on 18-01-2020.

08 Feb 2020 : Cycle Rally

In order to create awareness among people climatic change that is happening in the world right now, Adventure club of IIITDM Kancheepuram has organized a cycling rally to JUHU Beach on 08/02/2020. Around 26 students including a research scholar have participated in the rally.



Cycle Rally to JUHU Beach to create awareness on climatic change



Blustroducation '20

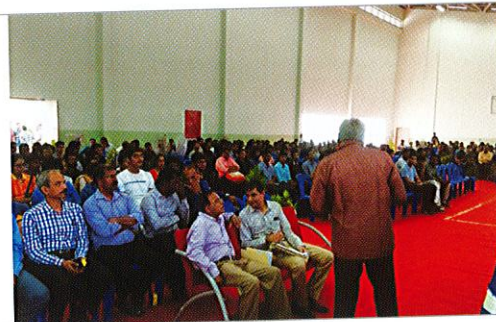
08 Events Organized

8.1 Orientation Program

In order to acclimatize the fresher students with academic and social atmosphere of Institute and inculcate the ethos of the Institute, three days orientation program was organized from July 24-26, 2019. New entrants were comforted with the Institute guidelines, academic calendar, and introduced with the hierarchy of the Institute. Orientation began with the expert and lecture from Prof. Ganeshan Balaji, (IIT M), and different session on meeting Industry / academia personnel. Further, sessions on tree plantation, Yoga, first aid, and self-defense skill were conducted in addition to an exciting and mesmerizing session on prevention of drugs in the society. The brief timeline of the event is tabulated below.



Felicitation of Mr. Jit Goel, (CEO) and Chief Software Architect of XCEL Corp



Expert lecture by Prof. Ganeshan



Session on Drug Prevention by Dr. Venkatesh Babu, IRS



Yoga Session



Tree plantation session



Self Defense session

8.2 Invited Talk Organized

No.	Date	Name of the Guest Speaker	Topic	Organizer
01	23.08.2019	Dr. Moumita Patra, IIT Guwhati	Vehicular ad hoc Networks/Internet of Vehicles	Dr. N Sadagopan
02	30.08.2019	Dr. Saswati Dana IBM Research Lab Bangalore	Natural Language, Bangalore	Dr. N. Mishra
03	04.09.2019	Dr. Anand V.P Scientist, CSIO-CSIR	E-Vehicles / Mobility : Challenges & Opportunities	Dr. Srijith K
04	27.09.2019	Dr. S A Sundaresan Vice President, Ashok Leyland	Emerging trends and Challenges in the design and manufacturing of Electric Vehicles	Dr. Siva Prasad
05	12.10.2019	Dr. Soundra Pandia Ministry of Electronics & IT	IoT	Dr. Vijayakumar K
06	16.10.2019	Dr. Amar Prakash Principal Scientist CSIR	Analysis and Design of Structures against Impulsive Loads due to Impact and Blast : Challenges for Engineers	Dr. Siva Prasad
07	01.11.2019	Dr. Arjun Menon IIT Madras	Shakti Processor - The Journey & Opportunities	Dr. V. Masilamani
08	19.12.2019	Dr. Sakthi Balan Muthiah LNM Institute of Information Technology	Social Synchrony and Detecting Events in Online Social Media	Dr. V. Masilamani
09	13.01.2020	Dr. Abhay A Sagade SRM Research Institute of Science	Seamless Junctions for Nanoelectronics : Myth or reality	Dr. K.P.Pradhan
10	27.01.2020	Dr. John Panneerselvam University of Derby, U.K	Energy Efficient Data Centres	Dr. Chitti Babu
11	29.01.2020	Dr. C.K. Subramaniam VIT Vellore	PEMFC Fuel Cell and Electric Mobility	Dr. Damodharan P
12	31.01.2020	Dr. Satya Mokamati Vanmok, Canada	IoT/Cloud Board theft/leak detection and gas pipelines	Dr. Timmaraju
13	06.02.2020	Dr. Raj Ramesh Chief AI Officer, Data Foundry	AI for Future	Dr. V. Masilamani
14	05.02.2020	Dr. K.R.A Nair Executive, Lucas TVS Retd	Transition of E-Mobility Challenges and Opportunities in India	Dr. Damodharan
15	20.02.2020	Prof Paul Wood University of Derby U.K	Advanced Manufacturing Research	Dr. Raguraman
16	21.02.2020	Maruti Tamrakar Antenna Engineer, Intel Tech	5G Antenna Design and System Integration	Dr. Priyanka Kokil

8.3 Guest Lectures Organized

The students of the institute are getting admission for higher studies in reputed institute both in India and abroad. Some of the notable achievement during the year are :

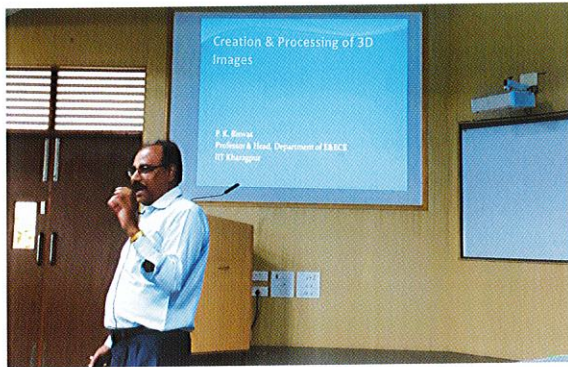
01. Dr. K P Pradhan organized an invited talk on Introducing RWTH Aachen University and Biomedical Engineering at RWTH, by Prof. Steffen Leonhardt, RWTH Aachen University, on 15, April, 2019.
02. Dr. Sudhir Varadharajan and Dr. Jayachandra Bingi organized EHIPASSIKO Summer (Industry Open House), Apr 2019.



03. Dr. Chitti babu organized two days workshop on Research Methodology during 13-14 March 2019.
04. Dr. Shahul Hamid Khan and Dr. Pandithavan organized SERB Sponsored Five Day National Level Workshop on Advanced Welding Techniques for Joining Dissimilar High Strength Alloys for Aerospace Applications (AWT 2019) held on April 29-May 3, 2019.
05. Dr. Munesh singh organized a hands-on-training program on Technical Writing and Publishing with Advanced Computer Tools, during 25-29 May, 2019.
06. Dr. Sivaselvan and Dr. N. Sadagopan organized a workshop on Data Science using Python (DSP 2019) during May 2-6 2019.
07. Dr. Asutosh Kar organized one-week short term course on Advanced Signal Processing Algorithms and Applications during 11-15 May 2019.



08. Dr. Sudhir Varadharajan organized a 3-week summer Sandbox program (May 2019).
09. Dr. K P Pradhan organized a five-day hands-on-training program on "Technical Writing and Publishing with Advanced Computer Tools" from 25-29th May 2019.
Dr. Timmaraju VM organized Mechanical Design Simulation Practice (NPTEL Lab workshop) held from 20-25 May 2019.
10. Dr. Timmaraju VM organized Mechanical Design Simulation Practice (NPTEL Lab workshop) held from 27th May to 1st June 2019.
11. Dr. Vijayakumar organized a Self-Sponsored STTP on Microgrid and Renewable Energy Technologies (MRET) during 6th, 11th June, 2019.
12. Dr. Damodharan organized Short Term Training Program (STTP) on Microgrid and Renewable Energy Technologies (MRET) during 6-11 June, 2019.
13. Dr. Noor Mahammad SK organized a 5 days program on high performance VLSI architecture for digital signal processing during 10 to 14 June 2019.
14. Dr. S R Pandian organized a 5 day program on innovative design and manufacturing education during 17 to 21 June 2019.
15. Dr. Noor Mahammad SK organized a 5 days workshop on Artificial Intelligence for ALL during 17-21 June 2019.
16. Dr. Noor Mahammad SK organized a 5 days workshop on Research Challenges and Opportunities in Network System Design during 24 to 28 June 2019.
17. Dr. Masilamani organized workshop on Digital Image Processing and Machine Vision, during 25-29, June, 2019.



19. Dr. Shahul Hamid Khan and Dr. Kalpana organized two days national work shop on Internet of Things in Supply Chain Management held on 27, 28 June 2019.
20. Dr. Chitti babu (Organizing Chair), Dr. Jagadeesh Kakarla (Co organizing Chair) and Dr. Asutosh kar (Co organizing Chair) organized IEEE sponsored International Conference on Energy, Systems and Information Processing (ICESIP-2019), during 04 July-06 July, 2019 at IIITDM Kancheepuram, Chennai.
21. Dr. Masilamani, Dr. Sivaselvan and Dr. Noor Mahammad SK organized workshop on Information Security, during 15-19 July, 2019.
22. Dr. Vijayakumar organized AICTE (ATAL) Sponsored Short Term Course on "Industrial Robotics: Automation and Control" from 26/09/2019 to 30/09/2019.
23. Dr. Naveen kumar organized two days Arduino Workshop during September 21, 28, 2019.



24. Dr. Sudhir Varadharajan organized a 3 one-day Discovery Workshops, Aug, Sep, Oct 2019.
25. Dr. Damodharan organized a two days workshop on Electric and Hybrid Vehicle Engineering (EHVE) on 18th & 19th, October 2019.



26. Dr. Jayachandra Bingi organized workshop on system physics: First step to innovation, Oct 12, 2019.
27. Dr. Sudhir Varadharajan organized EHIPASSIKO Winter (Industry Open House), Nov 2019.
28. Dr. Naveen kumar organized two days Arduino Workshop during November 28, 29, 2019.
29. Dr. Timmaraju VM organized Mechanical Design Simulation Practice (NPTEL Lab workshop) held from 25th to 30th November 2019.
30. Dr. Vijayakumar organized AICTE (ATAL) Sponsored Short Term Course on "Internet of Things: Concepts and Implementation" from 15/11/2019 to 19/11/2019.
31. Dr. Asutosh Kar organized of one-week short term course on Machine Learning Algorithms and Applications during 30th November to 04 December 2019.

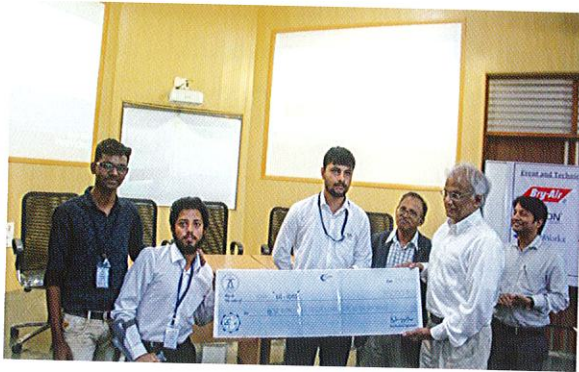




32. Dr. Noor Mahammad SK organized a one-week workshop on High Performance Computing for ALL during 02-06 December 2019.
33. Dr. Vijayakumar organized AICTE (ATAL) Sponsored Short Term Course on "Artificial Intelligence and Applications" from 04/12/2019 to 08/12/2019.
34. Dr. Noor Mahammad SK organized a one-week workshop on Reconfigurable Computing: FPGA based System Design during 09-13 December 2019.
35. Dr. M Sreekumar organized one-week STTP on Kinematic Analysis and Synthesis of Robot Mechanisms during 16-21 Dec. 2019.



36. Dr. Vijayakumar organized AICTE (ATAL) Sponsored Short Term Course on "Power Electronic converters and Controllers for EV and Smart grid" from 18/12/2019 to 22/12/2019.
37. Dr. Sudhir Varadharajan organized a 3-week Winter Sandbox program (Dec 2019).
38. Dr. K P Pradhan, Dr. B Raja and Dr. Selvajyothi organized a three-day SERB sponsored workshop on "BATTERY TECHNOLOGY FOR E-VEHICLE" from 26-28th December 2019.
39. Dr. K P Pradhan, Dr. B Raja and Dr. Selvajyothi organized a two-day hackathon on Smart Innovative Glove Box Design & Recycling Techniques for Lithium-Ion Batteries on 28-29th December 2019.



40. Dr. Senthil Kumaran organized three-week Faculty Induction Program and one-week Short term Training Program on Design for Additive Manufacturing.



41. Dr. Naveen kumar organized a self-sustainable workshop for interested students of the institute was conducted by the DIC and Staff.

8.4 International Conference, ICESIP 2019

The IEEE 2019 1st International Conference on Energy, Systems and Information Processing (ICESIP 2019) was held in Indian Institute of Information Technology, Design & Manufacturing (IIITD&M) Kancheepuram, Chennai, India during July 04-06, 2019. The conference includes technical sessions, keynote and plenary talk etc. The conference tracks are as follows: 1. Power & Energy Systems, 2. Electronics Systems, 3. Communication systems, 4. Control & Information Processing.

We received in excess of 300 papers from various institutions across the globe for the above-said tracks. After peer review process by Technical Programme committee, 150 papers have been accepted for presentation (50% acceptance rate). From these accepted papers, authors of 126 papers have been registered for final presentation in the conference. Finally, 123 papers have been presented by the authors from various countries namely Taiwan, South Korea, Bangladesh, Malaysia, IITs, NITs and other reputed institutions from India.

Prof.S.S.Pattnaik, Director NITTR Chandigarh was a chief guest and delivered a chief-guest address and Prof. Bansidhar Majhi, Director, IIITD&M Kancheepuram delivered an inaugural address.

The key-note speakers were Prof. Sukumar Mishra, IIT Delhi, Prof. S. R. Samantaray, IIT Bhubaneswar and Prof. T. Nandha Kumar, University of Nottingham Malaysia Campus. The event was technically co-sponsored by IEEE Madras Section in association with IEEE Student Branch, IIITD&M Kancheepuram, Chennai.

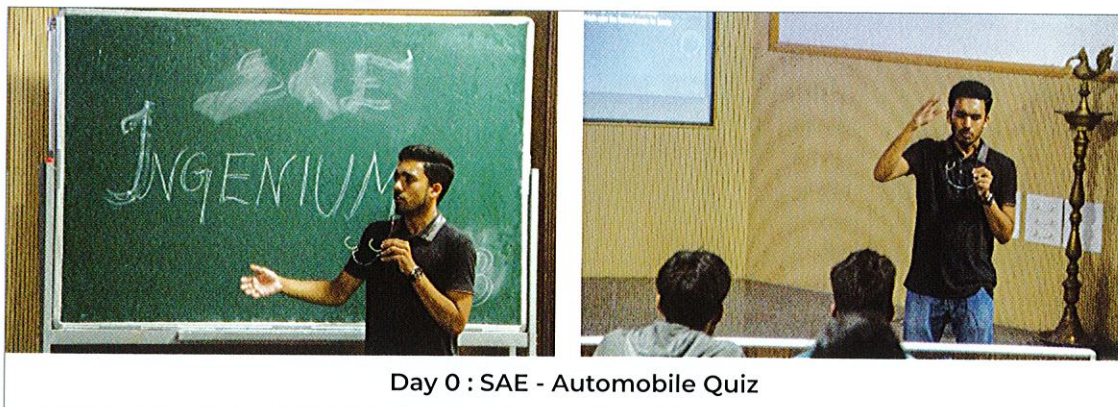


8.5 Research Scholar's Day 2020

Research Scholars Day (RSD) is an annual event celebrated by the PhD and Master's students. This year's RSD (RSD2020) was grandly celebrated on 28th February and the event saw an enthusiastic participation of faculty and students. It provided an excellent platform for senior research scholars to showcase their research work through posters and interact with other students, faculty and guests. Prof. Majhi (Director, IIITDM Kancheepuram) delivered the inaugural address and Prof. S. P. Venkateshan (Professor Emeritus, IIITDM Kancheepuram) delivered the opening remarks about the event. The event comprised of expert talks from distinguished guests like Dr Shankar Venugopal (Mahindra & Mahindra Ltd.), Prof. S. Gopalakrishnan (IISc Bangalore), Dr Dheepa Srinivasan (Pratt & Whitney) and Prof. C. Balaji (IIT Madras). The event concluded with certificate distribution to the research scholars and closing remarks by Dr. Binsu J Kailath (Dean Academics, IIITDM Kancheepuram). The event enhanced the student-faculty interaction and helped in motivating the research scholars to excel in their research work which was possible due to the relentless effort from the Professor in Charge of Research Dr. Gowthaman Swaminathan and the Research Scholars.



8.6 Vashist 2019

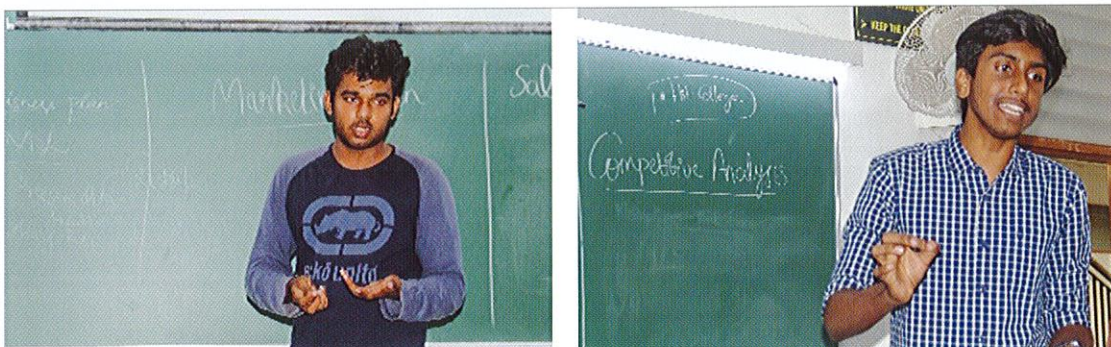




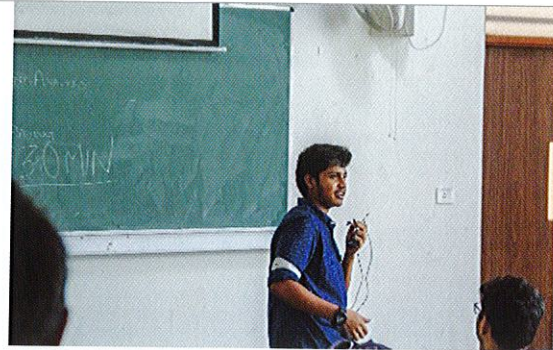
CS - Club Event Inauguration



Prometheus Torch - EPiC



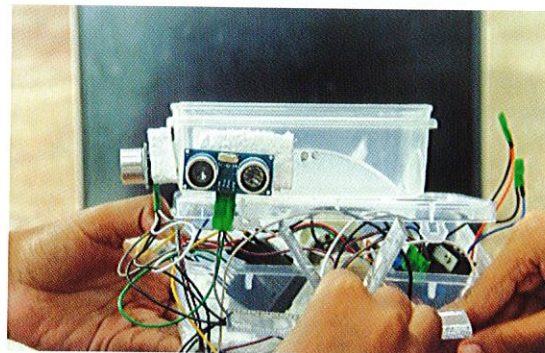
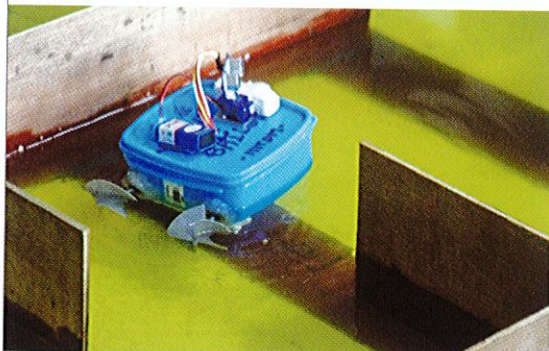
Day 1 : Pitch Meeting



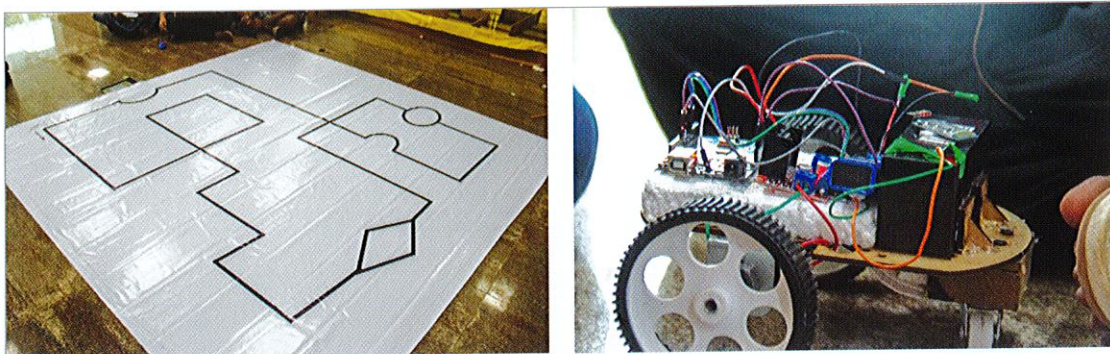
Quiz



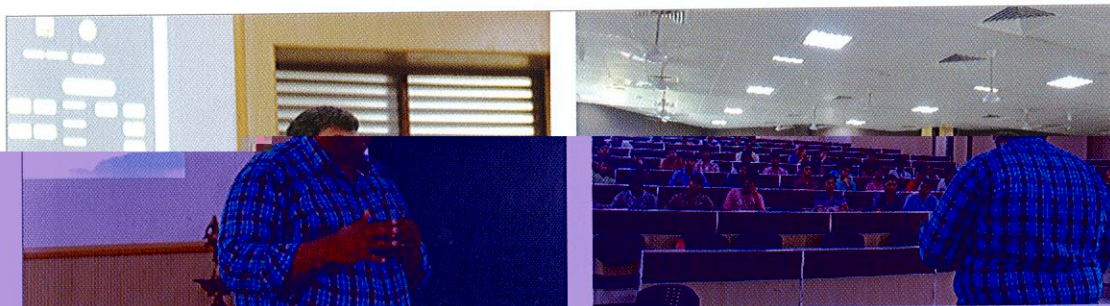
Rashmi



Robotics



Day 2 : Line Follower



Invited Talk AUV



Decode Battle



Circuitathon

8.7 Yoga Sessions

Students are also performing yoga and an expert from nearby Tamilnadu Sports University conducts yoga session on weekly basis.



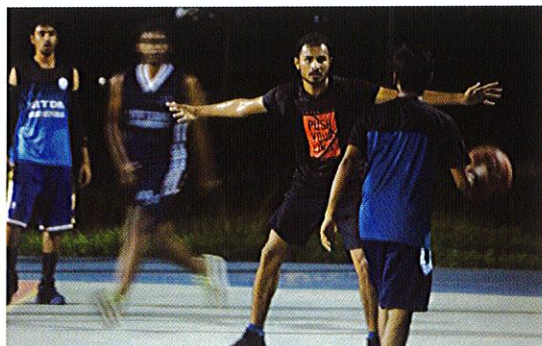
8.8 Fit India Program (29 Aug 2019)



8.9 Fresher's Tournament 2019 (30 August 2019)



8.10 Inter Departmental Sports Tournament (Sep, Oct 2019)



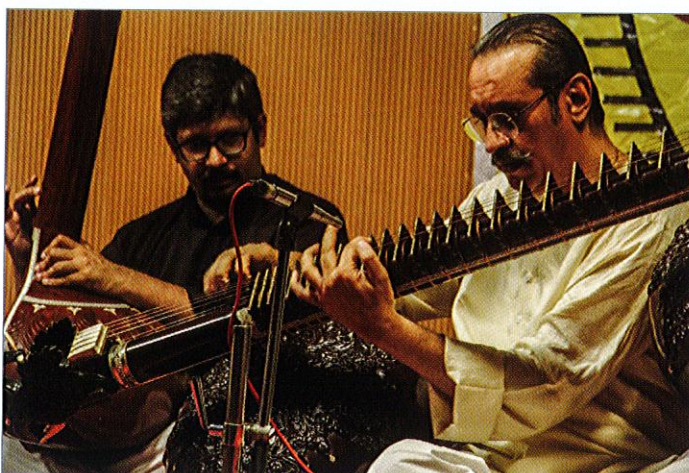
8.11 NCC Cadet Selection Trails (18 October 2019)



09 Calendar Events - Institute Celebrations

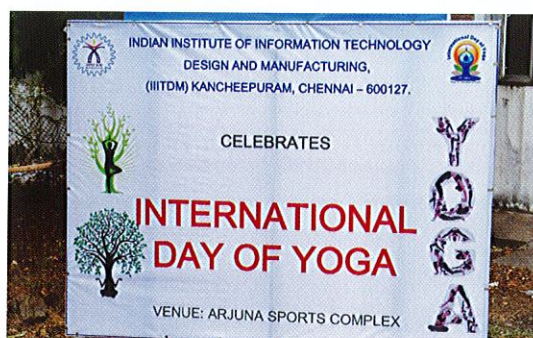
9.1 Spic Macay



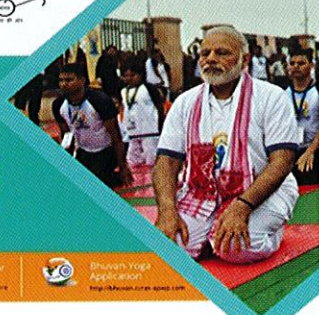
Students are also involved in promoting local art and music. In association with SPIC MACAY, the students are conducting music events at regular interval. During the period, a Sarod Recital by Pandit Tejendra Majumdar was conducted on 2nd April, 2019. He was accompanied by Shri Arup Chattopadhyay on the Tabla. The program is a part of the SPIC MACAY's SRF Virasat 2019 festival organised in association with SRF Foundation based in Delhi. A Rudra Veena concert by the prestigious Sangeet Natak Akademi awardee, Ustad Bahauddin Dagar was also conducted on 16.10.2019.





Rudra Veena Recital by Sh. Ustad Bahauddin Dagar
in collaboration with SPIC MACAY

9.2 International Day of Yoga



Everyone has a stake in INTERNATIONAL DAY OF YOGA
21st JUNE

Download our apps:  Yoga Locator 2019  Bhuvan Yoga Application

Greetings from the Ministry of AYUSH on the occasion of the International Day of Yoga (IDY)-2019!

Yoga offers numerous rewards that improve our health and secure us peace of mind. It improves our performance at workplace, has a positive impact on our personal relationships and helps us to maintain harmony with the surroundings in which we live.

As is well-known, the fifth International Day of Yoga falls on 21st June 2019. The observation of IDY started in 2015, following a decision of the United Nations to observe 21st June as the day dedicated to Yoga. It is matter of pride to all Indians that this decision came at the behest of the Hon'ble Prime Minister of India, who proposed this in his speech to the UN General Assembly in September 2014.

Like previous years, millions of people in over 200 countries are expected to participate in the IDY this year also. Yoga has something to offer to everyone, be it a hopeful child, an aspiring youth, a parent, or senior citizens. IDY is already the country's greatest mass movement for public health, and it is an inspiring way to get introduced to Yoga.

IDY is for all of us. The thrust of the IDY observation is on harmonious mass yoga demonstrations on 21st June 2019. Community-driven IDY events. The Ministry of AYUSH invites you to join the IDY movement by selecting an appropriate IDY event near you and participating in the same.

Be a part of IDY-2019. Start a journey towards good health and well-being.

With the best of wishes,

- Ministry of AYUSH, Government of India



INVITATION
INTERNATIONAL DAY OF YOGA Celebration @ IIITDM Kancheepuram
21 JUNE 2019

Program Schedule

- 04.00 pm – 04.10 pm Welcome Address - Dr. M Sreekumar, Dean – Faculty Affairs
- 04.10 pm – 04.25 pm Felicitation of Yoga Guruji Shri T Paramasivam and Address by Director, Prof. Banshidhar Mahji
- 04.25 pm – 04.30 pm Vote of Thanks - Dr. Naveen Kumar Vats, Dean – Student Affairs
- 04.30 pm – 05.30 pm Yoga Practice & Demonstration by Guruji Shri T Paramasivam and his students, J. Monicka & J. Gayatri

Venue: Arjuna Sports Complex



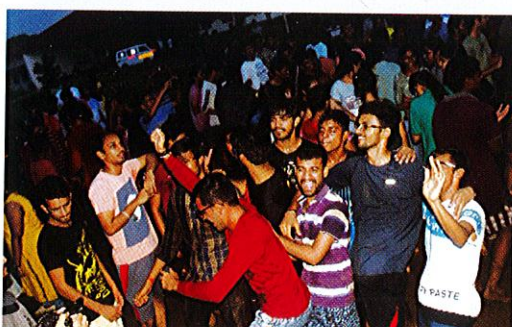
9.3 Independence Day



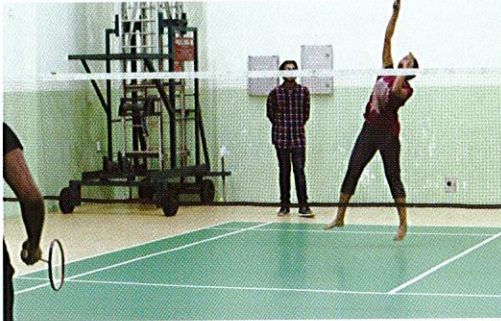
9.4 Friendly Cricket Match



9.5 Janmastami



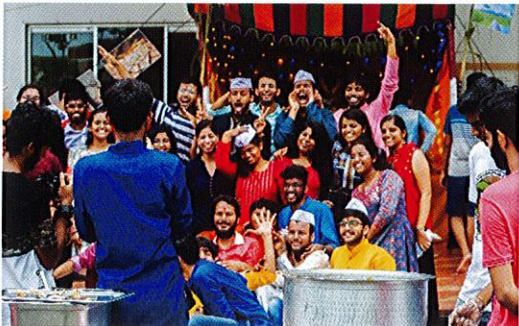
9.6 National Sports Day



9.7 Teachers Day Celebration



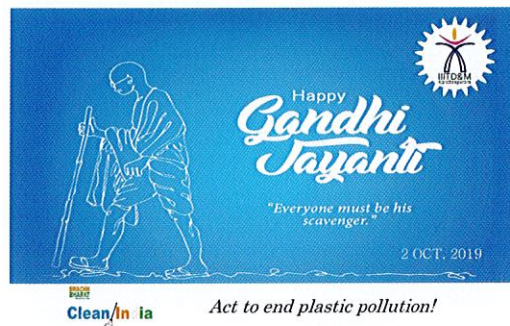
9.8 Ganesh Chaturthi



9.9 Onam 2019



9.10 Gandhi Jayanthi Celebrations



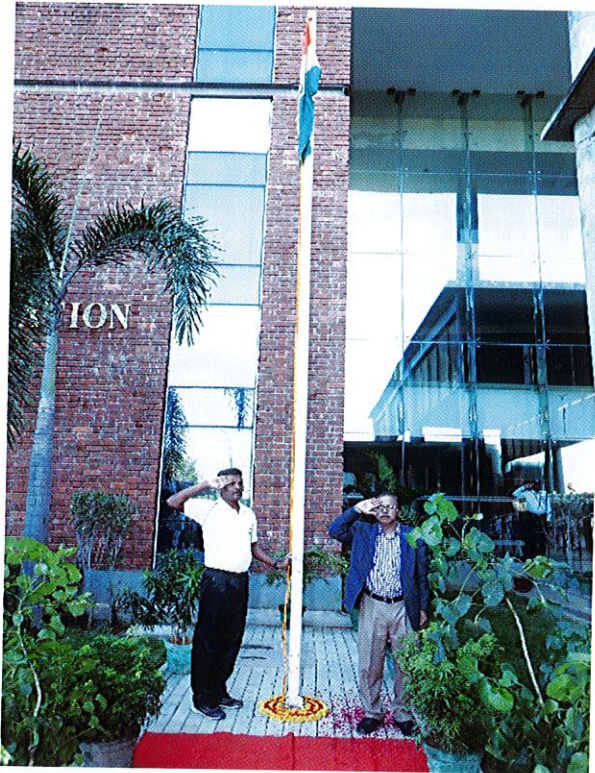
9.11 Dandiya Night 2019



9.12 Pongal Celebration



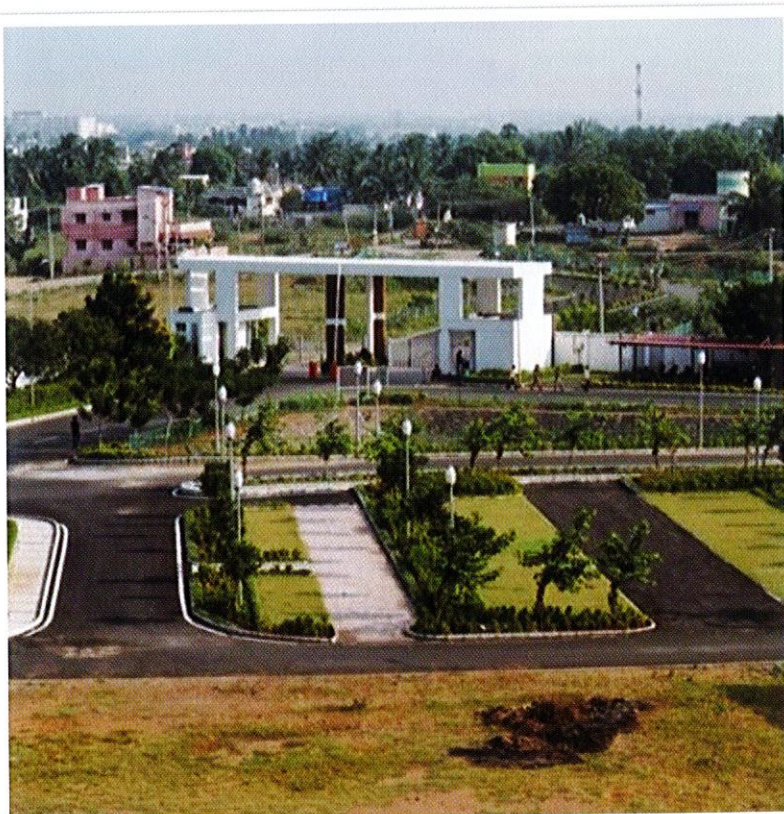
9.13 Republic Day



Republic Day Friendly Cricket Match



10 Infrastructure



10.1 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 with the budget granted from the time of the institute's inception. A comprehensive masterplan was 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 developments under Phase-I has been completed.

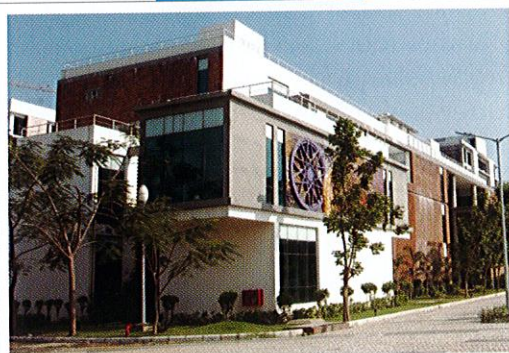
Year	Building Name	Area in Sq. Meters
2011-2012	PEMS	6300 : Total 6300
2012-2013	Boys Hostel 1	2600
	Girls Hostel	2876
	Admin Bldg	4775 : Total = 10251
2014-2015	Lecture Hall	10408
	Boys Hostel 1	18011
	Dining Hall	3784
2015-2016	Cafeteria	385
2016-2017	Sports Complex	2828
	Boys Hostel 2	12802
		15282 : Total 63,500
2017-2018	Laboratory Block	36166
2018-2019	Girls Hostel	13916
2019-2020	Faculty Quarters	14200 : Total 64,282

IIITD&M Institute Timeline - Permanent Campus



10.2 Major Infrastructure Facilities

Admin Block



Overall Spec. : G+3 Floors
 Plinth Area : 4775 sq. m
 Senate Block : 132 Seating Capacity

Academic Block



Overall Spec. : G+4 Floors
 Plinth Area : 10408 sq. m
 Occupancy : Labs & Lecture Halls

Laboratory Block



Overall Spec. : G+6 Floors
 Plinth Area : 36166 sq. m

Boys Hostel (Aswatha)



Overall Spec. : G+14 Floors
 Plinth Area : 18,297 sq. m
 Total No. of Beds : 724

Boys Hostel (Ashoka)



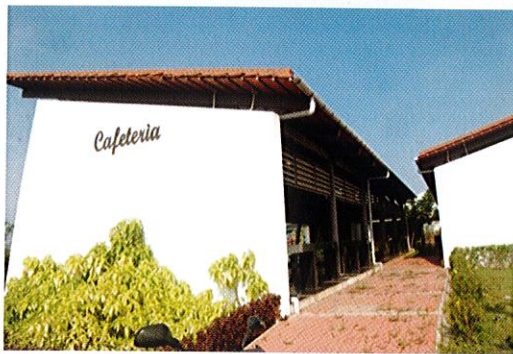
Overall Spec. : G+14 Floors
 Plinth Area : 12,522 sq. m
 Total Number of Beds : 386

Dining Block (Akshaya)



Overall Spec. : G+3 Floors
 Plinth Area : 3784 sq. m
 Seating Capacity : 512

Cafeteria



Overall Spec. : Single Storied
Plinth Area : 385 sqm

Indoor Sports Arjuna Complex



Overall Spec. : G+1 Floor
Plinth Area : 2,828 sq. m

Girls Hostel (Jasmine)



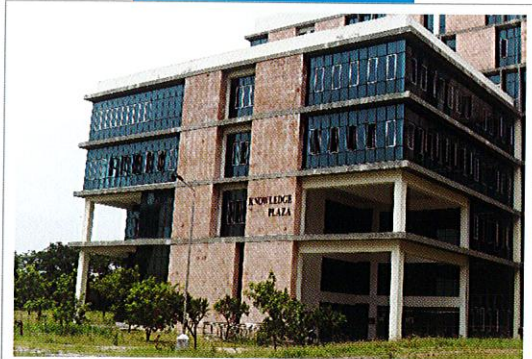
Overall Spec. : G+14 Floors
Plinth Area : 13,060 sq. m

Faculty Quarters



Overall Spec. : G+3 Floors
Number of Houses : 4775 sq. m
Plinth Area : 14,197 sq. m

Knowledge Plaza



Senate Hall



