वार्षिक प्रतिवेदन
ANNUAL REPORT
2023-2024

भारतीय सूचना प्रौद्योगिकी, अभिकल्पना एवं विनिर्माण संस्थान, कांचीपुरम

Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram

IIITD&M
Kancheepuram

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Vision, Mission And Charter

VISION

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

MISSION

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

CHARTER

To provide education and training, at both undergraduate and postgraduate levels, to persons of outstanding abilities who would provide leadership to Indian industry in globally competitive economic environment.

To carry out advanced research and development activities in design and

manufacturing technologies, both on its own and on sponsorship basis for the industry.

To provide distance learning and continuing education programme for faculty / scholars from other institutions and industry personnel.

BOARD OF GOVERNORS

AS ON 31.03.2023

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Founder and CEO,
Zoho Corporation

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IIITDM Kancheepuram

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Deputy Secretary (IIITs),
MoE, GoI

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Principal Secretary to Government,
Department of Information Technology,
Govt. of Tamil Nadu

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Technology,Madras

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IIITDM Kancheepuram

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Department of Electronics and
Communication Engineering
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Kancheepuram

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and Communication Engineering
IIITDM Kancheepuram

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Dean (SRICCE) & Dean (Planning),
IIITDM Kancheepuram

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HoD, Dept of CSE,
IIITDM Kancheepuram

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HoD, Dept of ECE,
IIITDM Kancheepuram

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HoD, Dept of ME,
IIITDM Kancheepuram

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HoD, Dept of S&H,
IIITDM Kancheepuram

Dr. Raguraman M
HoD, SIDI,
IIITDM Kancheepuram

Prof. M. Sreekumar
Dept of ME,
IIITDM Kancheepuram

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AS ON 31.03.2023

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Founder and CEO,
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Director,
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Member
Former CMD, Indian Bank

Prof. M Thenmozhi
Member
Head, DoMS, IIT Madras

Shri. Priyank Chaturvedi
Member
Deputy Secretary (IIITs), MoE, GoI

Sh. Anil Kumar
Member
Director (Finance), MoE, GoI

Shri. Chandan Kumar Prusty
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Assistant Registrar (Accounts),
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Dept of Civil Engineering,
IIT Madras

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Dean – Faculty Affairs
IIITDM Kancheepuram

Prof. S. Jayavel
Dean – SRICCE & Planning
IIITDM Kancheepuram

**Supt Engineer,
TNEB–TANGEDCO, Chennai
Member**

Secretary

Mr. R. Gunasekaran
Joint Registrar, IIITDM Kancheepuram

DIRECTOR'S REPORT

In 2023-24, we reintroduced our Dual Degree programme resulting in a perceptible increase in the UG admissions. Currently our total student strength is 1914 and we have 83 faculty members including the adjunct and visiting professors after the two rounds of faculty recruitment in 2023-2024. We facilitate an inter-disciplinary, design oriented engineering education where thrust is given to product development.

In the last couple of years, we have filed almost 36 patents and 7 patents have been granted in the academic year 2023-24. Congratulations to the faculty members and students who worked on these projects. Our research output in terms of academic publications in the year 2023-24 is nearly 350 and the average publication per faculty is 4.2. Our research publications have been cited 853 times by fellow researchers in respective fields. I would like to mention that in NIRF Innovation Ranking 2023 IIITDM Kancheepuram was ranked 8th in the country. We are awaiting the release of the NIRF Ranking 2024. We hope that our hard work and commitment to excellence will be reflected in this year's ranking also.

In the academic year 2023-24 IIITDM Kancheepuram received a total of 16 projects having a cumulative value of 3.6 crore rupees. We are engaged in government funded projects as well as collaborative and consultancy projects with the industry.

I would like to mention a few notable achievements. Prof. Binsu J Kailath and Dr. S. Kalpana were granted funding of Rs. 48.48 lakhs from Chip to Start up (C2S) project of MeitY; Dr. V. Timmaraju, 34.36 lakhs from Core Research Grant of SERB,-Power scheme' Prof. Naveen Kumar and Dr. V. Timmaraju 41.38 lakhs from Vanmok Inc.; Dr. Uttam Pal Rs. 47.52 lakhs from ICMR; in addition to other projects from SERB MATRICS and TARE schemes and CSIR/NBHM projects and those funded by Industries.

13 new MoUs have been signed in the academic year 2023- 24 and we will be partnering with organizations like NITTTR-Chennai, Mahindra & Mahindra, and NPTI for various projects. In May 2023 IIITDM Kancheepuram and University of Agder signed an MOU for academic exchange.

As part of the MOU, a team of faculty members from IIITDM Kancheepuram visited the university campus of Agder, Norway in May 2024. In continuation, a team of researchers from University of Agder visited our campus this July. Two postgraduate students from IIITDM will be visiting Agder University shortly for a year-long study program as part of this collaboration.

The introduction of the Support for Major Interdisciplinary Research Equipment (SMIRE) Scheme was a major leap in establishing a research facility at the institute. Formulated in the year 2023, a support of Rs. 6 crores is provided annually during the financial years 2023-24 and 2024-25 for the procurement of major research equipment. Under SMIRE 2023 the institute established sophisticated measurement and instrumentation facilities including Semiconductor Parameter Analyzer and Probe Station, Vector Network Analyzer, Anechoic Chamber, Raman Spectrometer, Customized Thermal Conductivity Tester, Electrospinning Machine, Graphene Quantum Capacitance Module, Impact Dynamics Testing Facility, and Stylus Profilometer Another scheme for financial support for faculty members from the institute is the seed grant provided to newly joined faculty members for establishing research facilities. In 2023-24, the seed grant has been increased to 20 lakhs per faculty member from the previous limit of 10 lakhs per faculty member.

The Institute also conducts short-term courses for faculty and students from other universities/colleges. In 2023-24, faculty members conducted 38 workshops, STTP, and conferences. These initiatives help in the dissemination of knowledge and upskilling of professionals.

Our research and skill development centers like Teaching Learning Centre, MaDeIT Innovation Foundation, and Design Innovation Centre are the nodal points for these community oriented initiatives apart from individual departments.

Teaching Learning Centre at IIITDM Kancheepuram is one of the 111 centers selected by the Ministry of Education for the implementation of Malaviya Mission Teacher Training Program (MMTTP) to accelerate faculty development following the vision of the New Education Policy. From October 2023 to June 2024, MMTTC organized 15 NEP orientation programmes and trained about 850 teachers from higher education institutions across the country as a way of implementing the following components of MMTTP: NEP orientation and sensitization; refresher courses; short-term courses; and Capacity Building on Design and Entrepreneurship (CBDE). In addition to this, the centre organized 47 Makerspace Orientation programs for 2820 Students and 120 faculty members from various technical institutes, and 3 workshops and 1 training program for government school children.

In the financial year 2023-24, MaDeIT Innovation Foundation, IIITDM Kancheepuram's business incubator, added 7 more companies to its portfolio. MaDeIT has incubated about more than 75 companies since its inception, and currently has a portfolio of 25 companies. MaDeIT helps its companies to find visibility and exposure. MaDeIT's incubatees participated in the Global Investors Meet 2024, Embedded Expo - India Electronics Week(IEW) and Source India Expo 2024.

As part of the teacher's day celebrations 2023, the institute, for the first time, honored the outstanding teachers from the Undergraduate and Postgraduate sections. Dr. B Chitti Babu and Dr. Siva Prasad AVS received the outstanding teacher awards. Dr. Sreenath Reddy from the Department of ECE received the Young Scientist

Award from the International Union of Radio Science (URSI) at the 4th URSI Atlantic Radio Science Meeting, held in Gran Canaria, Spain. Dr.Kishor Kumar Gajrani, Assistant Professor in the Department of Mechanical Engineering, is featured for the second time in the "World's top 2% scientist 2023" list released by Stanford University and published by Elsevier. A Faculty Startup, M/s Kanchi Systems and Solutions Pvt ltd, is registered by Dr.B.Raja and Dr.K.Selvajyothi .
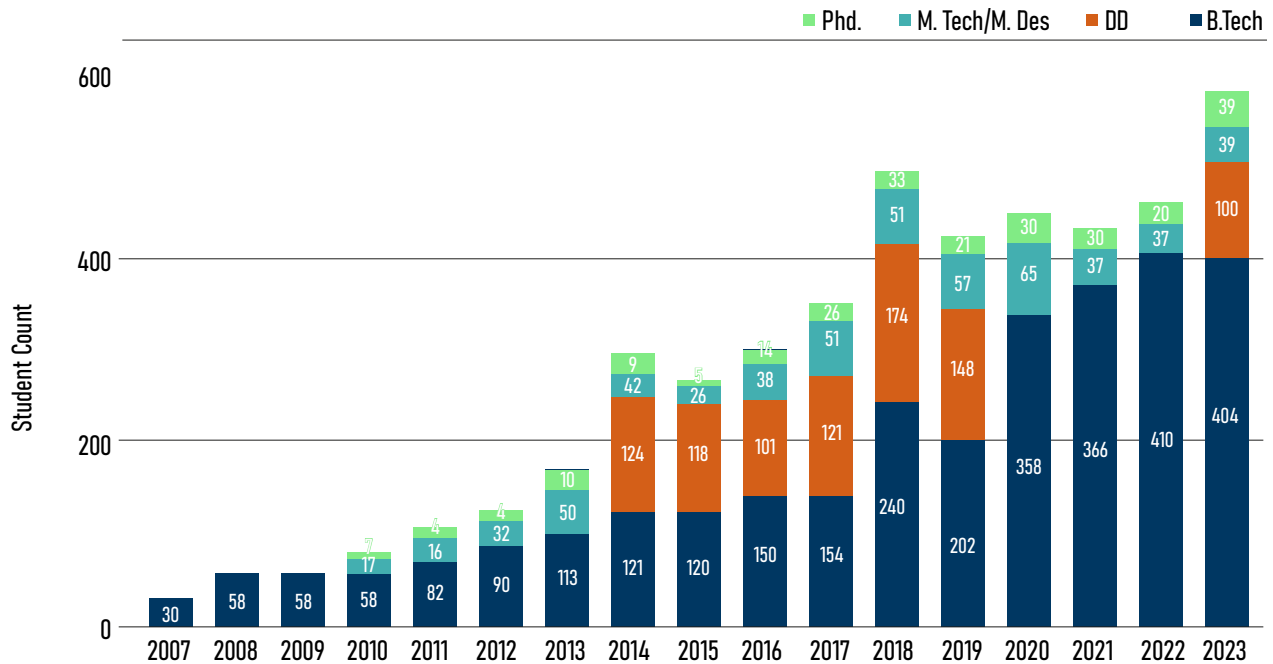
We have a very active and vibrant student community. I am proud to say that IIITDM Kancheepuram secured 1st position in the 6th Inter IIIT Sports Meet held at IIIT Allahabad. On behalf of the IIITDM Kancheepuram family I extend our congratulations to the sports wing of the institute. On the technical side, the student clubs like MaRS club, AUV Society and SAE are actively participating in various international competitions and presenting commendable performance. Our team secured 6th position internationally in the European Rover Challenge. AUV society qualified to participate in the Singapore AUV challenge and presented two research papers at IEEE/OES OCEANS conference. The IIITDM chapter of SPIC MACAY regularly organizes cultural programmes by veteran artists with the aim of introducing Indian culture to youngsters. Our students have been admitted to prestigious universities in India and abroad like Cornell, Stanford, Johns Hopkins and Purdue. It is a proud moment for IIITDM Kancheepuram to see its network of students spreading across the globe in the best academic centers.
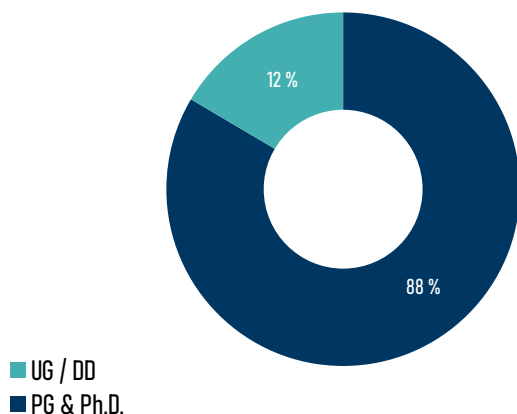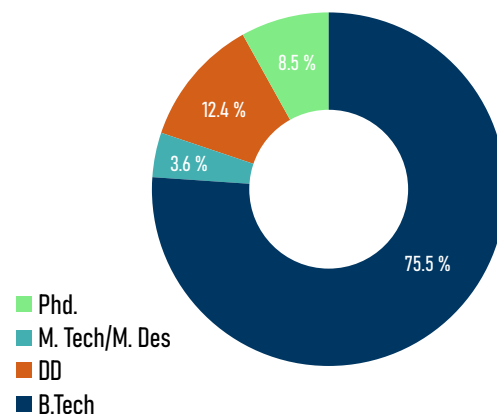
GRAPHICAL ABSTRACT

Student intake since inception

Legend: ■ Phd. ■ M. Tech/M. Des ■ DD ■ B.Tech

Stacked bar chart — Student Count (y-axis) vs Year (x-axis):

Year	B.Tech	DD	M. Tech/M. Des	Phd.
2007	30			
2008	58			
2009	58			
2010	58		17	7
2011	82		16	4
2012	90		32	4
2013	113	50	50	10
2014	121	124	42	9
2015	120	118	26	5
2016	150	101	38	14
2017	154	121	51	26
2018	240	174	51	33
2019	202	148	57	21
2020	358		65	30
2021	366	37	37	30
2022	410		37	20
2023	404	100	39	39

1914+ Students

158 Journals

133 Conferences

72 Faculty

40 Average age of faculty members

Program–wise distribution of students

- 12 %
- 88 %

■ UG / DD
■ PG & Ph.D.

Programme wise distribution of students
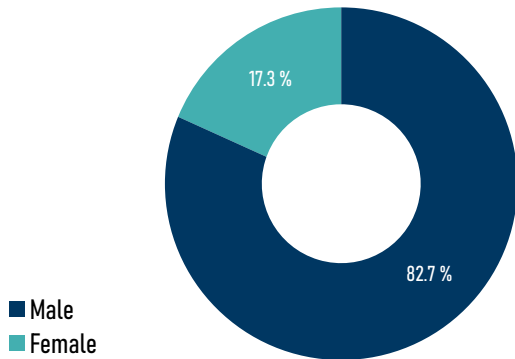
- 8.5 %
- 12.4 %
- 3.6 %
- 75.5 %

■ Phd.
■ M. Tech/M. Des
■ DD
■ B.Tech

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Gender wise distribution of students

- Male
- Female

17.3 %

82.7 %

UG students admitted for last 5 years

Year	Value
2019-2020	202
2020-2021	358
2021-2022	347
2022-2023	399
2023-2024	404

PG students admitted for last 5 years

Year	Value
2019-2020	57
2020-2021	65
2021-2022	40
2022-2023	33
2023-2024	39

Ph.D. students admitted for last 5 years

Year	Value
2019-2020	36
2020-2021	27
2021-2022	40
2022-2023	27
2023-2024	39
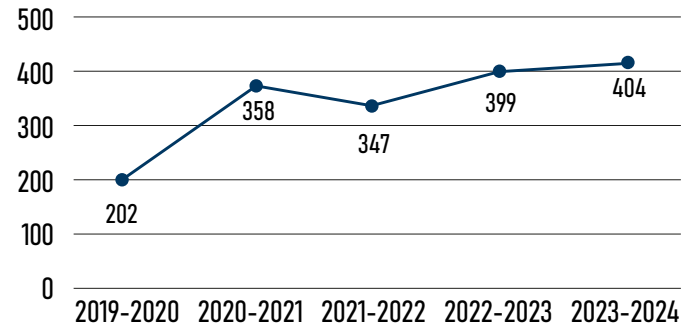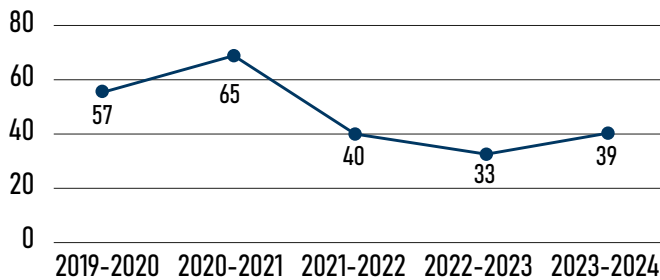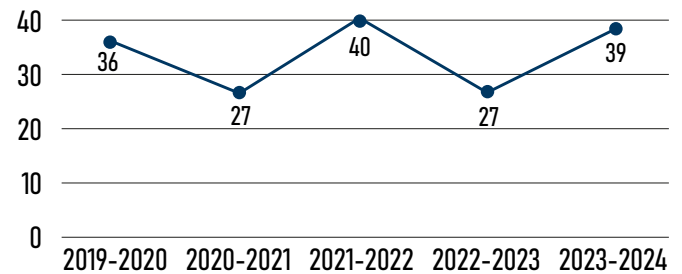
Department wise student intake 2023-2024

Department	UG	PG
CSE	210	14
ECE	170	6
ME	124	7
SIDI	0	12
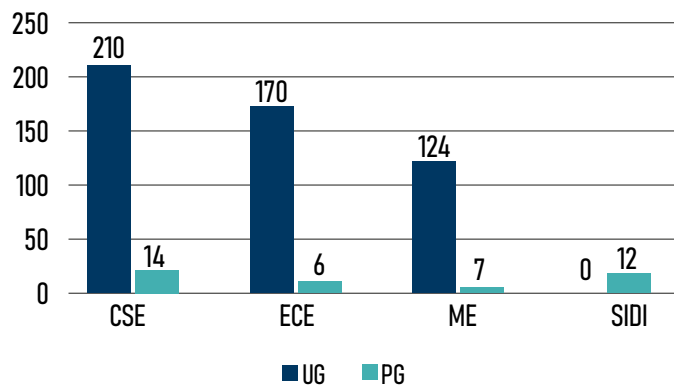
Gender wise student intake for last 5 years

Year	Male	Female
2019-2020	328	41
2020-2021	363	54
2021-2022	351	59
2022-2023	351	107
2023-2024	461	121
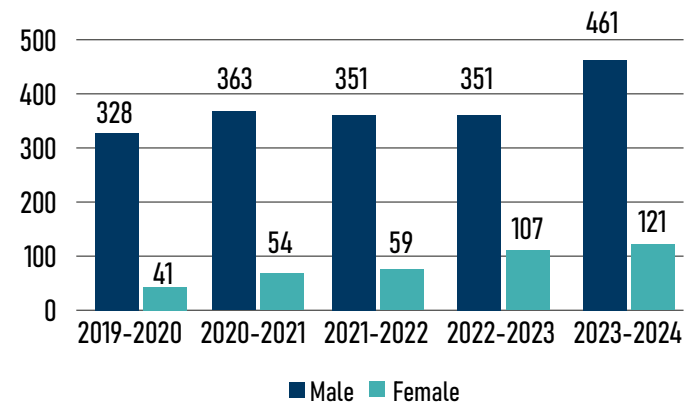
Cumulative faculty strength since inception
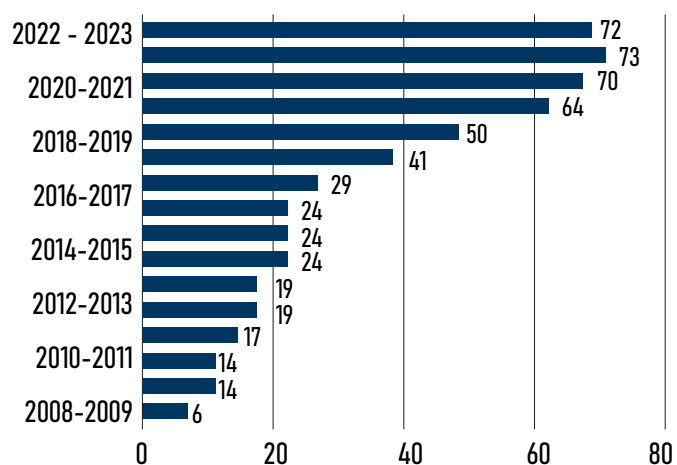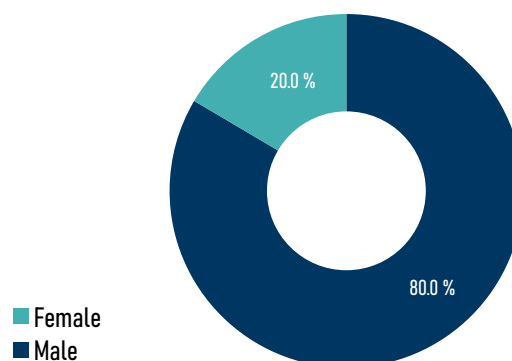
Year	Value
2022 - 2023	72
	73
2020-2021	70
	64
2018-2019	50
	41
2016-2017	29
	24
2014-2015	24
	24
2012-2013	19
	19
2010-2011	17
	14
2008-2009	14
	6

Program-wise distribution of students

- Female — 20.0 %
- Male — 80.0 %

Faculty Ph.D. Degrees

- IIT / IISC — 11 %
- NIT — 4 %
- Abroad — 19 %
- Others — 66 %

Gender wise distribution of staff

- Female — 29 %
- Male — 71 %

Age wise distribution

Age	Facilty	Staff
20-30	0	21
30-40	41	21
40-50	25	8
50-60	6	4
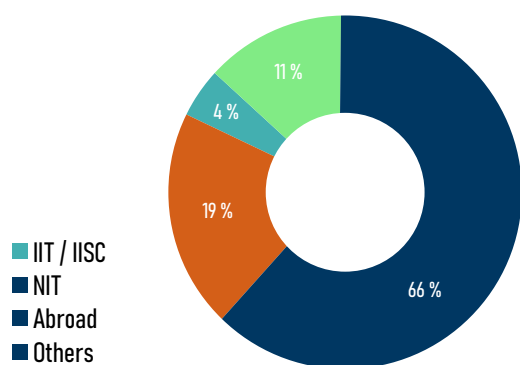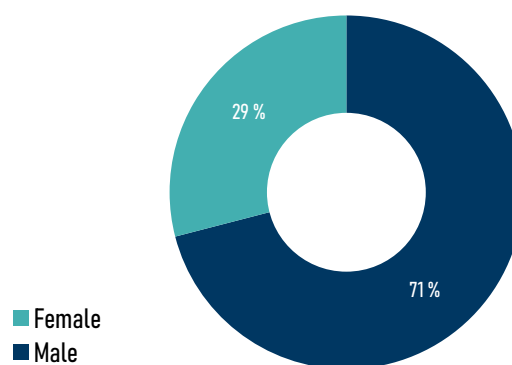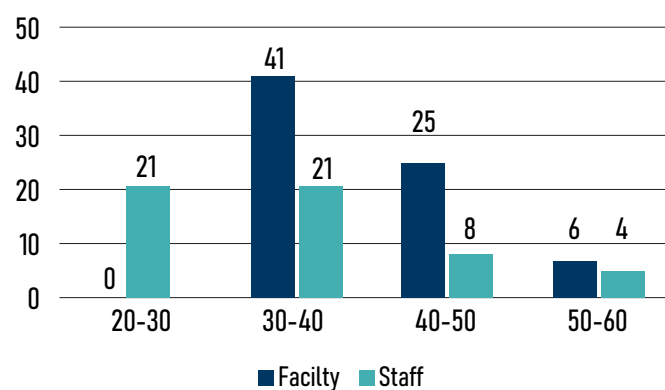
Department wise distribution of faculty

Department	Value
CSE	13
ECE	18
ME	21
SIDI	6
SH	14

13

No of PhDs awarded

(Bar chart — No of PhDs awarded)
- 2019: 13
- 2020: 10
- 2021: 16
- 2022: 12
- 2023: 30
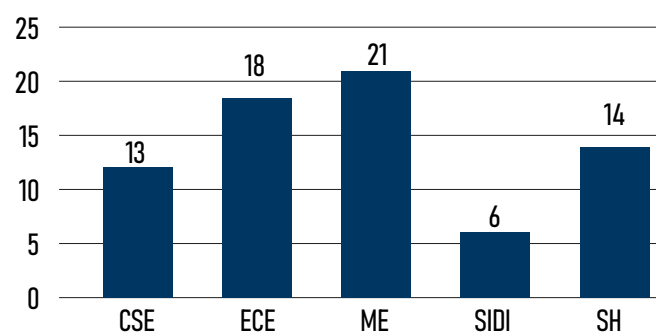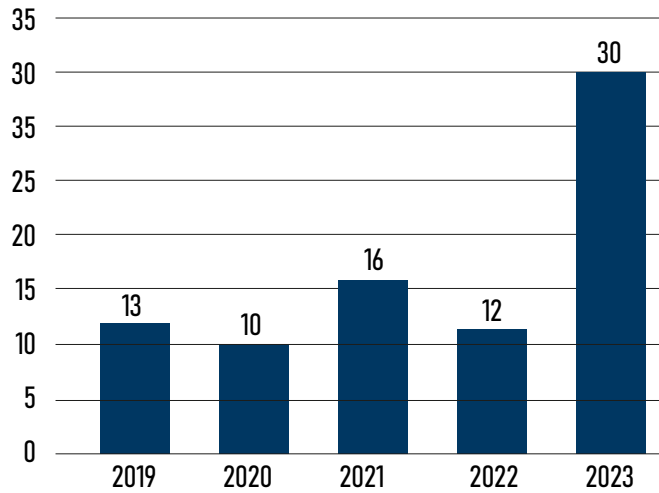
Funding Status of Sponsored research projects For last five years

(Bar chart — Funding Status of Sponsored research projects)
- 2019-2020: 176.94
- 2020-2021: 440.96
- 2020-2021: 259.17
- 2020-2021: 357
- 2020-2021: 445.13

Total publications in the last five years

(Bar chart — Total publications in the last five years)
- 2019-2020: 192
- 2020-2021: 193
- 2020-2021: 284
- 2020-2021: 273
- 2020-2021: 291

Department wise sponsored research funding

(Bar chart — Department wise sponsored research funding)
- ECE: 226.11
- CSE: 56.62
- ME: 120.56

Department wise publications

(Bar chart — Department wise publications)
- CSE: Journals 27, Conferences 23
- ECE: Journals 66, Conferences 54
- ME: Journals 38, Conferences 50
- S&H: Journals 19, Conferences 5
- SIDI: Journals 8, Conferences 1

■ Journals ■ Conferences

Total number of placement offers

(Line chart — Total number of placement offers)
- 2019-2020: 183
- 2020-2021: 184
- 2021-2022: 291
- 2022-2023: 148
- 2023-2024: 215

Program wise placement offers for last Five years

	B.Tech	DD	M.Tech
2019-2020	102	67	14
2020-2021	109	57	18
2021-2022	176	66	49
2022-2023	75	60	13
2023-2024	139	65	11
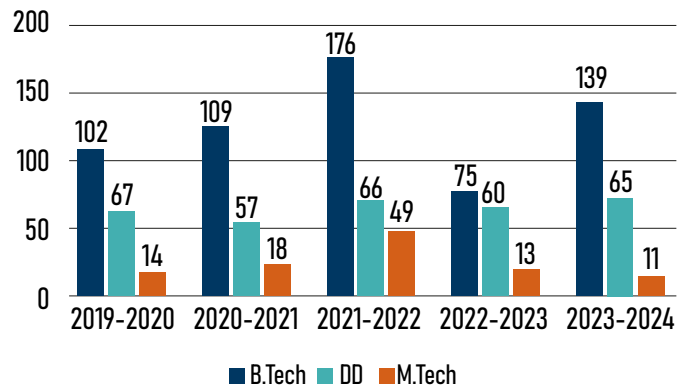
Department wise DD placement offers

- CED 40.0 %
- ESD 16.9 %
- EVD 16.9 %
- MSD 16.9 %
- MPD 9.2 %
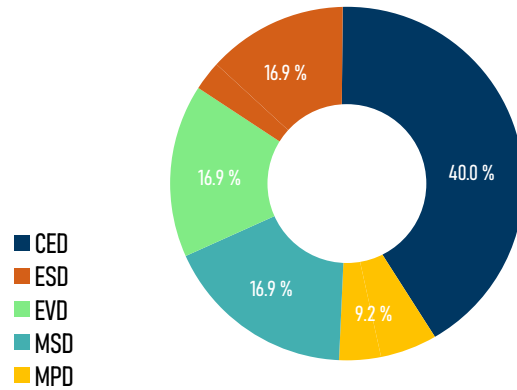
Department wise UG placement offers

- CSE 48.2 %
- ECE 24.5 %
- ME 21.6 %
- SM 5.8 %
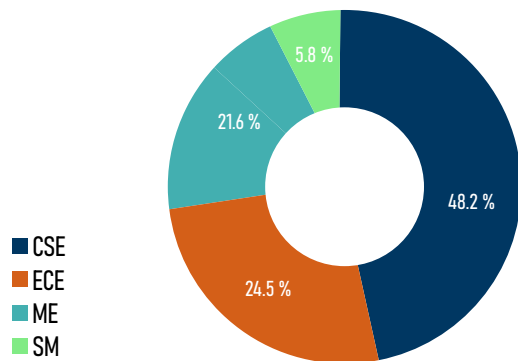
Department wise PG placement offers

- ECE 81.8 %
- ME 9.1 %
- SIDI 9.1 %
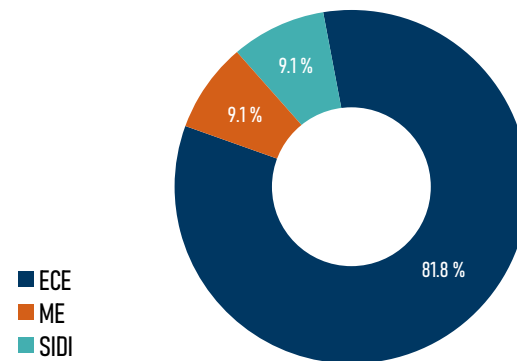
ACADEMICS

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. Design, Manufacturing, and Product Development are integral part of each programme in the institute, and basically satisfy the following criteria:

Societal impact - Engineering's primary value to society is the ability to deliver products and solutions that improve quality of life. Other benefits shall include enhanced comfort, safety, convenience, cost-effectiveness, usability, functionality, and marketability.

The curriculum is enriched with interdisciplinary courses blended with management, environment professional ethics science, etc. In addition, students have to design and develop a product or prototype as a part of their course work 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 modeling, 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 Engineering

Design Concepts

Interdisciplinary Knowledge

Management
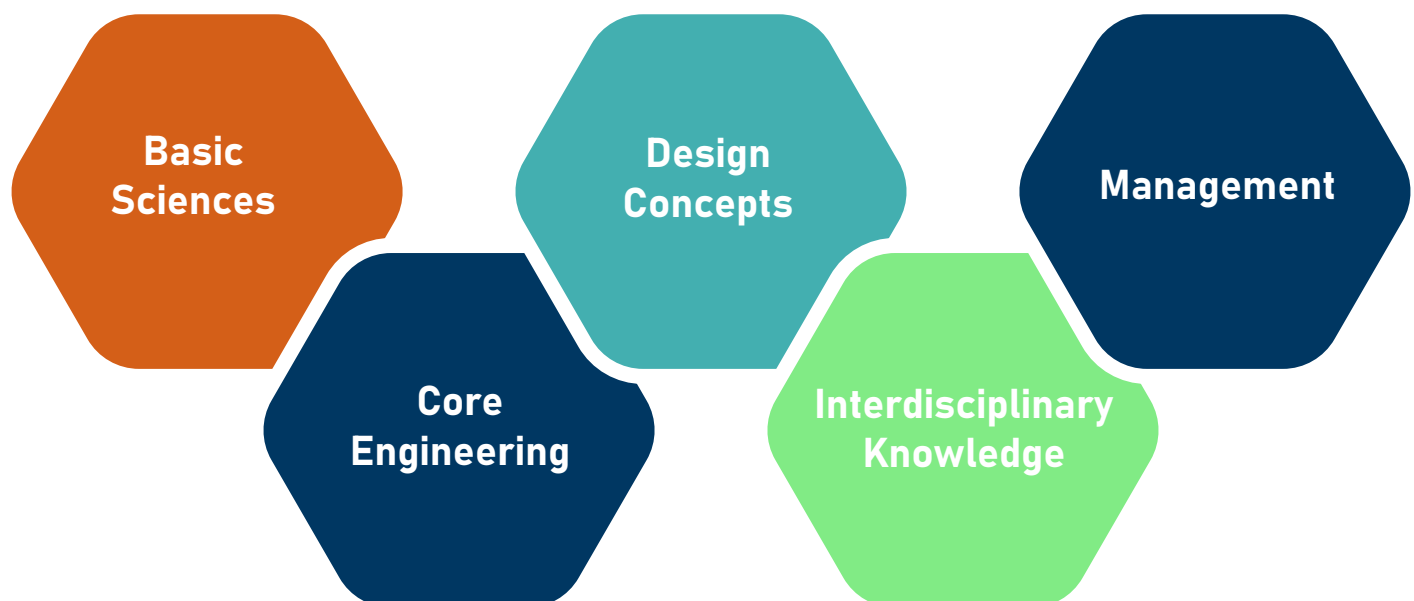
The motto of the institute is "Learning by Doing". It is put into practice in IIITDM Kancheepuram in terms of its teaching. The institute envisages a significant amount of emphasis for practice courses as theory ethical concepts are explored along with the relevant laboratory courses. All the programs 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.

S No	Degree	Course Name
1.	B.Tech	Computer Science and Engineering
		Computer Science and Engineering with Major in Artificial Intelligence
		Electronics and Communication Engineering
		Mechanical Engineering
		Smart Manufacturing
2.	Dual Degree (B.Tech+ M.Tech)	B.Tech and M.Tech in Computer Science and Engineering
		B.Tech in Electronics and Communication Engineering and M.Tech in Communication Systems
		B.Tech in Electronics and Communication Engineering and M.Tech in VLSI Design
		B.Tech in Mechanical Engineering and M.Tech in AI and Robotics
3.	M Tech	Computer Science and Engineering with Specialization in Data Science and Artificial Intelligence
		Electronics and Communication Engineering with Specialization in Communication Systems
		Electronics and Communication Engineering with Specialization in Microelectronics and VLSI Systems
		Mechanical Engineering with Specialization in Mechanical Systems Design
		Mechanical Engineering with Specialization in Smart Manufacturing
4.	PhD	All streams in Basic Sciences and Engineering

Fee Structure for the New Admissions (2023 Batch)

Description	B.Tech/DD	M.Tech/ MDes	Ph.D.
I. Institute Fees			
A. One-time Fees:			
Admission Fee	500	500	500
Certificate/Thesis Fee	500	500	1500
Student welfare fee	1000	1000	1000
Infrastructure Development Fee	1000	1000	1000
Alumni Life Membership Fee	500	500	500
Publication Fee / Library Fee	1000	1000	1500
Cultural Fee	500	500	-
Total (A)	5000	5000	6000
B. Semester Fees:			
Tuition fee*	73000	50000(*)	33000
Examination fee	500	500	500
Registration	300	500	500
Sports Fee	1000	1000	1000
Medical Fee	1000	1000	1000
Student Amenities	2000	2000	3000
Total (B)	77800	55000	39000
C. Medical Insurance Premium (per annum)			
Medical Insurance premium p.a.	450	450	450
Total (C)	450	450	450
Grand Total [A+B+C]	83250	60450	45450
II. Hostel Fees			
Hostel Fees & Mess Charges per semester			
Hostel Admission fee	700	700	700
Hostel Seat Rent	3500	3500	3500
Hostel Maintenance Charges	9000	9000	9000
Dining charges - Advance (**)	18200	18200	18200
Establishment B Charges	1000	1000	1000
Development Fee	1000	1000	1000
Total Hostel Fee	33400	33400	33400
Total Fee for Hostellers (I + II)	116650	93850	78850

Note:
1. *SC/ST/PWD students of B Tech and SC/ST students of PG and PhD are exempted from the payment of tuition fee irrespective of their parental income.
1. Hostel is compulsory for all students. If exemption is granted by the Institute, then day scholars will have to pay the above-mentioned Institute fees (Except Hostel Fees). (**) There may be variations in the dining charges based on tendering value.
2. (*) For PG students – Tuition fee of 50,000 per semester for the first year and 60,000 per semester for second year.

Student Intake 2023–24

	Programme	Count
UG B. Tech	Computer Science and Engineering	96
	Computer Science and Engineering with Major in Artificial Intelligence	53
	Electronics and Communication Engineering	131
	Mechanical Engineering	80
	Smart Manufacturing	44
	Total	404
DD	B.Tech and M.Tech in Computer Science and Engineering	61
	B.Tech in Electronics and Communication Engineering and M.Tech in VLSI Design	19
	B.Tech in Electronics and Communication Engineering and M.Tech in Communication Systems	20
	Total	100
PG M. Tech and M. Des	Computer Science and Engineering with Specialization in Data Science and Artificial Intelligence	14
	Electronics and Communication Engineering with Specialization in Communication Systems	2
	Electronics and Communication Engineering with Specialization in Microelectronics and VLSI Systems	4
	Mechanical Engineering with Specialization in Mechanical Systems Design	4
	Mechanical Engineering with Specialization in Smart Manufacturing	3
	Integrated Product Design	12
	Total	39
PhD	Computer Science and Engineering	5
	Mechanical Engineering	13
	Electronics and Communication Engineering	14
	School of Interdisciplinary Product Design	4
	Sciences and Humanities	3
	Total	39

11TH CONVOCATION

The eleventh Convocation was held on 14th September 2023 and the event was graced by Dr. N. Kalaiselvi, Secretary (DSIR), Government of India and Director General (CSIR) as Chief Guest and delivered Convocation address besides awarding medal to prize winners. The Chairman, Members of the BoG and Members of the Senate participated in the event.

In the convocation, degrees were awarded to 380 students. (303 students in person and 77 students in absentia), the details are as under:

Programme	No of students received degree
PhD	30
M. Tech	45
Dual Degree	149
B. Tech	187
Total	411

SUMMARY OF GRADUANDS

Programme Name	No of Graduands
B Tech	
B.Tech in Computer Science And Engineering	59
B.Tech in Electronics and Communication Engineering	52
B.Tech in Mechanical Engineering	44
B.Tech in Smart Manufacturing	32
Total	187
Dual Degree	
B. Tech. in Computer Science and Engineering and M. Tech. In Computer Science and Engineering with Specialization in Systems Design	54
B. Tech. in Electronics and Communication Engineering \and M. Tech. in Electronics and Communication Engineering with Specialization in Communication Systems Design	22
B. Tech. in Electronics and Communication Engineering and M. Tech. in Electronics and Communication Engineering with Specialization in VLSI Design	27
B. Tech. in Mechanical Engineering and M.Tech. in Mechanical Engineering with Specialization in Product Design	24
B. Tech. in Mechanical Engineering and M.Tech. in Mechanical Engineering with Specialization in Advanced Manufacturing	22
Total	**149**
M Tech	
M.Tech in Computer Science and Engineering with Specialization in Data Science And Artificial Intelligence	10
M.Tech in Electronics and Communication Engineering with Specialization in Communication Systems	2
M.Tech in Electronics and Communication Engineering with Specialization in Microelectronics and VLSI Systems	9
M.Tech in Mechanical Engineering with Specialization in Mechanical Systems Design	6
M.Tech in Mechanical Engineering with Specialization in Smart Manufacturing	6
Total	**33**
M.Des	
M.Des in Integrated Product Design	12
Doctor of Philosophy	No of Graduands
Computer Science and Engineering	4
Electronics and Communications Engineering	13
Mechanical Engineering	9
Science and Humanities	4
Total	**30**

STUDENT AWARDS – 2023
(In line with 51st Senate Approval)

1. Academic Excellence Awards

a. Institute Gold Medal for the Best Graduate across B Tech
(One award for highest CGPA across all the UG programme offered by the institute)

S.No	Programme	Roll No	Name	CGPA
1	B.Tech COE	COE19B005	Kadambi Narasimhan Akash	9.66

b. Institute Gold Medal for the Best Graduate across Dual Degree
(One award for highest CGPA across all the DD programme offered by the institute)

S.No	Programme	Roll No	Name	CGPA
1	DD COE	CED18I063	Sujoy Datta	9.5

c. Institute Award for the highest CGPA in UG:
(One award for each UG programme offered by a department/school)

S.No	Programme	Roll No	Name	CGPA
1.	B.Tech EDM	EDM19B039	Pasumarti Venkatesh	9.25
2.	B.Tech MDM	MDM19B024	J R Sukesh	9.45
3.	B.Tech MSM	MSM19B001	Puranan M	9.23

d. Institute Award for the highest CGPA in DD:
(One award for each DD programme offered by a department/school.)

S.No	Programme	Roll No	Name	CGPA
1.	DD EVD	EVD18I022	Samrat Nachiyappan N	9.29
2.	DD ESD	ESD18I011	Manas Kumar Mishra	9.46

e. Institute Award for the highest CGPA in PG:

(One award in each department/school for all the PG programmes offered by the department/school.)

S.No	Programme	Roll No	Name	CGPA
1	M.Tech CSE	CS21M1001	Gundreddy Sahith Reddy	9.05
2	M.Tech ECE 1 & M Tech ECE 2	EC21M1002	Niranjana Vannadil	9.7
3	M.Tech ME 1 & M.Tech ME 2	ME21M1001	Praveen D	9.86
4	M.Des	ID21M1006	Tanmay Dhananjay Kulkarni	9.29

2. Best Project Awards (B.Tech., DD and M.Tech./M.Des)

a. Institute Award for the Best UG Project

One award in each department/school for all the UG programmes offered by the department/school

S.No	Department	Programme	Roll No	Name
1	CSE	COE	COE19B052	Arunkonda Susheel
2	ECE	EDM	No student eligible	
3	ME	MDM & MSM	MDM19B037	P Guru Gopinath

b. Institute Award for the Best DD Project

One award in each department/school for all the DD programmes offered by the department/school

S.No	Department	Programme	Roll No	Name
1	CSE	COE	CED18I065	Animesh Kumar
2	ECE	EVD & ESD	ESD18I011	Manas Kumar Mishra
3	ME	MFD & MPD	MFD18I017	K P Arun

c. Institute Award for the Best PG Project

One award in each department/school for all the PG programmes offered by the department/school

S.No	Department	Programme	Roll No	Name
1.	CSE	CSE	No student eligible	
2.	ECE	M.Tech ECE 1 & M Tech ECE 2	EC21M1003	Charusha.C
3.	ME	M.Tech ME 1 & M.Tech ME 2	ME21M1003	Ram Mukilan C
4.	SIDI	M.Des	ID21M1010	Anupriya Gopal

3. Best Interdisciplinary Project Award:

Institute Award for the Best Interdisciplinary Project

One award among students of all the programmes including UG, DD and PG offered by the Institute

S.No	Programme	Roll No	Name
1	Dual Degree MPD	MPD18I006	Dasyam Ruthwik

4. Institute Award for the All Rounder of the Graduating Batch

S.No	Programme	Roll No	Name
1	B. Tech	COE19B038	Sreenivas Dheeraj Marri

Ph.D. scholars completed defense between 01.04.2023 to 31.03.2024

S.No	Roll No Name	Date of Defence	Guide	Thesis title
1.	COE18D006 Joshi Pratik	03.05.2023	Prof.V.Masilamani	Machine Learning Algorithms For Abnormal Entity Detection
2.	MAT17D001 Cyriac Antony	03.05.2023	Dr.Shalu MA	The Complexity Of Star Colouring And Its Relatives
3.	EDM17D001 Skandha Deepsita	04.05.2023	Dr. Noor Mahammad S K	An Analytical Approach To Design Energy -Efficient Arithmetic Circuits For Error -Tolerant Multimedia Applications
4.	MDM18D003 Ramarajan J	26.05.2023	Prof. S. Jayavel	Studies On The Performance Enhancement Of Savonius Type Vertical Axis Wind Turbines
5.	EDM18D009 S. Sudharson	29.05.2023	Dr.Priyanka Kokil	Automatic Detection Of Kidney Abnormalities From The Clinical Ultrasound Images
6.	EDM16D001 Dony J Muttath	01.06.2023	Dr.Premkumar K	Optimal Timely Scheduling In Wireless Networks With Energy Constraints
7.	MDM15D002 A K Hemnath	02.06.2023	Dr.K.Senthilkumaran	Distortion Prediction In Powder Bed Fusion Process Using Data-Driven Methods
8.	MDM17D005 Ananda Kumar P	28.07.2023	Dr. Venkata Timmaraju Mallina & Prof.Velmurugan, IIT Madras	Monotonic And Low-Velocity Impact Behavior Of Injection Over-Molded Short/Continuous Fiber Reinforced Polypropylene Composites
9.	EDM15D001 Santhosh Kumar.M	31.07.2023	Dr. K. Premkumar	Optimum Sensing And Opportunistic Channel Access In Cognitive Radio Networks
10.	EDM20D001 Anisha Natarajan	08.08.2023	Dr.Vijayakumar K & Dr. Munesh Singh, IIITDM Jabalpur	Investigation On Occupancy Detection Techniques For Internet Of Things Enabled Home Energy Management System
11.	COE18D005 Santosh Kumar Uppada	09.08.2023	Prof. Sivaselvan B	Machine Learning And User Social Engagement Based Approaches For Fake News/Fake Accounts Detection In OSN
12.	COE19D001 Isunuri P Venkateswarlu	10.08.2023	Dr. Jagadeesh Kakarla	Domain-Adaptive Models For Multi-Class Brain Abnormality Classification
13.	MDM18D004 Pavan Kumar A	11.08.2023	Prof. M. Sreekumar	Design And Development Of Crash Energy Absorption Systems Based OnMagneto-Rheological Absorber For Passenger Cars
14.	MDM20D002 Deiva Ganesh A	03.10.2023	Dr.P.Kalpana	Development Of Resilient Supply Chain Through Intelligent Risk Management Mechanism
15.	COE18D001 Subin Sahayam M	23.11.2023	Dr.Umarani J	Deep Learning Approaches For Brain Tumor Segmentation Using Magnetic Resonance Images
16.	EDM19D006 Rameez Raja Shaik	19.12.2023	Dr. Kumar .Prasannajit .Pradhan	Modeling Of Ferroelectric And Negative Capacitance Fdsoi Transistors For Switching, Memory And Neuromorphic Applications
17.	PHY18D005 Pritam Pradeep Shetty	28.02.2024	Dr. Jayachandra Bingi	Generation, Modulation And Detection Of Phase Structured Laser Beams For Sensing Application
18.	EDM17D002 Dhayalakumar M	13.03.2024	Dr. Noor Mahammad S K	High Speed Packet Classification Architectures
19.	MDM18D001 Kartheesan S	15.03.2024	Dr. B. Shahul Hamid Khan	Drysliding And Fretting Wear Behaviour Of CaO Reinforced Magnesium Nanocomposites

Student strength as on 31.03.2024

Programme	Name	Male	Female	Total	
B Tech	CS	340	56	396	
	CSAI	124	28	152	
	EC	389	78	467	
	ME	260	35	295	
	SM	107	29	136	
		1220	226		1446
DD – 2019 batch	CED	47	8	55	
	ESD	14	4	18	
	EVD	28	1	29	
	MPD	19	1	20	
	MFD	14	1	15	
		122	15		137
M Tech and M Des	CS	9	11	20	
	EC 1	2	5	7	
	EC 2	10	4	14	
	ME 1	5	0	5	
	ME 2	4	0	4	
	IDP	12	7	19	
		42	27		69
PhD	CSE	13	11	24	
	ECE	23	22	45	
	ME	55	01	56	
	ID	07	06	13	
	S&H	13	11	24	
		111	51		162
DD – 2023 batch	CS	54	7	61	
	EC1	16	3	19	
	EC2	18	2	20	
		88	12		100
				Total	1914

INFRASTRUCTURE

IIITDM Kancheepuram is adding infrastructure every year for the benefit of students. In this endeavour, we successfully constructed two state-of-the-art synthetic volleyball courts in Kancheepuram. This significant project was completed at a cost of Rs. 31.96 Lakhs. We had the honor of having the courts inaugurated on 29th May 2023 by our esteemed former chairman, Prof. S. Sadagopan. These courts not only provide a top-notch facility for our athletes but also exemplify our dedication to fostering sports and physical well-being.

Additionally, we embarked on a project to enhance the aesthetics and spirit of our campus by erecting a flag mast in front of the Admin Building. This project is valued at Rs. 8.43 Lakhs. The flag mast was inaugurated on 01st November 2023 by our honourable Chairman, Dr. Sridhar Vembu. This 20-metre-high mast national flag stands as a symbol of our unity, pride, and aspiration.

Furthermore, to ensure better visibility and recognition from the Vandalur-Kelambakkam road, we installed an 'IIITDM' signage board on the rooftop of the laboratory block. This project was carried out for a contract value of Rs. 4.6 Lakhs. The new signage enhances our campus's visibility and reinforces our unique identity and presence in the region.

Existing Infrastructure including Hostels: In addition to the existing Administartion block, Academic block, Library block, Senate Hall, Cafeteriathe Institute provided faculty housing and student hostels. Two Boys Hostels, Ashwatha and Ashoka and the Girls' hostel Jasmine is of G+14 floors with suffiecient lifts and plinth area of 18297, 12522, 13060 sqm respectively. Ashwatha has 361 rooms of single occupancy and 189 rooms of double occupancy can accommodate 739 students. Ashoka has 401 rooms of single occupancy while Jasmine has 270 rooms of single occupancy and 110 rooms of double occupancy and can inhabit 490 students. Multiple common facilities such as TV hall, Reading Hall, Board games, RO water plant, washing machines, electric geysers, solar water heaters and a few guest rooms are available with sufficient number of well-maintained restrooms in every floor in all the hostels. However, to keep up the mandate of the NEP 2020, the Institute is gradually increasing the student intake every year and new class/lab rooms and hostels are required to accommodate the new students.

Green Campus: Flora and Fauna in the campus: IIITDM Kancheepuram sprawling over 51.75 acres campus has water harvesting ponds, waste management units, Green House and employs renewable energy (solar panels) and about 40% of the campus habitat is dedicated to biodiversity development. The eco- friendly stance is seen in the Institute's commitment as a no smoking, plastic free, clean and green campus. Efforts are being made to develop the campus on green concepts particularly focus on water conservation, use of alternative sources of energy, solid waste management.

The campus is home to a diverse array of flora and fauna, with hundreds of majestic trees, shrubs, and ornamental plants adorning every corner. Recognizing the ecological significance of our campus, we are committed to safeguarding and nurturing this natural treasure for the benefit of current and future generations.

Flora Diversity: Nearly 60+ species of trees have been found in the campus, Some of the trees (common names) found in the campus are: Ashoka, Auri, Bael, Bamboo, Banyan, Blackboard, Cannonball, Cardamom, Christmas, Cinnamon, Coconut, Copperpod, Curry Leaves, Custard Apple, Drumstick, Giant Leaf Tamarind, Golden Shower, Gooseberry, Guava, Hong Kong Orchid, Horse Tamarind, Indian Almond, Indian Beech, Indian Rubber, Jackfruit, Jambolana, Jujube, Laurel, Lemon, Mango, Manila Tamarind, Mayflower, Night Jasmine, Paradise, Pinwheel, Plantain, Pomegranate, Portia, Rain Tree, Rose Wood, Sacred Fig, Tamarind, Teak, Weeping Fig, and White Damar.

Fauna Diversity: Being located nearer to the bird watching area of Chennai suburbs, campus attracts various bird species. Some of the birds commonly seen in the campus include Common Myna, Red Wattled Lapwing, Kingfisher, Crow, Pigeon, Babbler, Parrot, Woodpecker, Hornbill, Asian Koel, Sunbird, Peafowl, Owl, Eagle etc. Many insect species belonging to different orders viz., Lepidoptera, Coleoptera, Hymenoptera, Diptera, Hemiptera, Orthoptera, Odonata, also add to the faunal biodiversity of the Institute campus. In recent years' campus has also observed invasive guest species like Lissachatina fulica.

Butterfly Observation in the Campus: Institute Campus boasts of spotting nearly 30+ varieties of butterflies and moths which is an indication of a healthy environment and healthy ecosystems. Institute is in process of preparing a catalogue of tree species, shrubs, grasses, birds and butterflies in the campus.

RECRUITMENT

Institute completed two rounds of faculty recruitment and one round of non-faculty recruitment and the details of offers released along with status of their joining the Instituite are given in the tables below:

**DETAILS OF RECRUITMENT FOR THE PERIOD FROM
01.04.2023 TO 31.03.2024 : FACULTY/NON–FACULTY**

Advt No. IIITDMK/R/1/2023 dated 19.04.2023 (FACULTY)

S/No	Post	Department/ school/ stream	No. of applications received	No. of applications shortlisted	No. of candidates selected	Name of selected candidate (Dr.)	Date of joining
1	Assistant Professor (L–10)	CSE	137	87	1	Nithin Niranjan Awathare	Not joined
2	Assistant Professor (L–10)	ECE	198	95	0		
3	Assistant Professor (L–10)	ME	335	126	0		
4	Assistant Professor (L–10)	SIDI	41	12	1	Narendran G	29 Sep 2023
5	Assistant Professor (L–10)	Physics	89	13	0		
6	Assistant Professor (L–10)	Maths	117	54	0		
7	Assistant Professor (L–10)	English	37	3	1	Kandharaja M C	31 Aug 2023
8	Assistant Professor (L–11)	CSE	91	40	1	Bhukya Krishana Priya	24 Aug 2023
9	Assistant Professor (L–11)	ECE	98	31	1	Thummaluru Sreenath Reddy	28 Aug 2023
10	Assistant Professor (L–11)	ME	183	78	0		
11	Assistant Professor (L–11)	SIDI	32	4	1	M Monisha	24 Aug 2023
12	Assistant Professor (L–11)	Physics	80	11	0		
13	Assistant Professor (L–11)	Maths	71	33	1	Jagnath Bhanja	20 Oct 2023
14	Assistant Professor (L–11)	English	13	3	1	Parvath Das	24 Aug 2023
15	Assistant Professor (L–12)	CSE	56	8	2	Rahul Raman Preeth R	24 Aug 2023
16	Assistant Professor (L–12)	ECE	77	11	1	Sreejith K	24 Aug 2023
17	Assistant Professor (L–12)	ME	91	15	3	Shubhakar Chakraborty Avinash Kumar N Rino Nelson	24 Aug 2023
18	Assistant Professor (L–12)	SIDI	30	1	0		

S/No	Post	Department/ school/ stream	No. of applications received	No. of applications shortlisted	No. of candidates selected	Name of selected candidate (Dr.)	Date of joining
19	Assistant Professor (L-12)	Physics	75	87	1	Debolina Misra	24 Aug 2023
20	Assistant Professor (L-12)	Maths	30	95	1	M Subramani	24 Aug 2023
21	Assistant Professor (L-12)	English	11	126	0		
22	Assistant Professor (L-13A2)	ECE	34	6	5	Narsa Reddy Tummuru	Not joined
						Vijaya Kumar K	01 Aug 2023
						Selvajyothi	
						Premkumar K	29 Nov 2023
						B Chitti Babu	
23	Assistant Professor (L-13A2)	ME	37	8	5	Arul Kumar Mariyappan	01 Aug 2023
						Senthil Kumaran K	
						Venkata Timmaraju Mallina	
						Shahul Hamid Khan	
						Pandithevan P	
24	Assistant Professor (L-13A2)	Physics	33	4	0		
25	Assistant Professor (L-13A2)	Maths	10	0	0		
26	Assistant Professor (L-14A)	Physics	9	3	1	Naveen Kumar	01 Aug 2023

Advt No. IIITDMK/R/2/2023 dated 24.10.2023 (FACULTY)

S/No	Post	Department/ school/ stream	No. of applications received	No. of applications shortlisted	No. of candidates selected	Name of selected candidate (Dr.)	Date of joining
1	Assistant Professor (L-12)	CSE	62	5	2	Pindiri Venkatesh Ram Prasad Padhy	02 Feb 2024
2	Assistant Professor (L-12)	ECE	144	24	2	Pal Uttam Mrinal Rohini P	02 Feb 2024
3	Assistant Professor (L-12)	ME	166	16	2	Krishna Kumar Gajrani J Venkataramani	02 Feb 2024 10 May 2024
4	Assistant Professor (L-12)	SIDI	37	1	0		
5	Assistant Professor (L-12)	Maths	45	4	0		
6	Assistant Professor (L-13A2)	CSE	18	1	0		
7	Assistant Professor (L-13A2)	ECE	30	3	0		
8	Assistant Professor (L-13A2)	ME	20	6	2	S Gowthaman P Kalpana	02 Feb 2024
9	Assistant Professor (L-13A2)	Physics	24	1	1	Manjusha Battabyal	19 Jun 2024
10	Assistant Professor (L-13A2)	Maths	6	1	0		
11	Assistant Professor (L-14A)	CSE	8	2	2	V Masilamani Sivaselvan B	02 Feb 2024
12	Assistant Professor (L-14A)	ME	10	5	3	S Jayavel Raja B Jayabal K	02 Feb 2024
13	Assistant Professor (L-14A)	Physics	4	0	0		
14	Assistant Professor (L-14A)	Maths	5	2	0		

Advt No. IIITDMK/NT/R/01/2023 dated 23.06.2023 (NON–FACULTY)

S/No	Post	Pay Level	No. of applications received	No. of applications shortlisted	No. of candidates selected	Name of selected candidate (Dr.)	Date of joining
1	Junior Assistant	3	888	769	5	A Mohamad Meeran	Not joined
						Gokula Kannan T	22 Dec 2023
						Vijay Kumar	26 Dec 2023
						Eniyan Kumar R	Not joined
						Parthiban	15 Dec 2023
2	Junior Technician (ME)	3	160	130	3	Vasudevan K	Not joined
						Gowtham T	12 Dec 2023
						Janarthanan A	29 Dec 2023
3	Junior Technician (ECE)	3	120	85	2	Arjunan D	26 Dec 2023
						Tamilarasan D	18 Dec 2023
4	Junior Technician (Design)	3	30	14	1	Vasudevan K	28 Dec 2023
5	Junior Technician (CSE)	3	60	29	5	Nirmal T	Not joined
						A S Kamalieswari	26 Dec 2023
						Abey Ealiyas	Not joined
						Aswin A	28 Dec 2023
						Kamalakannan M	28 Dec 2023
6	Junior Technician (Physics)	3	12	1	0		
7	Junior Superintendent (Library)	6	179	158	1	Harikrishnan NS	28 Dec 2023
8	Junior Technical Superintendent (Design)	6	26	13	1	Bandaru Chakra Prasanna	07 Feb 2024
9	Junior Technical Superintendent (CSE)	6	33	17	1	Aravindan S	12 Dec 2023
10	Technical Officer (CSE)	10	93	65	1	R Nagarajan	10 May 2024
11	Technical Officer (ECE)	10	78	49	1	Pavithra P	02 Feb 2024

SPONSORED RESEARCH AND INDUSTRIAL CONSULTANCY

SPONSORED/CONSULTANCY PROJECTS

Sl. No.	Principal Investigator	Project Title	Amount (Rs.)	Agency, Private/ Public	Sanction Order No., Duration, End Date
1.	Dr. Pandithevan	Experimental and computational study to investigate the effect of chemical vapour deposition coating on wear resistance of hip implant	5,00,556/-	Diffuson Coatech LLP, Private	SP/ME/2023-24/01 dt. 21.04.2023, 24 months, 20.04.2025
2.	Dr. Pandithevan	Design and manufacturing of a fan for efficient heat disspation in 1000 HP Industrial Motor	8,58,000/-	Wolong India Technology P Ltd, Private	SP/ME/2023-24/02 dt. 16.6.2023, 12 months, 15.06.2024
3.	Dr. Tmmaraju V	Development of a thermoplastic composite tape winding set-up with enhanced build capacity	34,36,400/-	SERB-CRG, Public	CRG/2022/008644 dt 15.6.2023, 36 months, 19.06.2026
4.	Dr. N. Sadagopan	A framework for steiner tree domination and its variants in convex graphs-computing and complexzity study	14,48,900/-	NBHM(DAE), Public	02011/24/2023NBHM(R.P)/R&D II/6051 dt. 11.05.2023 & SP/CSE/2023-24/02, 36 months, 10.05.2026
5.	Dr. Sivaselvan (Mentor)	Side Channel attack exploration in Smart Wearable devices	18,30,000/-	SERB TARE, Public	SERB/TAR/2022/000502 dt 12.05.2023 SP/CSE/2023-24/04, 36 months, 11.05.2026
6.	Dr. Binsu J Kailath Co-P.I - Dr. Kalpana S	FPGA/ASIC/PSPC Development of Identification of stages of sleep in critical neurological illness cases from EEG signal using Neuromorphic circuit	48,48,000/-	MeITY C2S, Public	EE-9/2/2021-R&D-E dt 22.5.2023, 43 months, 10.02.2027
7.	Dr. Pandiyarasan V Dr. Rohini Co-PI	Artificial Intelligence & IoT based smart vet ecosystem for animal health, patient care & precision livestock farming	64,00,000/-	NASF, Public	NASF/PA-9028/2022-23 dt 01.08.2023 & SP/ECE/2023-24/05, 18 months, 27.1.2025
8.	Dr. Rohini PI / Dr. Pandiyarasan Co-PI	NICU Neonatal monitor: smart textile based sensor design, development and fabrication	29,18,696/-	SERB – SPG, Public	SPG/2022/001996 dt 11.09.2023, 36 months 15.09.2026

9.	Dr. Jagadeesh Kakarla	Design and Development of a Bilingual mobile application to identify terrestrial and marine fauna combined with the QR code display for the interpretation center	5,64,630/-	AIWC, Public	AIWC/C.No./5132/2023/P, 6 months, 24.03.2024
10.	Dr. Ashok Kumar Reddy	Metal oxide-based heterostructures for gas sensor devices	45,000/-	CRS, Public	CRS/2022-23/01/666 dt.15.05.2023, 12 months, 14.05.2024
11.	Dr. Priyanka Kokil	Design and Development of a standalone device for early detection of plant diseases using machine learning techniques	3,50,000/-	CSIR, Public	22/0904/23/EMR-II dt.31.08.2023, 36 months, 30.08.2026
12.	Dr. Naveen Kumar / Dr. V Timmaraju	Development of non-intensive pressor sensor using optical sensor technology	41,38,220/-	Vanmok Inc, Private	Agreement dt 29.8.2023, 24 months, 3.11.2024
13.	Dr Rahul Raman	Multi Biometric Analysis of cattle for identification and health monitoring	18,18,475/-	SYST, Public	SP/YO/2021/2227 dt.07.02.2024, 24 months, 06.02.2026
14.	Dr. Uttam Pal	Opto-electrical transvaginal imaging probe for preinvasive cervical cancer diagnosis	47,52,660/-	ICMR, Public	EM/DeV/S-G/147/0721/2023 dt.20.02.2024, 12 months, 19.02.2025
15.	Dr. AVS Sivaprasad	A theoretical and numerical study of mathematical theory of shock waves in methycellulose hydrogels	6,60,000/-	SERB MTR, Public	MTR/2023/000576 dt.28.02.2024, 36 months, 26.2.2026
16.	Prof Sreekumar M	Development of Deep Learning approach for 3D Virtual reconstruction of lost heritage artifacts present at Kheezhadi archaeological excavation site	18,30,000/-	SERB-TARE, Public	TAR/2023/000466 dt 09.1.2024, 36 months, 25.1.2027

Consolidated Report of Sponsored and Consultancy Projects Department-wise

Sponsored/Consultancy Details		Department					
		ECE	CSE	ME	S&H	SIDI	Total
Sponsored Project	**Number of projects received**	6	4	6	2	0	18
	Total fund sanctioned (Rs.)	2,26,11,076	56,62,005	1,20,56,844	41,83,220	0	4,45,13,145
Consultancy Project	**Number of projects received**	0	1	3	0	1	5
	Total fund sanctioned (Rs.)	0	1,20,000	7,24,284	0	3,79,134	12,23,418

List of Workshops / Conferences / Trainings / Internships

S.No	Title of Workshops / Conferences / Trainings	Period		Faculty Organizer	Amount
		From	To		
1.	Grid Power Electronics Technology – Grid PET 2023	26.04.2023	30.04.2023	Dr. Chitti Babu B	2,87,500/-
2.	Data Science using Python	05.06.2023	10.06.2023	Dr. Masilamani	2,75,000/-
3.	AI and Machine Vision Techniques for Robotics – AI for Robotics	12.06.2023	16.06.2023	Prof. Sreekumar	1,54,580/-
4.	Modelling Optical Physics using COMSOL Multi physics	05.06.2023	09.06.2023	Dr. Uttampal	23,200/-
5.	Deep Learning for Biometrics Privacy and Security 2023 (KARYASHALA SCHEME)	19.6.2023	25.6.2023	Dr. Umarani	5,00,000/-
6.	Quadcopter Test Bench (VRITIKA SCHEME)	01.05.2023	29.06.2023	Dr. Selvajyothi	1,50,000/-
7.	Identification of Novel peptides to inhibit cell cycle associated protein for the targeted therapy of ovarian cancer (VRITIKA)	10.05.2023	07.07.2023	Dr. Monisha M	60,000/-
8.	Digital Twin for battery management system (VRITIKA)	20.05.2023	19.07.2023	Dr. Raja B	1,50,000/-
9.	Emerging catalytic technologies for conversion of CO2 into fuels (VRITIKA)	22.5.2023	20.7.2023	Dr. Debolina Misra	1,50,000/-
10.	AI and Analytics in Distributed Fiberoptic Sensing (VRITIKA)	22.5.2023	20.7.2023	Dr. Srijith K	1,50,000/-
11.	Design and Development of a Polarization-sensitive multispectral intraoral cancer probe	15.05.2023	13.07.2023	Dr. Uttam Pal	90,000/-
12.	Emerging AIoT based medical imaging device development: From understanding to implementation	15.05.2023	14.07.2023	Dr. Priyank Kokil	1,50,000/-
13.	Assistive Tools for Disease Detection and Diagnosis from Medical Imaging (ATDDD) (VRITIKA)	01.06.2023	31.07.2023	Dr. Umarani	1,50,000/-
14.	Vritika - Design and Development of Ring-Collection based spatially offset Raman Spectroscopy (SORSDx)	05.06.2023	31.07.2023	Dr. Uttam Pal	1,50,000/-
15.	Data Analytics and Machine Learning models for Logistics and supply chain management	08.05.2023	05.7.2023	Dr. Shahul Hamid	1,50,000/-
16.	DR.Ramprasad padhy AI and Machine Vision Techniques for Robotics	12.6.2023	16.6.2023	Dr. Sreekumar	1,06,144/-
17.	DR.Ramprasad padhy Deep Learning for Biometrics Privacy and Security (DLBPS'23) KARYASHALA	19.06.2023	25.06.2023	Dr. Ramprasad Padhy	5,00,000/-

18.	"VLSI Architectures for Image and Video Processing" – VLSI2023	04.12.2023	08.12.2023	Dr. Noor Mahammad SK	
19.	High Performance Computing for ALL"– HPC2023	11.12.2023	15.12.2023	Dr. Noor Mahammad SK	24,426/–
20.	Cyber Security and Forensics for ALL" – CSF2023	18.12.2023	22.12.2023	Dr. Noor Mahammad SK	36,639/–
21.	AI and ROS for Robotics: Theory and Practice	11.12.2023	15.12.2023	Dr. Sreekumar M, Dr. Ram Prasad Padhy	3,93,500/–
22.	Winter School on Biomedical Optics 2023 – WiSBO 2023	11.12.2023	15.12.2023	Dr. Uttam M Pal, Dr. Gowri A, Dr. Srijith K	1,05,500/–
23.	Theoretical and Computational Heat Transfer – COMP HEAT TRANS	01.12.2023	02.12.2023	Dr. Jayavel S	12,000/–
24.	Computer Aided Design and Manufacturing in Biomedical Device Development (VRITIKA)	04.12.2023	31.12.2023	Dr. P. Pandithevan	1,50,000/–
25.	Micromachining and Microfabrication for Biomedical Devices (KARYASHALA)	15.12.2023	21.12.2023	Dr. Kishor Kumar Gajrani	5,00,000/–
26.	Mathematical Theory of Shocks in Solids (VRITIKA)	15.12.2023	15.02.2024	Dr. A V S Siva Prasad	1,50,000
27.	Nanofiber-based electrodes for steam electrolysis (NESE) (VRITIKA)	15.12.2023	13.02.2024	Dr. Anushree P Khandale	1,50,000/–
28.	Computer aided design/computer aided manufacturing/computer aided engineering - 2023	11.05.2023	17.05.2023	Dr. P. Pandithevan	8,885/–
29.	Data-Driven Microstructure Prediction for powder bed fusion process (VRITIKA)	02.01.2024	29.2.2024	Dr. Senthilkumaran	1,50,000/–
30.	Signal Processing Methods for Autonomous Vehicles (SPAV - 2024)	05.01.2024	06.01.2024	Dr. Priyanka Kokil	27,140/–
31.	Optimization Techniques	27.01.2024	27.01.2024	Dr. Pandri Venkatesh	25,000/–
32.	FDP on Smart Textile: Materials to Devices	22.02.2024	23.2.2024	Dr. Rohini P and Dr. Pandiyarasan V	60,000/–

NATIONAL FESTIVALS AND EVENTS

ATMANIRBHAR BHARAT - MOTHER'S DAY:

An online essay writing event was conducted on the 12th May,2023, on mother's day. The topic for the essay was My Mother - My Inspiration. Students were encouraged to share their experiences and stories that highlighted how their mothers had inspired and motivated them to be the best version of themselves. The essays ranged from being emotional tributes to thank you letters to their sweet mothers.

WORLD ENVIRONMENT DAY

On the occasion of World Environment Day 2023, the sports affairs of the institute organized a cleaning drive throughout the college to maintain the lush green of the campus and keep it open trash free. A creative sketching and slogan writing session in the Old Library was also organized as part of the same event where students were to sketch and paint based on MeriLiFE themes.

ANTI-DRUG DAY

On the 26th June,2023, an event was organized to create awareness of the harmful effects of substance abuse and to strengthen action and cooperation in achieving a world free of drug abuse. The event started off with a talk on Anti-drug Abuse and Prevention by a renowned Clinical Psychologist,

Academician and Power Coach, Dr. Srividhya and a talk on Drug Addiction and Prevention by the chief guest Dr. Venkadesh Babu,Deputy Commissioner of GST & Central Excise, Government of India. The talks were followed by a skit by the students and a rally along with the dignitaries Rally against drug abuse themed People first: stop stigma and discrimination, strengthen prevention.

INDEPENDENCE DAY

The event started off with the flag hoisting by the Director, Mr. Sanjay Kumar Singh, 2I/C (Comn), SHQ BSF, Chennai was invited as the chief guest for the event and also inspected the synchronized parade by the NCC unit of our college. IndicSense, music and dance clubs performed to patriotic songs. The dramatics club put up a drama on the struggle that led to freedom, reminding the attendees of the souls and their sacrifices behind the freedom we enjoy today. The government's measure of Swach Bharat was reiterated as a particularly important message to free the environment of waste too. Perhaps a day filled with goosebumps thinking about and thanking the selfless souls that lost themselves to free Maa Bharat! However, talks and discussions also focussed on the future of the country and how India could be a Vishwaguru in the coming years and a model for the world to follow!

Slogan Writing

The slogan writing event on "Unity Day" at IIITDM Kancheepuram campus brought together students from across India, who expressed their commitment in over 10 languages including Hindi, Kannada, Telugu, Tamil, Malayalam, Marathi, English etc. This diverse linguistic participation highlighted India's rich cultural tapestry and united voices in a collective call for the same.

ATMANIRBHAR BHARAT – BLUE DAY

In compliance with the United Nations theme "Planet Ocean: Tides are Changing", the students of IIITDM decided to turn up to college dressed in blue, to raise awareness about how human activity has caused damage to the driving force of all organisms on planet Earth. We collectively pledged to reduce the wastage of water by aborting shower baths, fixing leaky taps and reusing waste water wherever possible.

NATIONAL INNOVATION DAY

The SAE INDIA Collegiate Club of IIITDM, in collaboration with IIC, hosted an industrial lecture by Mr. D Ramakrishnan from Mahindra and Mahindra on "Recent Trends in Automotive Testing." Held on the IIITDM campus on 15th October 2023 from 3 pm to 4 pm, Mr. Ramakrishnan, with over 20 years of experience in the automotive industry, provided valuable insights into testing processes. He covered techniques such as homologation, virtual validation methods, and the importance of physical testing. The session with 29 participants included a Q&A where he offered advice on technical and non-technical problem-solving for new engineers, aiming to enhance students' problem-solving skills.

UNITY DAY

As part of the Unity Day, Unity Run was organized with the aim to show respect to the freedom fighters who sacrificed their lives and livelihoods for our country. The run was initiated from the Arjuna Sports Complex by the Director, Registrar, Dean SA and PIC-Sports. Several students participated in the event and all the participants received an e-certificate.

NATIONAL EDUCATION DAY

National Education Day, observed annually on November 11 since 2008, honors Maulana Abul Kalam Azad, India's first education minister. This day celebrates his contributions to Indian education, with various activities such as seminars, competitions, and workshops across educational institutions. It highlights Azad's role in shaping India's post-independence education system and encourages reflection on current educational challenges.

The National Education Policy (NEP) 2020 aims to transform India into a dynamic knowledge society by providing high-quality education to all. Rooted in principles of Access, Equity, Quality, Affordability, and Accountability, the NEP aspires to make India a global leader in knowledge and prepare youth for future challenges. On this event which was attended by more than 50 students, Prof. Sreekumar M conducted an interactive session on NEP2020andItsImpactontheSociety.

NATIONAL POLLUTION CONTROL DAY

The National Pollution Control Day seminar titled "Emission to Innovation: Paving way for Sustainability" focused on addressing environmental challenges related to pollution. Featuring compelling anecdotes from incidents like Chernobyl, The speaker Mr. Hari Prasad, Founder, Beyond Sustainability, highlighted nature's resilience and connected historical contexts to the goal of achieving net-zero carbon emissions by 2050. The speaker explored carbon footprints, their origins, and impacts, offering strategies for individuals to reduce their ecological footprint. An interactive Q&A session provided additional insights, drawing parallels to real-life examples like the Chennai and Mumbai floods. The seminar inspired attendees to prioritize sustainability and commit to a greener future.

NATIONAL ENERGY CONSERVATION DAY

The National Energy Conservation Day seminar titled "Greening Our Footprint:The need for Energy Conservation in the 21stCentury"highlighted the urgent need for transitioning to renewable resources and understanding the Paris Agreement. The speaker Dr. Selvajyothi K provided practical solutions to more than 50 students, using the 6Rs—Reduce, Refuse, Reuse, Recycle, Rethink, and Repair. The event empowered attendees to rethink their energy use and commit to sustainable practices.

NATIONAL YOUTH DAY

Poster Making Competetion

The National Youth Day Poster Making Competition, held on January 12th, which celebrated youth empowerment and Swami Vivekananda's teachings had 30+ participants. Organized under the theme "Empowering Youth, Igniting Minds: Swami Vivekananda's Vision," the event saw enthusiastic participation from students showcasing their artistic talents. Hand-drawn posters depicted unity, enlightenment, and Vivekananda's visionary ideals. The competition highlighted the importance of creative expression and left a lasting impact, fostering unity and a renewed commitment to youth empowerment among the participants.

Talk about National Youth Day

On January 12, 2024, the National Youth Day celebration featured an enlightening talk by Dr. Tapas Sil, who captivated the audience with his insights on youth empowerment and creating a brighter future. The event, commemorating Swami Vivekananda's birth anniversary, brought together students, faculty, and guests. Dr. Sil eloquently connected Vivekananda's teachings with modern challenges, emphasizing holistic development, self-confidence, resilience, and the pivotal role of education. His anecdotes and experiences added intellectual depth, leaving the audience inspired and engaged.

NATIONAL STARTUP DAY

A seasoned entrepreneur Mr. Gamaliel Das shared a compelling narrative of a startup journey in his talk titled The Unfolding Journey of My StartUp. The journey had ups and downs, from near bankruptcy to success, finally achieving success which manifested in terms of awards such as the TNSI Innovation Awards (2019, 2021) and Smart India Hackathon 2022 win. The speaker emphasized the importance of expos and tech workshops for networking and innovation. The event concluded with an open forum, providing practical insights on product development and overcoming obstacles, leaving participants, about 30, inspired and equipped with valuable knowledge.

REPUBLIC DAY

The event started off with the flag hoisting by the chief guest for the event and also inspected the synchronized parade by the NCC unit of our college. music and dance clubs performed to patriotic songs. Cultural Affairs put together an event where various groups of students performed different skits and speeches.

VIKSIT BHARAT@2024
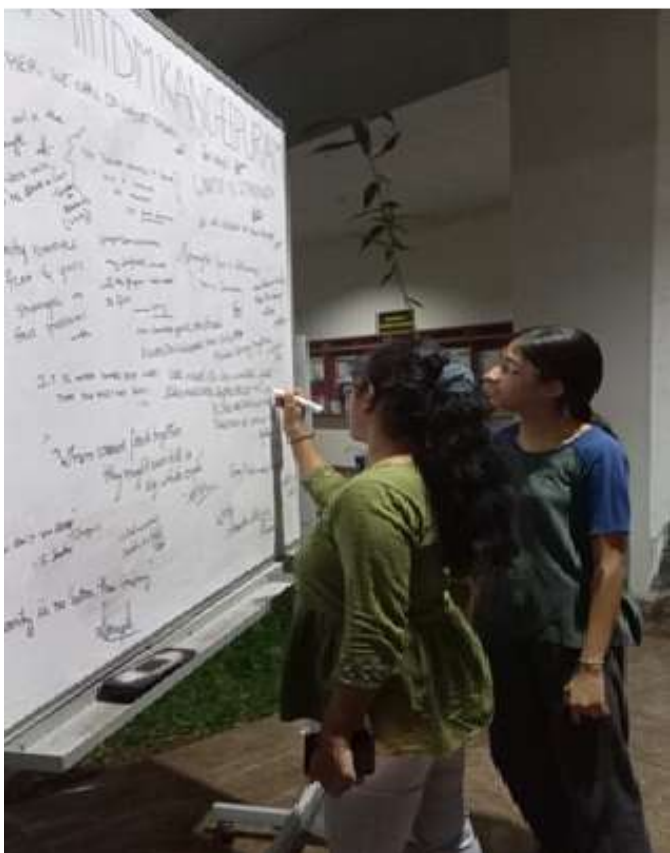
The Institute conducted 6 events as part of the Viksit Bharat@2047 from 1st April 2023 to 31st March 2024 and brief reports on

Hon'ble Prime Minister's Live Webcast on 11th December 2023 – The session was well attended by institute students, staff and faculty members. All participants were made aware of the steps involved in the submission of the feedback via MYGOV portal and tag with social media handles indicated.

Selfie Point created in the Institute Academic Area with Viksit Bharat Theme Backdrop

Email Communication:
Entire group of student community has been communicated via emails – the sop document shared by the ministry regarding the steps to provide the students feedback and their 3 point suggestions towards the cause of Viksit Bharat @ 2047 and encouraged to share their views in their social media profiles with relevant tagging.

Slogan Writing Contest
A slogan writing competition was conducted as part of Viksit Bharat@2047. Title: United India for Viksit Bharat@2047; Students wrote slogans on the role of being United for Viksit Bharat@2047.

Debate Competition:
Details of the event: The Online Debate Competition in ViksitBharat@2047 buzzed with student energy as they passionately exchanged ideas on vital issues. Despite the virtual setup, participants showcased impressive articulation and critical thinking skills. The competition, fostering intellectual camaraderie, revealed the resilience and adaptability of students in the digital space. ViksitBharat@2047 not only offered a platform for constructive discourse but also celebrated the youth's ability to articulate perspectives, contributing to the shared vision for India's development by 2047.

Title 1: Balancing Economic Growth and Environmental Conservation in Viksit Bharat @2047;

Title 2: The role of Artificial Intelligence in Shaping Viksit Bharat@2047

India's Techade – Chips for Viksit Bharat:
On the occasion of the address by Hon'ble PM Shri. Narendra Modi at 10:30 AM, India's Techade - Chips for Viksit Bharat, programme was hosted at IIITDM Kancheepuram, on March 13, 2024 to offer valuable insights into the advancements and initiatives in the semiconductor industry in India, especially in the context of our national development goals. Talks on the government initiatives to promote the semiconductor industry were delivered by Prof. Binsu J Kailath and Dr. Noor Mahammad Shak which was then followed by the invited talk by an Industry expert Shri. Sharat Deepak Kaul, Executive Director, Krypton Solutions, Pvt.Ltd. Bangalore.

DEPARTMENTS AND SCHOOLS

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

The Computer Science and Engineering stream started in 2009. IIITDM Kancheepuram's Computer Science and Engineering curriculum is modeled on the ACM (Association for Computing Machinery) recommendations and is the first of its kind engineering program offered in India. This program is aimed at producing engineers equipped with skills required for efficient hardware-software interaction. In addition to courses offered by the conventional Computer Science curriculum, this novel program offers core courses such as Embedded Systems, Human-Computer Interaction, Signals and Systems, Product Design etc., that equip the students with both computing and electronics engineering skills that are very much required for the successful creation of products requiring hardware - software interactions. Our graduates would find wide scope in VLSI, Embedded Systems and Electronics Product Manufacturing related industries in addition to application development avenues and higher studies that are open to conventional Computer Science engineers. The laboratories are equipped with powerful Deep Learning Engine, HP Workstations, FUJITSU Windows Server, IBM Debian Linux server and network infrastructure such as the ISDN equipment, network distribution switches, fire- wall and redundant wireless access controller to cater to the computing needs of the institute practice courses. The Institute is also equipped with a personal Supercomputer employing 4 Tesla cards giving a peak performance of 4.12 Tflops to assist in the advanced courses on Computer Architecture, Advanced Structure/Algorithms, Database Data Management/Knowledge Engineering and Image Processing. The HCI laboratory houses a powerful image processing workstation with intel x5690 6 core processor with dual monitor support.

Department of Computer Science and Engineering (CSE) offers design centric programmes such as B.Tech (CSE), B.Tech(CSE with Major in AI), Dual Degree (DD) programmes (B.Tech in CSE and M.Tech in CSE), M.Tech.(CSE with Specialization in Data Science and Artificial Intelligence) and Ph.D in various research areas in computer science. The department has enthusiastic students numbering around 550 which includes B.Tech, DD students, M.Tech and Ph.D scholars. There are 14 faculty members who are actively involved in research in areas such as knowledge engineering, machine learning, wireless sensor networks, membrane computing, cyber-physical systems, IOT, high performance computing, VLSI architectures, biometrics, machine learning, image processing, soft computing and theoretical computer science.

Details about Faculty Members

Dr. Bhukya Krishna Priya
(PhD – NIT Tiruchirapalli)
Assistant Professor

Computer Architecture, Memory Technologies, Machine Learning, Image Processing, Vehicular Networks.

Dr. Jagadeesh Kakarla
(PhD – NIT Rourkela)
Assistant Professor

Wireless Sensor Networks , Adhoc Networks , Internet of Things , Medical Image processing.

Dr. Jaishree Mayank
(PhD – IIT Patna)
Assistant Professor

Algorithm Designing for Real–time Cyber Physical Systems

Prof. Masilamani V
(PhD – IIT Madras)
Professor

Image Processing and Computer Vision, Machine Learning, Algorithms and Data Structures, Theory of Computing.

Dr. Noor Mahammad SK
(PhD – IIT Madras)
Associate Professor

Software for VLSI Design, Evolvable Hardware, Reconfigurable Computing, Network System Design, High Performance VLSI Architectures for Digital Signal Processing, Packet Processing Architectures and Algorithms, Computer Architecture

Dr. Pandiri Venkatesh
(PhD – University of Hyderabad)
Assistant Professor

Combinatorial Optimization, Reinforcement learning for optimization, Soft computing, Heuristics,Metaheuristics, Swarm Intelligence, Multi–objective Optimization.

Dr. Preeth R
(PhD – NIT Tiruchirappalli)
Assistant Professor

IoT and Cloud Computing, Machine Learning, Computer Vision, Computer Networks, Data Science.

Dr. Rahul Raman
(PhD – NIT Rourkela)
Assistant Professor

Computer Vision, Image Processing, Machine Learning, Biometrics, Visual Surveillance, Aesthetics.

Dr. Ram Prasad Padhy
(PhD – NIT Rourkela)
Assistant Professor

Machine Learning, Deep Learning, Computer Vision, Autonomous Robotics, Sensor Fusion, Multi-modal Perception, Visual Surveillance.

Dr. Sadagopan N
(PhD – IIT Madras)
Associate Professor

Graph theory and Combinatorics, Data Structures and Algorithms, Computer Networks, Database Systems, Graph Library Generation Package.

Dr. Sanjeet Kumar Nayak
(PhD – IIT Patna)
Assistant Professor

IoT and Cloud Computing, Applied Cryptography, Fog and Edge Computing, Unmanned Aerial Vehicle (UAV), Blockchain Technology.

Dr. Santhanam Raghavan
(PhD – NIT Karnataka)
Assistant Professor

Cloud Computing, Membrane Computing, Machine Learning

Prof. Sivaselvan B
(PhD – NIT Tiruchirapalli)
Professor

Knowledge & Data Engineering, Data Analytics, Human Computer Interaction, Evolutionary Computation Strategies.

Dr. Umarani Jayaraman
(PhD – IIT Kanpur)
Assistant Professor

Biometrics, Pattern Recognition, Deep Learning, Digital Image Processing, Human Computer Interaction.

FDP's/Workshops/ Conferences Organized

Dr. Ram Prasad Padhy:

Organized a talk on Roadmap from research to IPR : Patentability and non patentable subject matters on the occasion of World IPR day at IIITDM Kancheepuram. Date: April 26, 2023. Speaker: Dr. Sudarkodi Venkatesan.

Dr. Preeth:

Organized Research Internship in Computer Science (RISC 2023) at IIITDM Kancheepuram (15-05-2023 to 21-07-2023).

Dr. Masilamani & Dr. Preeth:

Coordinator of Six Days Short Term Training Program (STTP) at IIITDM Kancheepuram titled on Data Science using Python(05-06-2023 to 10-06-2023).

Dr. Ram Prasad Padhy:

Jointly coordinated with Prof Sreekumar an online Short Term Training Program (STTP) on AI and Machine Vision for Robotics from June 12-16, 2023 at IIITDM Kancheepuram.

Dr. Umarani J, Dr. Sivaselvan B, Dr. Rahul Raman:

Jointly coordinated with Prof Sreekumar an online Short Term Training Program (STTP) on AI and Machine Vision for Robotics from June 12-16, 2023 at IIITDM Kancheepuram.

Dr. Ram Prasad Padhy:

Organized a talk on Data Science - Regression and its applications in the industry at IIITDM Kancheepuram to encourage the students to look for industry oriented problems in data science. Date: Aug 03, 2023. Speaker: Mr. Murugesan Perumal

Dr. Masilamani:

Workshop on Competitive Programming, during 28 th Oct- 5 th Nov, 2023.

Dr. Noor Mahammad:

A One Week Workshop on VLSI Architectures for Image and Video Processing 04 to 08 December 2023, Online Mode.

Dr. Noor Mahammad:

A One Week Workshop on High Performance Computing for ALL (Parallel Programming for Parallel and Distributed Architectures) 11 to 15 December 2023, Online Mode.

Dr. Ram Prasad Padhy:

Jointly coordinated with Prof. Sreekumar a Short Term Training Program (STTP) on AI and ROS for Robotics: Theory and Practice from Dec. 11-15, 2023 at IIITDM Kancheepuram.

Dr. Noor Mahammad:

A One Week Workshop on Cyber Security and Forensics for ALL 18 to 22 December 2023, Online Mode.

Dr. Ram Prasad Padhy:

AI and Computer Vision for Autonomous Vehicles on Jan 13, 2024.

Dr. Pandiri Venkatesh:

Optimization Techniques on Jan 27, 2024.

Dr. Preeth:

Steering Committee Member (Coordinator) of International Collegiate Programming Contest 2023 (ICPC 2023), West Asia, Chennai Region.

Funded Research/ Consultancy Projects

Dr. Jagadeesh Kakarla:

Enhancement Algorithm for Banking Intelligence and Automation, Agency: SimplyFi, Role: Investigator, 18 months.

Dr. Jagadeesh Kakarla:

Design and Development of a Bilingual Mobile Application to Identify Terrestrial and Marine Fauma, Agency: AIWC, Role: Investigator. 6 months.

Dr. Noor Mahammad:

Principal Investigator - Consultancy work of Rs. 70,000/- Certified Cyber Warrior v3 Batch #04, Digital Skill Academy, IIT Madras, April 2023.

Dr. Preeth:

Sponsored Projects:Title: HiFi GENIE-High precision Fire detection system using smart decision support with GEO assisted Navigation for Industry 4.0 Establishment. Role & Sanctioned Fund: Principal Investigator, Rs.13,51,000/-Funding Agency: Startup Research Grant-SRG, DST, Government of India.
Duration: 2 years,completed.

Dr. Rahul Raman:

Monocular Depth Analysis Controlled GPS Denied AGV Navigation for Seamless Tracking, Funded by TiHAN-IIT Hyderabad, Status: Ongoing Project, Financial Outlay: 19.02 Lakhs, duration 18 Months.

Dr. Rahul Raman:

Multi Biometric Analysis of Cattle for Identification and Health Monitoring, Funded by Department of Science and Technology, Govt. of India, Status: Technical Acceptance, Financial Outlay: 16.32 Lakhs, duration 2 Years.

Dr. Ram Prasad Padhy:

Title: Situational Awareness in Self-driving Cars using Machine Learning, Funding Agency : SERB-DST, Role: Principal Investigator, Budget: Rs. 19,01,900. Duration: 24 Months (Dec 2021 to Dec 2023) .

Dr. Ram Prasad Padhy:

Title: Safety Critical Scenario Identification in Self-driving cars using Machine Learning, Funding Agency : TiHAN, IIT Hyderabad, Role: Principal Investigator, Budget: Rs. 24,83,166. Duration: 18 Months (July 2022 to Jan 2024).

Journal Publications

1. Kausik R, Sivaselvan B, V Kamakoti, Explainable Artificial Intelligence for Medical Imaging: Review and Experiments with Infrared Breast Images, Computational Intelligence, Wiley, May 2023.

2. Mercy F, Akash V, Anmol, Divya V, Manoj, Sadagopan, Sivaselvan, A Study of Neural Artistic Style Transfer Models and Architectures for Indian Art Styles, Network: Computation in Neural Systems, June 2023 Accepted, Taylor & Francis [SCIE,Q3]

3. Santosh Kumar Uppada, B S Ashwin, B Sivaselvan, A Novel Evolutionary Approach based Multimodal Model to detect Fake News in OSNs using Text and Metadata, The Journal of Supercomputing, Springer, July 2023 [SCIE, Q2]

4. Kaushik R, Sivaselvan B, V.Kamakoti, Clinical Thermography for breast cancer screening: A Systematic review on image acquisition, segmentation, and classification IETE Technical Review, Taylor & Franics, July 2023[SCIE,Q2]

5. Deepanjali.S and Noor Mahammad.Sk. Scalable and Accelerated Self Healing Control Circuit using Evolvable Hardware. ACM Transactions on Design Automation Electronics Systems. November 2023. https://doi.org/10.1145/3634682 [SCI Indexed]5. Deepanjali.S and Noor Mahammad.Sk. Scalable and Accelerated Self Healing Control Circuit using Evolvable Hardware. ACM Transactions on Design Automation Electronics Systems. November 2023. https://doi.org/10.1145/3634682 [SCI Indexed]

6. Kaushik R, Sivaselvan B, V Kamakoti, Attention Guided Grad-CAM : An improved Explainable Artificial Intelligence Model for Infrared Breast Cancer Detection, Multimedia Tools And Applications 2023, Springer, November 2023.

7. Kausik R, Sivaselvan B, V Kamakoti, IR-GAN: Improved generative adversarial networks for Infrared Breast Image Segmentation Quantitative InfraRed Thermography Journal, Taylor & Francis, November 2023.

8. B Venkateswarlu Isunuri, Jagadeesh Kakarla. "Ensemble Coupled Convolution Network for three-class brain tumor grade classification", Multimedia Tools and applications, Springer, SCI, 2023

9. Shree Prakash, Jagadeesh Kakarla. "Three Level Automatic Segmentation of Optic Disc using LAB color space Contours and Morphological Operation", International Journal of Imaging Systems and Technology , Wiley, SCI, Impact factor 2.177, 2023

10. Isunuri Bala Venkateswarlu, Jagadeesh Kakarla "EfficientNet and Multi-path Convolution with Multi-head Attention network for brain tumor grade classification ", Computers and Electrical Engineering, Elsevier, Accepted, Impact Factor: 4.152, 2023.

11. Ayesha Sk , V. Masilamani, Robust multiplicative watermarking technique for digital images in curvelet domain using normal inverse Gaussian distribution, Multimed Tools Appl, Vol. 88, Issue 6, pp. 9223-9241, 2023 (https://-doi.org/10.1007/s11042-022-14137-8; ISSN: 13807501, 15737721).

12. Partha Sarathi Chakraborty, Somanath Tripathy, and Sanjeet Kumar Nayak "BASPED: Blockchain assisted Secure Searchable Public Key Encryption over Outsourced Data," International Journal of Information Security (Springer), 2023. (doi: 10.1007/s10207 -023-00753-4).

13. Garv Anand, Mayank Vyas, Ram Narayan Yadav, and Sanjeet Kumar Nayak "On Reducing Data Transmissions in Fog Enabled LoRa Based Smart Agriculture," IEEE Internet of Things Journal, 2023. (doi: https://doi.org/10. 1109/J OT.2023. 3321466)

14. Deepanjali, S., Mahammad, S.K.N. A two-fold bio-inspired system for mitigating SEUs in the controllers of digital systems deployed on FPGA. Journal of Supercomputing (2023). https://doi.org/10.1007/s11227-023-05804-0 [SCI Indexed]

15. Ayesha Sk , V. Masilamani, Zero watermarking scheme for privacy protection in e- Health care, Automatika, Vol. 64, Issue No 3, pp 453-466, 2023 (https:/doi.org/10.1080/ 00051144.2023.2187525; ISSN: 51144).

16. Skandha Deepsita S., T. Karthikeyan, Noor Mahammad Sk., Energy efficient multiply- accumulate unit using novel recursive multiplication for error-tolerant applications, Integration, Volume 92, 2023, Pages 24-34, SSN 0167-9260, https://doi.org/10.1016/j.vlsi.2023.04.006. [SCI Indexed]

17. L Hemanth Krishna, Ayesha Sk, J Bhaskara Rao, Sreehari Veeramachaneni, and Noor Mahammad Sk, "Energy Efficient Approximate Multiplier Design with Lesser Error Rate using the Probability-based Approximate 4:2 Compressor"," in IEEE Embedded Systems Letters, doi: 10.1109/LES.2023.3280199, 2023. [SCI Indexed]

18. Raghavendra Kumar Sakali, Sreehari Veeramachaneni, Noor Mahammad Sk, "Preferential fault-tolerance multiplier design to mitigate soft errors in FPGAs", Integration, Volume 93, 102068, ISSN 0167-9260, https://doi.org/10.1016/j.vlsi.2023.102068, 2023.

19. Kumar Sakali R, Noor Mahammad Sk, Intrinsic Based Self-healing Adder Design Using Chromosome Reconstruction Algorithm, Journal of Electronic Testing, 2023. https://doi.org/10.1007/s10836-023-06050-1.

20. Dhayalakumar M, Noor Mahammad Sk, Deterministic Approach for Range Enhanced Reconfigurable Packet Classification Engine, ACM Transactions on Reconfigurable Technology Systems,March 2023. https://doi.org/10.1145/3586577.

21. T Anjali, V, Masilamani, Explainable masked face recognition, Multimed Tools Appl (2023)(https://doi.org/10.1007/s11042-023-16571-8; ISSN: 13807501, 15737721).

22. T Anjali, V, Masilamani, Text-Guided Synthesis of Masked Face Images, ACM Transactions on Multimedia Computing Communications and Applications, accepted for publication, 2024.

23. B Venkateswarlu Isunuri, Jagadeesh Kakarla. "EfficientNet and Mixed Convolution Network for Three-class brain tumor magnetic resonance image classification", Soft Computing, Springer, SCI, Impact factor 3.7, Accepted, 2024

24. Deepanjali S., Noor Mahammad Sk, Fault tolerant micro-programmed control unit for SEU and MBU mitigation in space based digital systems, Microelectronics Reliability, Volume 155, 2024, 115360, ISSN 0026-2714, https://doi.org/10.1016/j.microrel.2024.115360.

25. Dhayalakumar M., Noor Mahammad Sk,TeRa: Ternary and Range based packet classification engine, Integration, Volume 96, 2024, 102153, ISSN 0167-9260, https://doi.org/10.1016/j.vlsi.2024.102153.

26. Vidyasagar, Preeth Raguraman, and Guravaiah. HR-DO: High Reliable -Delay Optimized Controller Placement in Software Defined Networking."International Journal of Communication Systems 37, No. 8 (2024): e5739.

27. Naveen Kumar, V Rajakumari, Ram Prasad Padhy, Soumyaranjan Routray, Kumar Prasannajit Pradhan, "A Machine Learning Approach for Optimizing and Accurate Prediction of Performance Parameters for Stacked Nanosheet Transistor", Physica Scripta, IOPscience. Status: Recently Accepted, Year: 2024. Impact Factor: 2.9 DOI: https:/doi.org/10.1088/ 1402-4896/ad2b35, ISSN: 1402-4896

Patents

1. Dr Rahul Raman: Patent Grant Number: 436214, Position and time localization of occlusion between two objects using a static camera, Pankaj K Sa, Rahul Raman, Banshidhar Majhi, Indian Patent, 1218/KOL/2013, Date of Grant: 28/06/2023

Conference Publications

1. Shree Prakash and Jagadeesh Kakarla. "Automatic Segmentation of Hard Exudates using LAB color space Contours Edge detection and Morphological Operation" 8th Conference on Computer Vision and Image Processing , CVIP 2023

2. Sakali Raghavendra Kumar, SK Noor Mahammad, P Balasubramanian, and G Venkat Reddy, "Novel Embryonics Adder Architecture with Unicellular Self-Check Unit", Proceedings of the Second International Conference on Emerging Trends in Engineering (ICETE 2023), pp. 928 – 935, Atlantis Press, doi.org/10.2991/ 978-94-6463-252-1_93, 2023.

3. J Namratha Nadh, Ayesha Sk, Sreehari Veeramachaneni, Noor Mahammad Sk, "Energy Efficient Approximate Floating Point Divider", International Conference on Computer, Electronics & Electrical Engineering & their Applications (IC2E3), pp. 1-5, doi: 10.1109/IC2E357697. 2023.10262554, 2023.

4. V Mohith, Madhukumar Patnala, Sreehari Veeramachaneni, and Noor Mahammad Sk, "Precise Multiplier Design using Novel 4:2 Compressor", International Conference on Computer, Electronics & Electrical Engineering & their Applications (IC2E3), pp. 1-5, doi: 10.1109/ IC2E357697.2023.10262475, 2023.

5. Veeramani Sonai, Indira Bharathi, and Sk Noor Mahammad, "A Perspective of IP Lookup Approach Using Graphical Processing Unit (GPU)". In Distributed Computing and Intelligent Technology: 19th International Conference, ICDCIT 2023, Bhubaneswar, India, January 18-22, 2023, Proceedings. Springer-Verlag, Berlin, Heidelberg, 98 – 103. https://doi.org/ 10.1007/978-3-031-24848-1_7, 2023.

6. Kaniskaa MS, R Manimegalai, Noor Mahammad SK, "Parallelization Algorithm of Computer Vision for Autonomous Vehicles," 2023 2nd International Conference on Vision Towards Emerging Trends in Communication and Networking Technologies (ViTECoN), Vellore, India, 2023, pp. 1-6, doi: 10.1109/ViTECoN58111. 2023.10157031, 2023.

7. Satyabhama Vyshnavi Lakshmipriya Potti and Ram Prasad Padhy, "Depth Estimation from Single RGB Image using Attention based Encoder-Decoder Network", IEEE Annual India Conference (INDICON), IEEE, 2023. Status: Recently Accepted.

8. Shivakant Mishra, Sanjeet Nayak, and Ramnarayan Yadav, "An Energy Efficient LoRa-based Multi-Sensor IoT Network for Smart Sensor Agriculture System," in Proc. of 2023 IEEE Topical Conference on Wireless Sensors and Sensor Networks, IEEE, 2023, pp. 28-31.

9. Mayank Vyas, Garv Anand, Ram Narayan Yadav, and Sanjeet Kumar Nayak, "DASA: An Efficient Data Aggregation Algorithm for LoRa Enabled Fog Layer in Smart Agriculture," in Proc. of International Conference on Advanced Information Networking and Applications (AINA-23), 2023, pp. 40-52.

10. Ajay Chandra Korlapati, Sanjeet Kumar Nayak, Partha Sarathi Chakraborty, and Somanath Tripathy, "SIOCEN: Secure Integrity Verification of Outsourced Data in Cloud Storage using Blockchain," in Proc. 18th International Conference on Information Security Practice and Experience (ISPEC-23), Springer, 2023.

11. Sukesh Babu V. S. and Rahul Raman, "Pedestrian Direction Estimation: An approach via Perspective Distortion Patterns", in IEEE International Conference on Innovative Trends in Information Technology (ICITIIT-2023), IEEE.

12. K Kaushik, D Jaswanth Reddy, and Rahul Raman, "Muzzle Based Identification of Cattle Using KAZE", in IEEE International Conference on Innovative Trends in Information Technology (ICITIIT-2023), IEEE.

13. Haseeb Khan and Ram Prasad Padhy, "Free Space Detection for Autonomous Vehicles in Indian Driving Scenarios", Eighth International Conference on Computer Vision and Image Processing (CVIP), 2023. Status: Recently Accepted.

14. Yoga Sri Varshan V, Subin Sahayamand Umarani Jayaraman, "An Algorithm to Calculate Retinal Vessel Diameter in Fundus Images" The Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), 2023, IIT Ropar, India.

15. Nilu R. Salim, Srinivasaraghavan Sundar, Tejas Sivan, Kongathi Mythri, Umarani Jayaraman, "A Light Convolutional Neural Network Architecture for Cross-Spectral Face Recognition", International Conference on Computer, Electronics and Electrical Engineering and Their Applications, 2023, NIT Uttarakhand, India.

16. Kaushik Raghavan, Sivaselvan B, Kamakoti V, Counter-CAM : An Improved Grad-CAM based Visual Explainer for Infrared Breast cancer Classification, 20th Indian Council International Conference (INDICON), IEEE, Dec 14-17 2023 [Accepted]

17. Mercy Faustina, Aparajith Raghuvir, Sivaselvan B, CovPTM : COVID-19 PreTrained Model – Generic Model vs Biomedical Model Adaptation, 20th Indian Council International Conference (INDICON), IEEE, Dec 14-17 2023 [Accepted]

18. Kaushik R, B Sivaselvan, V Kamakoti, Integrating Explainable AI With Infrared Imaging and Deep Learning for Breast Cancer Detection, 21st. IEEE Intl . Conference OCIT 2023, NIT Rapipur, Dec 13-15 [Accepted]

19. Ram Mohan Chowdary Kota, Jaishree Mayank, Sanjeet Kumar Nayak, "Maximization of Profit and Throughput of EV Charging Station Integrated with PV and ESS", IEEE 99th Vehicular Technology Conference, Singapore, 2024

20. S. Deepanjali, A. Shaik, S. Noor Maham-mad and S. Beautlin, "Evolvable Hard-ware for Fault Mitigation in Control Circuits," 2024 37th International Confer-ence on VLSI Design and 2024 23rd Inter-national Conference on Embedded Sys-tems (VLSID), Kolkata, India, 2024, pp. 672–677, doi: 10.1109/VL-SID60093.2024.00119.

21. S. Raghavendra Kumar, S. Veeram-achaneni and Sk Noor Mahammad, "Fault-Tolerant Floating-Point Multiplier Design for Mission Critical Systems," 2024 37th International Conference on VLSI Design and 2024 23rd International Conference on Embedded Systems (VLSID), Kolkata, India, 2024, pp. 678–683, doi: 10.1109/VLSID60093.2024.00120.

22. Satyajit Mohapatra and Sanjeet Kumar Nayak. "Re-Max: A Reward Maximization Approach for Heterogeneous Drone Scheduling Problem," in the Proc. of 25th International Conference on Distributed Computing and Networking (ICDCN-24), ACM, 2024.

23. Satyajit Mohapatra and Sanjeet Kumar Nayak. "Greedy Algorithms for Heteroge-neous Drone Delivery Packing in the Cloud-assisted Intelligent Transportation System," in the Proc. of 16th International Conference on COMmunication Systems & NETworkS (COMSNETS-24), IEEE, 2024.

Invited Talks Delivered by Faculty Members

1. Dr. Noor Mahammad : Key Note Address on "Role of VLSI in Upcoming Industry 5.0", in technical session -1 on 27 April 2023 for NCIET-2023 sponsored by SERB and organized by EECE department, at NITTTR, Chennai.

2. Dr. Ram Prasad Padhy: Session Chair for Second International IEEE conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication, and Computational Intelligence: RAEEUCCI-2023 at SRMIST - Chennai, April 2023.

3. Dr. Ram Prasad Padhy: One week short-term course on Data Science using Python at IIITDM Kancheepuram, June 2023. Topic: Object-oriented Programming in Python.

4. Dr. Ram Prasad Padhy: One Week Online Short Term Training Program (STTP) on AI and Machine Vision for Robotics at IIITDM Kancheepuram, June 2023. Topics: AI & ML Techniques Fundamentals An Introduction to Robot Operating System (ROS) Hands on Experience with Robot Operating System (ROS) AI for Self-Driving Cars.

5. Dr. Rahul Raman: STC on Data Science using Python Organized by IIITDM Kancheepuram, Chennai, Duration 5 June 2023 to 10 June 2023.

6. Dr Jagadeesh Kakarla: Delivered Talk on "Data Reduction Techniques", in Short Term Course on "Data Science using Python" IIITDM Kancheepuram, Chennai, on 9 June 2023.

7. Dr Noor Mahammad : Workshop on Hands-on Training on FPGA Architectures and Programming using Verilog HDL", department of ECE, NIT Tiruchirappalli, 10 June 2023

8. Dr Rahul Raman: FDP on AI and Machine Vision for Robotics, Organized by IIITDM Kancheepuram, Chennai, Duration 12 June 2023 to 16 June 2023

9. Dr Rahul Raman: FDP on SERB sponsored workshop on Deep Learning for Biometrics Privacy and Security, Organized by IIITDM Kancheepuram, Chennai, Duration 19 June 2023 to 25 June 2023

10. Dr Rahul Raman: IEEE SPS Seasonal School on Advanced Signal Processing using Machine Learning Techniques, Organized by IEEE Signal Processing society MECS Hyderabad, Duration 10 July 2023 to 15 July 2023.

11. Dr Noor Mahammad : Machine Learning Techniques for Signal Processing, IEEE SPS Seasonal School on "Advanced Signal Processing using Machine Learning Techniques" 13 July 2023., in offline mode which is funded by IEEE Signal Processing society. Matrusri Engineering College, Hyderabad

12. Dr Noor Mahammad : Faculty Development Program on Digital System Design, which will be held from 17 July 2023 and 18 July 2023, Vellore Institute of Technology Vellore.

13. Dr Noor Mahammad : Faculty Development Program on Digital System Design, which will be held from 17 July 2023 and 18 July 2023, Vellore Institute of Technology Vellore.

14. Dr Noor Mahammad : 23 August 2023, Afternoon 2 to 4 pm. Wednesday on Role of Digital Forensics in Real Time Applications. National Institute of Technical Teachers Training and Research Extension Centre.

15. Dr. Noor Mahammad : Guest Lecture on Data link layer protocols and Network layer protocols, Department of IT, R.M.K Engineering College, 2 Sep 2023.

16. Dr. Noor Mahammad : AI for Cybersecurity at Amrita Vishwa Vidyapeetham, Chennai. On 13 Sep 2023, A two-day DRDO funded seminar on "The Impact of Artificial Intelligence in Cybersecurity Sustainable Development" is scheduled between September 13 -14, 2023.

17. Dr. Noor Mahammad : Guest Lecture on Cyber Security and Vulnerabilities Assessment Organized by Department of MCA, Mahindra Engineering College, 12 Oct 2023.

18. Dr. Noor Mahammad : SERB Sponsored High End Workshop on Research Challenges in Cyber Security and Digital Forensic Handled 3 sessions on Dig Forensics Tools & Challenges, Computer/ Network Forensics - Tools, Wireless / Wi-Fi Network Defence & Countermeasures 31 Oct 2023. VIT Vellore.

19. Dr. Noor Mahammad : Emerging Trends in Digital VLSI Design - From Moores Law Beyond, 2 Nov 2023, Department of Electronics and Communication Engineering, RMK College of Engineering and Technology, Chennai.

20. Dr. Noor Mahammad : Guest Lecture on Computer System Architecture, organized by the Department of Information Technology, RMK Engineering College, 9 Nov 2023, Chennai.

21. Dr. Ram Padhy: One Week Short Term Training Program (STTP) on AI and ROS for Robotics: Theory and Practice at IIITDM Kancheepuram, Dec 2023. Topics: Fundamentals of AI Robot Operating System (ROS) - Theory & Practice (3 sessions) AI for Autonomous Vehicles.

22. Dr. Ram Prasad Padhy: One week Faculty Development Programme on Recent Trends and Developments in AI for Autonomous EV, Dec 2023. Topic: AI and Computer Vision for Self-driving Cars17. IEEE One week Faculty Development Programme on The Art of Research and Development, Dec 2023. Topic: Technical Writing using Latex.

23. Dr. Noor Mahammad : Delivered Expert lecture on VLSI Design and Trends, A 3-Day Seminar on "Recent Trends and Challenges in VLSI Circuits, Systems and Architectures" from 23 January 2024 to 25th January 2024 is approved by SERB.

24. Dr. Noor Mahammad : Delivered Expert Lecture on Vulnerability Assessment and Penetration Testing, 15 Feb 2024, FDP on "Emerging Trends and Research Challenges in Cyber Security and Digital Forensics", 12th Feb - 16th Feb 2024 organized by VIT Vellore.

25. Dr. Noor Mahammad : Delivered Expert Lecture on Digital Forensic Tools and its application; Research challenges in Digital Forensic Tools, 16 Feb 2024, FDP on "Emerging Trends and Research Challenges in Cyber Security and Digital Forensics", 12th Feb - 16th Feb 2024 organized by VIT Vellore.

26. Dr. Sivaselvan: Invited Lectures at Workshops organized under ATAL AICTE scheme, QIP SRM, SSN, VIT, KCT College etc.

27. Dr. Sivaselvan:VNR VJIET Hyderabad, Keynote Speaker at ICAMADA 24 Intl Conference Data Science & Usability Aspects

28. Dr Sivaselvan:Inaugural Address as part of SRMIST Intl Conference ISTEM , Usability Engg. An Applied Perspective

29. Dr Preeth: Visited Indian Institute of Information Technology Kottayam as resource person for delivering guest lecture in a Five days SERB sponsored workshop.

CSE
TECHNICAL STAFF

Saravana Kumar K
Technical Superintendent

Aravindan S
Junior Technical Superintendent

Kanagaram K
Senior Technician

Kamalieswari A S
Junior Technician

Aswin A
Junior Technician

Kamalakannan M
Junior Technician

ADDITIONAL INFORMATION

Guest Lectures/Invited Talks in the Department of CSE:

S.No.	Title	Expert Name	Date
1	Regression and its applications in the industry	Prof. Murugesan Perumal	8 Mar 2024
2	Artificial Intelligence for Disaster Risk Reduction	Prof. T.V. Vijaya Kumar, Dean, School of Engineering, JNU, Delhi	5 Apr 2024

ICPC 2024 Regional Site – CSE Department IIITDM Kancheepuram

The International Collegiate Programming Contest (ICPC) Chennai Regionals at the Indian Institute of Information Technology Design and Manufacturing (IIITDM) Kancheepuram, concluded triumphantly on 12th Jan, 2024. Regional Director for the event was Prof V Masilamani and the contest was conducted by the Department of CSE. The event, marked by intense coding battles and intellectual rigor, ended with a valedictory ceremony. The ceremony was a vibrant affair, celebrating the hard work and achievements of all the participants. The atmosphere was filled with a mix of excitement and anticipation as everyone awaited the declaration of results. The top three teams out of all the participants from various institutes including IITs, NITs, and IIITs across the country with over 260 participants, who emerged victorious were: First Prize - Team "Yorozuya Forever" (Yash Bhagwat, Nishanth D, Teja Drondadula) from IIT Madras, Second Prize - Team "Chennai Sharks" (Harshavardhan Suresh, Kiran Raj K B, Deepak Sriram) from SSN College of Engineering, Third Prize - Team "is it rated?" (Aryaman Das, Utsav Jaiswal, Viraj Agrawal) from IIT Delhi.

Project Labs / Research Groups

Computer Vision and Machine Learning Lab

(Prof V Masilamani, Prof B Sivaselvan, Dr J Umarani, Dr Jagadeesh K)
The CVML lab focuses on research problems related to areas of Computer Vision, Machine Learning, Image Processing, Data Science & applied areas. Some the projects funded by industries / govt agencies are housed in this lab, such as the Adverse Drug Reaction prediction funded by the DataFoundry Pvt Ltd, Detection and Prevention of Obscene content on social network under Ministry of Home Affairs, Side channel attack detection in smart wireless devices by SERB, etc. In addition the group also regularly conducts outreach activities such as internships, workshops funded by industries / govt agencies such as SERB Accelerate Vigyan Vritika and Karyasahala schemes. Faculty members and research scholars of the group regularly publish in reputed journals and conferences.

High Performance Reconfigurable Computer Science Engineering(HPRCSE) Lab

Dr Noor Mahammad

The lab focuses on computer architecture, reconfigurable computing and allied areas research. The team works in architecture related problems impacting critical domain such as safety critical systems and has produced around 8 research scholars in various areas of software defined networks, architecture, safety critical designs etc.

Visual Surveillance and Biometrics Security Lab (ViBeS Lab) – Dr Rahul Raman

The ViBeS Lab explores computer vision and deep learning algorithms and implements them to achieve newer dimensions of visual surveillance and biometrics security. The research lab has developed an Autonomous Mobile Camera Robot to showcase the implementation of real time computer vision algorithms on edge. This lab boasts to have scholars from diverse departments and at different levels of education, viz. under graduates, post graduates, and PhD Scholars. The lab works on orthodox and unorthodox biometric security traits of humans and works even on animal biometrics. We have developed many pedestrian dataset variants and developed an annotated pedestrian dataset of 10 million frames. Some of our key areas are highlighted in the image below

Hybrid Intelligence lab: (Dr Preeth R, Dr S Raghavan, Dr P Venkatesh, Dr Krishna Priya)

The Hybrid Intelligence lab is focused towards developing prototypes for precision systems in IoT environment. The data collection is done in the lab using IoT Components and the testbed setup is enabled for both static and dynamic nodes.The researchers are working in the areas of machine learning for IoT, Localization in IoT for Industry 4.0 , Constraint/Context based data collection, data analytics for precision systems, and IoT enabled blockchain technology.

Key Areas of Research at HI Lab:

Edge Machine Learning (edge ML): It refers to the process of utilizing/running ML algorithms in edge devices such as Raspberry Pi and smart wearables.

Constraint/Context Based Secure Routing (CyberSecurity):

The data forwarding is done based on the security constraints in the network. The routing methodology varies based on the context of the network.

BlockChain for IoT Environment:

This setup enables the dynamic nodes to preserve the sensory data/information at several checkpoints based on the user requirements. It also emphasizes on the distributed task scheduling based on the location of the target node.

Localization in IoT for Industry 4.0:

The localization technique that finds the exact location of target node in a Internet of Things framework is applied for domain-specific applications

Data Analytics:

The focus is to develop a light-weight decision making module based on the historical data.

Autonomous Robotics and IoT System Engineering Research (ARISE) Lab:

(Dr. Ramprasadh, Dr. Sanjeet Kumar Nayak, Dr. Jaishree Mayank) Key areas of research at the ARISE Lab include:

Robotics: Designing and implementing advanced algorithms for autonomous navigation, manipulation, and decision-making. This includes the development of both hardware and software for robots that can perform complex tasks with minimal human intervention. IoT Systems: Creating robust and scalable IoT architectures that enable seamless communication and data exchange between devices. This involves developing protocols, sensors, and networks that ensure efficient and secure IoT operations. Machine Learning and AI: Integrating machine learning and artificial intelligence techniques to enhance the intelligence and adaptability of autonomous systems. This includes predictive maintenance, real-time data analytics, and adaptive control mechanisms. Human-Robot Interaction: Exploring ways to improve the interaction between humans and robots, ensuring that autonomous systems can work safely and effectively alongside people.

This includes studying ergonomics, user interfaces, and collaborative robotics. Cybersecurity: Ensuring the security and privacy of autonomous and IoT systems by developing robust cybersecurity measures. This includes protecting against cyber threats and ensuring the integrity of data and communications. The ARISE Lab collaborates with academic institutions, industry partners, and government agencies to drive innovation and translate research findings into practical applications. Through interdisciplinary research and a commitment to excellence, the lab aims to lead the way in shaping the future of autonomous robotics and IoT technologies.

Theoretical CS Research Group : Dr N Sadagopan, Dr P Venkatesh

The group focuses on areas such as Graph Algorithms, Data Structures, Combinatorics, Optimization problems etc. The group works on funded projects such as A framework for steiner tree domination and its variants in convex graphs-computing and complexzity study , Vertex Separators and its Variants: Structural and Algorithmic Study , On Spanning Trees - Generalizations and Variants (Theory and Algorithms), Investigation and Development of Heuristics for the large scale network design problems using two level network topologies and related problems.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ECE department was established with an undergraduate program in the year 2008. Now, our strength is 452 out of which we have 19 faculty members, 7 technical staff and 427 students. ECE Department is sponsored under "Fund for Improvement of S & T Infrastructure in Higher Educational Institutions (FIST)" of Department of Science & Technology (DST), Government of India.

The department offers an undergraduate Program B. Tech. in Electronics and Communication Engineering, two Dual Degree Programs B. Tech. in Electronics and Communication Engineering and M. Tech. in VLSI Design and B. Tech. in Electronics and Communication Engineering and M. Tech in Communication Systems. We also have Ph.D. programs along with two P.G. programs which are M. Tech. in Electronics and Communication Engineering with Specialization in Communication Systems and M. Tech. in Electronics and Communication Engineering with Specialization in Microelectronics and VLSI Design.

The department is actively involved in several funded projects from various central agencies such as The Ministry of Electronics and Information Technology (MeitY), UKEIRI, Department of Science and Technology (DST), Science and Engineering Research Board (SERB), DST MATRICS Scheme, SRG, TiHAN, IITH, UGC-DAE, etc. The Department received a funding of Rs. 77 Lakhs from DST under the FIST scheme for the period from 2021-2026.

Faculty Members and their Areas of Research

Prof. Binsu J Kailath
(PROFESSOR) -IIT Madras

Neuromorphic Circuits, Mixed Signal IC Design, Microelectronics and MEMS.

Dr. B.Chitti Babu
(Associate Professor, Head of the Department)

National Institute of Technology, Post Doc. (WUST, PL & VSB-TUO, CZ), Europe.
Power Electronics applications in smart distribution grids containing renewable energy sources.,Design of low power photovoltaic (PV) energy system for portable applications including MPPT algorithm, Grid Integration of Renewable power generation System, Control concepts in Power & Energy Systems.

Dr. Damodharan P
(Assistant Professor)-IIT Madras.

Power Electronics and Drives, Permanent Magnet Brushless DC Drive, Permanent Magnet Synchronous Drive, Electrical Vehicles (Hybrid EVs and Battery EVs), Design of Synchronous Reluctance Motor Drive, Switched Mode Power Supplies, Wireless Power Transfer for Electric Vehicle , Renewable Energy, Wind Energy Conversion System, High Step-Up DC to DC Converters for PV Systems, Grid Interactive Photovoltaic Systems.

Dr. Sudhakar Rao
Distinguished Visiting Professor

RF and Microwave Engineering and Antennas and Satellite Communication Systems.

Dr. Gowri. A
Assistant Professor)- IIT Madras.

Fiber optic biosensors and chemosensors, Instrumentation for Clinical Diagnosis, Medical Image Processing, Nanotechnology, Optical chemosensors, Plasmonic substrates and Microfluidic channel based biosensors.

Dr. S.Kalpana

(Assistant Professor)-National Central University, Taiwan

FET Biosensors ,Electrochemical Biosensors, Graphene-based sensors ,Microfabrication.

Prof. M.V. Kartikeyan

(Professor and Director) -Indian Institute of Technology (IIT-BHU),Varanasi

High-power Millimeter wave and Terahertz, Engineering, Sources and Allied Components, RF Circuits (RF-CAS), Antennas and Systems, Meta-materials and Fractals for Planar Antennas, Filters and Periodic Structures, Computational Techniques and Soft-computing in Microwave Domain.

Dr. Kumar Prasannajit Pradhan

(Assistant Professor)-National Institute of Technology ,ROURKELA.

Compact Model, TCAD Simulations, SOI MOSFETs, FinFETs, Negative Capacitance FETs, Radiation Hardened Devices, Ferroelectric FETs, Solar Cells, Graphene FET, Neuromorphic Computing, FET based Biosensors, Machine Learning in TCAD.

Dr. Pal Uttam Mrinal

(Assistant Professor) -Indian Institute of Science Bangalore.

Optical techniques for intraoperative cancer margin assessment , Intraoral probe for oral cancer diagnosis, Transvaginal optical probe for cervical cancer diagnosis, Bio-inspired Optical Materials and Devices.

Dr. Pandiyarasan Veluswamy

(Assistant Professor) - National University Corporation Shizuoka University, Japan.

Self-power generation for physiological sensors, ML/AI Materials for Energy device applications, Textile nanotechnology and smart fibers for energy harvesting and storage applications, Wearable devices (Energy and Health Care: Non-Invasive Diagnostics), Turning E-Waste into Materials and Energy.

Dr.Premkumar K.

(Associate Professor)-Indian Institute of Science Bangalore.
Scheduling in Networks, Cognitive Radio, Internet of Things, Social Networks, Big Data Analytics.
Metagratings, Metasurfaces, Multiple Input Multiple Output (MIMO) Antennas, Metamaterial Absorber, Frequency Selective Surface (FSS), Phased Antenna Arrays, 60 GHz Antennas.

Dr. Priyanka Kokil

(Associate Professor)-Motilal Nehru National Institute of Technology, Allahabad.

System theory, Nonlinear systems, Biomedical Signal Processing, Machine Learning, Deep Learning, Multi-dimensional Signal Processing, Time delayed systems, Robust stability, System theory.

Dr. Rajiv V. Joshi

(Distinguished Visiting Professor)

Quantum Computing, Quantum Error Correction, Cryogenic Temperature computing, RRAM and Crossbar Array, Energy Efficiency, CMOS Technology, DNN.

Dr. Rohini. P

(Assistant Professor)-IIT Madras.

Signal Processing, Image Processing, Medical Image Analysis, Early diagnosis, Non-invasive disease prognosis, AI in Healthcare

Dr. Selvajyothi K

(Associate Professor)-IIT Madras.

Electric Vehicles, Battery Management System, Product Design, FPGA/DSP Realization of Control Algorithms in Power Electronics.

Prof. M D Selvaraj

(Professor)-IIT Delhi.

Wireless Communications, Cooperative Diversity, Digital Communication over Fading Channels, Green Communications, Non Orthogonal Multiple Access.
Plasmonics, 2D Semiconductors, Photonics for neuromorphic computing.

Dr. Srijith. K

(Assistant Professor)-IIT Madras.

Optical Fiber Sensors, Fiber Bragg Gratings, Distributed fiber optic sensors, Surface Plasmon Resonance based optical sensors, Photonic Metasurfaces.

Dr. Tejendra Dixit
(Assistant Professor)-Indian Institute of
Technology Indore.

Nanoelectronics, Optoelectronics, Quantum
Devices and Computing, Memristors,

Dr. Thummaluru Sreenath Reddy
(Assistant Professor)-Indian Institute of
Technology. (ISM) Dhanbad.

Dr. Vijayakumar Krishnasamy
(Associate Professor)-National Institute of
Technology (NIT), Trichy.

Internet of Things, Smart Grid, Embedded
Controllers, Power Electronics ,Application of
Machine Learning and Artificial Intelligence to
Energy System, Renewable Energy Systems,
Home Energy Management System.

Shri.S Hariharan
Adjunct Faculty - Associate Professor System
on Chip, VLSI Design.

Dr. Renold
(Assistant Professor)-Indian Institute of
Technology. (ISM) Dhanbad.

FDPs/Workshops Conferences Organized

1. Dr .B.Chiti Babu – IEEE National Workshop on Research Methodology, (11–15, Mar 2024).

2. Dr. B.Chiti Babu –NaMPET Short Term Course on Grid Power Electronics Technology, (26–30, Apr 2023).

3. Dr. Pal Uttam Mrinal– 11th Dec to 15th 2023: Organized "Winter School on Biomedical Optics 2023 (WiSBO 2023)" from 11–15th December, 2023.

4. Dr. Pal Uttam Mrinal– Organized 5 day workshop "Introduction to Optical Modeling using COMSOL Multiphysics" from 5th– 9th June, 2023 (29 participants)

5. Dr. Pandiyarasan Veluswamy– 15.02.2023 – 23.02.2023 One Week High–End Workshop on Wearable Intelligent devices: Next Generation Technology, sponsored by SERB Accelerate Vigyan (KAARYASHALA)

6. Dr. Selvajyothi.k –SERB VRITIKA Accelerate Vigyan internship on Quadcopter Test Bench, Dr.K. Selvajyothi (PI / Event Organizer), Fund: 1.5 lacs, May 1 to 29th June 2023 (2 months)

7. Dr. Srijith.k– VRITIKA Summer Internship on AI and Analytics in Distributed Fiber Optic Sensing sponsored by SERB Accelerate Vigyan (June 15–July 31, 2023).

8. Dr.Priyanka Kokil– IIITDM Kancheepuram SPS SBC received approval for 2023 IEEE SPS Summer School on "Deep Learning and Its Applications to Biomedical Signal and Image Processing" worth $5000.

9. Dr.Priyanka Kokil– IIITDM Kancheepuram WIE affinity group received special funding of $400 to host the workshop on Open Source Reporting Tools on March 2 & 3 2023.

Funded Research Consultancy Projects

1. Prof. Binsu J Kailath and Dr. S.Kalpana were granted funding of 48.48 Lakhs in May 2023 from Chip to Startup (C2S) project of MeitY, Govt. of India for the project titled "FPGA/ASIC/PSoC Development of Identification of stages of sleep in critical neurological illness cases from continuous EEG signal using Neuromorphic circuit" Ongoing, 5 years

2. Dr.Chitti Babu –Investigation on the Stability of Phase Locked Loop for the Control of Grid–tied Solar Photovoltaic (PV) System under Grid Fault Condition– Rs.42,39,969, DST–SERB, (Jan 2023–Jan 2026), On Going.

3. Dr.Kumar Prasannajit Pradhan– Dr. K P Pradhan (PI) titled project "Exploring the Possibilities of Silicon based SOI Devices to Demonstrate Artificial Neurons for Neuromorphic Computing" under SERB International Research Experience (SIRE), 2023–24 (Ongoing). [16.97 Lakhs]

4. Dr.Kumar Prasannajit Pradhan– Dr. K P Pradhan (Mentor from Indian side) titled project "An Approach to Integrate Neurons and Synapses in a Single Transistor without Extra Circuitry for highly

Scalable Neuromorphic Devices under SERB Overseas Doctoral Visiting Fellowship (OVDF), 2023-24 (Ongoing). [22.68 Lakhs]

5. Dr.Pal Utham Mrinal- 2024: DST SERB CRG (INR 46,19,918) PI: Dr. Arpitha Anantharaju, JIPMER Co-PI: Dr. Uttam M. Pal Co-PI: Dr. Sreekumaran Nair, JIPMER Co-PI: Dr. Murali S, Status: Under implementation, Project title: Development of bi-modal transvaginal probe and evaluation of its diagnostic accuracy for a non-invasive AI-based detection of pre-invasive cervical lesion in comparison to standard colposcopy in screen positive patients

6. Dr.Pal Utham Mrinal- 2023: ICMR Small Investigator Initiated Call (INR 1,03,38,015) PI: Dr. Arpitha Anantharaju, JIPMER, Co-PI: Dr. Uttam M. Pal, Co-PI: Dr. Sreekumaran Nair, JIPMER, Co-PI: Dr. Murali S, Co-PI: Dr. Hardik J. Pandya, Status: ApprovedProject title: Opto-electrical transvaginal imaging probe for preinvasive cervical cancer diagnosis

7. Dr.Pal Utham Mrinal- 2023:DBT Call for Proposal on Biomedical Devices (71,82,000), PI: Dr. Hardik J. Pandya, IISc Bangalore, Co-PI: Gayatri Gogoi, Assam Medical College, Co-PI: Dr. Uttam M. Pal Status: Approved, Project Title: Design and Development of a bimodal intraoperative probe for breast cancer diagnosis

8. Dr.Pandiyarasan Veluswamy- NICU Neonatal Monitor: Smart textile based sensor design, development and fabrication, 2023-2026 [SERB]

9. Dr. Pandiyarasan Veluswamy- Artificial Intelligence & IoT based Smart Vet Ecosystem for Animal Health, Patient Care & Precision Livestock Farming, 2023-2026 [NASF, ICAR]

10. Dr. Pandiyarasan Veluswamy- Design and Implementation of Hybrid Photovoltaic and Thermoelectric System for Efficient Energy Harvesting, 2022 - 2025 [SERB CRG]

11. Dr. Pandiyarasan Veluswamy- Fabrication of efficiency-enhanced thermoelectric materials from 2D MoS_2/Polymer, 2022-2023 [UGC DAE Collaborative Research Scheme]

12. Dr. Priyanka Kokil- Visibility Enhancement Algorithm for Vision Intelligence System based on Environment Visibility Conditions Role: PI, Co-PI: Dr. Appina Balasubramanyam Sanctioned Amount: 23.99 Lakhs Agency: TiHAN, IIT HyderabadDuration: 2021-2024

13. Dr. Priyanka Kokil- Futuristic Healthcare Assistive and Predictive Solutions, Sanctioned Amount: 77 Lakhs Agency: FIST, DSTDuration: 2021-2026

14. Dr. Priyanka Kokil- Breath Assist: A Continuous Positive Airway Pressure System, Sanctioned Amount: 20.25 Lakhs Agency: TIDE, DST, Duration: 2021-2024

15. Dr. Priyanka Kokil- Stability of Nonlinear Time-Delayed Systems Subject to External Interference via Application to Biological SystemsSanctioned Amount: 6.6 Lakhs Agency: SERB, DSTDuration: 2022-2025

16. Dr.Priyanka Kokil- Design and Development of a Standalone Device for EarlyDetection of Plant Diseases using Machine Learning TechniquesRole: PIScheme: Extra Mural Research Division - II, Council of Scientific and Industrial Research, Duration: 3 years (2023-2026)Status-Ongoing

17. Dr.Priyanka Kokil- Development of multi-class liver abnormalities detection system from ultrasound images using deep learning methodsRole: PISanctioned Amount: 37.55 Lakhs Agency: SERB, DSTDuration: 2022-2025

18. Dr.Priyanka Kokil- Design and Development of a Standalone Device for EarlyDetection of Plant Diseases using Machine Learning TechniquesRole: PIScheme: Extra Mural Research Division - II, Council of Scientific and Industrial Research, Duration: 3 years (2023-2026)Status-Ongoing

19. Dr.Selvajyothi.K, Design and Manufacturing of a Curtain Coater for Solid state Batteries - (as Co-PI) (Consortium Project) DST/TMD/ICMAP/2K20 /01-Duration : 3 years DST Integrated Clean Energy Material Acceleration Platform (IC-MAP)

20. Dr. M.D. Selvaraj. "Mathematical Modeling and Analysis of 5G NOMA Cellular Systems"Principal Investigator: ,Sponsor: MATRICS, SERB,DST, Duration: 3 years (2023-2026).

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2. Sai Lokesh Gorantla, B.Bose, Akhil Garg, L.Gao, B Chitti Babu, " A Novel Feedback Control Algorithm for Effective Design of Reconfigurable Battery Packs for Electric Vehicles ", Sustainable Energy, Grids and Networks, Elsevier (I.F: 5.4), Jan 2024, https://doi.org/10.1016/j.segan.2024.101287.

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5. Ramesh Gugulothu, Bookya Nagu, D.Pullaguram, B.Chitti Babu, "Optimal Coordinated Energy Management Strategy for standalone Solar Photovoltaic System with Hybrid Energy Storage", Energy Storage, Elsevier (I.F:8.9), Vol.67, Iss.01, No: 107628, Sep 2023.

6. M.V. Kishore, B.Chitti Babu, C.Janani, "A Hybrid Approach to Modelling and Analyzing Reconfiguration of Photovoltaic Arrays Under Partial Shading Conditions ", Electrical Engineering, Springer, (I.F: 1.8), Vol.105, PP.1235-1249, Oct 2023.

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10. Aditya Thakur, Meenakshi Rawat, M.V. Kartikeyan, "Analysis of a New Metamaterial- Loaded Helical Slow-Wave Structure for Vacuum Electron Devices Applications," IEEE Transactions Plasma Science, February 2024.

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Conference Publications

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14. Karthika J., Arpitha Anantharaju, Uttam M. Pal, "GynoSight: a breakthrough in multispectral imaging for cervical cancer diagnosis," Proc. SPIE 13108, Women in Optics and Photonics in India 2023, 131080K, 2024; https://doi.org/10.1117/12.3029337

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16. A. Vijayan, R. Anbumuthu, R. Rafi.M.H, A. Anantharaju, Sangeetha.R.G, and U. M. Pal, "Design and Assessment of a Cross-polarized Colposcopy Filter (Clear Gyero) for Mitigating Glare from Colposcopy Images" in Frontiers in Optics + Laser Science 2023 (FiO, LS), Technical Digest Series (Optica Publishing Group, 2023), paper JM7A.83.

17. Karthika. J., D. Koodi, M. A. PT, S. S. Hassan, V. P. R, S. T. Sucharitha, R. R. M.H, and U. M. Pal, "Affordable Narrowband Multispectral Intraoral Probe Towards Oral Cancer Diagnosis in Low-resource Settings," in Frontiers in Optics + Laser Science 2023 (FiO, LS), Technical Digest Series (Optica Publishing Group, 2023), paper FM6E.6.

18. S. R., Sollenselvan, N. S. B., and U. M. Pal, "Numerical Ray Optics Analysis of Probe Optics Prototype for Mobile-based Raman Spectrometer," in Biophotonics Congress: Optics in the Life Sciences 2023, Technical Digest Series (Optica Publishing Group, 2023), paper DW4A.3

19. Arpitha Anantharaju, Uttam M. Pal, "Design of a Multispectral Transvaginal Imaging Probe for the Diagnosis of Pre-Cervical Cancer in Low-resource Settings", XXI Annual Conference Evidence Based Management of Cancers in India - EBM 2023, Tata Memorial Hospital Mumbai, 2023

20. Design and analysis of UHF passive dipole antennas for moisture detection using RFID technology, Charusha Chandran, Pandiyarasan Veluswamy, M Aishwarya, Wireless, Antenna and Microwave symposium 2023, Gandhinagar, Gujarat, India [Oral Presentation]

21. Turimerla Pratap, Venkata Rao Dhulipalla, Priyanka Kokil, Computer-aided Cataract Diagnosis with Fundus Retinal Images under Noisy Conditions, 2024 IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI), 2024, Gwalior, India

22. Pentapati Naga Sree Charan Teja, Thunakala Bala Krishna, Ajay Kumar Reddy Poreddy, Priyanka Kokil, Lightweight Deep Learning Model for Melanoma Classification in Dermoscopy Images for Smart Healthcare, 2024 IEEE International Conference on Wire-less Communications Signal Processing and Networking (WiSPNET), 1-6, 21-23 March 2024, Chennai, India.

23. Varun C, Ajay Kumar Reddy Poreddy, Thunakala Balakrishna, and Priyanka Kokil, A Computer Aided Detection System for Breast Cancer using Lightweight CNN Models for Smart Healthcare, accepted for presentation in IEEE sponsored Tenth International Conference on Biosignals, Images and Instrumentation, Sri Sivasubramaniya Nadar College of Engineering, Chennai, India in association with Drexel University, Philadelphia 20-22, March 2024, Chennai, 2024.

24. Delpha Jacob, Priyanka Kokil, Subramanian S, and Jayanthi Thiruvengadam, De-coding Sleep: Microphone-Based Snoring Analysis Using Embedded Machine Learning for Obstructive Sleep Apnea Detection, accepted for presentation in IEEE sponsored Tenth International Conference on Biosignals, Images and Instrumentation, Sri Siva-subramaniya Nadar College of Engineering, Chennai, India in association with Drexel University, Philadelphia 20-22, March 2024, Chennai, 2024.

25. Chandrasekhar Bhusham, Ajay Kumar Reddy Poreddy, Thunakala Bala Krishna and Priyanka Kokil, "Automated Anemia Classification and Hemoglobin Level Prediction using Deep CNN and GLCM Features of Palpebral Conjunctiva Images", IEEE 7th Conference on Information and Communication Technology (IEEE CICT-2023), PDPM IIITDM Jabalpur, India 15-17 December, 2023.

26. Niranjana Vannadil and Priyanka Kokil, "Noise and performance analysis on fundus images with CNN and transformer models", IEEE 7th Conference on Information and Communication Technology (IEEE CICT-2023), PDPM IIITDM Jabalpur, India 15-17, December, 2023.

27. C Siddarth, Ajay Kumar Reddy Poreddy and Priyanka Kokil, "A Comprehensive Study on Pre-trained Models for Skin Lesion Diagnosis in a Federated Setting", 8th International Conference on Computer Vision & Image Processing (CVIP-2023), IIT Jammu, 03rd-05th November 2023.

28. Sudharson S, Priyanka Kokil, Sasikala D and Aravinda Swamy Penta, "Deepfake Detection System Using a Hybrid Model", 14th International Conference on Computing Communication and Networking Technologies, IIT Delhi, 6th-8th July, 2023

29. Sudharson S, Priyanka Kokil, Annamalai R and N V Sai Manoj, "Enhanced Food-Classification System Using YOLO Models For Object Detection Algorithm", 14th International Conference on Computing Communication and Networking Technologies,IIT Delhi, 6th-8th July, 2023

30. Delpha J, Priyanka Kokil, Subramanian S, T Jayanthi, Comparative Study of VariousBreath Assist Devices and the Effect of Sleep Apnea (SA) Among the Indian Popula-tion, International Conference on Device Intelligence, Computing and CommunicationTechnologies, (DICCT), Dehradun, 2023.

31. P Mounika and Priyanka Kokil, Exponential Stability Criterion for State-space In-terfered Discrete System through External Disturbance, 5th International Conference on Power, Control Embedded Systems (ICPCES-2023), 06-08th Jan, 2023, MNNITAllahabad.

32. Reji G, K. Selvajyothi, B. Raja, Investigating THD for Series Arc Fault Detection in Single-phase Electrical Networks, 6th International Conference on Energy, Power and Environment (ICEPE) 2024 to be held at NIT Meghalaya, Shillong during June 20 - 22, 2024.

33. A. Johnson Antony, K. Selvajyothi, Extended Kalman Filter Based Estimation of the State of Charge of Lithium Iron Phosphate Battery Using an Equivalent Circuit Model, 6th International Conference on Energy, Power and Environment (ICEPE) 2024 to be held at NIT Meghalaya, Shillong during June 20 - 22, 2024.

34. S.Kirubakaran, M.D.Selvaraj, "Performance of Multiple Intelligent Reflecting Surfaces in RF and FSO Communication Systems,"in the proceeding of the IEEE 2023 IEEE Wireless Antenna and Microwave Symposium (WAMS), Vishakhapatnam. (BEST PAPER AWARD)

35. Simhadri Ravishankar; Bharath Kokkalla; M. D. Selvaraj, "Performance Analysis of Coordinated Multipoint NOMA Cellular Networks," in the proceedings of the IEEE 2023 IEEE Wireless Antenna and Microwave Symposium (WAMS), Ahmedabad.

36. Deepika Sasi, Srijith Kanakambaran and Thomas Joseph, Performance comparison of machine learning models for multi-event classification of vibrational patterns in distributed acoustic sensing system, 2024 International Conference on Signal Processing, Computation, Electronics, Power and Telecommunication (IConSCEPT), July 2024

37. Priyadharshini Rajendran, Dharshana Shahini R, Karthiga B and Srijith K, A Comparative Study of Machine Learning Techniques for Seismic Activity Monitoring using Fiber Optic Distributed Acoustic Sensors, 2nd IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2024), March 2024.

38. Yella Pavan Kumar, Archana T C and Srijith Kanakambaran, Tin Disulfide-Coated Non-Adiabatic Tapered Fiber for Humidity Sensing, Photonics 2023, IISc Bengaluru, July 2023.

39. Pasumarti Venkatesh, Yada Sai Pranay, Palas Biswas and Srijith Kanakambaran, Machine Learning Techniques for Impact Monitoring and Localization on Metallic Plates Using Fiber Bragg Grating Sensors, Photonics 2023, IISc Bengaluru, July 2023.

40. Leela Nagendra Srungarapu, Vikash Mishra, M Julie Therese, Sumanth Arige, and Tejendra Dixit, Exploration of defect engineering in h-BN for prospective quantum electronics, ISSS International Conference on Micro, Nano and Smart Systems 2024, Bengaluru, India IC-MNSS 2024 (IC-MNSS 2024) IISc Bangalore.

41. Shivani Mehta, Sumanth Arige, V Praveen Bhallamudi, and Tejendra Dixit, Implementation of Grover's Algorithm based on Quantum Reservoir Computing, IEEE 5th International Conference of Emerging Technologies 2024, Belgaum, India, 24th May – 26th May 2024, JAIN COLLEGE OF ENGINEERING, BELGAUM, INDIA.

42. Jampani Sarath Chandra, Sumanth Arige, M S Ramachandra Rao, and Tejendra Dixit, Characterization of CuO Thin Films Based Memristive Devices for Resistive Random-Access Memory, IEEE 9th International Conference for Convergence in Technology (I2CT) At: Pune (IIT Bombay Section), 5th-7th May.

43. Sainath Reddy Maram Reddy, Sumanth Arige, and Tejendra Dixit, Elucidating the role of Device architecture for Mott-insulator based Memory technology, IEEE 9th International Conference for Convergence in Technology (I2CT) At: Pune (IIT Bombay Section), 5th-7th May.

44. Jampani Sarath Chandra, Sumanth Arige, M S Ramachandra Rao, and Tejendra Dixit, Planar Memristor Configuration using CuO thin-films for Resistive Switching, 8th IEEE Electron Devices Technology and Manufacturing (IEEE EDTM), 4th-6th March, Bangalore (2024).

45. Arige Sumanth, Shrikanth Singhal, and Tejendra Dixit, Investigation of Negative Differential Resistance in Oxide Semiconductors based Memristors, XXII International Workshop on Physics of Semiconductor Devices, 13th-17th December, Indian Institute of Technology Madras, India (2023).

46. Ravindra Kumar Nitharwal, Anubhab Sahoo, Vivek Kumar, Tejendra Dixit*, and Sivarama Krishnan, Investigations on structural, vibrational, and optical properties of MoO3 nanomaterials synthesized

via hydrothermal and fs-laser ablation techniques, 34th Annual MRSI AGM conference; 2023 December 12 -15; IIT BHU, Varanasi, India (2023).

47. Ravindra Kumar, Vikash Mishra, Tejendra Dixit, Prahalad Kanti Barman, Pramoda K. Nayak, and M. S. Ramachandra Rao, Investigating the positive trion in the α-MoO3/MoS2 van der Waals heterostructure, Recent Progress in Graphene and 2D Materials Research (RPGR-2023), Nov. 2023, IISC Bangalore, Bangalore, India.

48. Ravindra Kumar, Vikash Mishra, Tejendra Dixit, Prahalad Kanti Barman, Pramoda K. Nayak, and M. S. Ramachandra Rao, Probing positively charged trion in α-MoO3/MoS2 van der Waals hetero-structure, , Flatlands beyond Graphene Sep. 2023, UCT Prague, Prague, Czech Republic.

49. Ravindra Kumar Nitharwal, Anubhab Sahoo, Vivek Kumar, Tejendra Dixit*, and Sivarama Krishnan, Tailoring the crystalline phase, size, and optical properties of the MoO3 nanomaterials via hydrothermal growth temperature, 7th Physics In-House Symposium; 2023 October 27 -28; IIT Madras, Chennai.

50. Bhargav Chakravartula, Akkala Vikas, K P Pradhan, and Tejendra Dixit, Development of an Accurate Model for Memristor based Temperature Sensor, 7th International Conference on Trends in Electronics and Informatics ICOEI 2023, Tirunelveli [DOI: 10.1109/ICOEI56765.2023.10125662].

51. Ravindra Kumar Nitharwal, Anubhab Sahoo, Vivek Kumar, Tejendra Dixit*, and Sivarama Krishnan , Time-resolved studies of quantum materials for optoelectronic applications, Indo-French conference on Photonics and Metamaterials (IFCFPM – 2023), 20th-22nd April, Mahindra University, Hyderabad, India (2023).

52. Sreenath Reddy Thummaluru, Julien Sar-razin, and Raghvendra Kumar Chaudhary, "60-GHz Magneto-Electric Dipole Anten-na-Based Array," 2024 IEEE Wireless Antenna and Microwave Symposium (WAMS), 29 Feb. 2024 - 03 Mar. 2024, Visakhapatnam, India.

53. Vinaykumar Kondigaari and Sreenath Reddy Thummaluru, "Bandwidth Enhancement of Metamaterial Absorber using Resistive Loading for X- and Ku-band Applications," 2024 IEEE Wire-less Antenna and Microwave Symposium (WAMS), 29 Feb. 2024 - 03 Mar. 2024, Visakhapatnam, India.

54. S Deena Priya and Sreenath Reddy Thum-maluru, "Reflector-based Isolation Tech-nique for mm-Wave MIMO Antenna," 2024 IEEE Wireless Antenna and Microwave Symposium (WAMS), 29 Feb. 2024 - 03 Mar. 2024, Visakhapatnam, India.

Invited Talks

1. Prof. Binsu J Kailath Delivered an address online on Applications of AI in VLSI Design to IIIT Sricity students on the occasion of India's Techade - Chips for Viksit Bharat for Viksit Bharst@2047 on March 13, 2024.

2. Prof. Binsu J Kailath Delivered an address on Initiatives of the Govt. of India for Chip Design to Institute community on the occasion of India's Techade - Chips for Viksit Bharat for Viksit Bharst@2047 on March 13, 2024.

3. Dr.B.Chiti Babu- Delivered a keynote speech in IEEE SASI-ITE'24 International Conference, SASI Institute of Tech. & Engg, Andhra Pradesh, 23-25

4. Dr.B.Chiti Babu- Feb 2024.-Delivered a keynote speech in the International Con-ference on Smart and Sustainable Energy Systems (ICSSES 2024), VIT Andhra Pradesh, 16-17, Feb 2024.

5. Dr. B.Chiti Babu- Delivered a keynote speech in the 4th IEEE International Con-ference on Communication, Computing and Industry 4.0(C2I4-2023), CMRIT, Ben-galuru, 14-16, Dec 2023.

6. Dr. B.Chiti Babu- Delivered a keynote speech in the IEEE Systems Council International Conference (IEEE RASSE 2023), Kottayam, Kerala, 09 Nov 2023.

7. Dr. B.Chiti Babu- Delivered a keynote speech in the Second International Con-ference on Power, Information, and Com-munication (ICPIC 2023), PSNCET, Tamil Nadu, 25 Aug 2023.

8. Dr. Kumar Prasannajit Pradhan- "Mim-icking of Biological Behavior Through CMOS and Beyond CMOS Based Devices" in the 2-days FDP in the topic ?Neuro-morphic Computing Devices? organized by Karpagam Academy of Higher Educa-tion on 05 July 2024.

9. Dr. Kumar Prasannajit Pradhan- "Mim-icking of Biological Behavior Through CMOS and Beyond CMOS Based Devices" in the 5-days short term course in the topic "Neuroevolution-based Advanced Semiconductor Devices (NASD - 2024)" organized by BIT Mesra on 07 March 2024.

10. Dr. Kumar Prasannajit Pradhan- "Mim-icking of Biological Behavior Through CMOS and Beyond CMOS Based Devices" in the 5-days FDP in the topic "Advanced Semiconductor Devices" organized by IIITDM Jabalpur on 30 January 2024.

11. Dr. Kumar Prasannajit Pradhan- "Mim-icking of Biological Behavior Through CMOS and Beyond CMOS Based Devices" in the 6-days ATAL FDP in the topic "Sem-iconductor Design and Development" organized by National Engineering Col-lege, Kovilpatti on 21 November 2023.

12. Dr.Kumar Prasannajit Pradhan- "Low power semiconductor device design and applications" in the 5-days workshop on "Research Opportunities in Semiconductor Materials and Devices" jointly organized by IIITDM Kancheepuram, SRM IST and Karunya Institute of Technology and Sciences on 16 October 2023.

13. Dr.Kumar Prasannajit Pradhan- "Mimicking of Biological Behavior Through CMOS and Beyond CMOS Based Devices" in in the 5-days STTP on "Next Generation Semiconductor Devices, Memories, and Sensors" organized by NIT Calicut on 25 July 2023.

14. Dr.Kumar Prasannajit Pradhan- "Mimicking of Biological Behavior Through CMOS and Beyond CMOS Based Devices" in in the 7-days High-end workshop on "Brain-inspired/Neuromorphic Computing for Responsible AI" funded by SERB and organized by IIT Patna on 23 Mar 2023.

15. Dr.Pal Uttam Mrinal- Talk on: Design and fabrication of novel miniaturized endoscopy optical systems for cancer diagnosis, at SERB Karyashala Micromachining and Microfabrication for Biomedical Devices, IIITDM Kancheepuram, Chennai 31-March 2024 to 06 April 2024

16. Dr.Pal Uttam Mrinal- Talk on: Upskilling and reskilling in increasing productivity and innovation under Viksit Bharat Campaign, at Sathyabama Institute of Science and Technology, 26th March, 2024.

17. Dr.Pal Uttam Mrinal-Talk on Use of AI for Cervical Cancer Diagnosis at IEEE SPS Summer Seasonal School on Deep Learning and Its Applications to Biomedical Signal and Image Processing (18th -22nd Dec, 2023)

18. Dr.Pal Uttam Mrinal-- Talk on Simulating Light-Tissue Interaction using COMSOL

Multiphysics, Webinar for COMSOL Multiphysics (31/10/2023) (Available online)

19. Dr.Pal Uttam Mrinal- Talk on Introduction to Computational Photonics at Workshop on Optics and Photonics, International School of Photonics, CUSAT Kerala (05/10/2023)

20. Dr.Pal Uttam Mrinal- Talk on Bioinspired Optics at BIDFEST 2023, VIT Vellore. (21/03/2023)

21. Dr.Pal Uttam Mrinal- Recent advances and future trends in optical techniques for oral cancer diagnosis, Global Biomedical Research Foundation (GBRF), Chennai. (2023)

22. Dr.Pandiyarasan Veluswamy- 22 Jun 2023 Invited Talk, "Sustainable Energy Harvesting Technologies", FDP on Energy Materials for a Sustainable Environment" June 19 - 23, 2023, School of Electronics Engineering, VIT-Chennai Campus, Chennai, India.

23. Dr.Pandiyarasan Veluswamy- 15 May 2023 Chief Guest & Guest Speaker, "Wearables in Health Care" SERB Sponsored Five days workshop on Emotion Recognition Assistive Signal & Image Processing Techniques for People with Autism: An AI perspective, 15 to 19 May 2023, Department of Electronics and Communication Engineering, Rajalakshmi Institute of Technology, Chennai, India.

24. Dr.Pandiyarasan Veluswamy- 25 Apr 2023 Chief Guest & Guest Lecture, "The Next Generation of Wearable Electronic Devices", GNAANA23 association valedictory function and deliver a Guest Lecture, Department of Electronics and Communication Engineering, Builders Engineering College, Tirupur, India.

25. Dr.Priyanka Kokil- Organized an invited talk on "Approaches to Address Challenges of Drone Images" by Prof.

Shivakumara Palaiahnakote, University of Salford, UK on 25.06.2024 at 3:30 PM.

26. Dr.Srijith.k– Expert session on "High Frequency Transmission Lines" in the Six day Faculty Empowerment Programme on Transmission Lines and RF systems organized by MIT Campus Anna University, Chennai, July 25, 2023.

27. Dr. Thummaluru Sreenath Reddy– At VIT Vellore on "Microwave Technologies for Future Wireless Communications," on 05 April 2024.

28. Dr. Thummaluru Sreenath Reddy– At IIT Patna on "Microwave Technologies for Future Wireless Communications," on 17 March 2024.

29. Dr. Thummaluru Sreenath Reddy– At CARE college, Trichy on "MIMO Technology for sub–6 GHz and mm–Wave Frequencies," on 15 December 2023.

30. Dr. Thummaluru Sreenath Reddy– At VIT Vellore on "Metagratings for Reconfigurable Intelligent Surfaces," on 06 December 2023.

31. Dr. Thummaluru Sreenath Reddy– For IEEE APS Chapter, Vizag on "Reconfigurable Intelligent Surfaces," on 18 November 2023.

32. Dr. Thummaluru Sreenath Reddy– At VIT Vellore on "Metagratings for Reconfigurable Intelligent Surfaces," on 17 April 2023.

Book Chapters

1. M. Muthu Meenakshi, G. Annasamy, S. Krishnan, M. Hema Brindha, and A. K. Narasimhan, in Nanoparticles as Sustainable Environmental Remediation Agents, ed. K. Simeonidis and S. Mourdikoudis, Royal Society of Chemistry, 2023, vol. 61, ch. 7, pp. 163–192.

2. R. Chandrasekaran, M. Satishkumar Reddy, B. Raja and K. Selvajyothi, Design of Bidirectional DC ? DC Converters and Controllers for Electric Vehicles or the book Power Converters, Drives, and Control for Sustainable Applications, Wiley Publications, June 2023.

3. Dr. Selvajyothi K, Dr. TamilSelvi S and Prof. Sarat Kumar Sahoo, lnduction, Synchronous and Special Electrical Machines, https://ekumbh.aicte-india.org/allbook.php#, Diploma, 2 year, 4 semester, May 2024, 322 pages.

4. K. Akhila, K. Selvajyothi, Design of Rare earth magnet free traction motor for electric vehicle for the book Power Converters, Drives, and Control for Sustainable Applications, Wiley Publications, June 2023.

Additional Information

1. Dr. B.Chitti Babu– received Outstanding Teacher Award 2023 from Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, Chennai for the Year 2023.

2. Dr.Gowri.A –Organized a Winter School on Biomedical Optics (WiSBO 23) at IIITDM Kancheepuram–Chennai, India between 11th December and 15th December 2023

3. Dr.Gowri.A– IEEE EMBS Faculty Advisor for conducting technical talk series in the field of Biomedical Engineering at IIITDM Kancheepuram.

4. Dr.Kumar Prasannajit Pradhan– Received the SERB International Research Experience (SIRE) 2023–24 for 6 months to work with Prof. J–P Raskin, UCLouvain, Belgium.

5. Dr.Kumar Prasannajit Pradhan– Selected as one of the recipients for the IEEE Madras Section Publication Award 2023.

6. Dr.Pal Uttam Mrinal– Organized the 6th EMBS Talk series on Polymeric Biomaterials for Medical implants and devices Dr. Mukesh Doble, Professor at Dept of Biotech IIT Madras, and Founding Director–of Theevanam Additives & Nutraceuts Pvt ltd at IIT Madras Research park in association with IIITDM Kancheepuram EMBS Student club. (7/11/2023).

7. Dr.Pal Uttam Mrinal– Organized the 6th EMBS Talk series on An Advanced Optical Biosensor with Versatile Functionality and Exceptional Throughput? by Dr. Ganesan Sivaramakrishnan, Project Manager, Multitel Innovation Centre, Belgium in association with IIITDM Kancheepuram EMBS Student club. (16/11/2023)

8. Dr.Pal Uttam Mrinal– Organized the 5th EMBS Talk series on Manipulating Light with Micro and Nano–Optics by Prof. Shanti Bhattacharya Professor, Department of Electrical Engineering, IIT Madras, in association with IIITDM Kancheepuram EMBS Student club. (22/09/23)

ECE
TECHNICAL STAFF

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Technical Officer

Shri. P. M. Sriram Bhaskar
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Shri. Krishna Prasad N
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Shri. M. Aswin Raj
Junior Technical Superintendent

Kum. Rakshana A
Junior Technician

Kum. Universe Jasmine A
Junior Technician (till Jan 2024)

Kum.Bhuvaneswari.N
Junior Technician(till Jan 2024)

Mr. Tamilarasan D
Junior Technician (From Jan 2024)

Mr. Arjunan D
Junior Technician (from Jan 2024)

DEPARTMENT OF MECHANICAL ENGINEERING

Department of Mechanical Engineering has a distinguished record in both teaching and research. We started our journey in the year of 2007 with a mechanical design and manufacturing stream. Over the past decade, we have grown our expertise and competence in the IT enabled Design and Manufacturing centered Mechanical Engineering curriculum and research.

We have a strong undergraduate program in mechanical engineering, including B.Tech (Mechanical Engineering) , B.Tech (Smart Manufacturing) , M.Tech (Mechanical Systems Design) and M.Tech (Smart Manufacturing). Our department offers IT enabled design and manufacturing-based engineering curriculum. The primary focus of our curriculum is to impart technical know-how to students, promote their problem-solving skills and innovation of new technologies. Department offers a large number of interdisciplinary courses for providing cross cutting knowledge to the students to pursue their interest. The course contents are periodically updated for introducing new scientific and technological developments. Undergraduate students are encouraged to undertake various research projects and encouraged to spend time in neighboring industries. The department also offers PhD degrees in specialized areas under internal, external and project categories. Our department maintains active research groups for carrying out collaborative and interdisciplinary research.

We have state of the art research facilities to support our academic programs and research. Excellent funding for research helps us to maintain high standards in our research infrastructure. Few research areas are Smart Manufacturing, Additive Manufacturing, Sustainable Manufacturing, Design for Additive Manufacturing, Experimental and Computational Biomechanics, Surgery Planning Algorithm, Supply Chain, Vehicle Routing Problem, Warehouse Location Problem, Manufacturing Technology, Smart Materials, Advanced FEM, Material Modeling, Bio-mechanics, Heat and Mass Transfer, Food Processing, Electronic cooling system, Heat Exchangers, Chemical Processing, Complexity in product design and entrepreneurship, Human Factors, context aware solutions, Engineering design with polymers and polymer composites, Fatigue and fracture of advanced engg materials, FE based topology optimization, Robotics and Control Systems, Energy storages and other allied areas.

Faculty Members and their Areas of Research

Dr. Arul Kumar Mariyappan
(Ph.D, IIT Kanpur) - Associate Professor

Process-Structure-Property-Performance (PSPP), Relationship, Digital Twin for Materials, Mechanistic Modeling of Materials, Data-Driven Constitutive Models, Statistical Analysis of Microstructural Images, In-situ Experiments

Dr. Avinash Kumar
(Ph.D, IIT Delhi)
Assistant Professor

Bio-flows, Bio-fluidics, Lab-on-Chip and Bio-devices, Bio-medical Devices and Health Care, MEMS, Bio-MEMS, C-MEMS and Micro/Nano-fluidics, Micro/Nano-fabrication and Advanced Manufacturing, Laser Machining and Surface Engineering.

Dr. M Rama Manohara Babu
Professor of Practice

Dr. Gowthaman Swaminathan
(Ph.D, North Carolina A&T State University)
Associate Professor

Processing and characterization of polymers and composites, Modelling of composite structures, Studies on damage tolerance and durability, energy absorption, fracture behaviors, Thermoelectric refrigerators.

Prof. Jayabal K
(Ph.D, IIT Madras)
Professor

Finite Element Methods,Material Modelling, Smart, Materials and Structures, Thermoelectric and wearable devices, Cold Spray Coating.

Prof. Jayavel S
(Ph.D, IIT Madras)
Professor

Fluid and Thermal Sciences, Computational Fluid Dynamics , Applications: Heat Exchanger, Wind Turbine, Electronic Cooling

Dr. P. Kalpana
(Ph.D, IIT Madras)
Associate Professor

IoT and Block chain in SCM, Advanced Optimization Techniques, Data Analytics, AI and ML, Circular Economy and reverse logistics, Sustainable Supply Chain Management, Supply Chain Risk Management

Dr. Karthick S
(Ph.D, IIT Madras)
Assistant Professor

Microfluidics and MEMS, Convective heat transfer and Mixing, Mobile Microrobots for drug delivery, Bio-Microfluidics and Lab-on-Chip, DropletMicrofluidics and Interfacial Phenomena, Circulating tumor cells sorting technologies.

Dr. Kashfull Orra
(Ph.D, IIT Kanpur)
Assistant Professor

Machining; Theoretical modal analysis; Machining tool dynamics and vibration analysis; Monitoring and control of manufacturing processes; Mathematical modeling and stochastic state estimation; Advanced manufacturing process and machining of super alloys;- Surface modifications of bio-implant and product development; Sustainable manufacturing and tribology analysis ; Friction stir welding; Composite materials.

Dr. Kishor Kumar Gajrani
Assistant Professor

Smart Manufacturing; Sustainable Machining; Additive Manufacturing; Micromanufacturing; Tribology; Green Lubricants and Coolants; Packaging.

Dr. M Velan
(Ph.D, IIT Madras)
Adjunct Faculty - Professor

Green Product Design; Sustainable Manufacturing; Manufacturing green products , Prototyping and testing , Green Energy, Pollution Control ;Carbon footprint; GHG emission and climate Change; Carbon Capture Utilization and Storage ;Artificial intelligence & Sustainability ; Green Supply Chain Management, Materials Research ; Life Cycle Assessment, Environment Impact assessment, E-waste Management,

Dr. Nagaraj. M

(Ph.D, NIT Trichy)
Assistant Professor

Severe plastic deformation (SPD) on lightweight alloys; Friction welding on similar and dissimilar alloys; Surface modification on biomedical implants; Wear, corrosion and Tribocorrosion analysis on ultrafine-grained alloys; Design and fabrication of ECAP-processed biomedical implants.

Dr. Pandithevan P

(Ph.D, IIT Guwahati)
Associate Professor

Experimental and Computational Orthopaedic Surgery; Surgineering using CAD and Virtual Reality ; Design and Manufacturing of Bio-implants; Computer-Aided Diagnosis of Neuropathy; A Framework for Health Monitoring of Cardiac System; Computer - Aided Tissue Engineering; Iso-geometric Analysis and Finite Element Analysis; Advanced Geometric Modelling and CAD; Design for Additive Manufacturing

Prof. Raja B

(Ph.D,College of Engg., Guindy)
Professor, HoD - Mechanical Engineering Department

Freeze drying of electrode powder and food products; Spray drying of electrode powder; Thermal management; Battery production and testing; New Product Development in Process Engineering.

Dr. N. Rino Nelson
(Ph.D, IIT Madras)
Assistant Professor

New Product Development; Finite Element Analysis; Material Characterization; Composites - Lightweight applications; Impact Mechanics; Pressure Vessel and Seal Design; High Strain Rate behaviour; Computer Aided Engineering; Structural and Dynamic design (Vibration Analysis); Six Sigma Methodology.

Dr. Senthilkumaran K
Associate Professor

Additive Manufacturing, Smart Manufacturing and Sustainable Manufacturing

Dr. Shahul Hamid Khan
(Ph.D, NIT Trichy)
Associate Professor

Flow Shop Scheduling; Meta-Heuristics; Digital Supply Chain Management; Multiple Criteria Decision Making; Reverse Logistics.

Dr. Siva Prasad AVS
(Ph.D, IIT Kanpur)
Assistant Professor

Computational Continuum Mechanics; Meshless methods; Dynamic Behaviour of Materials; Damage Mechanics.

Prof. Sreekumar M
(Ph.D, IIT Madras)
Professor

Robotics and Control; Serial, Parallel, and Compliant Mechanisms; Smart Materials and Smart Structures; Medical Devices; Fuzzy Control; Biomimetics and Biomechanics; AI, IoT, Smart Manufacturing; Digital Reconstruction of Heritage Artifacts.

Dr. Venkata Timmaraju Mallina
(Ph.D, IIT Madras)
Associate Professor

Engineering Design with Polymers and Composites; Fatigue and Fracture of Advanced Engineering materials; Mathematical Modeling of Materials Behavior; Lightweight Design and Structural Optimization; Fabrication of Thermoplastic Composite Products.

Dr. J Venkatramani
(Ph.D, IIT Madras)
Assistant Professor

My research interests are over the broad arenas of vibrations and nonlinear dynamics, aeroelasticity, stochastic modeling and dynamic analysis, and data science for multiphysics problems.

Dr. Vikash Kumar
(Ph.D, IIT (ISM) Dhanbad)

Thermal and Fluid Sciences, Computational Fluid Dynamics, Turbulent flows, Multiphase flows, Flow over airfoils, Bionic airfoils, Aeroacoustics, Optimization.

Dr. Shubhankar Chakraborty
(Ph.D, IIT Kharagpur)
Assistant professor

Heat Transfer; Multiphase flow; Multisensor measurement and data fusion; image processing; Design of Heat Exchangers.

FDPs/Workshops/ Conferences Organized

1. Dr. Pandithevan P - One week Short Term Training Program on Computer Aided Design/Computer Aided Manufacturing/ Computer Aided Engineering (CAD/- CAM/CAE -2023) during May 11-17, 2023

2. Dr. B.Raja - Vritika Internship – Digital Twin for Battery Management system (DTBMS 2023)

3. Dr. Shubhankar Chakraborty and Dr. Kashfull Orra - Organized and hosted SAE Tier –II event in association with SAEIndia Southern section MWC Division , 27 January 2024.

4. Dr. Senthilkumaran k - SERB Accelerate Vigyan – Vritika Internship organized from Jan – Feb 2024.

5. Dr. Kishor Kumar Gajrani and Dr. Karthick S - Organized SERB Accelerate Vigyan sponsored One-week high-end work- shop (Karyashala) on "Micromachining and microfabrication for biomedical devices" from 31-03-2024 to 06-04-2024.

6. Dr. Senthilkumaran k - STTP on Design for Additive Manufacturing from June 10-14, 2024.

7. Dr. Avinash Kumar , "Development of Novel Patterned Microfluidics Channel for Enhanced Mixing of Nanoparticles in Green Fluids", SERB (VRITIKA), 1.5 Lakhs.

Funded Research Consultancy Projects

1. Dr. Venkata Timmaraju Mallina - Devel- opment of a thermoplastic composite tape winding set-up with enhanced build capability - CRG (DST-SERB) - 34.36 Lakhs (June 2023) – Ongoing

2. Dr. Venkata Timmaraju Mallina - Devel- opment of non-intrusive pressure sensor using optical sensor technology - Vanmok Inc, Canada - 33.38 Lakhs (Au- gust 2023) – Ongoing

3. Prof.S.Jayavel and Prof.S.Tiwari - CRG - SERB: 47 Lakhs, Fund yet to be received.

4. Dr. P. Pandithevan, Experimental and computational study to investigate the effect of chemical vapor deposition coat- ing on wear resistance of hip implant (SP/ME/2023-24/01) Fund: 5.055 Lacs

5. Dr. P. Pandithevan, Design and develop a fan that can provide ventilation for the 1000 HP motor with test rig facility (WIT- PL/IIIT-GM/2023/05/r1) Fund: 10.13 Lacs

6. Dr. B.Raja (Mentor), Dr.Micha Premkumar (SSN, PI), Design and Development of a battery cooling module using hybrid heat pipe technology of an electric vehicle DST-TARE 15 lacs (7.5 lacs for IIITDM), 2024-2027

7. Dr. Kishor Kumar Gajrani, Numerical analysis of need-based cutting fluids for low-to-high-speed machining of forged steels, M/s Infinite Manufacturers - 2023 - 2024 (Ongoing).

   Dr. Kishor Kumar Gajrani (Co-PI), Stylus profilometer for surface measurement. SMIRE, IIITDM Kancheepuram, 2023-2024 (Ongoing).

Patents Filed

1. Prof. Raja B, Multiport mini channel Shelf Heat Exchanger – Dr.B.Raja and Dr.G.Srinivasan – Filed

2. Prof. Raja B, Spray Drying Apparatus - Dr.B.Raja, Dr.K.Rajasekar and Mr.Pothiraj – Filed

3. Dr. Pandithevan P, Surgical drilling guide to drill bone with different drill bits and angles for fracture fixation of femur (Application Number: 360156-001)‖ Design Accepted and Published, Journal No is 22/2023 and Journal Date is 02/06/2023 ‖ Inventors: P. Pandithevan, and Naveed Syed Ul Meira

Journal Publications

1. Arata Pradhan, Kashfull Orra, Crack analysis of micro-textured cutting tool, Manufacturing Technology Today, 22, 26-31, 2023. [https://-doi.org/10.58368/MTT.22.4.2023.26-31] (April 2023)

2. R. Naveen, B. Jithin and N. Rino Nelson, "Analysis of Creep behavior in Turbine Blade made of Nickel based super-alloys with coating of Ceramic Matrix Composites", Nano world Journal, 2023, 9(S1), S414-S418. (22 Apr 2023)

3. K Rajasekar, B Raja, Experimental investigation on volumetric heat transfer coefficient during intermittent spray drying of mannitol solution, Drying Technology, Volume 41, 2023 (May 2023)

4. 3D-printed dual-band energy harvester for WSNs in green IoT applications, AEU – International Journal of Electronics and Communications, Volume 164, 2023, 154641, (with Deepal Deepak Patil, Karthikeyan Sholampettai Subramanian, Nrusingha Charan Pradhan, Eswaramoorthy K. Varadharaj, Murugesan M) ISSN 1434-8411, https://doi.org/10.1016/-j.aeue.2023.154641. (Awarded for Best Paper in the journal for 2023)(may 2023)

5. J Ramarajan and S Jayavel. Effect of in-phase type waviness in the walls of a confined Savonius rotor placed in a long channel, Journal of Mechanical Science and Technology, 37(5):2395-2403, 2023. https://doi.org/10.1007/s12206-023-0416-7(03May2023)

6. M Srinivasagan and K Jayabal (2023) Domain switching model embedded on scaled boundary finite element method for nonlinear hysteretic behavior of ferroelectrics. Mechanics of Advanced Materials and Structures, 1-13. doi.org/10.1080/15376494.2023.2209361(13 May2023)

7. K Rajasekar, B Raja, Experimental investigation on volumetric heat transfer coefficient during intermittent spray drying of mannitol solution, Drying Technology, Volume 41, 2023(24 May 2023)

8. Chayan Maiti, Sreekumar Muthuswamy, Classification of materials in cylindrical workpieces using image processing and machine learning techniques, International Journal of Production Research, June 2023, DOI: 10.1080/00207543.2023.2219344, IF: 9.2(09 June 2023)

9. Aparna Parihar, Avinash Kumar, Udwesh Panda, Rukhsar Khan, Dipesh Singh Parihar and Raju Khan "Cryopreservation: A Comprehensive Overview, Challenges, and Future Perspectives", Advanced Biology (2023), 2200285. (June 2023)

10. M. Saleem, Kashfull Orra, V. Arumugam, Structural health monitoring of natural fiber-based hybrid composites, Polymer Composites, 44, 5867-5878, 2023. [https://doi.org/10.1002/pc.27533] (28 June 2023)

11. Pandithevan P and Prasannavenkadesan V. A non-invasive method to reconstruct patient specific human femur with in-situ drilling temperature data using probability density function. Journal of Mechanics in Medicine and Biology. 2023; 24(1): 2350062. (SCIE)(15July2023)

12. D. Sathish Kumar and S Jayavel. Entropy Generation and Hydro-Thermal Analysis of Microchannel Heat Sink with Solid Inserts for Electronic Cooling Applications. Heat Transfer Research. 54(17):75-96, 2023. https://doi.org/10.1615/HeatTransRes.2023048353(24Jul2023)

13. Navneet Khanna, Parth Raval, Deep Patel, Ravikumar Prajapati, Julius Schoop, Kishor Kumar Gajrani, 2023. Assessment of Additive and Subtractive Sustainable Manufacturing of Inconel 625. Tribology International. 186, 108655. (DOI: 10.1016/j.triboint.2023.108655). Impact Factor: 6.2.(Aug 2023)

14. S. Gowthaman, B. Srinu and G. Balaganesan "Effects of ZnO Nanowire and Silica Coatings on the Inter-yarn Friction and Ballistic Properties of Kevlar Fabrics", International Journal of Impact Engineering, Vol. 178, pp. 104637, August 2023.

15. N. Rino Nelson, N. Siva Prasad and A.S. Sekhar, "Structural integrity and sealing behaviour of bolted flange joint: A state of art review", International Journal of Pressure Vessel and Piping, 2023, 204, 104975, DOI: 10.1016/j.ijpvp.2023.104975. (Aug 2023)

16. Arun Kumar Bambam, Anupam Alok, Ashish Rajak, Kishor Kumar Gajrani, 2023. Tribological performance of phosphonium-based halogen-free ionic liquids as lubricant additives. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 237(4), 881–893. (DOI: 10.1177/13506501221121898). Impact Factor: 2.0.(29 Aug 2023)

17. P. Anandakumar, M. V. Timmaraju, R. Velmurugan, Quasi-Static and Low-Velocity Impact Behavior of Injection Over-Molded Short/Continuous Fiber Reinforced Polypropylene Composites. Applied Composite Materials, 30, 2025–2046, 2023. (2022 Journal Impact Factor: 2.3) https://doi.org/10.1007/s10443-023-10163-3 (14 Sep 2023)

18. Anil Dhanola, Kishor Kumar Gajrani, 2023. Novel insights into graphene-based sustainable liquid lubricant additives: A comprehensive review, Journal of Molecular Liquids. 386, 122523. (DOI: 10.1016/j.molliq.2023.122523). Impact Factor: 6.0 (15 Sep 2023)

19. RK Gouda, G Srinivasan, V Umesh, B Raja, Surface enhancement for boiling heat transfer through micro holes for electronic cooling applications, Sādhanā 48 (4), 1-8, 2023(27Sep2023)

20. Jagatheesh kumar S, Raguraman M, Siva Prasad AVS, Nagesha B K, Chandrasekhar U, Simulation driven methodology for distortion prediction in thin-walled compressor blade built using LPBF process, International Journal on Interactive Design and Manufacturing (2023), https://doi.org/10.1007/s12008-023-01560-w (Oct2023)

21. P. Anandakumar, M. V. Timmaraju, R. Velmurugan, V. V. Kumar, Effect of interface temperature on low-velocity impact response of injection over-molded short/continuous fiber reinforced polypropylene composites Polymer Composites, 45(2), 1165-1177, 2024. (2022 Journal Impact Factor: 5.2) https://doi.org/10.1002/pc.27843. (17 Oct 2023)

22. P. Anandakumar, M. V. Timmaraju, R. Velmurugan, Effect of imbibed moisture on monotonic and low-velocity impact behavior of injection over-molded short/continuous fiber reinforced polypropylene composites, Journal of Applied Polymer Science, 141(4), e54845, 2024. (2022 Journal Impact Factor: https://doi.org/10.1002/app.54845 (30 Oct 2023)

23. Pavan Kumar Archakam, Sreekumar Muthuswamy, Dynamic Behaviour of Multi-Stage Crash Energy Absorption Systems Integrated with MRA: Simulation and Analysis, Communications in Nonlinear Science and Numerical Simulation, Accepted for Publication, Aug. 2023, DOI: 10.1016/j.cnsns.2023.107505, IF: 3.9 (01Nov2023)

24. Jayabal, J., Kumaraguru, S. & Varadarajan, S. Evaluation of computationally optimized design variants for additive manufacturing using a fuzzy multi-criterion decision-making approach. Int J Adv Manuf Technol 129, 5199-5218 (2023). https://doi.org/10.1007/s00170-023-12641(15Nov2023)

25. Kalpana.P; Tarik.Z; Lokesh.K.S; Raja Sreedharann.V, (2023) "Improving shuttle services quality in VUCA world: evidence from the IT industry", International Journal of Quality & Reliability Management, vol. ahead of Print, pp. ahead of Print DOI: 10.1108/IJQRM-03-2023-0069: IF: 2.9. (22 Nov 2023)

26. Kavitha Sharanappa Gudadur, Treesa Reji, P Guru Gopinath, K Jayabal, Suhasini Sathyamoorthy, Pandiyarasan Veluswamy, Smart Wearable Thermal Management VO2 Coated Textile for Thermochromic and Sensing Applications, IEEE Sensors Letters 8 (2024) 1-4. doi.org/10.1109/LSENS.2023.3345143(20-Dec2023)

27. Saravanan M. K., Siva Prasad A V S, Raguraman Munusamy, A numerical modelling framework for simulating rate-dependent delamination along polyurea/steel interfaces under Mode-I loading conditions, International Journal of Adhesion and Adhesives (2024), 128, 103530. https://doi.org/10.1016/j.ijadhadh.2023.103530 (Jan2024)

28. Badri Narayanan, Sreekumar Muthuswamy, Investigation on the Influence of a New Trapezoidal-Triangular Membership Function in IT2FLS with Type-Reductions for a Manufacturing Application, Journal of Intelligent & Fuzzy Systems, Aug. 2023. DOI: 10.3233/JIFS-231412, IF: 2.0(10Jan2024)

29. Vuppuluri A, Penumakala PK, Subramanyam MVS, Ganesh S, Podicheti RS, Prasad AVSS, Mechanical response of reduced graphene oxide (rGO) reinforced epoxy adhesive joints, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science. 2024;0 (0) https://doi.org/10.1177/09544062241228072 (03 Feb 2024)

30. Chayan Maiti, Deep Patel, Sreekumar Muthuswamy, Machining Process Automation in CNC Turning using Robot Assisted Imaging and CNN based Machine Learning , Transactions of ASME- Journal of Manufacturing Science and Engineering, MANU-23-1491, DOI: https://doi.org/10.1115/1.4064626, IF: 4.5 (26Feb2024)

31. K. Sivakumar, M. V. Timmaraju, R. Gnanamoorthy, Lightweight design of steel sprocket for roller chain drive using explicit dynamic simulation, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2024. https://doi.org/10.1177/09544062241242652 (2022 Journal Impact Factor: 2) (April 2024)

32. T. Kalimuthu, P. Kalpana, Saravanan Kuppusamy, V. Raja Sreedharan,(2024)," Intelligent decision-making framework for agriculture supply chain in emerging economies: Research opportunities and challenges,", Computers and Electronics in Agriculture, Volume 219,2024,108766, ISSN 0168-1699, https://doi.org/10.1016/j.compag.2024.108766. IF:8.3 (April 2024)

33. Asaithambi, P., Ammiappa Venkata Subrahmanya, S. P., & Munusamy, R. (2024). Investigation of the effect of exposed area on blast mitigation response of structures. Mechanics of Advanced Materials and Structures, 1–16. https://doi.org/10. 1080/15376494. 2024. 2364300 (13 June 2024)

34. Kavitha Sharanappa Gudadur, Avinash Kumar, Pandiyarasan Veluswamy, "Wearable skin integrated flexible PVA-nickel nanocomposite patch for temperature sensor", Polymers for Advanced Technologies (2024), 35 (6). (18 June 2024)

35. Jeyapradhap Thirisangu, E. Hemachandran, and Karthick Subramani. "Suspending droplets beyond the Rayleigh limit: The interplay of acoustic and gravity forces." Physics of Fluids 35,12(2023).

36. Kumar, Dinesh, Vikash Kumar, and Kailash Jha. "Effects of hyperboloid vortex finder and inlet angle on the cyclone flow pattern and separation efficiency." Chemical Engineering Research and Design 204 (2024): 81-96.

37. T Jeyapradhap, G Srinivasan, B Raja, End-point estimation using a measurement sensor for freeze-drying process control, Thermal Science and Engineering Progress 41, 101848, 2023 RK Gouda, G Srinivasan, V Umesh, B Raja, Surface enhancement for boiling heat transfer through micro holes for electronic cooling applications, Sādhanā 48 (4), 1–8, 2023

Conference Publication

1. Deep Patel, Chayan Maiti, Sreekumar Muthuswamy, Real-Time Performance Monitoring of CNC Milling Machines using ROS 2 and AWS IoT towards Industry 4.0, Proc. IEEE EUROCON 2023, 6-8 July 2023, Torino, Italy, DOI: 10.1109/EUROCON56442.2023.10199020

2. Jeyapradhap Thirisangu, and Karthick Subramani, "Experimental investigation on suspension characteristics of water droplets in oil under acoustic fields", International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics (ICRAFMN-2023), Manipal Institute of Technology, Bengaluru, 12-14, Jul 2023.

3. Jeyapradhap Thirisangu, Anjan Mahapatra, and Karthick Subramani, "Experimental investigation on the influence of acoustic radiation force direction on droplet sorting using BAW", International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics (ICRAFMN-2023), Manipal Institute of Technology, Bengaluru, 12-14, Jul 2023.

4. Sujith Jayakumar, Muthu Shravan Sundaram, Varun Kumar Rajendran and Karthick Subramani, "Acoustic Mixing of Co-flowing Inhomogeneous Fluids in a Circular Well Microchannel", International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics (ICRAFMN-2023), Manipal Institute of Technology, Bengaluru, 12-14, Jul 2023.

5. Sujith Jayakumar, Videsh V K, and Karthick Subramani, "Improved understanding of Acoustic Relocation and Streaming phenomena for different Fluid configurations in a Microchannel", International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics (ICRAFMN-2023), Manipal Institute of Technology, Bengaluru, 12-14, Jul 2023.

6. Varun Kumar Rajendran and Karthick Subramani, "Acoustofluidic manipulation of droplets using Bulk Acoustic Waves", International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics (ICRAFMN-2023), Manipal Institute of Technology, Bengaluru, 12-14, Jul 2023.

7. Abaethan Saravanabhava, Varun Kumar Rajendran, Jeyapradhap Thirisangu and Karthick Subramani, "Enhancement of dielectrophoresis-driven heat transfer in annular geometry", International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics (ICRAFMN-2023), Manipal Institute of Technology, Bengaluru, 12-14, Jul 2023

9. Sri Maddukuri, Ravindra Ganta, Siva Prasad AVS, Numerical Study of Energy Absorption Capabilities of Periodic Cellular Structures, ICONS 2023, Organized by IGCAR and IIT Madras in August 2023 at Mahabalipuram.

9. A Prakash, Siva Prasad AVS, Analytical Modelling Framework for Dynamic Fracture of Ductile Materials, ICONS 2023, Organized by IGCAR and IIT Madras in August 2023 at Mahabalipuram.

10. Saravanan M K, Siva Prasad AVS, Constitutive Models For Impact Response of Polyurea Coated Structures, ICONS 2023, Organized by IGCAR and IIT Madras in August 2023 at Mahabalipuram.

11. R. Sharma and N. Rino Nelson, "Influence of rough surface on the leakage of flange joints", ICONS2023, August 23-25, 223, IGCAR, Kalpakkam.

12. Ankit Singh, Arun Kumar Bambam, Prameet Vats, Kishor Kumar Gajrani, 2023. Numerical modelling of machining of titanium alloys under phosphonium-based halogen-free ionic liquid as lubricant additives. Twenty-Ninth International Conference on Processing and Fabrication of Advanced Materials-XXIX (PFAM29), 06–08 September 2023, IIT Tirupati, Tirupati, India.

13. Shaik Mushraf Parvez, Kishor Kumar Gajrani, 2023. Fabrication of superhydrophobic aluminum surfaces using sink electric discharge machining. Twenty-Ninth International Conference on Processing and Fabrication of Advanced Materials-XXIX (PFAM29), 06–08 September 2023, IIT Tirupati, Tirupati, India.

14. Rajendra Kumar R T P, Jayabal K, Kamaraj M, Srinivasa Rao Bakshi. Fretting wear behaviour of AA2524T3 alloy, Fourth Conference on Heat Treatment and Surface Engineering (HTSE 2023), ASM International, Chennai, September 28-30, 2023.

15. Rajendra Kumar R T P, Jayabal K, Kamaraj M, Srinivasa Rao Bakshi. Modeling of cold spray flow dynamics and particle acceleration and deformation of pure aluminum for the repair of aircraft structures, Fourth Conference on Heat Treatment and Surface Engineering (HTSE 2023), ASM International, Chennai, September 28-30, 2023.

16. Ram Mukilan C, Rajendra Kumar R T P, Jayabal K, Kamaraj M, Srinivasa Rao Bakshi. Numerical characterization of Particle Velocity in Aluminium cold spray coating, Fourth Conference on Heat Treatment and Surface Engineering (HTSE 2023), ASM International, Chennai, September 28-30, 2023.

17. Kartheesan S, Shahul Hamid Khan B, Kamaraj M. "Dry sliding wear study of CaO reinforced magnesium matrix nanocomposites", 4th International Conference on Heat Treatment & Surface Engineering (HT&SE) Organized by IIT Madras, 28-30 September 2023.

18. Kartheesan S, Shahul Hamid Khan B, Kamaraj M "Influence of CaO Nanoparticles on Fretting Wear Characteristics of Mg Nanocomposites", 4th International Conference on Heat Treatment & Surface Engineering (HT&SE) Organized by IIT Madras, 28-30 September 2023.

19. Rajan Ponnusamy and Shahul Hamid Khan, "Modeling decision framework by Fuzzy MCDM approach for the sustainable supplier selection and order allocation problem" 10th International Conference on Business Analytics and Intelligence (2023-ICBAI), held at IISc Bangalore on 18-20, December 2023

20. Jithin B, Suganth V and N. Rino Nelson, "Moisture induced mechanical characterization of composite through numerical simulation", 23ADMMS, October 27 and 28, 2023, SRM University, Kattangulathur.

21. Prof. Jayabal K - Rajendra Kumar R T P, Jayabal K, Kamaraj M, Srinivasa Rao Bakshi. Modeling of Particle deformation during cold spray coating of Al-Cu alloy for prediction of critical velocity and bonding mechanism, Asian Thermal Spray Conference & Expo 2023 (ATSE 2023), IIT Madras, November 2-4, 2023.

22. Suganth V and N. Rino Nelson, "Effect of moisture diffusion on Mode I and Mode II interlaminar fracture toughness of hybrid fiber reinforced epoxy composites", AIMTDR2023.

23. Suganth V and N. Rino Nelson, "Moisture induced mechanical characterization of composite through numerical simulation", BPGC, November 24 and 25, 2023, CIPET-IPT, Kochi.

24. V. Kumar, L. S. Brar, K. Jha, "Numerical investigations of the cone-shaped vortex finders on the performance of cyclone separators." 2nd International Conference on Particles, Granules, Bulk Solids, Innovations and Applications, December 1-3, 2016, organized by Thapar University, Patiala, India.

25. Prameet Vats, Piyush Kumar Sinha, Kishor Kumar Gajrani, 2023. Numerical assessment of thermo-mechanical behavior of a multi-layer additive manufacturing process. 9th International & 30th National All India Manufacturing Technology Design and Research (AIMTDR) Conference, 08–10 December 2023, IIT BHU, Varanasi, India.

26. Dinesh Kumar S, Kishor Kumar Gajrani, 2023. Laser micro-texturing of titanium surfaces for enhanced hydrophobicity for biomedical applications. 9th International & 30th National All India Manufacturing Technology Design and Research (AIMTDR) Conference, 08–10 December 2023, IIT BHU, Varanasi, India.

27. Parth Raval, Mayur A. Makjesana, Kishor Kumar Gajrani, Navneet Khanna, 2023. Machinability analysis of AISI 4140: A comparison between dry, flood, and vegetable oil-based EMQL machining performance. 9th International & 30th National All India Manufacturing Technology Design and Research (AIMTDR) Conference, 08–10 December 2023, IIT BHU, Varanasi, India.

28. Amarnath Balaji, Kashfull Orra, Experimental study on 3D printed gripper with nitinol tactile sensor for an improved gripping performance, 30th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2023), IIT BHU, 8th – 10th December 2023.

29. Syed Naveed UM and Pandithevan P. Finite element analysis to predict post pelvic stability subjected with triangular and circular pattern of bone harvesting in bone autograft surgery. AIMTDR 2023, Dec 08-10, 2023, IIT BHU, Varanasi, India.

30. Jasim Sajidh NA and Pandithevan P. Experimental evaluation, modeling and sensitivity analysis of temperature in bone milling using elastic-net regression. AIMTDR 2023, Dec 08-10, 2023, IIT BHU, Varanasi, India.

31. Reconstruction of the temperature field using the data points at boundary using Physics-informed neural network, Chaurasia, Nagendra Kumar, and Shubhankar Chakraborty, Proceedings of the 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference December 14-17, 2023, IIT Patna, Patna-801106, Bihar, India. Begel House Inc., 2024. (https://-doi.org/10.1615/IHMTC-2023.1120)

32. Rajalingam, A., and Shubhankar Chakraborty, Effect of the transverse channel on the performance of micro-channel heat sink, Proceedings of the 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference December 14-17, 2023, IIT Patna, Patna-801106, Bihar, India. Begel House Inc., 2024. (https://-doi.org/10.1615/IHMTC-2023.850)

33. Yash Kumar Sahu1, Radhika Mittal1, Deep Patel, Chayan Maiti, and Sreekumar M, Vision-Based Object Sorting in Dynamic Environments using YOLO for RoboCup ARM Challenge 2023, 2023 IEEE 7th Conference on Information and Communication Technology (CICT-2023), 15-17 Dec. 2023, IIITDM Jabalpur.

34. Yash Kumar Sahu1, Radhika Mittal1, Deep Patel2+, Chayan Maiti2 and Sreekumar M, IEEE 7th Conference on Information and Communication Technology (CICT-2023), Vision-Based Object Sorting in Dynamic Environments using YOLO for RoboCup ARM Challenge 2023, Accepted for Oral Presentation, 15-17,Dec 2023, India

35. Kalimuthu T., & Kalpana P., "Dynamic Inventory Control for Price and Quality Sensitive Demand of Fresh Agricultural Products in Multi-Echelon Supply Chain", 56th Annual Convention of Operational Research Society of India (2023-ORSI) and 10th International Conference on Business Analytics and Intelligence (2023-ICBAI), IISc Bangalore, 18-20, December 2023.

36. Arvindkumar S., & Kalpana P., "Case Study –Additive Manufacturing's influence on Postponement Strategy in Supply Chain", 56th Annual Convention of Operational Research Society of India (2023-ORSI) and 10th International Conference on Business Analytics and Intelligence (2023-ICBAI), IISc Bangalore, 18-20, December 2023.

37. Ragunanthan V., & Kalpana P., " Case Study - Impact of AM assisted Part Unification on Bill of Material of a product", 56th Annual Convention of Operational Research Society of India (2023-ORSI) and 10th International Conference on Business Analytics and Intelligence (2023-ICBAI), IISc Bangalore, 18-20, December 2023.

38. Jeyapradhap Thirisangu, Anjan Mahapatra, and Karthick Subramani, "Numerical investigation of droplets in a vertical minichannel subjected to standing acoustic waves", 10th International and 50th National Conference of Fluid Mechanics and Fluid Power (FMFP-2023), IIT Jodhpur, Rajasthan, December 20-22, 2023.

39. Dr. Senthilkumaran K - Jayakrishnan Jayapal, Hemnath A. K., Senthilkumaran K., Sudhir Varadarajan, A New Method for Part Consolidation and Functional Integration, 9th International & 30th All India Manufacturing Technology, Design and Research Conference, IIT BHU, Varanasi, UP, India. December, 2023.

40. Sagar Kumar Jha, Navneet Khanna, Kishor Kumar Gajrani, 2024. Turning tool wear monitoring using digital image processing. 2nd International Conference on Futuristic Advancements in Materials, Manufacturing and Thermal Sciences (ICFAMMT), 19-21 January 2024 at IITRAM Ahmedabad, India. (Best Presentation in Technical Session Award).

41. V. Parkavi, Jayabal.K, Pandiyarasan Veluswamy , Synthesis of Black TiO2 nanoparticles for Photothermal Applications, 7th International Conference on Recent Innovations in Modern Science and Technology, KPR College of Engineering and Technology, Coimbatore, January 09-11, 2024.

42. Divyam Yadav, Rohan Shingre and Senthilkumaran Kumaraguru, Jayakrishnan Jayapal, An XML Schema to Represent Material and Hierarchical Information for Additive Manufacturing, 3rd International conference on Industry 4.0 and Advanced Manufacturing, IISc Bangalore, 11-12 Jan 2024.

43. Rajan Ponnusamy and Shahul Hamid Khan, "Designing a Multi Echelon Supply chain network for Citrus fruits inspecting the Economic, Social and Environmental issues", International Conference on Supply Chain management (ICSCM 2024) held in National University of Singapore, Singapore during January 12-14, 2024.

44. V. Parkavi, Jayabal.K, Pandiyarasan Veluswamy, Assessing the Performance of Hybrid Solar PV and TEG Technology, International Conference on Sustainable Materials for Engineering Applications, IIT Madras, February 1-3, 2024.

45. Narendra J, Suganth V and N. Rino Nelson, "An experimental and numerical investigation of low-velocity impact on moisture-induced of bio-based composite laminates",(ICSMEA 2024), IIT Madras, 1st – 3rd February 2024.

46. M. Saleem, Kashfull Orra, Prashant Rawat, V. Arumugam, Experimental investigation of fiber orientation of normal and inclined planes in sustainable composites to determine resistance to indentation damage, International Conference on Sustainable Materials for Engineering Applications (ICSMEA 2024), IIT Madras, 1st – 3rd February 2024.

47. V. Kumar, L. S. Brar,, "Modeling and optimization of industrial scale cyclones for minimum energy consumption." 1st International Conference on Futuristic Trends in Computational Analysis and Knowledge Management, February 25-27, 2015, organized by Amity University, Greater Noida Campus, India.

48. Arun Kumar Bambam, Kishor Kumar Gajrani, 2024. Synthesis and characterization of halogen-free ionic liquids based green metalworking fluids for difficult-to-cut materials. All India Research Scholar Summit (AIRSS) 2024, 04-07 March 2024 at IIT Madras, India. (Best Technical Presentation Award).

49. Penumuru Durga Prasad, Deep Patel, Sreekumar Muthuswamy, Premkumar Karumbu, In Situ Material Identification, Machining Monitoring and Cloud Logging with Machine Vision and AI-Integrated Collaborative Robot, 5th Innovative Conference on Innovative Trends in Information Technology, 15-16 March 2024, ICITI-IT-2024. Accepted for Oral Presentation, Paper ID: 419.

50. E. Gopi and S. Gowthaman "Experimental and Numerical Studies on Radial Tensile Strength of Composite Rotor", Proceedings of the International Conference on Mechanical Engineering and Technology (ICMET 24), NIT Kurukshetra, March 2024.

Book Chapters

1. Arun Kumar Bambam, Prameet Vats, Alok Suna, Kishor Kumar Gajrani, 2023. Hybrid metal additive manufacturing technology, Hybrid Metal Additive Manufacturing: Technology and Applications. CRC Press (Taylor and Francis Group). ISBN: 9781003406488.

2. Prameet Vats, Arun Kumar Bambam, Kishor Kumar Gajrani, Avinash Kumar, 2023. Characterisation of titanium feedstock powder prepared by recycling of machining chips using ball milling, Hybrid Metal Additive Manufacturing: Technology and Applications. CRC Press (Taylor and Francis Group). ISBN: 9781003406488.

3. Prameet Vats, Kishor Kumar Gajrani, Avinash Kumar, 2023. Laser-based additive manufacturing, Laser-based Technologies for Sustainable Manufacturing. CRC Press (Taylor and Francis Group). ISBN: 9781003402398. (DOI: 10.1201/9781003402398-4).

4. Arun Kumar Bambam, Kishor Kumar Gajrani, 2023. Challenges in achieving sustainability during manufacturing, Sustainable Materials and Manufacturing Technologies. CRC Press (Taylor and Francis Group). ISBN: 9781003291961. (DOI: 10.1201/9781003291961-9).

5. Karuturi Manohar Sai Krishna, Satyam Dwivedi, Rajendra Soni, Kishor Kumar Gajrani, 2023. Computational fluid dynamics analysis of MQL mist droplets characteristics with various geometrical nozzle orifice, Sustainable Materials and Manufacturing Technologies. CRC Press (Taylor and Francis Group). ISBN: 9781003291961. (DOI: 10.1201/9781003291961-5).

6. Nagella Lahari, Navneet Khanna, Kishor Kumar Gajrani, 2023. Energy and economic assessment of machining Ti-6Al-4V in cryo-MQL environment, Sustainable Materials and Manufacturing Technologies. CRC Press (Taylor and Francis Group). ISBN: 9781003291961. (DOI: 10.1201/9781003291961-3).

7. Anil Dhanola, Vijay Kumar, Arun Kumar Bambam, Kishor Kumar Gajrani, 2023. Use of additives and nanomaterials for sustainable production of biofuels, Sustainable Materials and Manufacturing Technologies. CRC Press (Taylor and Francis Group). ISBN: 9781003291961. (DOI: 10.1201/9781003291961-9).

8. Darshit Shah, R. A. Rahman Rashid, Muhammad Jamil, Salman Pervaiz, Kishor Kumar Gajrani, M. Azizur Rahman, Navneet Khanna, 2023. Cryogenic assisted drilling of Ti-6Al-4V. Sustainable Materials and Manufacturing Technologies. CRC Press (Taylor and Francis Group). ISBN: 9781003291961. (DOI: 10.1201/9781003291961-2).

9. Anil Dhanola, Kishor Kumar Gajrani, 2023. Nanomaterials as additive in biodiesel. Biowaste and Biomass in Biofuel Applications. CRC Press (Taylor and Francis Group). ISBN: 9781003265597. (DOI: 10.1201/9781003265597-03).

10. Shinde, A.A., Kene, A.P., Orra, K., Patil, K.B. (2024). Mathematical Modelling of Material Removal in Laser Assisted Electro-chemical Machining Process (LAECM). In: Pawar, P.M., et al. Techno-societal 2022. ICATSA 2022. Springer, Cham. https://doi.org/10.1007/978-3-031-34644-6_71

11. Deiva Ganesh, A., & Kalpana, P. (2023) "Digital twins – a state of the art from Industry 4.0 perspective", Intelligent Analytics for Industry 4.0 Applications, pp 23-35, IA14A-CRC Press, Taylor & Francis, https://doi.org/10.1201/9781003321149.

12. Rajkumar Reddy, K., Kalpana, P., & Deiva Ganesh, A. (2023) "Sustainability in Manufacturing", Progress in Sustainable Manufacturing, Springer. 71-79. https://doi.org/10.1007/978-981-99-0201-9_5.

13. Prameet Vats, Kishor Kumar Gajrani, Avinash Kumar, Laser-Based Additive Manufacturing, Laser-based Technologies for Sustainable Manufacturing (2023), (CRC Press, Taylor & Francis, USA). http://doi.org/10.1201/9781003402398-4

14. Aayush Pathak, Abhishek Kumar, Avinash Kumar, Ashwani Kumar, Francis Luther King M, Application of Laser Technology in the Mechanical and Machine Manufacturing Industry, Laser-based Technologies for Sustainable Manufacturing (2023), (CRC Press, Taylor & Francis, USA). http://doi.org/10.1201/9781003402398-6

15. Avinash Kumar, Mohit Byadwal, Abhishek Kumar, Ashwani Kumar, Francis Luther King M, Laser Micromachining in Biomedical Industry, Laser-based Technologies for Sustainable Manufacturing (2023), (CRC Press, Taylor & Francis, USA). http://doi.org/10.1201/9781003402398-8

16. Francis Luther King M, Ashwani Kumar, Avinash Kumar, Abhishek Kumar, Introduction to Optics and Laser-Based Manufacturing Technologies, Laser-based Technologies for Sustainable Manufacturing (2023), (CRC Press, Taylor & Francis, USA). http://doi.org/10.1201/9781003402398-1

17. Abhishek Kumar, Aayush Pathak, Avinash Kumar, Ashwani Kumar, Physics of Laser–Matter Interaction in Laser-Based Manufacturing, Laser-based Technologies for Sustainable Manufacturing (2023), (CRC Press, Taylor & Francis, USA). http://doi.org/10.1201/9781003402398-2

18. Ramarajan, J., and S. Jayavel. "Performance study of Savonius vertical axis wind turbine with slotted blades." In Fluid Mechanics and Fluid Power (Vol. 1) Select Proceedings of FMFP 2021, pp. 447–452. Singapore: Springer Nature Singapore, 2023.

19. Sathish Kumar, D., and S. Jayavel. "Effect of Surface Modification and Substrate Material on Flow and Heat Transfer Characteristics in Microchannel Heat Sink." In Fluid Mechanics and Fluid Power (Vol. 2) Select Proceedings of FMFP 2021, pp. 327–332. Singapore: Springer Nature Singapore, 2023.

20. Kavin, A. S., R. V. Abishek, J. Ramarajan, D. Sathish Kumar, and S. Jayavel. "Numerical Study on Enhancement of Heat Transfer in a Double Pipe Heat Exchanger Using Multiple Tangential Injection." In Fluid Mechanics and Fluid Power (Vol. 2) Select Proceedings of FMFP 2021, pp. 509–514. Singapore: Springer Nature Singapore, 2023.

21. P Prasad, Matcharla Devi Sri, S. Jayavel, and R. Gnanamoorthy. "Effect of coir fiber reinforcement in PLA on the heat transfer characteristics–numerical simulations." Materials Today: Proceedings 2023.

22. Prasannavenkadesan V and Pandithevan P. 2023. Chapter: Finite element analysis to predict post pelvic stability subjected with triangular and circular pattern of bone harvesting in bone autograft surgery. Springer Nature, Switzerland. In Press

23. Syed NUM and Pandithevan P. 2023. Chapter: Jasim Sajidh NA and Pandithevan P. Experimental evaluation, modeling and sensitivity analysis of temperature in bone milling using elastic–net regression. Springer Nature, Switzerland. In Press

List of Books Edited

1. Dr. Kishor Kumar Gajrani – Parnika Shrivastava, Anil Dhanola, Kishor Kumar Gajrani, 2023. Hybrid Metal Additive Manufacturing. CRC Press (Taylor and Francis Group), ISBN: 9781003406488.

2. Dr. Kishor Kumar Gajrani – Navneet Khanna, Kishor Kumar Gajrani, Khaled Giasin, J. Paulo Davim, 2023. Sustainable Materials and Manufacturing Technologies. CRC Press (Taylor and Francis Group), ISBN: 9781003291961.

3. Dr. Avinash Kumar - Abhishek Kumar, Avinash Kumar, Ashwani Kumar (Editors), Book title: "Applications of Biotribology in Biomedical Systems" (Springer Nature Publishing, Switzerland AG) (ISBN: 9783031583261, Link: https://link.springer.com/book/9783031583261).

Invited Talks

1. Kishor Kumar Gajrani, Sustainable Manufacturing, Keynote Talk for International Conference on Digital Transformation in Manufacturing (ICDTM 2023) organized by SASTRA University, Thanjavur, Tamil Nadu from 7th April to 9th April 2023. Date of the Talk: 08th April 2023.

2. Kishor Kumar Gajrani, Food Packaging Options, self-sponsored seven days' courses on "Fruits and Vegetable Dehydrations" conducted by Udyogwardhini Entrepreneurship and Skill Development, Nashik, Maharashtra, from 12th April to 18th April 2023. Date of Talk: 18th April 2023.

3. Kishor Kumar Gajrani, Tribology and Sustainability: A Future Perspective, Invited Talk for DST SERB KARYASHALA (high end workshop) on Industrial Tribology: Towards Sustainable Approach, conducted by SRM University, Chennai, Tamil Nadu from 15th May to 22nd May 2023. Date of the Talk: 19th May 2023.

4. Kishor Kumar Gajrani, Advanced Machining: Latest Trends and Techniques, Invited Talk for One-week faculty development programme on "Advanced Manufacturing: Latest Trends and Techniques", conducted by Dr. Sudhir Chandra Sur Institute of Technology & Sports Complex from 23rd June to 27th June 2023. Date of the Talk: 24th June 2023.

5. Kashfull Orra, Guest speaker, FDP on Advanced Manufacturing: Latest Trends and Techniques organized by DSCSITSC Kolkata, 25 June 2023 (Online)

6. Dr. Avinash Kumar - Delivered an invited talk on "Current Trends and Future Aspects of Laser Machining in Biomedical Devices" at Jerusalem Collage of Engineering, Chennai (06 September 2023).

7. Kishor Kumar Gajrani, Defence Material, Manufacturing Technologies and 3-D Printing, a brainstorming session on "Technology Roadmap -2047 for the Defence Sector" organized by Technology Information, Forecasting and Assesment Council (TIFAC) and DRDO Industry Academia – Ramanujan Centre of Excellence (DIA-RCoE), IIT Madras. Date of Session: 14th October 2023.

8. Dr. Kalpana P - All India Training course on "Data analytics using R" (October 2023, January 2024, March 2024) for the employees of Indian accounts and audit department conducted by regional capacity building and knowledge institute, Chennai.

9. Dr. Senthilkumaran k - "Part selection for AM using AI: A case study in the PBF process FDP" invited lecture at NIT Trichy in FDP on Composite Additive Manufacturing scheduled during 18-22 Dec 2023.

10. Kishor Kumar Gajrani, Hybrid Metal Additive Manufacturing, 9th International & 30th National All India Manufacturing Technology, Design and Research (AIMT-DR), organized by IIT BHU, from 08th December to 10th December 2023, Date of Talk: 09th December 2023.

11. Kishor Kumar Gajrani, Progress Towards Sustainable Development Goals 2030 through Manufacturing, organized by Nirma University. Date of Talk: 18th January 2024.

12. Kishor Kumar Gajrani, Data for Smart Manufacturing, Six Days National Level Online FDP on "Frontiers in Mechanical Engineering: Embracing Modern Trends and Innovations", organized by DMI College of Engineering, Chennai, from 21st March to 27th March 2024, Date of Talk: 26th March 2024.

13. Kishor Kumar Gajrani, Surface Modification of Medical Assisted Devices, SERB Accelerate Vigyan Sponsored One Week High-End Workshop on "Micromachining and Microfabrication for Biomedical Devices", organized by IIITDM Kancheepuram, Chennai, from 31st March to 06th April 2024, Date of Talk: 31st March 2024.

14. Dr.B.Raja - Invited talks – Thermal Management in EV – Anand Institute of Technology

15. Dr. Shubhankar Chakraborty - Invited Lecture on "Representation of data of computational work using MatLab" at Department of Chemical Engineering at Sri Sivasubramaniya Nadar College of Engineering, Chennai.

16. Dr. Avinash Kumar - Delivered an expert lecture in One-Week High-End workshop (Karyashala) on "Micromachining and Microfabrication for Biomedical Devices" sponsored by SERB Accelerate Vigyan from 31 March to 06 April 2024.

17. Dr. Avinash Kumar - Delivered an expert lecture in DST–SERB, Accelerate Vigyan Sponsored (Karyashala) workshop on "3D Printing, Biomanufacturing and Characterization of Materials" at Department of Mechanical Engineering, PDPM Indian Institute of Information Technology, Design and Manufacturing from 6th to 12th May 2024.

18. Dr. Karthick S - Karyashala workshop – "Micromachining and Microfabrication for Biomedical Devices"

19. Dr. Senthilkumaran k - "Holistic development and Value education" NEP Sensitization program –TLC - 10 lectures

20. Dr. Senthilkumaran k - "Advancements in 3D printing techniques for antenna fabrication: Materials, Methods and Applications" – Invited Talk at NIT Trichy SERB funded Karyashala workshop titled "RF circuit and 3D printed Antenna – Fundamental to advanced design concept and tools for smart wireless applications".

Additional Information

List of Awards

1. Dr.Kishor Kumar Gajrani – Featured consequently for the second year in the "World's top 2% scientist 2023" list released by Stanford University and published by Elsevier.

2. Dr.Kishor Kumar Gajrani and team - Best presentation in technical session award: International Conference on Futuristic Advancements in Materials, Manufacturing and Thermal Sciences (ICFAMMT), 19–21 January 2024 at IITRAM Ahmedabad, India.

3. Dr. Kishor Kumar Gajrani Best Technical Presentation Award to Mr. Arun Kumar Bambam at IIT Madras for paper titled "Synthesis and characterization of halogen-free ionic liquids based green metal-working fluids for difficult-to-cut materials" presented during All India Research Scholar Summit (AIRSS) 2024, 04–07 March 2024.

4. Dr.Rino Nelson and Team – Best paper award in ICMICA2023

5. Dr.Sreekumar M Visiting Professorship-University of Genoa, Italy and Ecole Centrale Nantes, France Supervision of Student Team (Deep Patel-ME21D0004, Yash Kumar Sahu-CED19I039, Radhika Mittal-CED19I050, Chayan Maiti-ME21M2003) who won a 4th Place at the International Competition, Robo Cup Autonomous Robot Manipulation Challenge 2023, which was held during 4-10 July 2023 at Bordeaux, France. Best Paper Award, In Situ material identification, machining monitoring, and cloud logging integrated with AI and machine vision" in The 5th International Conference on Innovative Trends in Information Technology (ICITIIT-2024) organized by IIIT Kottayam, 15-16 March-2024, Paper ID: 419.

Faculty Start-ups

1. Dr.B.Raja and Dr.K.Selvajyothi registered a Faculty Startup - M/s Kanchi Systems and Solutions Pvt ltd

Liaison with Industries

1. Dr. Kishor Kumar Gajrani – M/s Infinite Manufacturers – Ongoing research Project Prologics India – Arc fault detector

2. M/s Vayuneer (MaDelT) – Air water generation – design discussion

3. Dr. Venkata Timmaraju Mallina – TVS Motors Private Limited – Ongoing research projectVanmok Inc., Canada – Ongoing research project in collaboration with Prof. Naveen Kumar

4. Dr. Kalpana P – My strong collaborations and associations with industry personnel from organizations such as Ford Motor Company, has resulted in the following project work for my MTech student as given below

5. Dr. Kalpana P – Ragunanthan V (ME22M2002) is doing project titled "Analyzing Resilience and Sustainability of Additive Manufacturing Enabled Automotive Supply Chain" along with Mr. S. Arvind Kumar, Manager- Manufacturing and supply chain analytics, Ford Motor Company.

6. Dr. S Gowthaman – National Security Guard (NSG), Chennai – for field testing of armour fabrics

7. Dr. S Gowthaman – Tamil Nadu Commando Force (TNCF), Chennai – for field testing of armour fabrics

8. Dr. S Gowthaman – Simulator Development Division (Army), Secunderabad – for field testing of armour fabrics

9. Dr. Shubhankar Chakraborty – Helped Vedam Design & Technical Consultancy Pvt. Ltd. for simulation for simulating Thermal plume recirculation and design for SW intake/discharge of a ship.

10. Dr. Rino Nelson – In collaboration with Coromandel Pvt Ltd for developing a pesticide injection system on to trees.

11. Dr. Karthick S – Woolong Pvt Ltd

12. Dr.B.Raja Prologics India – Arc fault detector

13. Dr.B.Raja M/s Vayuneer (MaDelT) – Air water generation – design discussion

Technical Staff

Dr. C. Gurunathan
Technical Officer (SS)

Shri. A.Vijayabharathi
Senior Technician

Shri. A. Vigneshwaran
Technical Superintendent

Shri. Gowtham T
Junior Technician

Shri. R. Dharmarasu
Junior Technical Superintendent

Shri. Janarthanan A
 Junior Technician

Shri. G. Manigandan
Senior Technician

New lab Setup in Department

1. Dr. Shubhankar Chakraborty – Multiscale Thermofluids Research Lab (MTR Lab) – L417 A – New facility developed : (a) Microchannel Heat sink set up (b) Porous heat exchanger test rig

2. Dr.N. Rino Nelson – L508D – New facility developed: Experimental Modal Analysis Kit.

3. Dr. Venkata Timmaraju Mallina – L414 C – New facility developed : Heating Vacuum Oven,Composites tape making set-up, Composite tape winding set-up

4. Dr. P. Pandithevan – L011 – New facility developed – Test rig to measure flow rate of industrial fan

DEPARTMENT OF SCIENCES AND HUMANITIES

The Department of Sciences and Humanities at IIITDM Kancheepuram brings together the disciplines of Mathematics, Physics, and English under one roof. At present, the Department has 12 faculty members offering mandatory undergraduate courses and interdisciplinary research oriented courses for postgraduate and doctoral students. The department offers a carefully designed platter of courses crafted based on the design centric curriculum of the Institute. Sciences and Humanities is an intensively research oriented department and it offers PhD programs in Mathematics, Physics, and English. The PhD programmes of the Department give an opportunity to meritorious candidates to pursue their research interests in core, cross disciplinary and interdisciplinary areas.

The research team of faculty and scholars in Mathematics focus on areas like algorithms, graph theory, numerical linear algebra, and mathematical cryptography. The members of Physics stream are involved in research in areas like materials science–based defense and energy devices, photovoltaics, and fuel cells; materials modeling; fiber optics and photonics; solar and thermal energy applications; giant resonances of nuclei; and supersymmetric quantum mechanics.

Faculty Members and their Areas of Research

Stream of Mathematics

Dr. Jagannath Bhanja
(Ph.D, IIT Roorkee)
Assistant Professor

Additive and Combinatorial Number Theory, Extremal Combinatorics, Arithmetic Ramsey Theory.

Dr. Nachiketa Mishra
(Ph.D, IIT Madras)
Assistant Professor

Partial Differential Equations, Numerical Analysis, Numerical Linear Algebra, Theory of Homogenization, Differential Algebraic Equations.

Dr. Shalu M A
(Ph.D, IIT Madras)
Associate Professor

Graph Theory; Algorithms.

Dr. M. Subramani
((Ph.D, Chennai Mathematical Institute)
Assistant Professor

Algebraic and Analytic number theory, Mathematical Cryptography.

Dr. Vijayakumar S
(Ph.D, IIT Madras)
Assistant Professor

Algorithms; Combinatorial Optimization; Graph Theory and Combinatorics.

Stream of English

Dr. Kandharaja K M C
(Ph.D, University of Hyderabad)
Assistant Professor

My research interests are in the following fields of Applied Linguistics and English Language Education: Classroom Discourse, Gender and Language, Teacher Education, Material Development and Evaluation, Language Policy & Planning/Education Policy, Discourse Studies, Sociolinguistics and English for Academic Purposes.

Dr. Parvathy Das
(Assistant Professor)

Life Writing ; Narratives ; Theories of Self and Identity ; Literature, Science, and Philosophy.

Stream of Physics

Dr. Anushree P Khandale
(Ph.D, Nagpur University, India)
Assistant Professor

Nano-structured materials for electrochemical device applications (Solid Oxide Fuel cells, Alkaline Fuel Cells, Sensors etc.) ; Tailoring material's micro-structures ; Electrochemical Impedance Spectroscopy ; Materials Science.

Dr. Y. Ashok Kumar Reddy
(Ph.D, Sri Venkateswara University)
Assistant Professor

Metal-based nanostructures for photodetector devices ; Metal oxide-based IR bolometers for defence systems ; Nanostructured materials for gas sensor devices.

Dr. Debolina Misra
(Ph.D, IIT Kharagpur)
Assistant Professor

Materials Modelling from first-principles electronic structure calculations; Computational catalysis ; Computational Spectroscopy; Rational design of materials for sustainability ; Defects in oxides ; Strongly correlated oxides ; Optical and magnetic properties of materials.

Dr. Manjusha Battabyal
(Ph.D, IIT Kharagpur)
Associate Professor

Thermophysical properties of solids, Powder Metallurgy, Magneto-thermopower, Device fabrication, Raman Spectroscopy, Advanced Electron Microscopy, Flexible Semiconductors, Energy Harvesting Device.

Prof. Naveen Kumar
(HoD - S&H)
Professor

Fiber Optics ; Solar Thermal Energy Applications ; Renewable energy applications.

Dr. Sadhu Sai Pavan Prashanth

Assistant Professor

Multifunctional Materials, Ferroelectric and Multiferroic Composites and Thin Films, Correlated Oxides for Optoelectronic and Spintronic Applications.

Dr. Tapas Sil

(Ph.D, Visva - Bharati)
Associate Professor

Giant Resonances of Nuclei ;Relativistic Mean Field Theory in Nuclear Structure ; Properties of Hot Nuclei ; Dynamics of Anharmonic Oscillators ; Supersymmetric Quantum Mechanics.

Dr. Vivek Kumar

(Ph.D, IIT Madras)
Assistant Professor

Nanostructured materials for energy conversion and storage: Supercapacitors, Photovoltaics; Multifunctional devices; Raman and photoluminescence spectroscopy ; Biophysics: Biomolecule-metal hybrid systems; Electron transfer in metalloproteins; SERS.

FDPs/Workshops/ Conferences Organized

1. Dr. Ashok Kumar Reddy conducted a Short-term program on Functional Materials and Devices Sponsorship: MoE and MMTTC, IIITDM Kancheepuram Schedule: 1-6 July, 2024

Funded Research/ Consultancy Projects

Physics

1. Dr. Y Ashok Kumar Reddy: Collaborative Research Scheme (CRS) Project funded by UGC-DAE CSR Title: Metal oxide-based heterostructures for gas sensor devices; Amount: Rs. 1.95 Lakhs (2023-2025)

2. Dr. Y Ashok Kumar Reddy: Collaborative Research Scheme (CRS) Project funded by UGC-DAE CSR Title: Metal oxide-based heterostructures for gas sensor devices; Amount: Rs. 1.95 Lakhs (2023-2025)

3. Prof Naveen Kumar and Dr. Timmaraju Venkat Malina: "Development of non-intrusive pressure sensor using Optical Sensor Technology", Vanmok Leak Detection Technologies Inc. Canada, Rs. 48 Lakhs, November 2023.

4. Prof. Naveen Kumar,"Design and development of an automated multipurpose rig to fabricate customized fiber Nano wires/tapers/couplers for investigating Nano photonics applications", CRG (SERB), Rs. 34 Lakhs.

English

1. Dr. Kandharaja K M C: Principal Investigator (India) in ELTRA project funded by British Council, UK (28th March 2024 to 30th April 2025). Title of the project: Beyond Gendered textbooks: An investigation into gender(ed) discourses in secondary English Language Classrooms in India and Uganda. Grant Awarded: 28,850 UK pounds & Grant for research activities in India: 9735 UK pounds. Collaborators: a) Dr. Harry Kuchah Kuchah, Associate Professor of Language, Social Justice and Education, University of Birmingham (PI- UK) b) Dr. Florence Ebira - Senior Lecture Makerere University, Uganda (PI-Uganda)

2. Dr. Kandharaja K M C:Collaborators: a) Dr. Harry Kuchah Kuchah, Associate Professor of Language, Social Justice and Education, University of Birmingham (PI- UK) b) Dr. Florence Ebira - Senior Lecture Makerere University, Uganda (PI-Uganda)

3. Dr. Kandharaja K M C:Collaborators: Dr. Dinesh A, Assistant Professor of Communication, Siva Shivani Institute of Management, Hyderabad(Co-Mentor/Co-PI).

Technical Symposiums /Conferences Participated

1. Y. Ashok Kumar Reddy: Influence of Oxygen Partial Pressure on the Performance of MoO3-based Ultraviolet Photodetectors, International Conference on Nanoscience and Nanotechnology (ICONN 2023), SRM IST, Chennai, March 27-29, 2023

2. Y. Ashok Kumar Reddy: Effect of Annealing Temperature on the Performance of the MoO3-based UV Photodetector, Photonics 2023, 5-8 July 2023, Indian Institute of Science, Bengaluru, India

Patents Filed

1. Dr Ashok Kumar Reddy: Title: Bench Top 3-D Printed Convertible Four-Probe Set-upPatentee: IIITDM Kancheepuram, Y. Ashok Kumar Reddy, P.V. Karthik Yadav, C. Praveen Kumar, B. Ajitha, Country: India, Patent No: 532653, Application No: 202241059700; Date of Filing: 19-10-2022, Status: Granted, Granted Date: 12-04-2024.

Journal Publications

Mathematics

1. J. Bhanja and R. K. Mistri, The sizes of the restricted sums of multisets, Proceedings of the Indian Academy of Sciences (Mathematical Science), 133 (2023), P40. (23 Nov 2023)

2. M. A. Shalu, Cyriac Antony, Hardness transitions and uniqueness of acyclic colouring, Discret. Appl. Math. 345: 77-98(2024) (15 March 2024)

3. J. Mondal, S. Vijayakumar: Star covers and star partitions of double-split graphs. Journal of Combinatorial Optimization 47:17, pp 1-51 (2024). doi.org/10.1007/s10878-024-01112-2 (22 March 2024)

4. M. A. Shalu, Kirubakaran V K, On cd-chromatic number and its lower bound in some classes of graphs, Discret.Appl.Math, 348: 202-210(2024) (15 May 2024)

5. Subramani, M., & Sangale, U.K. (2024) Euclidean Algorithm in Imaginary Abelian Sextic Number Fields. The Journal of the Indian Mathematical Society, 91 (1-2), 77-82.

Physics

1. P.V. Karthik Yadav, Y. Ashok Kumar Reddy*, WS2/WO3 heterostructure-based photodetectors on SiO2/Si for future optoelectronics, ACS Applied Electronic Materials, 5 (2023) 2538-2547 (April 18,2023)

2. Debolina Misra, Giovanni Di Liberto, Gianfranco Pacchioni, CO2 electroreduction on single atom catalysts: Is water just a solvent?, Journal of Catalysis 422, 1-11 (2023).(June 2023)

3. Maitreyo Biswas, Debolina Misra*, Tarun K. Kundu, Strain induced variations in transport and optical properties of SrVO3: a DFT + U study, European Physical Journal B 96: 74 (2023). (09 June 2023)

4. P C Harisankar and Tapas Sil, " Liquid drop-vapour coexistence in smoothed particle hydrodynamics", Engineering Analysis with Boundary Elements. 151, 56 (2023) https://doi.org/10.1016/j.enganabound.2023.02.039 (June 2023)

5. Anibrata Mondal, Y. Ashok Kumar Reddy*, Influence of oxygen partial pressure on the performance of MoO_3-based ultraviolet photodetectors, Surfaces and Interfaces, 41 (2023) 103179 (Oct 2023)

6. Karthickraja R, Y. Ashok Kumar Reddy, B. Ajitha, Oxygen partial pressure dependent sputtered copper oxide films for visible photodetectors, Surfaces and Interfaces, 41 (2023) 103264 (Oct2023)

7. P.S.V.R.A. Kishor, Prince Gollapalli, Debolina Misra, Prajeet Oza, and Satyesh Kumar Yadav, Role of electronic binding energy on the stability of B, C, N, and O in Fe, Physica B: Condensed Matter 668, 415264 (2023). (01 Nov 2023)

8. D. Bora, H. Dutta, B. Saha, Y. Ashok Kumar Reddy, R. Patel, S. Kr. Verma, P.S. Sellamuthu, R. Sadiku, J. Jayaramudu, A review on the modification of polypropylene carbonate (PPC) using different types of blends/composites and its advanced uses, Materials Today Communications, 37 (2023) 107304 (Dec 2023)

9. Anibrata Mondal, Y. Ashok Kumar Reddy*, Enhanced photodetector performance of nanostructured MoO_3-x thin films by inert annealing, IEEE Sensors Journal, 24 (2024) 2726-2733 (25 Dec 2023)

10. Shri Hari S Pai, Anibrata Mondal, Ramya B.T, B. Ajitha, J. J. Samuel E, Y. Ashok Kumar Reddy*, Effect of calcination temperature on NiO for hydrogen gas sensor performance, International Journal of Hydrogen Energy, 50 (2024) 928-941 (02 Jan 2024)

11. Ramya Barathy T, P.V. Karthik Yadav, Anibrata Mondal, B. Ajitha, Jayaramudu Jarugala, Y. Ashok Kumar Reddy*, High porosity and oxygen vacancy enriched WO_3-x thin films for room temperature hydrogen gas sensors, International Journal of Hydrogen Energy, 50 (2024) 878-888   (02 Jan 2024)

12. Sudatta Giri, Satyesh Yadav and Debolina Misra*, A First-principles Study of Electro-catalytic Reduction of CO_2 on Transition Metal Doped Stanene, Physical Chemistry Chemical Physics, 26, 4579-4588 (2024). (04 Jan 2024)

13. Debolina Misra, Giovanni Di Liberto and Gianfranco Pacchioni, CO_2 Electroreduction on Single Atom Catalysts: Role of the DFT Functional, Physical Chemistry Chemical Physics 26, 10746-10756 (2024) (PCCP 25th Anniversary Issue). (08 March 2024)

14. Karthickraja R, Y. Ashok Kumar Reddy, B. Ajitha, Effect of substrate temperature on Cu_2-xO growth for enhanced photodetector performance in visible region, Y. Ashok Kumar Reddy, B. Ajitha, IEEE Sensors Journal, 24 (2024) 12296-12303 (18 March 2024)

Conference Publications

Mathematics

1. M A Shalu, Cyriac Antony, Star colouring of regular graphs meets weaving and line graphs, CALDAM 2024 (accepted)

2. M A Shalu, Kirubakaran V K, Open Packing in H-free Graphs and Subclassesof Split Graphs, CALDAM 2024 (accepted)

3. M A Shalu, Sandhya, T.P, A Generalization of χ-Binding Functions. In: Synergies in Analysis, Discrete Mathematics, Soft Computing and Modelling. Forum for Interdisciplinary Mathematics. Springer, pp 151–161 (2023)

4. rya, Sridhar T, Anirudh Sathish and Subramani M, Primary Carmichael Integers and Carmichael ideal, ICCGNFRT Conference Proceedings, (Organized by Kerala School of Mathematics) (accepted for publication)

Physics

1. Y. Ashok Kumar Reddy*, P. V. Karthik Yadav, T. R. Barathy, B. Ajitha, I. Yadav, S. Gupta, Enhanced TCR results of TiOx thin films for uncooled infrared microbolometers, IEEE Applied Sensing Conference (APSCON-2023), Bengaluru, India, 2023, pp. 1–3

Invited Talks

Mathematics

1. Dr. Subramani M: Delivered a series of invited lectures at a two-day national workshop on Algebra and Number Theory in October 2023, hosted by the School of Mathematical Sciences at SRTM University, Nanded, Maharashtra. ·

2. Dr. Subramani M: Presented invited lectures at a workshop on Number Theory and its Applications held at NIT Calicut in December 2023. ·

3. Dr. Subramani M: Presented lectures during a Teachers' Enrichment Workshop focused on Probability and Number Theory at NIT Calicut in February 2024.

Physic

1. Y. Ashok Kumar Reddy: Nanostructured-based semiconductor materials for optoelectronic devices, 13th International Conference on Advanced Materials and Devices (ICAMD2023), Jeju, South Korea, December 4-8, 2023

2. Dr. Debolina Misra: Invited speaker in the FDP programme on "Computational Modelling of Materials" organized by Department of Physics, Madanapalle Institute of Technology & Science, 8th to 12th May, 2023.

3. Y. Ashok Kumar Reddy: Thin Film Coatings for Fabrication of Devices, SERB Sponsored One week high-end workshop on Micromachining & Microfabrication for Biomedical Devices, IIITDM Kancheepuram, April 4, 2024

English

1. Dr. Kandharaja K M C:Delivered a talk on the topic "Communication for Entrepreneur" as a resource person in the 2 Week Sandbox Program (theme "start-up culture") for entrepreneurs / students organised by MaDeIT, Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram (IIITDM, Kancheepuram), 21st Dec 2023.

2. Dr. Kandharaja K M C:Delivered an online talk on the topic "Academic writing centres a necessary structural reform to achieve social inclusion" as a resource person in the Faculty Development Refresher Program organised by UGC-MHRD, University of Hyderabad, 9th Jan 2024.

3. Dr. Kandharaja K M C:Delivered an online talk on the topic "A Critique on Language Policy Documents (1968, 1986, 1992 and 2020)" as a resource person in the Faculty Development Refresher Program organised by UGC-MHRD, University of Hyderabad, 1st Jan 2024.

4. Dr. Kandharaja K M C:Delivered an online talk on the topic "Understanding Language Policy, Planning, and Language Ideologies in Multilingual India" as a resource person in the online Faculty Development Programme Organised by the Department of English, SSN College of Engineering, Chennai, 11th March 2024.

Dr. Manimegalai K
Junior Technical Superintendent

SCHOOL OF INTERDISCIPLINARY DESIGN AND INNOVATION

The School of Interdisciplinary Design and Innovation (SIDI) has been created in November 2020 to give thrust to the design-centric education mandate of IIITDM Kancheepuram. SIDI draws its motivation from two major developments that have impacted the education sector in the year 2020 – the pandemic that exposed the fault-lines in the prevalent teaching/faculty-centric model of education, and the National Education Policy 2020 that has created possibilities for developing new learning/student-centric networks of education and innovation.

Faculty Members

Dr. Anand Lakshmanan
(PhD - IISc Bangalore)
Adjunct Faculty

Data analytics in Road Safety systems ; Innovative applications with IOT in road safety and public health.

Mr. Gokul Rajasekaran
Adjunct Faculty

Design methodology ; Computer Aided Industrial Design; Form exploration ; Digital Design.

Dr. Jayachandra Bingi
(PhD - IIT Madras)
Assistant Professor

Photonics for Defence and medical applications (Photonic devices and sensors); Bio-inspired research and development ; TRIZ analysis for innovative solutions

Mr. Jinan Kodapully

Adjunct Faculty

Design education (Foundation program), Natural learning Process, Aesthetic sense development, cognitive development, knowledge creation, creativity, play, Innovation, Damages of schooling.

Dr. Karthik.C
(PhD - IIT Madras)
Assistant Professor

Design of Minimally Invasive Robotic Surgical Tools; Design of Surgical Devices; Soft Robotics; Application of Compliant Mechanisms to Surgical Tools.

Dr. Monisha. M
(PhD - IIT Hyderabad)
Assistant Professor

Biosensors for cancer diagnosis; Biomedical Imaging; Biomaterials for Healthcare applications ; Microfluidics for biomedical applications; Simulation of Biomolecular complexes

Dr. Narendran G
(PhD - NIT Karnataka)
Assistant Professor

Polymer heat transfer devices for EVs, Thermal system design and optimization, Fuel cell flow maldistribution, Additive manufacturing of metal heat sinks, Microfluidics, Organ on Chip, Digital Olfaction

Dr. Raguraman Munusamy
(PhD - IISc Bangalore)
Assistant Professor
Multi-scale modelling of lightweight materials - metals, composites, honeycomb and hybrid structures; Design of experimental facilities; Design for blast, ballistic impact, fan blade off, bird strike and crashworthiness; Modelling of advanced manufacturing and 3D printing processes; Integration of IoT and additive manufacturing for design innovations; DFMA - tolerance analysis

Mr. S. Sundara Mohan
Adjunct Faculty

Sustainable Product Design,Bamboo crafts and furniture design,Bionics design,Ergonomics Design, Design Education,Indian Traditional arts and Crafts,Toy Design.

Dr. Sudhir Varadarajan
(PhD - IIT Madras)
Associate Professor

Complex responsive processes in design and innovation; Managing the fuzzy front-end of product/service innovation; Methodologies and tools for conceptual design.

Mr. VSS Iyer
Adjunct Faculty

FDPs/Workshops Conferences Organized

1. Dr Sudhir Varadarajan: 2023: Delivered 8 capacity building workshops for MaDeIT corporate client

Funded Research/ Consultancy Projects

1. Dr. Jayachandra Bingi, "Development of Milk adulteration and concentration detection Device" RefractX Pvt Ltd, Chennai (2023-2024)

2. Dr. M.Monsiha, "Designing and development of a novel therapeutic anticancer peptide to inhibit Aurora kinase A for the targeted therapy of oral carcinogenesis" (DST SERB)

Journal Publications

1. Mahalingam Babu, Sudhakara Reddy Bongu, Pritam P. Shetty, Eswaraiah Varrla, G Ramachandra Reddy, Jayachandra Bingi, Demonstration of spatial self-phase modulation based photonic diode functionality in MoS2/h-BN medium, Materials Science in Semiconductor Processing, Volume 168, 107831, 2023.

2. Pritam P Shetty and V Hemalatha and Mahalingam Babu and Jayachandra Bingi, Vortex phase deterioration common-path interferometry, Journal of Optics, 25, 8, 2023.

3. Hemalatha V, Jayachandra Bingi, "Remote surface charge detection device for water with excess charge" Engineering Research Express (IOP), 5, 1, 2023.

4. Rao, Ronisha Shankar, Deepak Saravanan, and Monisha Mohan. "GC–MS analysis, pharmacokinetic properties, molecular docking and dynamics simulation of bioactives from Curcumis maderaspatanus to target oral cancer." In Silico Pharmacology 12.1 (2024): 16.

5. Saravanan, Deepak, and Monisha Mohan. "Immunoinformatics-driven approach for development of potential multi-epitope vaccine against the secreted protein FlaC of Campylobacter jejuni." Journal of Biomolecular Structure and Dynamics (2024): 1–12.

6. Narendran, G., Jadhav, P. H., & Gnanasekaran, N. (2023). A smart and sustainable energy approach by performing multi-objective optimization in a minichannel heat sink for waste heat recovery applications. Sustainable Energy Technologies and Assessments,60, 103447. (IF-8.00).

7. Jayapal, J., Kumaraguru, S. & Varadarajan, S. "Evaluation of computationally optimized design variants for additive manufacturing using a fuzzy multi-criterion decision-making approach", Int J Adv Manuf Technol 129, 5199–5218 (2023). https://doi.org/10.1007/s00170-023-12641-1

8. Paturu P, Varadarajan S. "Assessingenvironmental sustainability by combining product service systems and life cycle perspective: A case study of hydroponic urban farming models in India", Sci Total Environ. doi: 10.1016/j.scitotenv.2024. 172232. Epub 2024 Apr 4.

Patents

1. Dr Jayachandra Bingi: Muthu Ram Kumar Avichi, Jayachandra Bingi, Rashi Dwivedi, An Aerial drop assembly, 202341012831, 20/04/2023 (Published).

2. Ms Anusha, Dr Jayachandra Bingi, Dr Sudhir Varadarajan: 2024: # 514284 (granted): Single Line Spectroscopic Device For Milk Fat And Adulteration Detection.

3. Dr Sudhir Varadarajan: 2024: # 522435 (granted): An Integrated Smart Motorcycle Throttle System, with R Saranathan.

Conference Publications

1. Sudhir Varadarajan, "Integrating Generativity in Design with the Socio-material Context: A complex responsive processes perspective", Plenary Talk at the 17th International Paris Workshop of the Design Theory SIG of the Design Society 29th – 30th January 2024.

Invited Talks Delivered by Faculty Members

1. Dr. Monisha M : Delivered talk on National seminar on Applications of Bioinformatics and Biosimulations, B.S.Abdur Rahman Crescent Institute of Science & Technology, Chennai, 2023.

2. Dr. Monisha M : Delivered talk on' Phytochemical fabrication and characterization of silver nanoparticles from Catharanthus roseus for antioxidant, antimicrobial and anticancer activity', International

Conference on Nano Structured Materials and Polymers (ICNP 2023), School of Nanoscience and Nanotechnology (SNSNT) & School of Energy Materials (SEM) Mahatma Gandhi University, Kerela, Chennai, 2023.

3. Dr. Monisha M : Delivered a talk, Wearable Intelligent Devices: Next Generation Technology, IIITDM Kancheepuram, Chennai, 2023.

4. Dr. Monisha M : Delivered talk titled "Morphological cell image analysis for detection of cancer" IEEE SPS Seasonal School on Deep Learning and Its Applications to Biomedical Signal and Image Processing, 2023.

5. Dr. Monisha M : Delivered talk titled 'Microscopic imaging of cells -live cell imaging and Organ-on-a-Chip Platforms for cancer diagnosis', Winter School on Biomedical Optics- WiSBO 2023, IIITDM Kancheepuram, Chennai.

6. Dr. Monisha M : Delivered talk "In silico Epitope Prediction and Immunogenic Analysis for development of potential vaccine against Zika virus", International Conference On Emerging Concepts in Biotechnological Innovations (ICEC-BI-2023), SRM University, Chennai. (Young Scientist Award).

7. Title:Ultra low emission in bio samples, determination and processing for diagnosis, Winter School on Biomedical Optics (WiSBO '23) at IIITDM Kancheepuram-Chennai, India, 11th December - 15th December 2023.

8. Title: Bio - inspired solutions, COVIDYA Startup Sandbox program, MaDeIT Innovation foundation, IIITDM Kancheepuram, Chennai.

9. Dr. Jayachandra Bingi: CRE Lecture 15: Nature to venture, a path of innovation, Time: Oct 4, 2023.

Technical Staff

Mr. Bandaru Chakra Prasanna
Junior Technical Superintendent

Mr. Vasudevan K
Junior Technician

CENTRES, CELLS AND COUNCILS

Institute Innovation Council

The Ministry of Education (MoE), Govt. of India has launched the MoE's Innovation Cell (MIC) initiative to cultivate a culture of innovation in Higher Education Institutions (HEIs). It envisions setting up Institution Innovation Councils (IICs) across HEIs in India to create a conducive ecosystem for innovation and entrepreneurship.

The Institute Innovation Council (IIC, setup in 2018) composed of student and faculty members organizes MIC- and self-driven events to create awareness, conduct various innovation and entrepreneurship-related activities, and systematically foster the culture of innovation in IIITDM Kancheepuram.

The events conducted by the IIC in the Institute are:

Exhibition Day:

The exhibition day organised by the Institute Innovation Council on August 15-16, 2023, featuring Prof. Hiroya Ikeda as the chief guest, was a successful event highlighting startup development and ecosystem support for innovation and entrepreneurship.

NEP 2020 and its impact on Society:

Held on November 10, 2023, featured Prof. Sreekumar M. as the keynote speaker. The session explored NEP 2020's transformative impact on education, emphasizing Access, Equity, Quality, and Accountability.

Industry Talk:

The 'Industry Talk Series' on "Recent Trends in Automotive Testing", held on October 13, 2023, featured Mr. D. Ramakrishnan from MRV, Mahindra and Mahindra. The event successfully provided students with valuable insights into current trends in automotive testing, enhancing their understanding and skills in engineering domains related to testing and quality assurance.

My Story: A Motivational Talk of an Inventor:

The motivational talk by Dr. Shanmugakumar Murugesan, founder of MATIC, held on November 16, 2023, was inspiring and insightful, highlighting innovation in agri-tech and motivating participants towards entrepreneurial endeavours in the field.

My Story: A Motivational Talk of an Entrepreneur:

The motivational talk by Dr. Kaushik Suresh, co-founder of startup company CANARY BIO-SENSORS, was engaging and informative, inspiring participants with insights into startup entrepreneurship and innovation.

Entrepreneurship and Innovation as a Career Opportunity:

The workshop on 'Entrepreneurship and Innovation' with Mr. Riyasdeen Samsudeen, CEO of SpezarTech Pvt Ltd, held on December 13, 2023, was informative and inspiring.
Participants gained valuable insights into pursuing entrepreneurship as a career, exploring the potential of innovation in shaping their professional paths.

Greening our Footprint:

The talk on "Greening Our Footprint: The Need for Energy Conservation in the 21st Century" by Dr. Selvajyothi K, held on December 14, 2023, was insightful and thought-provoking. importance of energy conservation for a sustainable future, making the event informative and impactful.

Emission to Innovation: Paving Way for Sustainability:

The session on "Emission to Innovation: Paving Way for Sustainability" held on January 2, 2024, featured Mr. Hari Prasad from Beyond Sustainability, offering insightful perspectives on sustainable production and its impact on pollution control. Participants engaged in discussions exploring actionable strategies for fostering sustainability in industrial practices, making the event enlightening and impactful.

The Unfolding Story of my Startup:

The talk on 'The Unfolding Journey of My Start-up' by Mr. Gamaliel Das, hosted on January 16, 2024, offered valuable insights into entrepreneurship and digital innovation through Code-hunters' success story.

Essay Writing Competition:

Participants engaged enthusiastically in the Essay Writing Competition themed around "Importance of the Usage of Local Products and their Role in Innovation". Students expressed their insights through compelling essays, contributing to meaningful discussions on the subject.

Workshop on Design Thinking, Critical Thinking, and Innovation Design:

The workshop on Design Thinking, Critical Thinking, and Innovation Design, led by Dr. Karthik on February 19, 2024, was a highly engaging and enlightening session. Participants gained valuable insights into problem-solving strategies and innovative approaches, fostering a collaborative learning environment that enhances critical thinking skills.

CAD Design Workshop:

The CAD modelling workshop (CADventure) held on March 11, 2024, was a resounding success, offering students a comprehensive introduction to Computer-Aided Design (CAD) through hands-on learning with Autodesk Fusion 360.

Demo Day: Innovating for a Healthier, Greener Tomorrow!:

The Demo Day on May 8, 2024, was a remarkable showcase of innovative projects focused on sustainability and health, highlighting diverse solutions from renewable energy to waste reduction. Participants' dedication and creativity were evident, contributing to a successful event aimed at shaping a more sustainable future.

IIC Regional Meet

The regional meet of Institution's Innovation Council (IIC) was held at BSACIST Convention Center, Vandalur, on December 1, 2023. Registration and a signatory campaign for innovation and startups took place from 7:30 to 10:00 am, followed by visits to an IIC poster gallery

and innovation stalls. The inaugural session began at 11:00 am, featuring speeches by Dr. N Raja Hussain, Mr. Dipan Sahu, Mr. Thiru B Senthil Velavan, Pro Chancellor Mr. Abdul Qadir Abdul Rahman Buhari, and Pro Vice Chancellor Dr. N. Thajuddin. The event included a round table meeting led by Dipan Sahu and concluded at 5:30 pm.

Auction Bazaar

Auction Bazaar, hosted by the Institute Innovation Council (IIC), held on 9thNovember,2023, attracted over 70 participants for a unique blend of scavenger hunt and auction. Participants embarked on an adventurous search for hidden items, which were then auctioned off in spirited bidding wars. The event combined teamwork, strategy, and excitement, highlighting IIC's commitment to innovation and fostering community. As the auction concluded, Auction Bazaar left a lasting impression, symbolizing the exciting fusion of adventure and collaboration within the IIC community.

Entrepreneurships and Innovation as a Career Opportunity –

DEPARTMENT OF SCHOOL OF INTERDISCIPLINARY DESIGN AND INNOVATION

The "Entrepreneurship and Innovation as a Career Opportunity" event featured a seasoned entrepreneur who emphasized the importance of a deep market understanding in launching successful ventures. The speaker, Mr. Riyasdeen Samsudeen, highlighted

the need for grassroots insights and hands-on market research, sharing personal anecdotes and practical strategies across key stages such as idea validation, product development, fundraising, and legal navigation. The event provided attendees (40) with a nuanced view of entrepreneurship's challenges and successes, inspiring them to consider entrepreneurship and innovation as viable career paths through a well-informed, market-centric approach.

Mystory:A Motivational Talk of an Inventor

The Institute Innovation Council (IIC) and the Student Affairs Council (SAC) - Technical Affairs of IIITDM Kancheepuram hosted a motivational talk on MY STORY by Dr. Shanmugakumar Murugesan, founder of MATIC, a leading deep agri-tech startup.

The SAE Collegiate Club, in association with the Institute Innovation Council, successfully organized the Tier-1 events of the SAEINDIA Student Convention. Approximately 40 participants showcased their engineering skills across diverse disciplines, including Python Programming, Auto-quiz, welding, and sheet metal applications. The events featured practical competitions and presentations, judged by industry experts and academics. Winners advanced to Tier 2 of the convention, highlighting their exceptional talents. The event fostered healthy competition and provided opportunities for networking and knowledge exchange, promoting excellence in engineering education and innovation.

The session held on 16th Nivember 2023 focused on raising awareness about startups and the critical support services that aid their development. Dr. Murugesan provided valuable insights into product development and problem-solving, using real-life examples to illustrate his points. The talk offered a fresh perspective on navigating entrepreneurial challenges and encouraged attendees to embrace the entrepreneurial journey.

SAE India Student Convention (Tier-1) and Competetion

Industrial visit to STAM Digital Toolings Pvt Ltd.

The SAE Collegiate Club-IIITDM Kancheepuram, in collaboration with the Institute Innovation Council, successfully hosted the Tier-1 events of the SAEINDIA Student Convention duringJanuary23-25,2024. Around 40 participants demonstrated their engineering skills in areas such as Python Programming, Auto-quiz, welding, and sheet metal applications. The practical competitions and presentations were judged by industry experts and academics. The winners advanced to Tier 2 of the convention, showcasing their exceptional talents. The event promoted healthy competition, networking, and knowledge exchange, enhancing excellence in engineering education and innovation.

My Story as an Entrepreneur

Startup development is crucial for fostering innovation and entrepreneurship. Aspiring entrepreneurs must navigate the complexities of starting and growing a business within a robust ecosystem that offers mentorship, funding, co-working spaces, and networking opportunities. These support services aid in knowledge exchange, resource allocation, and skill enhancement, helping startups overcome challenges and optimize growth. Alumnus of the Institute, Mr. Kaushik Suresh narrated his story of challenges and breakthroughs to more than 100 students on 30November,2023 from 2-3PM. Exploring entrepreneurship reveals the art of transforming innovative ideas into reality, enriched by inspiring stories of individuals who infuse creativity and ingenuity into their ventures. The event highlighted the transformative power of innovation in shaping industries and emphasized its significant impact on the entrepreneurial landscape.

Startup Sandbox Program

Institute Innovation Council organized the two week Sandbox program which was designed and executed based on the theme"Discover,-Define, Develop and Deliver".The program commenced on 11th December and was completed by 22nd of December 2023. Totally 21 participants participated in the program.

Discover and Define

Based on the lean product playbook principle, Dr.Karthic Narayanan R (MaDeIT Innovation Foundation) delivered a lecture to understand the " problem space" using the product market fit pyramid. Case studies pertinent to breakfast, travel and automation were explained to understand the problem space followed by exercises / activities. Participants were exposed to a sketching session by Dr.Narendran G (School of Interdisciplinary Design and Innovation).Activities/exercises were given to loosen the mind and unravel for creativity.

Ms. Bala Kiruthiha, a SPARSH Innovator, delivered a masterclass on identifying and exploring problems. She emphasized the importance of both secondary (desktop-based) and primary market research. Drawing from her 6-8 month immersion process, Ms. Kiruthiha highlighted the necessity of on-ground research to uncover real problems. Her talk covered user interactions, filtering mechanisms, and frameworks, including the widely used Stanford Design School framework for problem ranking.

Prof. Raja B, Head, Department of Mechanical Engineering delivered a lecture highlighting the importance of the following topics: Art-Aesthetics, Styling and Appearance; Design-Functionalrequirements(Ergonomic,portability,modularityetc..) and Technology-Invisible to the customer.

The talk emphasized the importance of art and design to understand the requirements of the user/ customers,whereas technology is saturated. Through critical case studies,the difference between Invention Vs Innovation was explained.

Solutions available from nature (Bio-inspired and Bio mimitic) were delivered by Dr.Jayachandra Bingi (School of Interdisciplinary Design and Innovation) for the participants. This helped them gradually move to understand the problem-inspiration-solution space. The talk also gave an overview of inspiration-problem-solution. This was followed by a laboratory session ounderstand the products which were inspired by nature. Meanwhile, the participants continued with their journey of talking to users and sketching their possible solution(s).

Develop and Deliver

Prototyping and its nuances was introduced by Mr.Murugadoss Kannan (School of Interdisciplinary Design and Innovation) who used many different methods such as thermocol art, plaster of paris, polystyrene with heat etc.. as aid to create molds for manufacturing various shapes. This day-long learning and activities helped the participants understand how simple manufacturing methods like these can help them create mockups for their solutions. The participants used these methods to create various mock ups of their solutions. The mock-ups displayed the physicality of the solution, with the key feature imbibed, which was based on the discussions from the user. Each team worked on their mockups and brainstormed with the user to collect further feedback. This helped them further improve their solutions.

Professor Sudhir Varadarajan (School of Interdisciplinary Design and Innovation) delivered a session on business model canvas as shown in Figure with case studies.This provided an outline of how a problem can be converted to a business proposition.

Simplified English for presentation was conducted by Dr.Kandharaja KMC (School of Humanities and Social Sciences). He emphasized the need for presentation using simple English as a tool to effectively put forth the ideas to a larger audience.The important aspect of the lecture was distinguishing between formal and informal communication.

Green Horizons- Innovating for a Healthier future

"Green Horizons: Innovating for a Healthier Future" showcased student prototypes focused on sustainable and health-conscious solutions. Prof. M D Selvaraj, Dean – Design, Innovation, and Incubation, and Dr. Pandiyarasan V, lead the event. Over 50 students participated, presenting more than 20 prototypes in an open house event. Notable innovations included a breath sensor using AI to diagnose illnesses by analyzing cough patterns, and a phone cover designed to reduce radiation and heat from mobile devices. These projects highlight a forward-looking integration of green technologies with healthcare advancements, demonstrating the creativity and ingenuity of young minds in addressing contemporary challenges at the crossroads of health, technology, and environmental sustainability.

MaDeIT

In the financial year 2023–24, MaDeIT Innovation Foundation added 7 more companies to its portfolio. MaDeIT has incubated about 75+ companies since its inception, and currently has a portfolio of 25 companies. MaDeIT and its incubatees also participated in the Global Investors Meet 2024, Embedded Expo – India Electronics Week(IEW) and Source India Expo 2024. Six companies graduated from the PRAYAS program, and five companies raised funds from other schemes and investors. MaDeIT also took steps to build the ecosystem to support startups and MSMEs in the area of mobility and defence. MaDeIT Innovation Foundation signed MoU with Segula Technologies India Pvt Ltd to nurture startups in the sustainable mobility domain. MaDeIT organized two outreach sessions for the 11th edition of the Defence India Startup Challenges (DISC). MaDeIT helped 11 startups to submit their proposal for the DISC XI challenges. Raana Semiconductors Pvt Ltd, the Winner of DISC 10 challenge has signed MaDeIT as its Partner Incubator. MaDeIT also organized events focused on indigenization opportunities in the defence sector.

Defence Startup Expo

Malaviya Mission Teacher Training Centre:

In the year 2023-24 the Ministry of Education (MoE) launched the Malaviya Mission Teacher Training Program (MMTTP) to accelerate faculty development and implementation of NEP in higher education institutions. UGC is the nodal centre for MMTTP. IIITDM's Teaching Learning Center (TLC) is one of the 111 centres selected for implementation of MMTTP. As per the MMTTP guidelines, the TLC has been renamed as Malaviya Mission Teacher Training Centre (MMTTC). And a new Academic Advisory Council has been constituted to guide the activities of MMTTC.

IIITDM's MMTTC has started implementing the following components of MMTTP: (a) NEP orientation and sensitization, (b) Refresher courses, (c) Short-term courses, and (d) Capacity Building on Design and Entrepreneurship (CBDE). Between Oct 2023 to Jun 2024, MMTTC organized 15 NEP orientation programs with the help of 22 resource persons and trained about 850 teachers from higher education institutions across the country. The CBDE program was officially launched by Shri Sanjay Murthy, Secretary, Higher Education, on 7 May 2024 in the presence of the members of the Program Advisory Council, mentors, directors and principal investigators of 30 participating institutions.

In addition to the above, MMTTC took steps to create a more transparent operating model and improve self-sustenance. It organized 47 Makerspace Orientation programs for 2820 Students and 120 Faculty from various technical institutes, and 3 workshops and 1 training program for government school children. MMTTC also extended support to the students from other institutions to translate their design into working prototypes.

INSTITUTE LIBRARY

The institute library (Knowledge Plaza) has good collection of resources in the form of books, periodicals (Print magazines & Journals), e-books, e-journals, e-standards, CD ROMs, research support tools, leading national newspapers, and NPTEL course video contents related to Engineering, technology, humanities, and management. It houses Kindle, and operates on KOHA. 424 new books have been added to the library this year giving to a total of 7272 books. We have renewed the Elsevier Science Direct 4 subject collections with 1631 e-journals in Computer Science, Engineering, Mathematics, Physics, and Astronomy. Our library also renewed IEEE Xplore Digital Library and Bloomsbury Design Library and is apart of the e-ShodhSindhu consortium through which get access to ACM, ASME, Springer Link and Nature Journal collecetions. We also subscribe to Anti-plagiarism Tool Turnitin which is extensively used by the research scholarsa and students. The library conducted Book Fair for first-year students during September 11-13, 2023, which provided the stduents to purchase textbooks, general books and competitive books at discounted price.

Our library also houses Kibo XS Device service which enables users to listen, translate, and digitize hard copies of printed and handwritten documents in real–time especially for visually challenged. RFID enabled entry/exit gate has been installed in the library to detect unauthorized access to resources. The library's working hours are from 09.00 AM to 10.00 PM on weekdays and 09.00 AM to 05.30 PM on Saturdays. Library Junior Technician Mr. Karthick V.J. has attended Regional Training Programme on Plagiarism Detection Software (PDS) – ShodhShuddhi on 29th November, 2023 and Library Superindenet staff Mr. G. Perumal has attended a traiing program on Smart Data Storage: Next–Gen Archiving and Retrieval 19th February 2024 to 23rd February 2024.

COMPUTER CENTRE

Major activities of the Computer Centre are listed below through which it supports the Institute activities.

i. Network
Troubleshooting and maintenance of the Network to the entire campus .(Hostel Zone, Lab Block, Admin, Academic , Senate Hall, PEMS ..etc)

ii. IP Phone
IP phone configuration and maintenance for the entire campus.

iii.Computers and Software
Troubleshooting and service Desktop, Workstation and servers and Installation and Maintenance of Softwares in the entire campus.

iv. CCTV Surveillance
Implement and Maintain CCTV surveillance to entire Campus

PLACEMENT CELL

Placement statistics for the year 2023-24 is provided below:

Total No of Students Registered for Placements (A)	Students' Active Participation (B)		No of Offers as on date (C)	Effective Strength D = (A–B)	Placement % as on 30th July (C/D)
466	No of Students who applied for less than 5 companies	147	215	319	67.3

Department wise No of Students Placed and CTC details

Branch wise No of Students placed & CTC details (AY 2023-24)				Package in Rs. Per Annum		
Course	Department	Effective Strength	Placed Students	Maximum	Average	Minimum
B.Tech	CSE	95	67	14, 00, 000	8,94,523	3,30,000
	ECE	58	34	29,05,790	9,48,646	3,30,000
	Mechanical	41	30	15,21,600	5,78,571	3,00,000
	Smart Manufacturing	17	8	7,50,000	6,75,000	6,00,000
Dual Degree (B.Tech + M. Tech)	Computer Science and Engineering	39	26	35,39,732	19,19,447	7,50,000
	ECE – Communication Systems Design	12	6	31,62,000	19,74,976	6,00,000
	ECE – VLSI Design	15	11	18,78,480	17,32,784	11,50,000
	Mechanical–Advanced Manufacturing	12	11	9,00,000	7,87,500	7,50,000
	Mechanical Engineering Product Design	13	11	12,00,000	8,26,667	6,00,000
M. Tech.	CSE–Data Science and AI	2	0			
	ECE – Communication Systems	4	3	11,50,000	11,25,000	11,00,000
	Mechanical–Mechanical Systems Design	1	1	5,00,110	5,00,110	5,00,110
	Mechanical–Smart Manufacturing	2	0			
	ECE–Microelectronics and VLSI Systems	8	6	40 K/month–1 Yr Internship (PPO awaited)		
M. Des	Integrated Product Design	1	1	4,20,000	4,20,000	4,20,000
		319	215			

Package AY-2023 Vs AY-2024

Parameter	AY 2022 – 23	AY 2023 –24 (as on date)
Highest package	32 LPA	35.39 LPA
Average Annual Package	10.84 LPA	11.41 LPA

CTC details (Course wise) – AY 2024

Course	Package in LPA		
	Maximum	Average	Minimum
B.Tech	29.05	8.68	3.00
Dual Degree (B.Tech + M. Tech)	35.39	16.67	6.00
M. Tech.	11.50	11.25	5.00

List of Companies offered Placement to our students – 2023–2024

S.No	Company Name	Positions Offered	S.No	Company Name	Positions Offered
1	Academor	29	30	SUJA – SHOEI ICOE (MadeIT)	2
2	TCS (NQT)	19	31	Textron	2
3	Foxconn	16	32	Tiger Analytics	2
4	AMD	14	33	Congruent Solutions Pvt Ltd	2
5	Kynhood Technologies Pvt. Ltd.	10	34	Neoware	2
6	Tata Consultancy Services (TCS	9	35	Microchip	2
7	GAVS Technologies Pvt. Ltd.	9	36	Mahindra & Mahindra	2
8	TensorGo	6	37	Anand Group	1
9	Quantrium	5	38	BeeHyv Software Solutions Pvt Ltd	1
10	trimble	5	39	Brakes India Private Limited	1
11	Valeo	5	40	Cambridge Mobile Telematics	1
12	Peninsular Research Operatio	5	41	Data Patterns (India) Ltd.	1
13	Besmak Components Pvt Ltd	4	42	Greaves Cotton Ltd	1
14	KLA	4	43	IdeyaLabs	1
15	Wayspire EdTech Private Limited	4	44	Kriatec Services Private Limited	1
16	Apex Semiconductors	4	45	Larsen & Toubro Limited	1
17	Analog Devices India Pvt. Ltd	3	46	MathWorks India Pvt Ltd	1
18	Tvasta Manufacturing Pvt Ltd	3	47	Mu Sigma	1
19	Checktronix India Pvt Ltd.	3	48	Pi Square Technologies India (PSTI)	1
20	Marvell India Pvt Ltd	3	49	SVP LASER TECHNOLOGY Pvt. Ltd.	1
21	NeoMotion	3	50	TuTr Hyperloop Pvt. Ltd	1
22	Agneyas Labs	3	51	Varroc	1
23	Tejas Networks	2	52	IISc Periwinkle Labs	1
24	Aqfer India Private Limited	2	53	GE Digital	1
25	Kshoonya Inc	2	54	Renault Nissan	1
26	MAQ Software	2	55	Saint Gobain	1
27	MBIT Wireless	2	56	Binocs Labs Pvt Ltd	1
28	MulticoreWare	2	57	Psyxi Devices Pvt Ltd	1
29	PGP Glass Pvt Ltd	2		Grand Total	215

Kaaryashaala:

A 3-day Intensive Training Program on Learning from Ant was organized from 29th to 31st March 2024 to make students ready for the Internship and Placement process and also to seek clarity, confidence, and self-awareness. Sessions on Resume Building, Summer Internship to PPO, Effective Communication Skills, Future Opportunities and Challenges, The Discipline of Building Character and Mock Group Discussions were arranged.

A Session on The Art of Contacting Recruiters on Linked In was conducted on 20th march by the Placement Coordinator Jashwanth Peddisetty

The Placement Cell conducted Aptitude Training and Weekly Test sessions from 19th Feb to 29th Feb 2024. Weekly Tests were conducted based on the Topics covered for the entire week during the Training Period. This activity ensures our students to be in touch with the Quant area which ensures them in clearing the first round during the recruitment process.

IPR CELL

The IPR cell has officially empanelled the M&P IP protectors, Gujarat, in the month of May 2023 to serve and streamline the patent filing by the institute faculty and students.The IPR cell conducted one round of institute patent support review in August 2023 and short listed three patents out of four for the institute funding support.

In the endeavor of filing more patents, 4 new patents have been filed in 2023 financial year and more in line. The total count of the institute patents at the end of the 2023-24 year is 36. Among the published patents 7 patents were granted in the last one year.

SOCIAL SERVICE CELL

The Social Service Group (SSG) addresses community needs and focuses on sustainable solutions by bringing innovative ideas and strategic planning to promote socialism in the community. The group works closely with faculty, students, and local organizations to strengthen the group's network and outreach. We develop individuals through group-based hands-on activities and improve knowledge, understanding and skills. In this way, each individual is guided to interact and relate with others and experience growth opportunities according to their needs and abilities.

List of Events Conducted:

1. Introduction Session

An overview of SSG's mission and vision, past and future activities. Volunteers learned about the benefits of participation, including leadership development and community impact

2. Plant Observation Session

This activity provided knowledge of the local flora on campus and also fostered a deeper appreciation for the environment. The event was interactive and educational and became a memorable experience for all participants.

3. Tree Plantation Session

The aim was to promote ecological sustainability and improve the greenery of the institute. Group discussions on the long-term benefits of tree planting, the role of trees in maintaining the ecological balance, etc. fostered a sense of community and responsibility towards nature.

4. Exploration of campus flora

This activity enhanced knowledge of campus flora and fostered a deeper appreciation for the environment. The event was interactive and educational, making it a memorable experience for all participants.

5. Cleanliness Drive

The session emphasized the importance of maintaining a clean and sustainable environment for all members of our college community.

6. Poster Making Session

The aim was to use artistic skills to create impactful posters that address issues such as environmental protection, social justice, and community health. This session empowered volunteers and others to communicate meaningful messages to their peers and the wider community.

7. Plant Watering Session

The activity emphasized the importance of plant care and ecological awareness. The event not only contributed to the maintenance of green spaces, but also promoted a sense of responsibility and connection with nature among the participants.

8. Campus Observation

The campus observations were aimed at reviewing and highlighting the proactive approach to improving the aesthetics and functionality of the campus.

9. Case Study on Bangalore Water Crisis

The session facilitated meaningful discussions on sustainable water practices and community solutions. Participants gained valuable insight into environmental issues and helped raise awareness of critical water management issues in urban areas.

Introduction session

Poster making session

10. Online Debate

This interactive session provided a platform for exploring diverse viewpoints, showcasing critical thinking and research skills, and fostering meaningful discussions on pressing global and social challenges.

Tree plantation session

Plant watering

Cleanliness drive

SCHOLARSHIP CELL

Institute scholarship cell is conducting scholarship awareness programmes twice a year. Through talk we are guiding the students for various central government, private and excellence scholarships. We support the students to understand the eligibility and application procedures for all the applications. Also, we are continuously mentoring and supporting students regarding the information and deadline of individual scholarships. The cell verifies all the applications and guides the students to submit necessary supporting documents to make sure they will receive the national level scholarships. The centre also organizes discussion meetings with different private public sector organizations to facilitate a maximum number of scholarships to our needful students.

National Scholarships

For the current year 2023-2024, 179 students applied for NSP scholarships out of which165 students obtained central government scholarship under various schemes such as: (1) National fellowship and scholarship for higher education of ST students (2) PM Yasasvi central sector scheme of top class education in college for OBC, EBC and DNT students (3)

Central sector scholarship of top class education for SC students (4) Central sector scheme of scholarships for college and university students (5) Scholarship for top class education for students with disabilities (6) Prime minister's scholarship scheme for central armed police forces and Assam rifles (7) Post matric scholarship for students with disabilities.

New Scholarship scheme "PM YASASVI" is introduced for EWS students and around 40 students applied for this scholarship in the current year.

Financial Assistantship for Hostel Corpus Fund:

We are providing financial assistantship for hostel corpus funds to 21 students out of 54 students applied.

Other Scholarships:

We are encouraging students to apply for scholarship from private organizations, foundations and industries such as: Foundation For Excellence – Scholarship: Various foundations who are providing the assistantship are: (1) Ratan Tata Scholarship for Engineering Students by Tata Education and Development Trust, (2) Siemens Scholarship Program by Siemens India, (3) Venkat Panchapakesan Scholarships India by Google India, (4) HDFC Educational Crisis Scholarship by HDFC Bank, (5) Keep India Smiling Foundational Scholarship Programme by Colgate – Palmolive (India) Pvt. Ltd, (6) ONGC Scholarship Scheme by ONGC.

State Govt. Scholarships:

Students from Madhya Pradesh, Jharkhand, Uttar Pradesh, Andhra Pradesh, and Bihar have availed the facility of state Scholarship. The scholarship process involves the approval of submitted documents by the students by the Professor in Charge. Once approved, the District Officer of the Social Welfare Department of the respective State processes the document of the student and approves based on further verification.

The process for Uttar Pradesh Scholarship was initiated for the first time through IIITDM Kancheep–uram in the Academic year 2023–24.

Higher number of applications were received from Madhya Pradesh and Uttar Pradesh. A total of twelve students had applied for Madhya Pradesh state scholarship. A total of six students had applied for Uttar Pradesh Scholarship.

ADMINISTRATIVE STAFF

Designation	Name	PHOTO
Registrar	Mr. Chidambaram A	
Joint Registrar	Mr. Gunasekaran. R	
Assistant Registrar	Mr. Gundavarapu Ravi Kumar	
Assistant Registrar	Mr. Chandan Kumar Prusty	
Assistant Executive Engineer (Civil)	Mr. Pandiyan.S	

Assistant Engineer (Elect.)	Mr. Ramkumar R	
Senior Physical Training Instructor	Mr. Alaguraj P	
Superintendent	Mrs. Rajalakshmi S	
Superintendent	Mrs. Subashini G	

Superintendent (Library)	Mr. Perumal G	
Junior Engineer (Civil)	Mr. Govindarajan S N	
Junior Engineer (Elect.)	Mr. Thailam Shivanagadurgavinod kumar	
Junior Superintendent	Mr. Rajinikanth N	

Junior Superintendent	Mrs. Kavitha P	
Junior Superintendent (Accounts)	Mr. Hariharasuthan P	
Junior Superintendent (Library)	Mr. Harikrishnan N S	
Senior Assistant	Mr. Balaji R	

Senior Assistant	Mr. Dinesh Kumar K	
Senior Assistant	Mr. Karthikeyan S	NO PHOTO
Senior Assistant	Mr. Venkatesh. G	
Junior Assistant	Mr. Gokula Kannan T	NO PHOTO
Junior Assistant	Mr. Lokesh Arunachalam R	
Junior Assistant	Mr. Mahathi Dhanavanthan E	

Junior Assistant	Mr. Parthiban S	
Junior Assistant	Mr. Sivabalan R	
Junior Assistant	Mr. Venkatesh S	
Junior Assistant	Mr. Vijay Kumar R	NO PHOTO
Junior Assistant	Ms. Harshini S	NO PHOTO
Junior Technician (Library)	Mr. Karthick.V J	

Junior Technician (Library)	Mrs. Sindhu S	
Internal Audit Officer	Mr. Chandrasekaran K	
Internal Audit Officer	Mr. Paranthaman M	NO PHOTO
Consultant (Admin)	Mr. Thirugnanamurthy J	NO PHOTO
Security Officer	Mr. Vijayan P	NO PHOTO

9th INTERNATIONAL DAY OF YOGA

Institute Sports Section organized Mass Yoga Practice Session on 21 June 2023 from 6.00 AM to 7.00 AM at Arjuna Sports Complex, as part of 9th International Day of Yoga (IDY) 2023 Celebrations. 300 Students have actively participated in the session. Mr. A. Chidambaram, Registrar has inaugurated the session. The session was conducted by Mr. Gokulraj, Ms. Aarthy and Mr. Goplalkrishnan of Dept. of Yoga, Tamilnadu Physical Education and Sports University.

STUDENT BODIES OF PROFESSIONAL SOCIETIES

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IEEE Student Branch Competition Vashisht 2023

The event was an opportunity for students to present their projects and research work in the form of a project or paper. Based on projects and research in progress / completed, students were invited to present a poster/paper on their work to a panel of judges to win a cash prize. The event was opened for BTech and Dual Degree students across India with projects from topics including Signal Processing, Communication, VLSI Technology, Robotics and Automation, Oceanic Engineering, Computational Intelligence, Photonics. Around 800 registrations were received and the event was organized in 3 rounds as follows.

/Round 1 (Held online)
A total of 425 teams (Individual and 2 Member) submitted the abstract for the first round. A preliminary shortlisting round was held based on the abstracts and the selected participants were informed to participate in the Vashisht IIITDM Tech Fest to be held on the 11th and 12th.

Round 2 (11th Feb @ IIITDM)
A total of 120 teams qualified for Round 1 of which 85 teams presented their work in Round 2. Participants were grouped into four categories: ML, AI, IoT and Others. PhD scholars were invited as Judges for the event.

Round 3 (12th Feb @ IIITDM)

The top 10 teams from Round 2 qualified for Round 3. Dr Rohini P and Dr Akash Kumar Jain were invited as the judges for the event.

Winners

The 1st place was awarded to Rithick S and Subashini S of Bannari Amman Institute of Technology for their patent-pending project on Orthotic leg for analysis – Orthomobi. (Certificate + Rs 4000 Amazon Voucher)

The 2nd place was awarded to Laksharaj Jha and Rishi Arun of SRM IST for their project on AI Chatbot for Doctors. (Certificate + Rs 2500 Amazon Voucher)

The 3rd place was awarded to Yada Sai Pranay of the Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram for his work on Vibrational Patterns of Distributed Fiber Sensors using Machine Learning.

Event: IEEE Systems Council Distinguished Lecture

IEEE Systems Council Distinguished Lecture on the topic THE RISE AND RISE OF BIOMETRIC SYSTEMS was conducted on 01/11/2023 in H15 in academic building from 4.30 to 6.00 pm. The speaker, Dr. Sambit Bakshi, an associate editor of the IEEE Systems Journal provided a clear explanation of the evolution of biometrics, origins of biometric systems and their current commercialization aspects. He also presented various use cases for biometric systems, along with their advantages and disadvantages. Over 100 students, including UG, PG, and research scholars from IIITDM, as well as participants from other institutions such as SRM, attended the event. All participants were highly satisfied with the event, and the students, particularly UG students seeking research areas, were greatly motivated. The event concluded with a vote of thanks from the convenor, Dr. Rahul Raman.

Electron Device Society

Event 1: IEEE EDS Technical Talk (TT) on "ReRAM for In-Memory Computing: Prospects and Challenges" by Mr. Shubham Pande, IIT Madras on April-17, 2023-Virtual Mode.

Event 2: IEEE EDS Distinguished Lecture (DL) on "Challenges of Reliability in Advanced Electronics" by Prof. Cher-Ming Tan, Chang-Gung University on April-21, 2023-Physical Mode.

IEEE EDS DL on "Agrivoltaics: Where Engineers Meet Farmers" by Prof. Santosh Kurinec, Rochester Institute of Technology, USA on September 12, 2023 @4.30 PM IST.

4. IEEE EDS SBC has organized a school event under the banner of Engineers Demonstrating Science: An Engineer Teacher Connection or EDS-ETC program including hands-on sessions of the snap circuit kits at Kandigai Government High School, Chennai, Tamil Nadu on August 14, 2023.

OPTICA STUDENT CHAPTER

Optica (formerly OSA), Advancing Optics and Photonics Worldwide, is the society dedicated to promoting the generation, application, archiving and dissemination of knowledge in the field. Founded in 1916, it is the leading organization for scientists, engineers, business professionals, students and others interested in the science of light. The OPTICA Student Chapter of IIITDM Kancheepuram includes 42 student members. The Student Chapter is managed by a core team comprising of Jaswanth Reddy C (President), G V S S Akhil (Vice President), Vikrant Abhishek (Secretary), Mohit Sai B (Treasurer) and Karthikeya (Public Relation Officer). Dr. Srijith K, Assistant Professor in the Department of ECE serves as the faculty mentor for the Student Chapter.
Some of the highlights of the activities of the Student Chapter in the academic year 2023-24 are listed below:

UV Light Treasure Hunt:

On Independence Day (August 15, 2023) at our campus, a UV light treasure hunt was conducted, structured in two distinctive rounds. The initial phase comprised a screening test featuring 10 optics-related questions, from which the top 12 teams advanced to the subsequent round. In the second round, clues intertwining light and freedom fighters were devised leading to the treasure. The top three teams that successfully located the treasure were bestowed with thrilling prizes.

Neo-Talk:

The third edition of New Era of Optics (NEO) Talks was hosted by OPTICA IIITDM Kancheepuram on September 20, 2023 at 5 PM IST. The speaker, Dr. Debdatta Ray, INSPIRE Faculty, IISER Kolkata gave a talk on Optical Metasurfaces: The future of Ultrathin Optics. Metasurfaces, engineered for ultrathin optics, utilize "meta-atoms" to achieve desired optical outputs through material and geometry variations. The talk covered introduction to metasurfaces, working principles, simulation techniques, and fabrication methods. Applications including plasmonic metalenses and enhanced solar cell efficiency were also discussed followed by a concluding remark on the significance of these devices in everyday life.

School visit:

The OPTICA Student Chapter conducted an insightful school visit at the Government School in Kovalam, focusing on engaging experiments related to the properties of light on November 3, 2023. The initiative aimed to introduce students to the fascinating world of optics through hands-on experiences. The experiments were designed to highlight the key properties of light, such as reflection, refraction, diffraction, and interference. Students had the opportunity to explore these concepts hands-on, using a variety of simple and accessible materials. The interactive

session not only provided a dynamic and engaging learning environment but also encouraged students to actively explore and understand the principles governing the behavior of light. The visit fostered a sense of curiosity and excitement among the students, inspiring them to delve deeper into the captivating realm of optics and science.

Photon Forge:

The Photon Forge event was successfully conducted during Vashisht 2024, our Institute's technical festival, providing a platform for participants to demonstrate optical phenomena through their innovative prototypes. The event attracted a diverse group of participants who showcased their creativity and technical skills. The winners were determined based on three key criteria: the craftsmanship and innovation in creating their prototypes, the effectiveness and clarity of their demonstrations, and their ability to respond accurately and confidently to the judges' questions. The event fostered a spirit of innovation and learning, highlighting the practical applications of optical phenomena.

IEEE EMBS STUDENT CLUB

The IIITDM Kancheepuram EMBS Student club organized a series of insightful talks during the 2023-2024 academic year, featuring experts in the field of biomedical engineering.

EMBS Talk Series Highlights:

7th EMBS Talk on 7th November 2023:

"Polymeric Biomaterials for Medical implants and devices" by Dr. Mukesh Doble, Professor at Dept of Biotech IIT Madras, and Founding Director-of Theevanam Additives & Nutraceuts Pvt ltd at IIT Madras Research park.

6th EMBS Talk on 16th November, 2023:

"An Advanced Optical Biosensor with Versatile Functionality and Exceptional Throughput" by Dr. Ganesan Sivaramakrishnan, Project Manager, Multitel Innovation Centre, Belgium.

5th EMBS Talk on 22nd September, 2023:

"Manipulating Light with Micro and Nano-Optics" by Prof. Shanti Bhattacharya, Professor, Department of Electrical Engineering, /IIT Madras.

These talks provided students with valuable insights into cutting-edge research and and applications in biomedical engineering. The EMBS Student club continues to play a vital role in fostering academic and professional development in this exciting field.

STUDENTS' ACTIVITIES

Technical Affairs – SAC

Overall Status Report:

Our tech community at the institute has experienced remarkable growth. From a modest group of 40-50 students in 2020-2021, we expanded to over 250 members in 2022-2023 and have now surpassed 400 active participants in 2023-2024. This thriving community represents 15% of our student population, underscoring the dedication of our technical affairs team to foster and enhance this growth.

The vibrant club culture at IIITDM is fueling a surge in technical enthusiasm and skill development. The achievements of our clubs in 2023-2024 demonstrate the unwavering commitment of our students to honing their technical abilities. We embrace both failures and successes as essential components of our growth journey, encouraging students to learn from setbacks and celebrate their triumphs.

The inauguration of the Innovative Idea to Reality (I2R) Makerspace has further accelerated our technical momentum. This facility provides every student with the resources to ideate, innovate, and bring their prototypes to life. Collaborative activities with the Institute Innovation Council have also instilled a strong sense of entrepreneurship among our students, driving them to transform their ideas into reality.

Achievements

SAE M-Baja

The club achieved an overall ranking of AIR 22 for SAE mBaja 2024, with top 25 rankings in Sled Pull, Acceleration Test, Validation, Endurance, Design, and CAE categories, and an impressive 6th place in Cost.

Three of the team members have been placed in prestigious automotive OEMs, including Anand, Varroc, and Greaves Manufacturers.

Additionally, three of the team members are interning at Renault Nissan.

SAE – AeroTHON

Ranked 21st out of 87 teams in the Design Report submission of Phase 1.

Secured 2nd place out of 87 teams in the Technical Presentation at Global Academy of Technology, Bangalore.

Achieved 1st place (Best Challenger Award) out of 25 teams at SJCIT Bangalore.

Secured a top 60 position out of 400 submissions in the Phase 1 Design Report Submission at IIT Madras Shaastra 2024.

Ranked 4th after successfully performing both autonomous and manual tasks at IIT Roorkee Cognizance 2024

AUV Society

Team Nira of the AUV Society secured 3rd place worldwide in the Ocean Exploration Video Challenge at the MATEROV World Championship 2023, USA.

Qualified among 42 global teams for SAUVC '24, Singapore.

Presented two research papers at OCEANS 2024 in Singapore.

Developed a precise software simulation tool from scratch.

Innovated with surface vehicles, creating an RF-controlled boat for Techfest 2023, IIT Bombay, and a hovercraft for Shaastra 2024, IIT Madras, achieving 5th rank out of 168 teams registered in Shaastra, IIT Madras.

Developed a ballast-operated ROV using surrounding water for depth control for Pragyan 2024, NIT Tiruchirappalli, achieving 5th rank out of 25+ teams registered in Pragyan 2024, NITT

MaRS Club

Currently ranked in the top 19 for ISRO Robotics Challenge and achieved top 69 in European Rover Challenge 2024.

Integrated advanced steering mechanisms into rovers for precise control and manoeuvrability.

Achieved partial autonomy for rover and manipulator systems, enhancing operational capabilities.

Currently ranked in the top 19 for ISRO Robotics Challenge and achieved top 69 in European Rover Challenge 2024.

Integrated advanced steering mechanisms into rovers for precise control and manoeuvrability.

Achieved partial autonomy for rover and manipulator systems, enhancing operational capabilities.

Robotics Club

Ranked 66th Across India in Flipkart Grid Hackathon

Successfully completed fabricated 8kg Battlebot

Talpade Aero Design Club

Qualified for phase-2 among 400 submissions in phase-1 of Boeing Aeromodelling Contest at IIT Madras Shaastra 2024.

Successfully ranked among the top 50 teams in the competition.

Individual student achievements:

Hariram Selva V R (ME22B2009) and Snekan.S (ME22B1007) were finalists (Top 8) in the Road Safety Ideathon-2023.

Kabilan (ME21B1029) was awarded Best Submission Prize for December in the APAC region in Altair's Global Student Contest.

Amiya Kumar Mondal (EDM20D013) received a prestigious "HONOURABLE MENTION Award" in the 11th International URSI Student Paper Prize Competition.

Team UnCoders (Abhishek M J – CS21B2018, Chanakya Vasantha – CS21B2008, M Sri Sujan – CS21B1081, DSLR Siddesh – CS21B2019, Srilekha – EC22B1127 and Vundi HS Mokshagna – CS21B1062) clinched victory at Smart India Hackathon 2023, on the problem statement, Developing a GUI based hardening script for Ubuntu operating system with flexibility to cater for organisational security policies (PS – 1446) at finals held at Amity University, Uttar Pradesh on 19th-20th December 2023.

Technical Clubs Activities

FROST Society:

FRee and Open-source Software Training" is a society that has been formed with students from various technical clubs managed by technical affairs. The objective of FROST is to give an opportunity for first-year students to explore different branches of engineering irrespective of their branch and training to Free and Open Source Software to students at higher semesters. Through these sessions the students were exposed to the working culture of various competitive clubs like SAE, AUV, and MaRS.

The society organised multiple sessions on various tools and domains which include the following.

Machine Learning and Artificial Intelligence, cloud-based Python development, and practical ML model building on 10th Oct 2023..

Fundamentals of Git, setting up of repositories, and collaborative software development on Version Control, Git, and GitHub on 17th Oct 2023.

Introduction to Dynamic Programming on 3rd November 2023

Linux basics, package managers, and file management on 7th November 2023

3D transforms with MATLAB which covered 3D poses, quaternions, and practical applications on 29th November

Web Animations web development April 18, 2024

IPD Club:

The club conducted various seminars under the title Gavaksha Talk Series including the following:

Key note by Ms. Athira Balakrishnan on September 30, 2023;

Current Trends in Kidney Transportation Devices and Intellectual Property by Mr. Magesh S. and Mr. Aditya Gupta

From Lab to Life: The Journey of Material Synthesis in Energy Devices and Designing for Experience by Mrs. V. Parkavi and Mr. Durgesh Tekale

Ms. Anupriya Gopal's talk on "Be Water, My Friend" captivated attendees with her inspiring journey and insights, offering fresh perspectives and engaging discussions.

"Procrastination"by Mr. Pranav Nath Kotla and Minimalism in Design by Ms. Vemula Pujitha

Information Design by Ms. Renuka Deshpande and Importance of Visual Communication in Research Ms. Aiswarya Manammal

Design thinking by Mr. Ch Anant and Design Portfolio" by Mr. Dhanaraj K

Design and Music by Mr. Vignesh Anand and Language of Visual Experience by Ms. Shangary Sundar.

Role of Visualization by Mr. K K Vivek and Explore Together by Mr. Vasanthakumar S

In addition, talks on Stress Management, The Principles of Sensory Design, Storytelling in Design, The Brand, Practicing Design Thinking, Good vs Bad Design, have also been conducted.

CS Club

Coding Contest #1:

The "Coding competition for First years" held on 12th October 2023 was a successful introduction to competitive programming for 50-75 participants.

Designed to engage and challenge first-year students, it provided a platform to hone their coding skills in a supportive environment, fostering enthusiasm and skill development in programming.

Discussion on Best Coding Practices:

The "Contest solution discussion and best coding practices" session held on 20th October 2023 was organised by the club for 30-40 participants.

It focused on reviewing solutions from a previous coding contest, discussing important algorithms, and sharing best coding practices to enhance participants' skills in competitive programming.

Coding Contest #2:

The "Online coding contest" organised by CP-CS Club on 3rd November 2023 saw active participation from 50-75 second, third, and fourth-year students.

The competition featured challenging questions aimed at enhancing participants' coding skills at an intermediate-advanced level.

Coding Contest #3:

The "Coding Competition for First years II" held on 5th November 2023 was a successful event with 50-75 first-year students participating.

The competition featured questions of basic-intermediate difficulty, aimed at introducing and enhancing the students' skills in coding and problem-solving.

Session on Web Development #1:

The "Introduction to web development" session, organised by the club, attracted 50-75 participants eager to learn HTML, CSS, and Javascript.

Participants also learned to install essential Visual Studio Code extensions for web templating and styling, fostering a practical understanding of foundational web development skills.

Session on Web Development #2:

The "Web development session II" on February 22, 2024, focused on intermediate Javascript skills, introduction to DOM Manipulation, and basics of React.

The session attracted 50-75 participants who engaged actively in learning these essential web development concepts, enhancing their practical coding skills.

Open Mic Session:

The CS Club's first Open Mic Session on August 10th, 2023, provided a platform for participants to share their tech insights, career aspirations, and projects in a supportive environment.

Attendees engaged enthusiastically, fostering a collaborative spirit and inspiring discussions among tech enthusiasts.

Session on Hacking, Modding and Simulation:

The EdITH session on September 26, 2023 delved into hacking, modding, and simulations, engaging participants with hands-on activities like spoofing, reverse engineering, and game modding.

Attendees explored new tech interests, connected with peers, and learned about upcoming CTF competitions and hackathons, fostering a dynamic learning environment in technology.

Insights on CP Workshop:

The session by Prof. Masilmani on "Competitive Programming" was successfully conducted both offline and online on October 23, 2023.

It provided valuable insights into coding competitions, placement opportunities, and entrepreneurial ventures, preparing participants for the upcoming workshop aimed at enhancing their skills in competitive programming.

Coding Contest on Women's Day:

The Coding Contest organized by CS Club and Institution's Innovation Council on March 8, 2024, was a dynamic event, attracting participants from diverse skill levels.

The contest fostered a competitive yet collaborative environment, encouraging students to showcase their programming skills and win exciting rewards.

AI Art Session:

The AI Art session hosted by CS Club's AI Team on March 16, 2024, was a captivating exploration of AI-driven artistic techniques and the innovative methods behind jailbreaking large language models like Stable Diffusion XL and LLAMA2.

Attendees engaged in interactive discussions and demonstrations, gaining valuable insights into the intersection of artificial intelligence and creative expression.

Google Developers Student Club

AWS Workshop:

The Cloud Computing Essentials and AWS Fundamentals session led by Ms. Bhuvana from Accenture was a resounding success, covering introductory concepts in cloud computing, AWS services, and hands-on deployment of a full-stack application.

Participants engaged actively, registering for AWS Educate to apply their newfound knowledge practically.

Deep Learning Session:

The Deep Learning Fundamentals session by Mr. Aryaman Gadia from AMD was a hit, providing an insightful exploration of real-world applications and hands-on project participation.

Attendees engaged actively, gaining practical knowledge and valuable insights into GPU optimization using reinforcement learning.

EPiC

External Talk:

The session, titled "Influx of new generative AI tools in the field of entrepreneurship", was conducted by Dr. Karthic Narayanan, CTO of MaDeIT, IIITDM Kancheepuram.

Industry Talk:

The session, titled "Talk by Mr. Neeraj from SixSigmaConcept", was an External Invited Talk held on June 15, 2023. Mr. Neeraj engaged 20 participants in discussing Entrepreneurship and Startup methodologies, emphasising technology's role in transforming innovative ideas into successful startups.

Kaala Bazaar / Auction Bazaar:

The session engaged 100-120 participants in a scavenger hunt where found items were auctioned off. Organised in collaboration with IIC, winners received a total sum of Rs. 1000.

Entrepreneurship for a Day:

The Entrepreneurship for a Day competition held by EPiC Club & IIC on September 19th was a resounding success, with participating teams collectively achieving sales exceeding ₹22,000.

Participants showcased their creativity and entrepreneurial skills, setting up stalls and engaging in transactions with enthusiasm and professionalism, culminating in a vibrant and rewarding entrepreneurial experience.

Eureka Ideathon:

The Eureka! Ideathon, held in partnership with Eureka! IIT B, provided participants with a platform to showcase their entrepreneurial ideas.

Participants pitched innovative concepts, vying for a chance to fast-track to the Zonals round of Eureka! 2023, with prizes and opportunities for all contestants to receive online evaluations and recognition for their creativity and innovation.

IEEE IIITDM Student Section

Distinguished Lecture Talk:

The IEEE Systems Council Distinguished Lecture on "The Rise and Rise of Biometric Systems" featured a comprehensive exploration of biometric technology's evolution, applications, and implications.

With enthusiastic participation from over 100 students across various institutions, the event left attendees inspired and informed about the prospects of biometrics.

Workshop on Research Methodology:

The "Workshop on Research Methodology" held from 11th to 15th March 2024, was conducted online with a focus on imparting essential research skills.

Facilitated by experts from academia and industry, it provided comprehensive training in research processes, hypothesis formulation, and practical exercises, engaging 50 participants from various institutions effectively.

AUV Society

Industry Talk:

The session titled "Insight into Industrial Underwater Vehicles" was conducted as an External Invited Talk exclusively for club members. Dr. Rajesh, Scientist-F at NIOT, provided valuable insights into underwater industry practices, emphasising the challenges and opportunities in ocean exploration.

Industrial Visit:

Club members visited Planys Technologies, an Underwater Robotics Company which provides underwater visual inspection services using marine robotics in Chennai. The team gained valuable insights on methodologies used in underwater vehicles.

Optica IIITDM Kancheepuram Student Chapter

UV Light Treasure Hunt:
The UV Light Treasure Hunt took place on August 15, 2023. Participants engaged in an exciting adventure, deciphering optics-themed clues to uncover hidden treasures, fostering teamwork and enjoyment throughout the event.

NEO Talk:
The third edition of New Era of Optics (NEO) Talks on "Optical Metasurfaces: The Future of Ultrathin Optics" was successfully hosted on September 20, 2023. Dr. Debdatta Ray from IISER Kolkata delivered insights into this cutting-edge field in a hybrid format, engaging both in-person and online participants.

Light in Life:
The International Day of Light event celebrating "Light in Everyday Life" concluded with participants submitting captivating images and videos showcasing the influence of light in diverse daily contexts. Submissions highlighted the beauty and significance of light in enhancing our experiences, reflecting a wide array of creative interpretations.

Robotics Club

Workshop on Computer Vision:
The computer vision workshop on Image Segmentation provided hands-on experience using AI tools from Facebook Research, designed to be beginner-friendly with no prior experience required. Participants explored practical applications and achieved targeted outcomes within an engaging and interactive session.

Workshop on ROS and Moveit:
The workshop on Robot Simulation Using ROS+Moveit provided hands-on experience with the ABB IRB 7600 robotic arm, tailored for beginners with no prior experience required. Participants engaged in practical exercises, exploring ROS functionalities and simulating robotic movements within an interactive session.

SAE Club

Drone Workshop:
The Drone Workshop, hosted by Astra IIITDM successfully covered fundamental drone technology aspects. Participants engaged in sessions covering flight mechanics, mechanical subsystems, computer science integration, and electrical engineering components.

Altair Workshop:
The Altair Workshop featured Devarakonda Pavan Kalyan from Altair Pvt Ltd. His session focused on roll-cage manufacturing for Team Rebel Racers and gripper design for Team Astra IIITDM, utilising Altair Hyperworks and Inspire Topology Optimization.

Participants gained practical insights into CAE applications, benefiting their respective projects significantly.

BAJA Workshop:
The BAJA Workshop, conducted over three days from February 26-28, 2024, provided comprehensive training to SAE Baja team applicants.

Led by mBAJA and eBAJA team leads, the sessions covered subsystem details, roles, and technical aspects, helping members understand and choose their roles effectively.

Drone Workshop:
The Drone Workshop, held on August 24, 2023, gathered 80 participants who engaged in sessions covering the fundamentals of drone technology.

The workshop included practical demonstrations and discussions aimed at enhancing understanding and practical skills among attendees.

Recent Trends in Automotive Testing:

The session on Recent Trends in Automotive Testing, held on April 1, 2024, featured Mr. D Ramakrishnan from Mahindra and Mahindra, who shared valuable insights on industry practices and testing methodologies.

The interactive talk in the Seminar Hall engaged 29 participants, fostering a deeper understanding of automotive engineering challenges and solutions.

MaRS

Introduction to Robotics:
The session was a Teaching Learning Session focused on introducing the recruits to subsystems, upcoming club activities, and facilitating interactions with senior members to kickstart their intern period at MaRS.

TAD Aeromodelling Club

Introductory Session on Industrial Design
It is an introductory session about what IDC is about and why industrial design is important for a design student. And the session also expands on the design thinking process and other different aspects of the design.

Keynote Events

Inaugural of Innovative Idea to Reality (I2R) Makerspace:

The I2R Makerspace at our institution offers a comprehensive range of resources dedicated to prototyping.

It provides both consumable and non-consumable components essential for project development, including raw materials, electronic components, circuit boards, sensors, actuators, and microcontrollers.

The facility also houses various tools like soldering stations, 3D printers, laser cutters, and power tools.

Students have access to these resources to bring their ideas to life and create functional prototypes.

Inaugurated on March 15, 2024, by Mr. Debi Prasad Dash, Former General Manager of Indian Railways, the I2R Laboratory is a hub for innovation and practical learning.

Technical Open House 2024

The Technical Open House on February 21, 2024, was a resounding success, showcasing innovative prototypes from our competitive teams.

Attendees were captivated by the cutting-edge projects in robotics and aeromodelling, sparking enthusiastic interactions and discussions.

The event saw a high turnout, all eager to explore the displayed creations.

The subsequent recruitment drive successfully inducted both seasoned engineers and eager newcomers into our technical teams.

Positive feedback highlighted the event's role in fostering innovation and collaboration within our institute.

Inaugural of SAE Collegiate Club of IIITDM Kancheepuram

The SAEINDIA Collegiate Club of IIITDM Kancheepuram was inaugurated on August 23, 2023.

The event began with the traditional lighting of the lamp and a warm welcome to distinguished guests.

Dr. Sethupathi, Chairman of SAEISS MWC Division, delivered an inspiring address emphasizing engineering excellence.

Industry leaders like Mr. Anantharaman Prakash and Mr. S. Shanmugam shared motivational insights.

Students were honoured for their exemplary contributions and achievements within the club.

Faculty advisors Dr. Shubhankar Chakraborty and Dr. Kashfull Orra were recognized for their support and mentorship.

The event concluded with enthusiastic applause, marking the beginning of a dynamic journey in innovation and collaboration.

SAE Student Convention 2023-2024

Members of the SAE Club participate in the SAE Student Convention 2023-24, engaging in diverse competitions such as Computer-Aided Manufacturing, Technical Paper Presentation, and Python Programming.

Our institute hosted the Tier-2 of the SAE Student Convention 2023-24, where we excelled in competitions including Bridge Building, Technical Paper Presentation, and Biomimicry.

In Tier-3 of the competition, our institute secured top positions in Biomimicry and performed exceptionally in Bridge Building and Auto Quiz.

Specifically, we achieved 1st place in Biomimicry and 2nd place in Bridge Building and Auto Quiz during the Tier-3 competition.

These achievements highlight our club's commitment to excellence and innovation in various technical disciplines at the SAE Student Convention.

Vigilance Awareness Week 2023

During the Vigilance Awareness week, IIITDM Kancheepuram has actively encouraged students, staff, and faculty to come together, increase awareness about common vigilance-related issues, and foster an environment dedicated to eliminating corruption and unethical practices. The events conducted as part of Vigilance Awareness Week 2023 are:

Poster Making Competition:
The poster competition held on 18th September 2023 saw enthusiastic participation, with students showcasing their creative posters on the theme "Preventive Vigilance and Allied Areas".

Debate Competition:
The debate held on 25th September 2023 was highly engaging, with participants passionately discussing "Transparency in Public Policy Framework Making" and "The Effect of Digital Payment Systems in Eliminating Corruption".

Quiz Competition:
The Vigilance Awareness Week 2023 quiz saw enthusiastic participation from students, effectively enhancing their understanding of vigilance and promoting the values of integrity and transparency.

Slogan Writing Competition:
The Slogan Writing Competition on "Public Interest Disclosure and Protection of Informers (PIDPI)" held on October 9, 2023, was a great success, with participants showcasing their creativity and commitment to transparency and accountability.

Entrepreneurship Summit 2024

The Indian Institute of Information Technology Design & Manufacturing Kancheepuram hosted its first-ever E-Summit on March 23-24, 2024. This landmark event focused on networking and innovation, bringing together aspiring entrepreneurs, professionals, and industry experts to discuss and collaborate on cutting-edge technologies. The theme centred on networking opportunities in the digital age.

The inaugural E-Summit kicked off with a powerful opening ceremony featuring a keynote speech by Mr. Robert Kennedy Manoharan, Senior Director at Tekion Corp, Chennai. The address to young entrepreneurs set an inspirational tone for the event, emphasising the importance of innovation, perseverance, and ethical leadership in the rapidly evolving digital landscape. Kennedy's words resonated with the audience, encouraging them to dream big and make a positive impact on the world through entrepreneurship.

Following the inauguration, Mr. Karthic Narayanan, CTO, MaDeIT Innovation Foundation, joined the stage, offering valuable insights into entrepreneurship. His expertise provided an excellent foundation for the events to follow.

Formal Events:

Stock Simulation: Participants engaged in a two-round stock trading challenge, testing their financial acumen and decision-making skills in a simulated market environment.

Boardroom: This flagship event simulated real-world business challenges, pushing participants to think critically and make executive-level decisions.

Hackadthon: A unique blend of hackathon and advertisement creation, this event challenged participants to not only solve problems but also market their solutions effectively.

IPL Auction: The afternoon saw an exciting cricket-themed event where teams strategically bid for players with a virtual purse of 50 crore.

Wealthopoly: The day concluded with this informal, college-themed Monopoly-style game, where participants navigated a campus-themed board, buying properties and building their academic empires.

Startup Expo: The day began with this vibrant exhibition showcasing innovative products and services from various companies. Attendees had the opportunity to engage with entrepreneurs, explore internship opportunities, and gain insights from industry experts.

Business Plan: Participants tackled a challenging case study on transforming a traditional manufacturing facility into a Smart Factory, demonstrating their ability to integrate Industry 4.0 principles into practical business strategies.

Stock Sprint: This event took participants on a simulated financial journey spanning two decades. Starting with fixed capital, competitors made strategic investment decisions, navigating market shifts and unforeseen events.

Suit Up: An engaging legal debate competition where duos argued a fictional entrepreneur lawsuit case, testing participants' persuasive skills and legal reasoning.

Murder Mystery: Participants put their detective skills to the test in this thrilling on-campus event, deciphering clues scattered across campus to solve a fictional entrepreneur's murder.

Panel Discussion: The summit featured an insightful discussion on "Carving the future industry 4.0 and identifying new marketing trends". Esteemed speakers Shyam Sekar S, Founder at Voxit Media, Nithin Alexander founder of the Underdogs of Madras, Sundararajan G director at Adept Labz and Deepak Shankar, founder and VP of sales, Mirabilis Design shared their perspectives on the technological evolution reshaping industries worldwide.

Comedy Night: The event concluded on a high note with a stand-up comedy performance by Gautham. Known for his unique blend of intellectual wit and absurdity, Gautham entertained the audience with his humorous takes on life, engineering, and everything in between.

IIITDM's inaugural E-Summit was a resounding success, bringing together a diverse group of students, professionals, and industry experts. The event fostered an environment of learning, networking, and innovation, showcasing the spirit of entrepreneurship and the potential of emerging technologies. As the curtains closed on this inaugural edition, participants left inspired and better equipped to face the challenges of the digital age, setting a strong foundation for future E-Summits at IIITDM Kancheepuram.

Vashisht-2024

Vashisht '24 is the fifth edition of IIITDM Kancheepuram's Annual Technical Fest, took place from March 15th to 17th, 2024, and set the stage as an inclusive platform for engineering enthusiasts.
Titled NEXUS AEON, the event was designed to celebrate intelligence and creativity in a warm and welcoming environment. This fest, which promoted the envisioned sustainable future interconnected with defence exploration (RETROFUTURE), aimed to nurture an inclusive and collaborative community. It sparked a passion for technology launching students into the horizons of innovation and attracting over 3000 students from across the country.

Vashisht '24 received sponsorship from Sri Aalaya Infra Private Limited, Lightcast, IIITDM Alumni Association, Bank of Baroda, Canara Bank, Union Bank, Indian Bank, Unstop, APTOS Foundation, Institute Innovation Council of IIITDM Kancheepuram, CADMacro, and Vyza Solutions.

Vashisht Juniors

Vashisht Juniors took place on March 15, 2024 witnessing a massive turnout of over 450 students from local government schools for science exploration at the institute. The fest provided a platform for students to exhibit their talents and innovations, featuring a diverse range of activities including competitions, paper presentations, workshops, and talks by industry professionals. This initiative aims to foster technical interest among government school students by enabling them to showcase their projects at Science Exhibitions and participate in Science Quizzes and a fun-filled Origami Session.

Flagship events:

Robowars: In the fiercely competitive arena, advanced robots equipped with formidable weapons clashed in a spectacular display of engineering and strategy. Amidst the excitement and cheers of the crowd, one robot emerged victorious, showcasing unmatched prowess and strategic acumen.

GDSC Vashisht Hackathon: The Vashisht Hackathon unfolded as a dynamic platform where participants delved into real-world challenges, employing diverse technologies to innovate solutions over 36 intense hours. Guided by talks, workshops, and mentorship, the event fostered learning, collaboration, and inventive problem-solving at its peak.

Drone Racing Challenge: The Aerial Ascendance Drone Racing Challenge thrilled participants with custom tracks and intense competition, culminating in heart-pounding finals where skill and speed determined the champions. It was a high-energy spectacle that showcased the exhilarating world of drone racing at its finest.

Aquaquest: The participants demonstrated their engineering ingenuity through ROVs designed to overcome underwater challenges. This competition provided a dynamic platform for fostering innovation and testing practical applications of underwater robotics.

NAMO

Nexus Aeromodelling Olympiad: NAMO at Vashisht showcased innovative aerospace designs inspired by retro themes, where participants crafted and demonstrated fixed-wing aircraft systems. This event celebrated historical aviation while challenging engineering skills and creativity, culminating in a dynamic display of AeroModeling excellence

Pitch on Pitch: Pitch on Pitch successfully catalysed entrepreneurial growth by offering student startups a platform to pitch ideas, network with industry experts, and gain crucial insights. Participants engaged in meaningful discussions, received valuable feedback, and contributed to shaping the future of entrepreneurship in India.

Capture the Flag: Participants engaged in an intense Capture the Flag competition, navigating through cybersecurity challenges to uncover hidden vulnerabilities and triumph over opponents. The event showcased strategic thinking and technical prowess in a thrilling, adrenaline-fueled atmosphere.

Retrover: Teams competed in a challenging robotics event navigating a simulated maze with autonomous UGVs or teleoperation, solving clues and overcoming obstacles. The competition highlighted teamwork, engineering skills, and strategic thinking in an exciting atmosphere of problem-solving and collaboration.

IEEE Paper Presentation: Participants delved into the latest innovations across diverse fields during the IEEE Papers Presentation Event, engaging with pioneering researchers who unveiled groundbreaking discoveries. From artificial intelligence to renewable energy, the event sparked curiosity and provided firsthand insights into shaping future advancements.

ASME IIITDM Paper Presentation: The ASME Technical Paper Presentation offered participants a prestigious platform to share their work and insights at a technical session. Abstract submissions provided unparalleled exposure, fostering discussions on advancements shaping the future of engineering.

Proshows:

Shadow Puppetry (Tholpavakoothu): The classical shadow puppetry Proshow by Ramachandra Pulavar enchanted the audience on the 16th evening, while the immersive workshop from the 15th to the 17th provided attendees with a deep dive into the art form, creating a memorable and inspiring cultural experience.

Bike Stunt Show: The bike stunt show thrilled the audience with daring acrobatics and impressive tricks, leaving spectators in awe of the riders' skills and precision. It was an exhilarating display of talent and bravery.

Valedictory Ceremony: The valedictory ceremony featured a prize distribution and an inspiring talk by Prof. Arun D. Mahindrakar from the Department of Electrical Engineering at IIT Madras. The event celebrated achievements and provided valuable insights, leaving a lasting impact on all attendees.

Musical Night: The musical night featured an electrifying performance by OneLove the band, captivating the audience with their soulful melodies and high-energy rhythms. As the evening progressed, DJ Akram took over, spinning an eclectic mix of beats that kept the crowd dancing well into the night. The seamless blend of live music and DJ sets created an unforgettable atmosphere, filled with energy and excitement. It was a night of pure musical magic that left everyone wanting more.

SPORTS AFFAIRS

» 15th August 2023:

Independence Day Run was organized on the occasion of 76th Independence Day.

» 22nd – 29th August 2023:

Organized competitions for Athletics, Badminton, Table Tennis, Tennis, Carroms and Chess on the occasion of National Sports Day.

» September 2023:

Conducted practice matches for IIITDM Volleyball, Basketball and Football teams and also team sync-ups with external coaches for guidance ahead of their participation in IIT Madras Sports Fest 2022.

» 21st – 24th September 2023:

Participated in IIT Madras Sports Fest for Athletics, Volleyball, Football, Tennis, Chess, Table-Tennis and Badminton.

» 15th–30th October 2023:

Fit India Freedom Run 3.0 was organized daily where participants can run or walk at their own pace, convenient time and place.

» 15th October – 6th November 2023:

The 11th Edition of Inter Department Tournament was organized.

» 05 Sept 2024 (Teachers Day)

Teacher's Day friendly matches in cricket, carom, badminton games was conducted for faculty and staff of our institute

Men:

Badminton, Basketball, Cricket , Football , Tennis , Volleyball , Athletics

Women:

Badminton, Basketball, Tennis, Volleyball, Athletics
Combined (Men and Women):
Carrom, Chess , Table Tennis

» 31st October 2023:

Unity Run was conducted on the occasion of National Unity Day.

» 24th November 2023:

A logo design competition had been conducted for the design of Inter-IIIT Sports Meet logo.

» 26th November 2023:

NSO Selections were conducted for all sports for a total of 370 students (B. Tech 2023 batch).

» 6th to 10th September 2023:

Novice Freshers Tournament was conducted for sports such as Basketball, Athletics, Volleyball, Tennis, Badminton, Carroms, Chess, Table-Tennis.

» 20th to 26th November 2023:

Selection trial for 5th Inter IIIT Sports Meet was held

» January to February 2023

Practice Matches were arranged for different sports events such as cricket, basketball, football and volleyball.

» 21st – 25th February 2023:

Our tennis and table tennis teams participated in the Vibrance Sports Fest at VIT Chennai.

» 27th March 2023 – 9th April 2023:

Individual Sports Leagues for various games were conducted for the students of IIITDM such as:

» 3rd Edition for Mens Cricket Tournament

» 2nd Edition for a Girls-Exclusive Cricket Tournament

» Elite Badminton Premier League (Men & Women)

» Basketball League (Men & Women)

» Volleyball League 3.0 (Men & Women)

» Table Tennis Tournament (Men & Women)

» Institute Football League

» IIT Madras Sports Fest:

Name	Result
Venithra	Bronze
Sravanth & Shirish	Bronze
Shamprethi	Bronze
Ajay Rathod	Silver

INTER IIIT 2024

The 6th edition of the Inter IIIT Sports Meet took place at IIIT Allahabad from March 9th to March 12th, 2024.

Our institute participated in a variety of events including athletics, aquatics, badminton, basketball, carroms, cricket, football, lawn tennis, table tennis, tug of war, powerlifting, and volleyball. Our students exhibited exceptional sportsmanship and competitiveness throughout the tournament, showcasing their prowess and determination in each event.

Their relentless drive and unwavering commitment were evident as they displayed their skills and athleticism on the field, track and court. Their remarkable performances not only brought glory to our institute but also served as a testament to their dedication and talent.

The event proved to be a resounding success, with our institute clinching the men's, women's, and overall championship titles.

(SAC) Academic Affairs Annual Report 2023 – 2024 / Documentation of FAQs:

Academic student team made documentation containing FAQs regarding the minors, electives, specializations, honors, credits, etc. and also, had an open session with all the students and Dean Academics to address various queries.

JoSAA Registration Process:

Academic student body along with the volunteers contributed for JoSAA admission process during the physical reporting at the institute.

Mentor – Mentee Program:

Academic student team organized a mentor-mentee program for the 1st year students after their admission. This was to guide the 1st year students in their initial steps, support them during their hard times and help them in their studies, career and to discuss about their problems.

Guidance about Scholarships:

Academic student team organized an information session on Saint-Gobain Scholarship in coordination with the company and institute administration. They also organized a session to discuss about the scholarships in our institute provide and POCs to get further help.

Weekend Sessions:

Every Friday after the academic hours and during the weekend, academic student team with the help of senior students conducted tutorial sessions for the students who face difficulties in some subjects like Calculus, Linear Algebra, etc. tudy Groups Channels:

Academic student team created communication channels for the students to gather them up based on their interests and choices. This was initiated to have all the like-minded students as a community help them achieve their dreams much faster and in a much better way.

Resources and Materials for the sessions:
Academic student team gathered up all the resources, study materials and assignments to help the students in their preparation for Weekend Sessions and Study Groups.

IDP Higher Education Services:

Academic student team, with the help of IDP Team (International Education Specialists), conducted sessions for final year students to provide an awareness about the higher studies and the processes to be followed.

Semester Automation System:

Academic student team designed a plan for automating the process of semester registration for the existing students.

Hostel Affairs

Facilities added in hostels during last one year (2023–2024)

New automated washing machines have been installed in boys' hostels.

New geysers are installed.

All the civil complaints are resolved such as tube lights in corridors, fans and broken ceilings.

A new RO system was installed in Ashoka hostel.

List of events conducted by hostel affairs (2023–2024)

Events conducted	Date
Onam	3rd September 2023
Janamastami	7th September 2023
Ganesh Chaturthi	18th September to 22nd September 2023
Dussehra (Dandiya Night)	24th October 2023
Diwali night	12th November 2023
Freshers day	18th February 2024
Holi	25th march 2024
Farewell	8th April 2024
Movie streaming	Once in a month
Match streaming	19th November 2023 , and important match IPL and world cup

Report on Hostel Facilities

Ashwatha, Ashoka, Jasmine (for girls):

Student Accommodation is available in single and double occupancy rooms with bed, study table, chair, wardrobe for each occupant. Wired internet access (LAN) is also provided in every room. Every hostel has recreational Facilities including Common facilities with TV rooms, Reading rooms and Common space at every floor. In addition to ensure Health and Safety, Medical Room with First aid supplies and a visiting doctor; 24/7 security personnel and CCTV surveillance and Fire extinguishers and emergency exits on each floor are also available for the stduents in the hostel zone. Additional Amenities include In-house laundry service room with washing machines, Regular cleaning of rooms and common areas by the Housekeeping staff and Dustbins are available at every floor in the common areas. Prompt repair and maintenance services, Cold water supply at every tap and geyser at every floor for hot water; Uninterrupted power supply with backup generators and lifts are also available.

Cultural Affairs

Cultural Affairs' events started with Independence Day. Like every year, speeches, dance and music performances will be done from Cultural Affairs along with IndicSense and Dramatics performances. Following it, Cultural Week was organized from 16th – 22nd Aug 2023 where A set of events by all Cultural Clubs are conducted in those days to select the contingent that represents our institute in other college fests.

This year, Red Ribbon Society has been included under the umbrella of Cultural Affairs through which 2 Blood Donation Camps are organized in association with the Rotary Club of Chennai through which 200+ units of blood have been donated by students, faculty and staff.

Our institute's Drama Crew has gone to IIM Indore and represented our institute in the finals. They are in the Top 6 in 266 teams that have participated in the event. Apart from what stated above, Regular Club Activities are conducted throughout the year. We also have organized several awareness events on different occasions.

MERAKI '23:

With an aim to bring together the student community for various co-scholastic activities, the institute's intra-college Cultural Fest, Meraki 2023, was set on the 14th and 15th of October. The entire event was themed based on the ICC cricket World Cup which was happening at the same time as Meraki in India.There were formal and informal events and competitions conducted by all the cultural clubs along with a few vibrant music and dance performances in the Open Air Theater to conclude the fest.

Debates, Moot court, CD painting, QuestFest, and Picture Parody were some events in which students enthusiastically participated. The literary skills of the to be engineers were clearly displayed in the debate and moot court events. Pictionary, Guess the song, 22 yards, and several other casual games were among the informal joy-filled events where students took part in. Events like these helped students come out of their busy monotonous engineering schedule and chill a bit.

The EBSB Sangam performances gave an ethnic touch to the event. Students from different states exhibited the cultural traditions of their states, resounding with the government's initiative of 'Ek Bharat Shreshtha Bharat'. Students from Tamil Nadu, Maharashtra, Karnataka, Gujarat, Kerala, Andhra Pradesh, and Telangana formed groups and showcased what their states had to contribute to the collective Indian heritage. These events stood testimony to the virtue all of us have been taught since childhood – Unity in Diversity!

SAMGATHA '24:

This year, the 13th edition of Institute's Cultural Fest Samgatha happened for 4 days starting from 4th – 7th April 2024 with the theme of "Around The World". Samgatha '24 started off with Therukoothu performance organized by SPIC–MACAY followed by Inaugaral ceremony by Dean SA Prof. Masilamani V, Dean AA Prof. Jayabal K, PiC Cultural Affairs Dr. Sai Prashanth, Dr. Raghavan S and Dr.Jagannath B on 4th of April 2024.

Few publicity events are conducted for a week before inauguration including Ethnic Day on 4th of April 2024. All clubs conducted various formal and informal events throughout the 3 days. Events ranging from Dance Wars, Art of Noise, Game of Realms, Filmathon, Think Tank, Creative Echo, BGMI to PhotoHunt, Debate, Groovin, Euphony. A photo exhibition is arranged for passing out students in one of the academic halls.We saw a footfall of over 1600-1800 including external participants.

For the Pro-show we had Mysore Xpress perform on Saturday, 6th April 2024 opened by Institute's student band Negative Space and #1 International Female DJ in India Julia Bliss performed on Sunday, 7th of April

**IndicSense (SPIC-MACAY IIITDM)–
IndicSense – the SPIC MACAY
chapter of IIITDM**

IndicSense – SPIC MACAY IIITDM is IIITDM Kancheepuram's club for anything and everything Indic. The purpose of the club is to instill Bharatiya Sanskar – a civilizational conscious among the Youth and provide a platform for students to express their thoughts and skills in Indian Music, Art and Literature.

The past academic year has definitely been the period which saw the club blossom from an idea to a full fledged Sangraha of more than 45 active students, deeply entrenched into the psyche of Indian Art, Culture and Literature.

We encourage dialogue and practice of Indian classical music and dance, folk arts, classical literature, history, heritage, philosophy, and anything and everything Indic! We had also released our own e-publication "Vr ttāntam" – an open arena encouraging students to learn, research and write on topics including Indian art, culture, history, tradition, philosophy etc.

Adhering to the tradition at IIITDM of having a classical concert on the 1st day of the academic session for the freshers, Team IndicSense was delighted to host a Carnatic Music Concert performed by Vid . Sikkil C Gurucharan , accompanied by Vid Satish Kumar on the violin and Vid Kishore Ramesh on the Mridangam.

This was followed by the inaugural edition of Laghu Virasat, an Indian cultural extravaganza held on the 3rd, 4th and the 5th of November that consisted of workshops and performances of several art forms such as Kalaripayattu, Mohiniattam, Veena and Terracotta-Pottery. It was absolutely a blessing for the student organizers and the participants to have these artists through whom Indian culture, as mesmerizing as it is, is still alive!

Further, the club also hosted its first 'Author Talk', where an eminent historian Dr. Vikram Sampath, who enlightened the audience with a lecture on "The Alternative Story of India's Struggle for Freedom: The case of the brave revolutionaries".

Students of the club also actively participated in the national call by the Hon. PM Shri Narendra Modi to celebrate Ram Lalla's return to Ayodhya with a series of Ram Bhajans on our Social Media platforms and concluded it with a celebration as a team by lighting lamps and performing the 'Nama Ramayanam' on 22nd January 2024.

Following the Pran Prathishta, the club was indeed blessed by Sri Rama to host two folk performances with Ramayanam as their theme – Tholpavakoothu by Padma Shri K K Ramachandra Pulavar and his team, who also conducted 3 sessions of workshops before their blissful performance and then a Therukoothu performance by Kalaimamani

Dr. P K Sambandam. Both performances received a rousing reception from both students , staff and faculties of our institute, with more than 300 people attending both events.

In spirit of social consciousness, and in sync with the underlying philosophy of our club, students from government schools from Kandigai,

Kumizhi, Police Public school etc, were invited to participate in the workshops both during Virasat and Tholpaavakoothu, and several of them had claimed to have had an unparalleled experience learning from the ubers of the field!

Alumni Affairs Report

Highlights:

The AlumnIIIT'23 event marked a significant milestone, drawing a footfall of over 350 participants.

The Alma Mater Interaction featured 12 distinguished alumni speakers.

"Resume 101" was a notable success with over 30 alumni mentoring 60+ students, resulting in the creation of 5 career opportunities for alumni.

These initiatives represent the largest events conducted by Alumni Affairs to date.

Operations:

Alumni Affairs allocated 3 lakh funds from alumni contributions to enhance student clubs and activities.

There was a 14% improvement in alumni data completeness, with over 1000 data points collected for NIRF and the Ministry of Education.

FACULTY SUPPORT IN INSTITUTE ADMINISTRATION

DEANS

	Position	Name the official
1.	Dean Faculty Affairs	Prof. Naveen kumar Vats (up to 08.02.2024) Prof. Binsu J Kailath (from 09.02.2024)
2.	Dean Academic Affairs	Dr. N. Sadagopan (up to 08.02.2024) Prof. K Jayabal (from 09.02.2024)
3.	Dean Sponsored Research (SRICCE) and Planning	Prof. S Jayavel
4.	Dean Design, Innovation and Incubation	Dr. Tapas Sil (up to 08.02.2024) Prof. M D Selvaraj (from 09.02.2024)
5.	Dean Student Affairs	Prof. B Sivaselvan (up to 08.02.2024) Prof. Masilamani V (from 09.02.2024)

HEADS

S.no	Department/School	Head
1.	Computer Science and Engineering	Dr. Masilamani V (up to 08.02.2024) Prof. B Sivaselvan (from 09.02.2024)
2.	Electronics and Communication Engineering	Dr. Chitti Babu
3.	Mechanical Engineering	Dr. K. Jayabal (up to 08.02.2024) Prof. B Raja (from 09.02.2024)
4.	Science and Humanities	Dr. Shalu M.A. (up to 08.02.2024) Prof. Naveen Kumar (from 09.02.2024)
5.	School of Interdisciplinary Design and Innovation	Dr. Sudhir Vararajan (up to 05.04.2023) Dr.Raghuraman M (from 06.04.2023)

PROFESSORS IN CHARGE OF VARIOUS CELLS AND UNITS OF THE INSTITUTE

Sl.No	Position	Faculty
1.	PIC Academics	Dr. Gowthaman S
2.	PIC Examinations	Dr. Srijith K
3.	PIC Research	Dr.Premkumar
4.	PIC–QIP and NPTEL	Dr.Venkata Timmaraju
5.	PIC–Social Media	Dr.Kumar Prasannajit Pradhan
6.	PIC SSG	Dr.Karthick S
7.	PIC Scholarships (Central Govt. Schemes)	Dr. Nachiketa Mishra
8.	PIC Scholarships (State Govt. Schemes)	Dr. Uttam Mrinal Pal
9.	PIC– Sports	Dr. Preeth R
10.	PIC– Co-curricular activities	Dr.Parvathy Das Dr.AVS Siva Prasad
11.	PIC– EBSB and Cultural activities	Dr.Raghavan S
12.	PIC– Alumni Affairs	Dr. Selvajyothi K(Chairperson) Dr. Gowri A Dr.Bhukya Krishna Priya Dr. Vikash Kumar
13.	PIC– Medical Centre	Dr. Ashok Kumar Reddy
14.	SC/ST/Ex–servicemen Liaison Officer	Dr.Chitti Babu
15.	OBC and Equal Opportunity	Dr. Shahul Hamid Khan
16.	PIC– Computer Centre & eMail services	Dr. Sanjeet Kumar Nayak
17.	PIC– Civil Maintenance	Dr. Pandithevan P
18.	PIC– Electrical Maintenance	Dr. Vijayakumar K
19.	PIC– Hindi Cell	Dr. Anushree P Khandale
20.	PIC– Horticulture	Dr. Subramani M
21.	PIC–Library	Dr. Vivek Kumar
22.	PIC–IPR	Dr. Jayachandra Bingi
23.	Institute Innovation council	Dean–DII
24.	Part – time CVO of Institute	Dr.Tapas Sil

25.	PIC–Designers Club & AUV society	Dr. Karthik C
26.	PIC–SAE& MARS	Dr.Shubhankar Chakraborty
27.	PIC–IEEE student branch	Dr. Chitti Babu
28.	PIC – MMTTC and PIC – MadeiT	Dr.Sudhir Varadarajan
29.	PIC–OPTICA Student Chapter	Dr. Srijith K.
30.	TLC	Dr.Sudhir Varadarajan
31.	DIC	Dr.Naveen Kumar
32.	MaDeIT	Dr.Sudhir Varadarajan

COMMITTEES AND CELLS IN THE INSTITUTE

Sl.No	Name	Faculty
1.	Placement cell	Dr. Priyanka Kokil (Chairperson) Dr.Rahul Raman (CSE) Dr.Rohini P (ECE) Dr.Rino Nelson (ME) Dr.Jayachandra Bingi (SIDI) Shri Ravikumar G,Placement officer i/c
2.	Guidance and Counselling commit	Dean–AA (Chairperson) Dean–SA PIC–Examination PIC–Academics PIC–Research
3.	Institute Infrastructure committee	Dean–Planning (Chairperson) PIC–Computer Centre PIC–Electrical Maintenance PIC–Civil Maintenance AR–Accounts IAO Officer in–charge of Estate

4.	Disciplinary Committee(Academic)	Dean-Academics
		PIC -Examination
		HoDs(ECE,ME,CSE,SIDI)
		JR/AR Academics
5.	Disciplinary Committee (Hostel)	Dean-SA
		Chief Warden
		All wardens
6.	Discipline and Welfare Committee(DWC)	Dean-AA(Chairperson) All Deans
		Concerned HoDs JR/DR/AR,Academics, Secretary
7.	NIRF & ARIIA Committee	Dr. Sudhir Varadarajan (Chairperson)
		Dr.Tapas Sil
		Dr. Pandithevan P Dr. Premkumar K
		Dr. Tejendra Dixit
		Dr. Ashok Kumar Reddy
		Shri Chanda Kumar Prusty Shri Ravikumar G, Secretary
8.	Institute Newsletter Committee	Dr.Pandiri Venkatesh
		Dr.Kashfull Orra
		Dr.Aakash Kumar Jain
9.	Anti -ragging Committee	Dean-SA (Chairperson) All Wardens
		JR/AR Admin

10.	Website and Automation	Dr.Jagadeesh Kakarla(Chairperson) Dr.Raghavan S Dr.Karthik C
11.	Media Cell	Prof. M D Selvaraj Dr. Monisha M Shri Ravikumar G,P.R.O
12.	Internal Complaints Committee	Prof. Binssu J Kailath (Chairperson) Dr. Kalpana P. Smt. Rajalakshmi S. Smt. Teena Mary Treesa Mrs. V.G Bhooma, Sr. DGM&CVO, Southern Railways
13.	Annual Report Coordination Committee	Dean-FA (Chairperson) All Deans All section Heads and HODS AR Admin - Convener
14.	Annual Report Preparation Committee	Dean-FA(Chairperson) Dr.Raghavan S Dr. Jaishree Mayank Sh. Nagarajan R Ms. Rakshana A, Sh. Karthick VJ Sh. Aswin A

HOSTEL WARDENS

Sl.No	Hostel	Faculty
1.	Ashoka	Dr.Nachiketa Mishra
2.	Aswatha	Dr.AVS Siva Prasad
		Dr.Ram Prasad Padhy
3.	Jasmine	Dr.Parvathy Das
		Dr.Jaishree Mayank