INDIAN INSTITUTE
OF TECHNOLOGY
DHARWAD

॥ सा विद्या या विमुक्तये ॥

ANNUAL REPORT 2024-25

www.iitdh.ac.in

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FROM THE DIRECTOR's DESK

PROF. VENKAPPAYYA R DESAI
DIRECTOR, IIT DHARWAD

IIT DHARWAD has added one more year to its existence since its inception in 2016 and is in its 10th year now. Our strength lies in our ability to blend the best teaching practices and contemporary, industry-specific curricula, which are strongly supported by our robust industry interface and our academic curriculum, which aligns primarily with the NEP 2020. We take pride in our top-quality faculty members, who have built a reputation for themselves in quality teaching, training, mentoring, and impressive research. This is ably supported by our infrastructure, a satisfactory campus life, well-equipped labs in departments & centres of excellence, as well as new courses & programs.

This Annual Report of IIT DHARWAD describes the wide range of various academic, co-curricular activities at IIT DHARWAD. The Editorial team has endeavoured to showcase the conducive academic, research, and friendly atmosphere that exists on campus, highlighting research projects, publications, patents, participation in international/national symposia/ conferences/ seminars/ workshops, as well as special achievements, including awards, recognitions, and honours. The prominent contributions and achievements of the faculty members and students are presented in the pages that follow. This Annual Report 2024-25 effectively presents the activities of IIT DHARWAD to its readers.

In order to increase the healthy impact of learning, research and experience sharing, several MoUs have been inked with reputed Institutions and Organizations such as the Indian Institute of Science (IISc), Bengaluru, Central Power Research Institute, Bengaluru, National Institute of Technology (NIT), Warangal and several other MoUs with premier institutions such as National Centre for Biological Sciences (NCBS), Bengaluru and so on. We have been collaborating with our defence-related organisations, such as the Manekshaw Centre of Excellence in National Security Studies and Research (MCoENSSR), the Aeronautical Research & Development Board (AR&DB), and the Naval Research Board (NRB) of the Defence Research & Development Organisation (DRDO). Already, a few sponsored projects have been sanctioned.

Among the other major sponsored research projects, Prof. Rajshekhar V. Bhat was awarded a prestigious ₹2.5 crore project titled 'AI-native Radio for 6G semantic communications: From Theory to Chips' by the Telecom Technology Development Fund (TTDF) and the Telecom Centre of Excellence (TCoE). Prof. Koteshwararao Kondepu has secured ₹138 crore of TTDF-DOT project grant titled "SMART-RIC6G: Smart Drift-Handling Enabler for RAN Intelligent Controllers in 6G Networks" from the Department of Telecommunications. Prof. Keerthi M C has secured ₹59.12 lakhs SERB-CRG project grant titled "Experience Study of an Oscillating Transonic Shock-wave Boundary layer interaction (CRG/2023/007990-C)" from the Department of Science and Technology. Prof. Somashekara M.A. has secured a ₹52.80 lakhs SPARC-MOE project grant titled "Development of Personalised, focal and deep transcranial magnetic Stimulation (TMC) Coils using metal addictive Manufacturing" from the Ministry of Education, Government of India.

This academic year was also marked by strong research activities, with around 260 publications. Many events, including talks from esteemed speakers, 17 sponsored projects, 33 consultancy projects, 2 CSR (Corporate Social Responsibility) projects, and three workshop projects, further showcased our development. Nine of our faculty members have received the prestigious PM's Early Career Research Grant (ECRG) from the Anusandhan National Research Foundation (ANRF), Department of Science & Technology (DST), during this academic year. They are Profs. Amar Kushwaha [EECE], Balkrishna Chaube [BSBE], Konjengbam Anand [CSE], Kundan Kumar Singh Sagar [CHY], Satavisha Kayal [CHY], Shraddha Srivastava [MATHS], Subhash Mehto [BSBE], Veekesh Kumar [MATHS] and Shashanka Mattur [EECE]. Additionally, PRof Amarnath Hegde [CIE] was awarded the Prof. Satish Dhawan Young Engineer Award by the Karnataka State Council for Science & Technology [KSCST].

Moving towards our placements, our students have been placed in several reputed and well-known companies from various domains, including Core Engineering, R&D, IT&BT (Information Technology & Biotechnology), Automobile, Government, Tourism, and Startups, with competitive packages. We remain continuously invested in the overall progress of our students, offering them a range of opportunities in various areas. The median package is ₹12.18 LPA (Lakhs Per Annum), average is ₹ 14.65 LPA, and the highest package is ₹ 38.5 LPA, with an overall placement percentage of nearly 96% [inclusive of students opting for higher education/competitive exams/opening startups]. Many events, such as workshops, webinars, HR conclaves, coding tests and experience-sharing sessions were organised to improve the placement skills of the students.

The Bengaluru Chapter of our Alumni Association was launched on 31st August 2024. To showcase our commitment to cultural activities, we hosted a 7-day Regional SPICMACAY (Society for the Promotion of Indian Classical Music and Culture Amongst Youth) Convention from October 14th to 20th, 2024. The 5th edition of IIT DHARWAD's Annual Tech Festival (PARSEC 5.0) returned this year with 2 lakh Online impressions and 2000+ registrations.

This year, we introduced the 3rd and 4th Co-Curricular Activities (CCA) verticals, specifically NCC (National Cadet Corps) and National Cultural Appreciation (NCA). This provides our students with additional avenues to instil discipline in their lives as cadets or explore their hobbies related to Indian classical arts.

Our sincere gratitude to all our mentors, collaborators and facilitators. Sincere thanks are also due to the members of the Board of Governors (BoG), the Finance Committee (FC), the Senate, and the Building & Works Committee (BWC) members. Special thanks to the Ministry of Education (MoE) and its staff, Government of Karnataka, Deputy Commissioner and District Administration of DHARWAD and their team. We are sure of their continued support and encouragement in future.

Let me also thank all the student community, faculty members, including visiting faculty members, adjunct faculty, staff members, administration, support and security services of the institute for their sincere involvement towards the smooth running of the institute and also for being a part of the growth of the institute in the last year. With all our collective efforts, let us strive to make our IIT positively transform from an 'Iron' into a 'Magnet' very soon.

I am also confident that the hard, smart, sincere, disciplined, and focused work of all stakeholders will make IIT DHARWAD scholastically rich and a centre of attraction for students, researchers, and scholars from across the country and beyond.

JAI HIND!

PROF. VENKAPPAYYA R DESAI
DIRECTOR, IIT DHARWAD

ABOUT THE IIT DHARWAD

The Indian Institute of Technology, Dharwad (IITdh) is one of the third-generation (3-G) IITs, established by the Ministry of Education (MoE), Government of India (GoI). It was started in August 2016 under the mentorship of IIT Bombay. Our academic journey began in the Academic Year (AY) 2016-17, with the establishment of four-year Bachelor of Technology (B.Tech.) programs in Mechanical Engineering (ME), Electrical Engineering (EE), and Computer Science & Engineering (CSE).

Currently, our institute offers four other B. Tech programs - Engineering Physics (EP), Mathematics & Computing (M&C), Civil & Infrastructure Engineering (C&IE), Chemical & Biochemical Engineering (C&BE), as well as a five-year Bachelor of Science-Master of Science (BS-MS) program, a two-year Master of Technology (M. Tech.) A Master of Science (MS) Program and a Program offered by the three oldest Departments of Mechanical, Materials & Aerospace Engineering (MMAE), Electrical, Electronics & Communication Engineering (EECE) and CSE. Our PhD program is offered by all ten Departments [which also include the other seven Departments of Bio Science & Bio Engineering (BSBE), Chemical Engineering (ChE), Chemistry, C&IE, Humanities, Economics, Arts and Rural Technologies (HEART), Mathematics and Physics].

Presently, IIT DHARWAD accommodates about 1,562 students, of whom 25–30% are women. This diverse student community represents more than 25 States and Union Territories across the country. Approximately 25% of our students are enrolled in Master's and Doctoral programmes. Our academic community comprises 93 regular faculty and 12 adjunct / visiting faculty / Professors of Practice across ten departments. The institute has consistently secured competitive research and development grants, delivered sponsored and consultancy projects, and published high-quality scientific manuscripts in reputable journals and conference proceedings.

The Institute aspires to attain global recognition in education and research by fostering a receptive learning environment, generating new knowledge, and enabling scientific breakthroughs and technological innovation. By nurturing interdisciplinary research and sustaining an ecologically harmonious campus, IIT DHARWAD provides an enabling ecosystem for both students and faculty to excel.

The Institute has carefully planned and developed world-class infrastructure over a sprawling 470-acre campus, of which 67 acres are preserved as natural forest. The campus is being built to achieve net-zero impact with respect to water, energy, and waste. In line with this vision, the Board of Governors has recently approved an ambitious target to realise this net-zero status by 2030.

Over the past eight years, IIT DHARWAD has strategically recruited faculty with global exposure, with a strong emphasis on high-quality research and interdisciplinary academic programmes. The Institute is advancing a holistic research approach in key areas, including net-zero (sustainable) physical infrastructure, Cyber-Physical Systems (CPS), Green Mobility, Precision Agri-Tech, and 3D & 4D Printing for Additive Manufacturing. Key initiatives include the Space Data Science Laboratory (SDSL), along with two Growth Centres of Excellence in Affordable and Clean Energy (ACE) and in Indian Knowledge Systems (IKS). IIT DHARWAD's commitment to innovation, sustainability, and national technology missions is further strengthened through industry partnerships, sponsored research projects, and institutional support structures such as DhaRti (Dharwad Research Technology and Incubation) and the Institute Innovation Council (IIC). The Institute has also been awarded the prestigious Karnataka Renewable Energy Development Limited (KREDL) Chair Professorship to further accelerate research in renewable, affordable and clean energy domains that form the backbone of national development.

In December 2022, IIT DHARWAD was awarded a 5-star Rating under the Green Rating for Integrated Habitat Assessment (GRIHA) for its Large Development (LD) Master Plan. Additionally, IIT DHARWAD has been awarded the Best Concrete Structure by the Ultratech Cements Group.

IIT DHARWAD is well-connected by road, rail, and air. The permanent campus is approximately 3 km from National Highway 48 (Pune–Bengaluru Highway). The inter-district and inter-state bus terminal is located about 8 km away, with regular services to major cities such as Bengaluru, Mumbai, and Hyderabad. The nearest railway station is Dharwad Railway Station, situated about 14 km from the permanent campus. Hubballi Railway Junction, the headquarters of the South Western Railway Zone, is about 30 km away. Hubballi Airport is the nearest airport, offering regular flight connectivity to major cities including Bengaluru, Mumbai, Hyderabad, Delhi, Pune and Chennai. Another airport in Belagavi is approximately 70 km away, which also connects major cities.

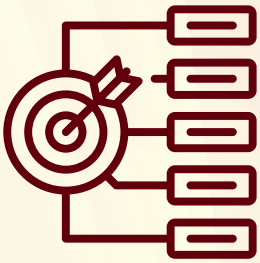
VISION

To attain global recognition in education and research by nurturing a receptive learning environment that creates knowledge for all and by fostering scientific breakthroughs & innovative technologies for addressing global challenges.

MISSION

- To promote education that enriches young minds, propels knowledge, fosters responsible innovation, and cultivates leadership.
- To innovate and contribute through performance-based technologies and solutions for addressing society and industry challenges.
- To nurture interdisciplinary research and methodologies for developing capabilities that are globally competitive and transformative.
- To emerge as a focal point for collaboration with industry, academia and other scientific centres of excellence nationally and internationally.
- To provide an ecologically harmonious campus that promotes learning and the overall well-being of its inhabitants.

OBJECTIVES



- To create a globally competitive education system through programs in various domains of engineering, science, humanities and social sciences and support excellence through cutting-edge research and pedagogy.
- To facilitate technological innovation and new research by establishing state-of-the-art infrastructure and facilities, thereby supporting societal needs.
- To build a rich learning environment for students by providing inspired teaching, healthy student-faculty ratios, research and innovation opportunities, and industry-related skills.
- To orient research towards new/fertile markets, in collaboration with the Government and industry and strengthen ties and support with all concerned partners.
- To provide avenues for generating and disseminating new research pathways through publications, symposiums, training programs, copyrights and patents.
- To offer a conducive research ambience for attracting and nurturing world-class faculty that would spearhead knowledge building in all disciplines.

ALL TIME FOCUS

We are committed to fructify the 'ParashurAma BasavEshwara akshaya kshEtra (PBaK)', a Net-Zero Water-Energy-Waste Facility by 2030.

Organization

BOARD OF GOVERNORS

CHAIRMAN

Prof Venkappayya R. Desai

Officiating Chairman, IIT DHARWAD
(Upto 28th February 2025)

MEMBERS

Prof Venkappayya R. Desai

Director, IIT DHARWAD

Shri S. R. Umashankar

Additional Chief Secretary
Department of Higher Education Government of Karnataka
Room No: 645, 6th Floor, M.S. Building
Bangalore – 560001
(From March to June 2024)

Dr Shamasundar S.

Managing Director
ProSIM R&D Pvt Limited
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Prof Bhavin Kothari

Senior Faculty – Strategic Design Management,
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Extension Road, Gandhinagar – 382007

Prof Ramjee Repaka

Professor,
MMAE and Dean Students' Welfare,
IIT DHARWAD

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Joint Secretary (Technical Education),
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Department of Higher Education, Government of Karnataka
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Prof S. S. Murthy

Former Professor,
Department of Electrical Engineering,
IIT Delhi.

Organization

Prof N. S. Punekar

Visiting Professor,
BSBE and Dean Academic Programs,
IIT DHARWAD

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Dr Kalyan Kumar Bhattacharjee

Registrar
IIT DHARWAD
(from 5th February 2025 to till date)

Shri Sandeep Pareek

Deputy Registrar &
Officiating Registrar IIT DHARWAD
(from April 2024 to 4 February 2025)

Organization

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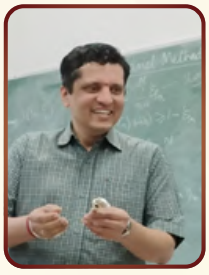
Prof Venkappayya R. Desai

Officiating Chairman, IIT DHARWAD
(Upto 28th February 2025)

Ex-OFFICIO MEMBERS

N. S. Punekar

Visiting Professor and
Dean of Academic Programmes
Department of Biosciences and Bioengineering,
IIT DHARWAD



Dileep A D

Professor and Dean of Administration
Department of Computer Science
and Engineering, IIT DHARWAD

Pratyasa Bhui

Associate Professor and
Dean of R&D
Department of Electrical, Electronics and
Communication Engineering, IIT DHARWAD

S M Shivaprasad

Visiting Professor and Dean of Outreach
Department of Physics, IIT DHARWAD

Prof Ramjee Repaka

Professor and Dean of Student Welfare
Department of Mechanical,
Materials and Aerospace Engineering,
IIT DHARWAD

Dhiraj V. Patil

Associate Professor and
Dean of Faculty Welfare
Department of Mechanical,
Materials and Aerospace Engineering,
IIT DHARWAD

Amaranath Hegde

Associate Professor and
Dean of IPS
Department of Civil and
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Assistant Professor & Head
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Organization

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Nilkamal Mahanta

Assistant Professor & Head
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IIT DHARWAD

Naveen K.

Assistant Professor & Head
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Sagnik Sen

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Department of Mathematics,
IIT DHARWAD

Ramachandra Phawade

Assistant Professor &Head
Department of Computer Science
and Engineering,
IIT DHARWAD

Dr Kalyan Kumar Bhattacharjee

Registrar, IIT DHARWAD
Secretary

Organization

MEMBERS

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Pushpa Trivedi

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Surya Pratap Singh

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IIT DHARWAD

Organization

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Aniket Kataware.

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Department of Civil and Infrastructure Engineering, IIT DHARWAD

Goudappa R Dodagoudar

Professor, Department of Civil Engineering, IIT Madras

Arun D. Mahindrakar

Professor, Department of Electrical Engineering, IIT Madras

Nikhil Hegde

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Department of Computer Science and Engineering, IIT DHARWAD

Rahul Pandya

Assistant Professor & FiC Students Welfare (Mentorship)
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Rajshekhar V Bhat

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Ramesh Nayaka

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Department of Civil and Infrastructure Engineering, IIT DHARWAD

Koteswara Rao Kondepu

Associate Professor & Associate Dean IPS (Networking and Communications)
Department of Computer Science and Engineering, IIT DHARWAD

Sudheer Siddapurdeddy

Associate Professor & Associate Dean Coordination (Academic, Faculty, R&D, Students)
Department of Mechanical, Materials and Aerospace Engineering, IIT DHARWAD

Tejas P. Gotkhindi

Associate Professor & Associate Dean-FW, Recruitment
Department of Mechanical, Materials and Aerospace Engineering, IIT DHARWAD

R. Prabhu

Associate Professor
Department of Physics, IIT DHARWAD

Organization

Ridhima Tewari

Associate Professor, Associate Dean, Students' Welfare (Wellness and Female Students), Chairperson -Internal Complaints Committee (ICC)
Department of HEART, IIT DHARWAD

Veekesh Kumar

Assistant Professor & FiC - FW(Recruitment)-2
Department of Mathematics, IIT DHARWAD

Shreedevi Masuti

Assistant Professor
Department of Mathematics, IIT DHARWAD

Ameer Mulla

[Associate Professor, Associate Dean - IPS [Electrical]
Department of Electrical, Electronics and Communication Engineering, IIT DHARWAD

D. Narasimha

Visiting Professor, Department of Physics, IIT DHARWAD

Tamal Das

Assistant Professor & FiC-AP-UG-1
Department of Computer Science and Engineering, IIT DHARWAD

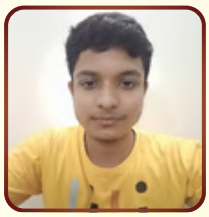
Samatha Benedict

Assistant Professor & FiC-AP-UG-2
Department of Electrical, Electronics and communication Engineering, IIT DHARWAD

STUDENT MEMBERS

Mr Vedant Wagh

B. Tech Student



Mr Priyanshu

BS-MS Student

Ms Vedpathak Mukta Mahesh

B. Tech Student

Mr Uttkarsh Jaiswal

B. Tech Student

Organization

Mr. Siddhant Nagar

MS Student

Mr. Dushyant Kumar

M Tech Student

Mr. Sumit Sah

Ph.D. Student

Ms. Meghna Bhat

Ph.D. Student

FINANCE COMMITTEE

CHAIRMAN

Prof Venkappayya R. Desai

Officiating Chairman, IIT DHARWAD
(Upto 28th February 2025)

MEMBERS

Prof Venkappayya R. Desai

Director, IIT DHARWAD

Shri Sanjog Kapoor

Joint Secretary & Financial Advisor,
Department of Higher Education,
Ministry of Human Resource Development,
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Prof Amarnath Hegde

Dean Infrastructure, Planning & Support (IPS)

Ms Saumya Gupta

Joint Secretary (Technical Education)
Department of Higher Education
Ministry of Human Resource
Development 118-S,
Shastri Bhawan, New Delhi

Dr. D Lakshmanan

Advisor F&A, IIT Bombay

SECRETARY

Dr Kalyan Kumar Bhattacharjee

Registrar
IIT DHARWAD
(from 5th February 2025 to till date)

Shri Sandeep Pareek

Deputy Registrar &
Officiating Registrar IIT DHARWAD
(from April 2024 to 4 February 2025)

BUILDING AND WORKS COMMITTEE

CHAIRMAN

Prof Venkappayya R. Desai

Officiating Chairman, IIT DHARWAD
(Upto 28th February 2025)

MEMBERS

Prof Amarnath Hegde

Dean Infrastructure, Planning & Support (IPS)

Shri P Vedagiri

Dean (IPS), IIT Bombay

Shri Ashok C Naik

Officer on Special Duty, IIT Bombay

Dr Kolluru V L Subramaniam

Dean (IPD), IIT Hyderabad

Shri K J Mahesh Chandra

Executive Engineer, IIIT DHARWAD

SECRETARY

Dr Kalyan Kumar Bhattacharjee

Registrar
IIT DHARWAD
(from 5th February 2025 to till date)

Shri Sandeep Pareek

Deputy Registrar &
Officiating Registrar IIT DHARWAD
(from April 2024 to 4 February 2025)

ACADEMIC SECTION

The Indian Institute of Technology, DHARWAD (IIT DHARWAD) commenced its academic activities in July 2016 with three undergraduate programs: B. Tech in Computer Science & Engineering, Electrical Engineering, and Mechanical Engineering. The first batch had a total of 113 registered students. The institute began its PhD program in January 2018 (Spring 2017-18) with four registered students and its MS by Research program in 2019 with seven registered students. New B.Tech. Programs were introduced in the coming years, including Engineering Physics in 2021-22, Chemical and Biochemical Engineering, Civil and Infrastructure Engineering, and Mathematics and Computing in 2022-23. A new dual-degree program, BS-MS in Interdisciplinary Sciences, also began in the 2022-23 academic year. The M.Tech. The program in Mechanical Engineering started in 2022 with 14 students. The M.Tech. program in Electrical Engineering started in 2023 with 26 students. IIT DHARWAD consistently focuses on delivering high-quality education and providing state-of-the-art research facilities to both students and faculty members. Student enrolment has increased significantly over the years. The student strength during 2024-25 was 892 B.Tech., 87 BS-MS, 95 M.Tech., 38 MS by Research, 5 Executive M.Tech., and 211 PhD.

Students Enrolment Since 2016

Program	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
B. Tech	113	114	117	126	161	162	221	227	286
BS-MS	0	0	0	0	0	0	30	22	35
MS	0	0	0	8	11	19	5	11	9
PhD	0	8	21	22	28	27	30	61	80
M.Tech.	0	0	0	0	0	0	14	34	65

Category Wise Student Enrolment 2024-25

Program	GEN	EWS	OBC	SC	ST	PWD*	Total
B.Tech.	106	34	72	50	24	2	286
BS-MS	10	3	8	10	4	0	35
MS	4	0	4	1	0	0	9
PhD	35	8	21	14	2	0	80
M.Tech	22	7	22	11	3	0	65

*PwD students are included in their respective social category as well.

Gender Wise Student Enrolment 2024-25

Program	Male	Female	Total
B.Tech.	235	51	286
BS-MS	31	4	35
MS	8	1	9
PhD	56	24	80
M.Tech	52	13	65

Academic Section

Details of the Programs

IIT DHARWAD is currently offering nine B.Tech. programs and a five-year integrated BS-MS program in Interdisciplinary Sciences.

The details of the B. Tech. The programs are listed below:

1. B. Tech. in Computer Science and Engineering
2. B. Tech. in Electrical Engineering
3. B. Tech. in Mechanical Engineering
4. B. Tech. in Engineering Physics
5. B. Tech. in Civil and Infrastructure Engineering
6. B. Tech. in Mathematics and Computing
7. B.Tech. in Chemical and Biochemical Engineering
8. B.Tech. in Electronics and Communication Engineering
9. B.Tech. in Electrical and Electronics Engineering

Apart from the B.Tech. and BS-MS programs, the following postgraduate programs are offered.

MS by Research (Now renamed as M.Tech. by Research)

1. Computer Science and Engineering Department
2. Electrical, Electronics and Communication Engineering
3. Mechanical, Materials, and Aerospace Engineering Department

M. Tech.

1. M.Tech. in Mechanical Engineering
2. M.Tech. in Electrical Engineering
3. M.Tech. in Computer Science and Engineering

Ph.D.

1. Biosciences and Bioengineering Department
2. Chemical Engineering Department
3. Chemistry Department
4. Civil Engineering Department
5. Computer Science and Engineering Department
6. Electrical, Electronics, and Communication Engineering
7. Humanities, Economics, Arts and Rural Technologies
8. Mathematics Department
9. Mechanical, Materials, and Aerospace Engineering Department
10. Physics Department

Convocation

The 5th Convocation was held on 22nd July 2024. Prof. Shrinivas Ramchandra Kulkarni (George Ellery Hale Professor of Astronomy and Planetary Science, Division of Physics, Mathematics and Astronomy at the California Institute of Technology [CalTech], Pasadena, California, USA) was the Chief Guest for the event.

Number of Awarded Degrees

Sl. No.	Program	No. of Students
1	B. Tech in Computer Science and Engineering	60
2	B. Tech in Electrical Engineering	51
3	B. Tech in Mechanical Engineering	43
4	MS by Research	11
5	PhD	15
6	M. Tech. in Mechanical Engineering	10
	Total	190

Academic Section

The following awards have been instituted to be presented at the convocation every year.

Medals and Cash Awards for the Year 2024-25

President of India Gold Medal: For the most outstanding student among all the branches who have completed the requirements for the degree of Bachelor of Technology (highest CPI).

Director's Gold Medal: For the most outstanding student among all the branches, considering aspects such as general proficiency, academic performance, co-curricular, extracurricular activities, research/ papers /patents, technical events, awards/recognitions, entrepreneurship and social services.

Institute Silver Medal (CSE): For the most outstanding student who has completed the requirements for the degree of Bachelor of Technology in Computer Science and Engineering (CSE) branch (highest CPI).

Institute Silver Medal (EE): For the most outstanding student who has completed the requirements for the degree of Bachelor of Technology in Electrical Engineering (EE) branch (highest CPI).

Institute Silver Medal (ME): For the most outstanding student who has completed the requirements for the degree of Bachelor of Technology in Mechanical Engineering (ME) branch (highest CPI).

Cash Award: Om Prakash Goyal and Sevati Devi Goyal Award: - The award is presented to the academically best girl student at the Institute convocation and consists of a certificate & cash prize of 25,000/-. In case the academically best girl is the overall topper of the whole batch and the recipient of the President's Gold Medal, the award is given to the next best (based on CPI) girl student, as a token of encouragement.

Medal awardees for the year 2024-2025

Sl. No.	STUDENT NAME	BRANCH	MEDAL
1	Shahank P	CSE	President of India Gold Medal
2	Aditya Kalyani	EE	Director's Gold Medal
3	Arvind Kumar M	CSE	Institute Silver Medal (CSE)
4	P Nitin Srinivas	EE	Institute Silver Medal (EE)
5	Lokesh B Jogi	ME	Institute Silver Medal (ME)
6	Ms. Kavali Sri Vyshnavi Devi	CSE	Om Prakash Goyal and Sevati Devi Goyal Award

Institute Foundation Day

The Institute Foundation Day was celebrated on 24th August 2024. The Chief Guest for the event was Prof. T. G. Sitharam, Chairman of the All-India Council for Technical Education (AICTE), New Delhi.

Three awards are presented to female students for their all-around performance on the eve of the Institute's Foundation Day.

The details are presented below:

Dr Bishweshwar Dayal and Prakashwati Dayal Award: The award is given to a female student with the best overall performance at the end of the 4th Semester, belonging to the UG programs. The award consists of Rs. 35,000/- and a certificate

Academic Section

Smt. P. Susheela and Prof. P. Venugopal Rao Award: The award is given to a female student with the best overall performance at the end of the 2nd Semester and to a female student with the best overall performance at the end of the 6th semester. This award is for female students enrolled in undergraduate programs. The award consists of Rs. 35,000/- and a certificate.

Foundation Day awardees for the year 2024

Sl. No.	Name	Roll No	Branch	Semester	Name of the Award
1	Ms. Richa Rajashekhar	CS23BT020	CSE	2nd	Smt. P Susheela and Prof. P. Venugopal Rao Award
2	Ms. Vedpathak Mukta Mahesh	CS22BT036	CSE	4th	Dr. Bishweshwar Dayal and Prakashwati Dayal Award
3	Ms. Eluri Harshitha	ME21BT011	ME	6th	Smt. P Susheela and Prof. P. Venugopal Rao Award

BIOSCIENCES AND BIOENGINEERING

About the Department

The Department of Biosciences and Bioengineering (BSBE) was established in 2016 and has steadily grown into a dynamic centre for research and academic training. With six faculty members spanning diverse areas of modern biology, the department offers BS–MS, MS in Molecular Medicine and PhD programs designed to cultivate scientific curiosity, critical thinking, and research excellence.

Focused on the rapidly advancing field of molecular medicine, BSBE is committed to cutting-edge research and aims to emerge as a globally recognised hub of innovation and discovery.

Faculty Profile and Research Areas

Sudhanshu Shukla
Associate Professor

Research Area (s)
Molecular Cancer Research

Subhash Mehto
Assistant Professor

Research Area (s)
Inflammation, Autophagy, and Host-Pathogen Interactions

Surya Pratap Singh
Assistant Professor

Research Area (s)
Biophysics, Raman spectroscopy, Label-free imaging

Swananda Marathe
Assistant Professor

Research Area (s)
Neuroscience, Neurodegenerative disorders, Psychiatric Disorders

Bal Krishna Chaube
Assistant Professor

Research Area (s)
Vascular Biology and Metabolism, Cardiometabolic Disorders, Vascular Immunology, Tumor metabolism and Metastasis, Blood Brain Barrier Remodeling

Narayan S Punekar
Visiting Professor

Research Area (s)
Microbial Biochemistry and Molecular Enzymology (Major fields) Microbial Metabolic Regulation, Understanding Metabolism through biochemical & recombinant DNA techniques, Fungal Molecular Genetics and its Applications to Metabolic Engineering

Academic Departments

State of the Art Facilities

- Confocal Facility
- BSL2 facility
- Proteomics and small molecule analysis facility
- FACS facility
- Microbiology Lab
- Raman Spectroscopy
- Molecular Biology Lab
- Cell Biology lab
- Preclinical Research Facility

Professional Outreach Activities

- Prof. Bal Krishna Chaube served as the Invited Speaker at the 1st Vascular Biology Conference held at NCBS, Bangalore from April 15–17, 2024. He is also an Early Career Member of the American Heart Association (AHA), USA, since July 2024, and an Early Career Member of the European Vascular Biology Organisation (EVBO), Netherlands, from July 2024 onwards.
- Prof. Sudhanshu Shukla delivered an invited talk at the event titled "Innovative Strategies for Advancing Biomedical Research," organised by Dayanand Sagar University, Bengaluru.
- Prof. Surya Pratap Singh serves as a Reviewer for the Science and Engineering Research Board (SERB), Government of India, and for the Discovery Grant section at the Wellcome Trust, United Kingdom. He is a Member of the Society of Applied Spectroscopy (SAS), USA, and also a Member of the Board of Studies in the Department of Biotechnology, KLE University, Hubbali. In addition, he is a Member of the Board of Studies for Biomedical Sciences at the SDM Research Institute for Biomedical Sciences. Prof. Singh also organised the Indo-Finnish Course on Themes in Circular Economy and Sustainability held from 19–23 August 2024 at the Institute of Technology, Tamil Nadu, India.
- Prof. Swananda Marathe received a prestigious travel award from the Japanese Society of Neuroscience.
- IIT dhArwAD's Biosciences and Bioengineering (BSBE) Department conducted an Indo-Finnish joint course on "Circular Economy and Sustainability" during 19-23 August 2024. The course, having master's and PhD students in it, covered sustainability theories, circular economy, and interdisciplinary research, with case studies from India and Finland. The event which was held in collaboration with IIT Delhi, IIT Guwahati, and the University of Eastern Finland aimed at equipping attendees with future environmental technologies through featured lectures by experts from both the nations.

Awards and Achievements

- Prof Subhash Mehto and Prof Bal Krishna Chaube received the Prime Minister's Early Career Research Grant from ANRF.
- Ms Shivani Mavlankar Selected for 15th Bangalore Microscopy Course 2025 jointly organised by NCBS, C-CAMP, and inStem.
- Ms Shivani Mavlankar and Ms Panchami P Bhat were selected for the prestigious EMBO Workshop on Host and Pathogen Heterogeneity in Tuberculosis (GW25-02) organised by CCMB, Hyderabad.
- Ms Tithi Bhowmick was selected for the prestigious Microscopy & Image Analysis Training Course 2025, organised by IISER Pune.
- Ms Annesha Chatterjee was awarded a SERB fellowship to deliver an oral presentation at the Cell Symposia: Chemical Biology in Drugging the Undrugged, held from December 2–4, 2024, in San Francisco, CA, USA.
- Ms Nikita Bhandari received a SERB fellowship to present a poster at the Cell Symposia: Chemical Biology in Drugging the Undrugged, held from December 2–4, 2024, in San Francisco, CA, USA.
- Ms Disha Acharya and Ms Nikita Bhandari presented posters at the Annual Indian Cancer Research Conference hosted by IISER Pune.

CHEMICAL ENGINEERING

About the Department

The Department of Chemical Engineering was established in 2022 and offers a dynamic and interdisciplinary academic environment. At the undergraduate level, it provides a four-year B.Tech. program in Chemical and Biochemical Engineering, meticulously designed to integrate the core principles of Chemical Engineering with foundational concepts from Biology and Chemistry.

For postgraduate studies, the department offers a PhD program, aimed at fostering cutting-edge research and innovation across diverse fields. This interdisciplinary curriculum equips students with a strong theoretical foundation and hands-on expertise, preparing them to excel in advanced studies or pursue professional careers in emerging areas within Chemical Engineering and allied domains.

Faculty Profile and Research Areas

Ashok Kumar Ummireddi
Assistant Professor

Research Area (s)

Electrocatalysis and Energy storage.
Electrochemical CO2 conversion.
(Photo-)electrochemical water splitting and H2 production.Electrochemical Ammonia synthesis.

C Ravikumar
Associate Professor

Research Area (s)

Nanoparticles.
Colloids.
Interface Science Mechanism.
Modeling and Simulation.
Catalysis.
Drug Delivery.
Water treatment

Ravi Chandra Dutta
Assistant Professor

Research Area (s)

Gas Separation and Storage.
Development of CO2 capture technologies.
Development of Novel Energy Storage Devices.
Drug Delivery using Nanoparticles.
Molecular Dynamic and Monte Carlo Simulations.

Sontti Somasekhara Goud
Assistant Professor

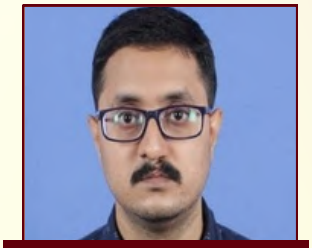
Research Area (s)

Multiphase flows.
CFD.
Microfluidics.
Fluidization/Gasification.
Slurry transport.

Suvamay Jana
Assistant Professor

Research Area (s)

Biocatalysis.
Drug and Materials Discovery.
Drug Formulation.
Drug Delivery.
Computational Chemistry.



Varaha Jayarama Krishna Jonnalagedda
Assistant Professor

Research Area (s)

Waste valorization through thermochemical and hydrometallurgical methods.
Catalysis and reaction kinetics.
Selective recovery of metals and resources. Process intensification for sustainable and efficient material conversion.

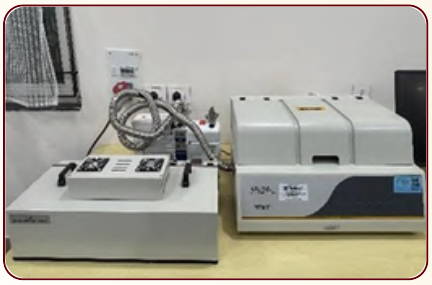
Shashwata Ghosh
Assistant Professor

Research Area (s)

Conceptual design of chemical processes.Process modelling and simulation.Process Intensification.Sustainability assessment of technology and process systems.

State of the Art Facilities

Rheometer



Gas permeability tester

Isothermal titration calorimeter

Drug dissolution apparatus

High performance liquid chromatography

Autoclave

Refrigerated centrifuge

Professional Outreach Activities

- Prof. C. Ravikumar, Associate Professor in the Department of Chemical Engineering, delivered an expert lecture during the One Week Self-Sponsored 6th National Workshop on "Research Conception, Technique, and Publication (with Hands-on)" organized by the Department of Chemical Engineering, VNIT Nagpur, from May 13–17, 2025, where he spoke on selecting effective research titles and identifying emerging interdisciplinary areas with societal impact. He also presented an invited talk titled "Safe Use of Nanomaterials in Biomedical Applications" at the one-day symposium on "Fostering Safety in the Use of Advanced Nanomaterials in the Health Sector," held as part of the Indo-Norway Bilateral Research Meet 2025 on March 28, 2025, at IIT Madras.

Academic Departments

- Manohar Jammula and Dr.Somasekhara Goud Sontti published their first research article titled "Numerical Analysis of Controlled Droplet Formation Surrounded by a Shear-Thinning Fluid in a Co-flow Microfluidic Device" in ACS Industrial & Engineering Chemistry Research [Q1 journal, IF: 3.8].
- Manohar Jammula and Dr.Somasekhara Goud Sontti's work has been featured as the cover art of the ACS Industrial & Engineering Chemistry Research (I&ECR) journal of volume 64, issue 5, 2025.
- Prof. Suvamay Jana delivered an invited talk at KLE College of Pharmacy on the theme of computer-aided drug design.
- The Department of Chemical Engineering, IIT Dharwad, Karnataka, India hosted a two-day National Symposium on "Smart Interfaces: Colloids in Medicine, Energy, and Materials" sponsored by the Anusandhan National Research Foundation (ANRF) in offline mode from October 9-10, 2025.

Awards and Achievements

Best Presentation Award

- Manohar Jammula received the Best Presentation Award on the topic "CFD Simulation of Droplet Generation and Dynamics in a Shear-thinning Fluid using Flow-focusing Microchannel." at the 2nd International Conference on Fluid, Thermal, and Energy Systems (ICFTES'24) held at the National Institute of Technology, Calicut (NIT Calicut) from June 6 to 8, 2024

CHEMISTRY

About the Department

The Department of Chemistry at IIT DHARWAD was established along with the inception of the institute in 2016. The department currently has six regular faculty members and one guest faculty. In addition, several guest professors from other IITs have served the department from time to time in teaching and research, establishing laboratories etc. The department also has multiple technical staff to assist with various pedagogical activities. The department currently offers several suitably designed undergraduate level core and elective courses such as Chemistry for Engineers: Fundamental concepts and applications (CH102), Hands on science laboratory (CH111), Sustainable energy and energy materials (CH302), Our health and medicine (CH405), Bioenergy and biofuels (CH303), Quantum field theory (CH 403) , and Introduction to sophisticated characterization techniques. A new integrated and interdisciplinary Bachelor of Science-Master of Science (BS-MS) program has been started from 2022. In addition, the department is also involved in interdisciplinary B. Tech in chemical and biochemical engineering program along with BSBE and chemical engineering department. At the PG level, the department offers various interdisciplinary courses (topics in chemistry, organic spectroscopy, polymer, material science, and green chemistry etc.), courses in organic and biological chemistry (Organic reaction mechanisms, bioorganic chemistry, and chemical biology), inorganic chemistry (inorganic and organic photochemistry, coordination and organometallic chemistry), and physical chemistry (statistical thermodynamics, kinetics, advanced computational chemistry, molecular spectroscopy, and electrochemistry). The department is also planning to offer M.Sc. program from next year along with integrated MSc-PhD and Postdoctoral programs in the near future.

In terms of research, the department has an active PhD program with interdisciplinary research areas such as polymer and materials chemistry, bioorganic and medicinal chemistry, chemical biology, surface organometallic chemistry, asymmetric synthesis, phase- transfer catalysis, bioinorganic chemistry, nanocluster and catalysis, Computational material science, designing of organic electrodes for batteries, non- adiabatic chemistry, and polaritonic chemistry. Currently the PhD students enter the program either in teaching assistant (institute funded), fellowship (CSIR/UGC) and/or project (external funding agencies such as DST/CSIR/DBT) categories. There are 20 PhD students, 2 JRFs and several project assistants/interns at present conducting research in just-mentioned research regarding UG/PG curriculum and research programs/infrastructure. The committee appreciated the curriculum, teaching infrastructure that the labs. The faculty members also have secured around 20 externally funded research projects, 2 intramural projects and 2 consultancy projects worth close to ~7 Cr from various governmental (DST, CSIR, MoE, ICMR, SERB, NASF etc.) and private agencies for carrying out fundamental and transformational research. Currently, 3 projects are under review for funding in different agencies. About 20 peer reviewed journal publications and several book chapters have been published from the department in 2024-25 while many papers are under review, providing a healthy contribution to the institute's scholarly activity. The faculty and PhD students participate in various research conferences and seminars. One PhD student (Mr. Dhananjaya G) received the prestigious PMRF fellowship for pursuing PhD with Dr. Nilkamal Mahanta. Two students (Vinutha KV and Yashwanth S) have received CSIR/UGC-JRF fellowships. In terms of research facilities, the department has several modern equipment (such as NMR, IR, UV-Vis and fluorescence spectrophotometer, chemical fume hoods, glove boxes and other essential instruments) for conducting cutting edge research across boundaries. In addition, several instruments are housed in the SCIF (such as AFM, FESEM, UTEM etc.) which could be used for various transdisciplinary research. Several new and advanced instruments have been recently procured for advanced research (FTIR, HPLC, LCMS, MALDI-TOF-MS, PXRD, GC, TCSPC, etc.) to cater to the department's growing instructional laboratories, and research requirements.

Being in a new and vibrant institute, the department has active collaboration with various engineering and science. The faculty members are also serving as members in the Board of studies of other nearby institutes (such as SDM, KIMS, BEC, KLE etc.) to serve the teaching and research community in and around the Hubli-DHARWAD region. The department holds regular student seminars, journal clubs and other guest seminars on current areas of chemistry and beyond and actively participates in several outreach activities of the institute.

Academic Departments

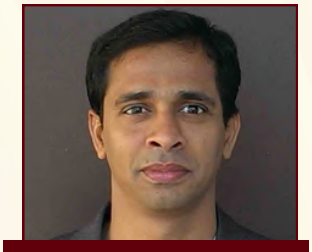
The department has organized a one day research symposium named "Rasaayan Sangooshthi"-2025 in March which featured speakers from different institutions, in addition to students from various universities/colleges around the Hubli-Dharwad region. The department also organized various talks during the academic year 2024-25 for the betterment of the research scholars and students. An academic advisory committee consisting of four senior professors from different institutes (IIT, IISc, and TIFR) visited IIT Dharwad to provide feedback and suggestions department is following, and the quality of faculty and publications.

Faculty Profile and Research Areas

Bhalchandra Laxmanrao Tembe
Visiting Professor

Research Area (s)

Chemistry, Yoga, Indian Knowledge Systems



Rajeshwara Rao M
Associate Professor

Research Area (s)

p-conjugated organic compounds, Porous organic polymers, NIR-absorbing systems, open-shell biradicaloids

Sudhir Kumar Sahoo
Assistant Professor

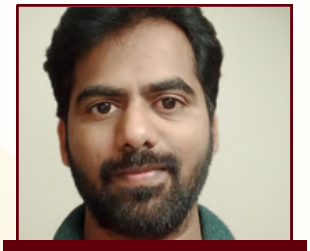
Research Area (s)

Development of computational methods, computational materials science, and designing of organic electrodes for batteries and nitrogen-reduction catalysts.

Kundan Kumar Singh Sagar
Assistant Professor

Research Area (s)

Bioinorganic, nanocluster, catalysis, small molecule activation.



Mahesh Gudem
Assistant Professor

Research Area (s)

Theoretical and Computational Chemistry, Polaritonic phenomenon in molecules, Photochemistry, Multi-reference methods, Quantum dynamics, QM/MM.

Nilkamal Mahanta
Assistant Professor

Research Area (s)

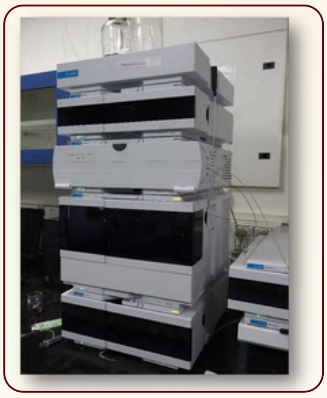
Bioorganic and physical organic chemistry, chemical biology, protein biochemistry, enzyme mechanisms, natural products biosynthesis, antimicrobial resistance, biofuels.

Satavisha Kayal
Assistant Professor

Research Area (s)

Asymmetric synthesis, Hybrid catalysis, Chiral Bronsted acid catalysis, Phase-Transfer Catalysis

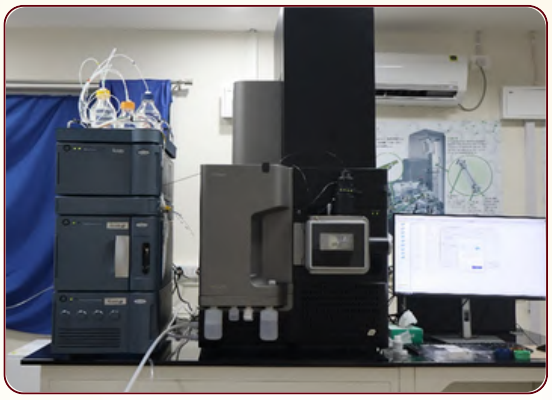
State of the Art Facilities



High Performance Liquid Chromatography (HPLC)

Gas Chromatography Instrument (GC)

MALDI-ToF Mass Spectrometer



Liquid Chromatography Mass Spectrometry Instrument (LC-MS)

Centrifuge

BET Surface Area Analyzer

High Resolution Mass Spectrometer (HRMS)

Powder X-Ray Diffractometer

Circular Dichroism Spectrophotometer

Tubular Furnace

Fluorimeter

Professional Outreach Activities

- Prof. Kundan K. Singh delivered an invited talk titled "Catalytic Hydroamination of Alkynes by Stibine Protected Au-Nanoclusters" at the CURRENT ADVANCES IN CHEMICAL SCIENCE – 2025 conference held at Ashoka University, Sonipat, Haryana. He served as an external examiner for the JRF-to-SRF upgradation of a Ph.D. scholar from the Department of Chemistry, Delhi University in February 2025. Prof. Singh was also an organising member of the one-day research symposium "Rasaayan Sangooshthi" held on March 22, 2025, and a two-day national symposium "Next-gen Functional Materials – 2025," organised by the Department of Chemistry, IIT Dharwad. Additionally, he represented the department at the HR Connects Bengaluru Chapter – 2024 of the Career Development Cell (CDC), IIT Dharwad, and participated in the "Samskrita Sambhāṣaṇam" workshop organised by the Raj Bhasha Vibhag, IIT Dharwad.
- Prof. Mahesh Gudem represented the department at the Royal Society of Chemistry's Select Committee for the Roundtable Discussion on Roadmap to Advancing Open Science in India, held on 10 September 2024 at Safina Towers, Bengaluru. He also served as an organising member of the one-day research symposium "Rasaayan Sangooshthi" conducted on 22 March 2025, and the two-day national symposium "Next-gen Functional Materials – 2025," organised by the Department of Chemistry, IIT Dharwad. Prof. Gudem delivered a talk at a one-day international webinar hosted by Sri Maha Yogi Lakshmamma Government Degree College, Yemmiganur, Andhra Pradesh, on 28 February 2025. Additionally, he contributes to the academic community as a reviewer for the Journal of Photochemistry & Photobiology and the Resonance Journal of Science Education.
- Prof. Nilkamal Mahanta contributes extensively to the global scientific community through multiple academic, editorial, and administrative roles. He serves as a reviewer for several high-impact research journals and book chapters in Chemistry, Biology, and Biochemistry, including Nature Communications, Biochemistry, and journals from RSC and Wiley. He is an External Member of the Board of Studies at the SDM Research Institute for Biomedical Sciences (SDMRIBS), SDM University, Dharwad, and an External Examiner for Ph.D. evaluations in the Departments of Chemistry and Biotechnology at KLE Technological University, Hubli. Prof. Mahanta is a Member of the American Chemical Society (ACS), USA, and a Life Member of the Indian Society of Analytical Scientists (ISAS). He also serves as an External Member of the Research Advisory Committee (RAC) of the Multi-disciplinary Research Unit (MRU), Karnataka Institute of Medical Sciences (KIMS), Hubli. He is the Institute Coordinator for the IIT Dharwad – SDM University MoU on advancing research collaborations. In addition, he is a Member of the Board of Studies for the Department of Biotechnology at KLE Technological University, Hubli; the Department of Chemistry at Basaveshwar Engineering College, Bagalkot (2022–25); and the Department of Biotechnology at R.V. College of Engineering, Bengaluru (2022–24). Prof. Mahanta also serves as an Associate Editor of Frontiers in Microbiology (2022 onwards), a Member of the School Research Committee (SRC) at KLE Technological University, Hubli, and a Member of the Equipment Committees of the University Science Instrumentation Centre (USIC), Karnatak University, Dharwad.
- Prof. Rajeswara Rao M served as a member of the doctoral committee for Ms. Sakthi Priya at VIT Chennai (2024) and for Ms. S. Logeswari at SRM Institute of Science and Technology, Tamil Nadu (2024). He also contributed as an External Academic Auditor for the Department of Chemistry, SDM College of Engineering and Technology, Dharwad, in 2024. In addition, Prof. Rao regularly supports the scientific community as a reviewer for reputed journals, including ACS Applied Materials & Interfaces, ACS Applied Polymer Materials, Chemical Communications, and others.
- The Department of Chemistry, IIT dhArwAD had also organized a one-day chemistry research symposium, "Rasaayan Sangooshthi," on 22nd March 2025. The event featured insightful and enlightening research talks by eminent speakers from IISc BengaLUru, IIT Bombay, TIFR HyderAbAd, and IIT DHARWAD along with experts from Rani Channamma University, BeLagAvi, KLE Technological University, HubbaLLi and KarnATak University dhArwAD. More than 150 students and faculty members from various colleges and universities from KarnATaka and MahArASHTra have participated in the symposium. An engrossing poster session was also arranged which showcased the research works of the participants.

Awards and Achievements

- Prof. Nilkamal Mahanta is a recipient of the Acharya Prafulla Chandra Ray Award of Excellence from the Indian Chemical Society, Kolkata (August 2021), and the Outstanding Oral Presentation Award at the 27th International Conference of the International Academy of Physical Sciences on Recent Advances in Catalysis Science and Engineering held at NIT Jamshedpur (26–28 October 2021). He delivered a talk at the Faculty Development Programme on Innovation and Startup Practices in Chemical and Allied Sciences at Shivaji University, Kolhapur, on 4 March 2025. Prof. Mahanta also engaged with students of Classes IX–XII at PM Shri Jawahar Navodaya Vidyalaya, Hassan under the PM SHRI Programme from 7–8 March 2025. Additionally, he co-authored "Thoughts for the Future," a feature article published in Nature Chemical Biology to commemorate the journal's anniversary.

CIVIL & INFRASTRUCTURE ENGINEERING

About the Department

The Department of Civil and Infrastructure Engineering, established in 2022, offers a four-year undergraduate program (B.Tech.) in Civil and Infrastructure Engineering. At the postgraduate level, the department provides a PhD program. Our students undergo a comprehensive curriculum that combines theoretical knowledge with practical applications in areas such as Structural, Geotechnical, Transportation, and Water Resources Engineering. Our programs emphasise sustainability, resilience, and the integration of digital technologies in civil infrastructure. Broad areas of the current research focus of the department include Sustainable Construction Materials, Modern Construction Techniques, Structural Fire Engineering, Geosynthetics and Ground Improvements, Railway Geotechnics, Geoenvironmental Engineering, Sustainable and Resilient Pavements and Water Sustainability.

Vision: To be a global leader in civil and infrastructure engineering education and research, contributing to the sustainable development of society.

Mission

- Develop a curriculum based on the present and future challenges of civil infrastructure.
- Conduct impactful research to build a smart, sustainable and resilient civil infrastructure.
- Establish strong collaborations with civil engineering industries to address the challenges of the built environment.
- Foster the potential of students to excel as future entrepreneurs of the construction industry.

Faculty Profile and Research Areas

Amarnath Hegde
Associate Professor

Research Area (s)

Geotechnical Engineering, Geosynthetics and Ground Improvements, Soil Dynamics and Vibration Isolation, Stability of Earth Retaining Structures, Computational Geotechnics.

Aniket Vasantrao Kataware
Assistant Professor

Research Area (s)

Pavement Materials, Pavement Evaluation. Pavement Management System, Sustainable and Resilient Pavements, Pavement Design and Analysis.

Giridhar Rajesh Bande
Assistant Professor

Research Area (s)

Geotechnical Earthquake Engineering, Industrial By-Products for Sustainable Development, Ground Improvement Techniques, Design of Coastal Geotechnical Structures.

Hemanth Kumar Chinthapalli
Assistant Professor

Research Area (s)

Structural Engineering, Structural Dynamics, Structural Fire Engineering.

Academic Departments

K V Jayakumar
Visiting Professor

Research Area (s)

Hydrology, Water Resources, Climate Change Adaptation and Environment Management.

Ramesh Nayaka
Assistant Professor

Research Area (s)

Structural Engineering and Materials, 3D Concrete Printing Technology, Sustainable Infratech Innovations.

Sanatkumar P Rajamane
Professor of Practice

Research Area (s)

Steel Structures, Bridge Engineering, High Rise Structures, Construction Management.

Venkappayya R Desai
Professor

Research Area (s)

Integrated water resources management, flood/ drought management, water harvesting, Hydrologic/ hydraulic engineering, Traditional best management practices, Sustainable facilities in water/ energy.

Somil Yadav
Visiting Assistant Professor

Research Area (s)

Steel Structures, Bridge Engineering, High Rise Structures, Construction Management.

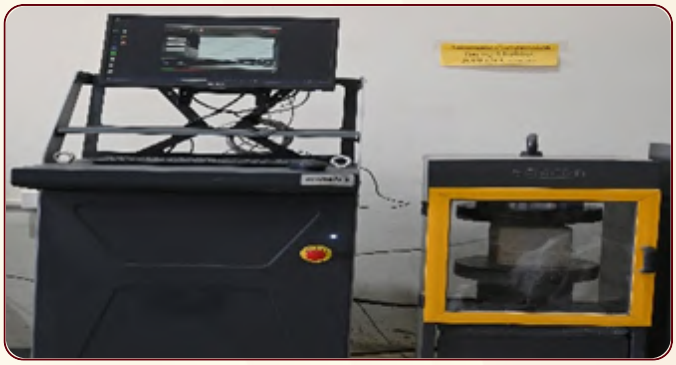
Academic Departments

State of the Art Facilities

Non-destructive tests (UPV, Rebound Hammer)

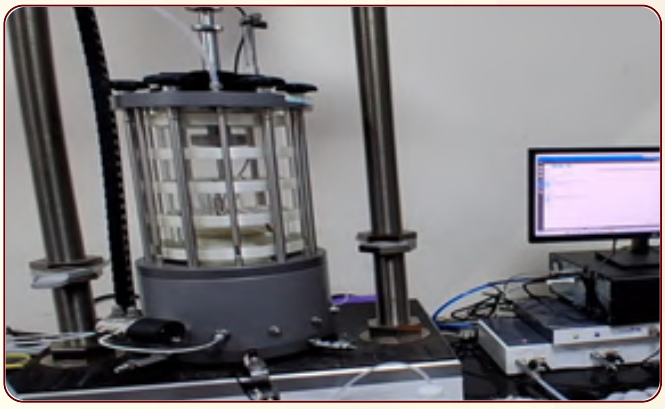
Thermal Conductivity Analyser

Large scale Robotic arm 3D Concrete printer



Automatic Compression Testing Machine, 3000 kN Capacity with touch panel (displacement controlled)

UTM-2000KN capacity



Unsaturated Triaxial Testing Machine

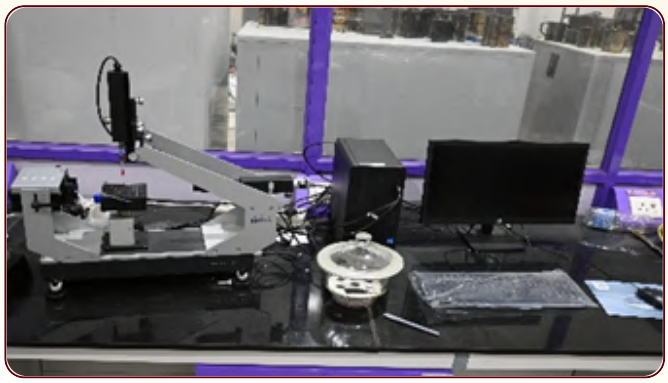
Dynamic Shear Rheometer

Wheel Tracking Test Device

Resilient Modulus Testing (SPS-15)

Brookfield viscometer

Cyclic Simple shear



Contact angle measurement

Computer controlled large direct shear test apparatus

Professional Outreach Activities

Our faculty acted as reviewers of the following journals:

- Journal of Geotechnical and Geoenvironmental Engineering, ASCE
- International Journal of Geomechanics, ASCE
- Journal of Engineering Mechanics, ASCE
- Geotextiles and Geomembranes (Elsevier)
- Computers and Geotechnics (Elsevier)
- Transportation Geotechnics ((Elsevier)
- International Journal of Geosynthetics and Ground Engineering (Springer)
- Indian Geotechnical Journal (Springer)
- Ground Improvement (ICE)
- Natural Hazards (Springer)
- Journal of Earthquake Engineering (Taylor and Francis)
- Iranian Journal of Science and Technology, Transactions of Civil Engineering (Springer)
- Applied Ocean Research (Elsevier)
- Natural Hazards Review (ASCE)
- International Journal of Geosynthetics and Ground Engineering (Springer)
- Journal of Testing Materials (ASTM)
- International Journal of Pavement Engineering (Taylor and Francis)
- Road Materials and Pavement Design (Taylor and Francis)
- Construction & Building Materials (Elsevier)
- Ain Shams Engineering Journal (Elsevier)
- Transportation Research Record (SAGE)
- Discover Civil Engineering (Springer)
- Transportation in Developing Economies (Springer)
- Journal of Materials in Civil Engineering (ASCE)
- Structures (Elsevier)
- Case Studies in Thermal Engineering (Elsevier)

Awards and Achievements

- Prof. Amarnath Hegde received "Rising Star in Geotechnical Engineering Award" for the year 2023-2024 by the Geotechnical section of Frontiers in Built Environment Journal (2024). He also received "Exceptional reviewer of the year-2023" from International Journal of Geosynthetics and Ground Engineering, Springer (2024)
- Prof Ramesh Nayaka and his research team is the "Winner of Global Sustainathon Challenge-2023" jointly organized Masood Entrepreneurship Centre, University of Manchester, UK and Deshpande Start Ups, Hubballi.
- Prof K V Jayakumar has been nominated to the Board of Management of Aditya University, Surempalam, Andhra Pradesh (Oct 2024 onwards). He is also serving as a member of the Board of Governors of Muthoot Institute of Technology and Science, Ernakulam (Sept 2024 onwards). Prof K V Jayakumar was invited to coordinate the review of the syllabus for Civil Engineering for the Civil Services Examination by the Union Public Service Commission. He is also a member of the Governing Body of Wetlands International South Asia,

Invited talks by our faculty

- Prof. Venkappayya R. Desai and Prof. K. V. Jayakumar delivered a series of invited talks at national and international academic platforms throughout 2024–25. Their expert lectures covered a wide spectrum of themes including "Sustainable Waste Management Practices for MSW" at the ATAL FDP organised by NIT Goa (12 December 2024), "Sustainable Urban Water & Waste Management" at the Sanaka Educational Trust Group of Institutions, Durgapur (17 December 2024), "Environmental Flows and Water Management in India" during the Golden Jubilee celebrations of the Engineering Staff College of India, Hyderabad (28 November 2024), and a plenary talk on "Sustainable Urban Water & Waste Management" at the Second International Conference on Infrastructure Development: Sustainability, Resilience and Transformational Adaptation (ICID 2024) held on 27 September 2024 at Mar Baselios College of Engineering and Technology, Thiruvananthapuram. They were invited speakers for several pedagogical and academic development themes, including "AI Tools and Platforms for Educators" at Surana College of Management, Bengaluru (30 November 2024), "Mastering Research Proposals and Design Thinking Approaches" at Muthoot Institute of Technology & Science, Ernakulam (27 November 2024), "Holistic Education and the Role of Humanities: Insights from NEP 2020" at NIT Trichy (10 November 2024), "Dynamics of Research Pedagogy and Best Practices" at Shetty Institute of Technology, Gulbarga (26 October 2024), "Stress and Time Management for Teachers" at the Madan Mohan Malaviya Mission Teacher Training Centre (MMTC), NIT Warangal (September 2024), "Directives on Preparing Funding Proposals" at SRM University, Chennai (10 September 2024), and "National Educational Policy 2020 – Salient Features" during an online programme organised by the Malaviya Mission Teacher Training Centre, Indira Gandhi National Tribal University, Amarkantak, UP (June 2024). They also contributed to industry–academia dialogue, with Prof. Jayakumar serving as a panelist at the Industry–Academia–Government Conclave, UDYAMA 1.0, organised by the Government of Kerala (10 December 2024), and delivered "Executive Skills for Emerging Managers" at Jamia Hamdard, Delhi (25 April 2024). In addition to their academic outreach, the faculty co-authored research papers titled "Review on Assessment of Hydrological Alteration and Environmental Flow Requirements" (presented at the International Conference on Environmental Sustainability and Climate Change Adaptation, VTU Belagavi, 13–14 February 2025) and "Studies on Environmental Flows in India: The Current State-of-the-Art" (presented at the International Conference on Water, Environment, Energy & Society — ICWEES, NIT Puducherry, 23–26 April 2025).
- Prof. Giridhar Rajesh Bande delivered multiple invited talks across reputed academic platforms, sharing his expertise in geotechnical engineering and research methodology. On 8 January 2025, he led a session on "Hands-on Session on SLOPE/W and SEEP/W" during the short-term course Application of Multi-module Geostudio Software for Comprehensive Assessment of Geotechnical Structures (AMGS-25) organised by the Department of Civil Engineering, NIT Warangal, Telangana. He continued his contribution on 9 January 2025 with a talk on "Numerical Modeling of Embankment Resting on Soft Ground Stabilized with Prefabricated Vertical Drains" in the same program. Earlier, on 3 December 2024, Prof. Bande delivered an invited lecture on "How to Write a Research Paper?" during the Faculty Development Programme "Empowering Innovation Research Methodology and IPR (EIRM & IPR-2024)" organised by the Department of Civil Engineering, Fabtech Technical Campus, College of Engineering and Research, Sangola, Solapur, Maharashtra.
- Prof. Amarnath Hegde delivered a series of invited talks on contemporary topics in geotechnical engineering across multiple academic platforms in 2024. On 19 June 2024, he spoke on "Functions and Applications of Geosynthetics for Infrastructure Projects" during the five-day Faculty Development Program on Geotechnical Engineering Practices and its Sustainable Development organised by the Department of Civil Engineering, Ballari Institute of Technology & Management; the session was delivered online via Microsoft Teams. Earlier, on 21 May 2024, he delivered an invited lecture on "Soil Behavior and Stabilization Techniques" at MCGAN'S Ooty School of Architecture through Google Meet. On 30 April 2024, Prof. Hegde presented a talk on "Geotechnical Engineering and Sustainability" during the two-day conference Sustainable Infrastructure: Innovations, Opportunities and Challenges (SIIOC-2024) organised by the Department of Civil Engineering, National Institute of Technology Karnataka, Surathkal.

- Prof. Aniket V. Kataware delivered a series of invited talks focused on emerging trends in pavement materials and research publication practices. On 21 February 2025, he presented a lecture on "Artificial Intelligence Models for Pavement Materials and Technologies" at KLE Technological University, Belagavi, Karnataka. Earlier, on 4 January 2025, he delivered a talk on "Survey of Journals and Publishing the Paper" at the Sahakar Maharshi Shankarrao Mohite Patil Institute of Technology and Research, Shankarnagar – Akluj, Maharashtra, followed by the same topic on 5 December 2024 at Fabtech College of Engineering and Research, Sangola, Maharashtra.
- Prof. Ramesh Nayaka delivered several invited talks and actively contributed to academic and professional platforms promoting sustainability in civil engineering. He presented a lecture on "Waste or Wealth – Strategic Waste Management Practices" at an event jointly organised by the Departments of Civil Engineering and Architecture & Planning at the National Institute of Technology Calicut, Kerala, in May 2024. He served as Guest of Honor and Speaker at the SPARC Program on Emerging Innovations in Sustainable Construction Materials, organised by the Department of Civil Engineering, BITS Pilani – Hyderabad Campus, during 12–13 September 2024. Additionally, he was a Keynote Speaker at the International Conference on Sustainable Materials and Practices for Advanced Research in Civil Engineering, hosted by the School of Civil Engineering, REVA University, Bengaluru, from 12–13 July 2024. In addition to his invited talks, Prof. Nayaka organised a week-long Karyashala on "Sustainable Construction Materials for Sustainable Infrastructure" from 14–24 March 2024, and led a webinar on "A Framework for Life Cycle Assessment – Towards Sustainable Infrastructure" held on 1 October 2024. He also served as a Program Committee Member for the 2nd edition of the IEEE Conference on Engineering Informatics (ICEI 2024) scheduled on 26–28 November 2024, jointly organised by IIT Dharwad (26 November), KLE Technological University (27 November), and IIIT Dharwad (28 November), continuing the first ICEI conference hosted at Swinburne University of Technology, Australia, on 20–21 November 2024.
- Prof Somil Yadav conducted an upskilling and awareness program on "Net-Zero Energy Buildings" under the auspices of the GCoE-ACE at IIT Dharwad.

Reviewer of Thesis

- Prof. Amarnath Hegde reviewed the Ph.D thesis entitled "Response of Waste Foundry Sand Backfilled Retaining Wall" Department of Civil Engineering, Thapar Institute of Engineering & Technology Patiala, Punjab in March 2024.
- Prof. K. V. Jayakumar contributed to doctoral research evaluation as an examiner for multiple Ph.D. theses across reputed institutions. He evaluated the thesis titled "Adaptive Multi-objective Modeling Framework for Environmental Flow Regulation in a River–Reservoir System" submitted by Ms. Jose Ruby at IIT Madras in July 2024. He also examined the thesis "Multifarious Resource Optimization" submitted by Ms. Shanky Garg at Guru Gobind Singh Indraprastha University, Delhi, in May 2025. In addition, Prof. Jayakumar evaluated the thesis "Integrated Hydrological Modeling of Water Resource System under Climate Change Impacts and Management Options in the Subarnarekha River Basin, India," submitted by Ms. Pratibha Kumari at the Central University of Gujarat.
- Prof. Ramesh Nayaka has contributed to doctoral research evaluation as an examiner for multiple universities across India. He reviewed Ph.D. theses submitted to Visvesvaraya Technological University (VTU), Karnataka; Osmania University, Hyderabad; Andhra University; Manipal Academy of Higher Education (MAHE), Manipal; and M.S. Ramaiah University, Bengaluru, demonstrating his continued engagement in strengthening research quality and academic standards in the field of civil engineering.
- Prof. Aniket V. Kataware is a lifetime member of several professional organisations, including the Indian Roads Congress (IRC), the Indian Concrete Institute (ICI), and the Institute of Engineers (India), reflecting his continued commitment to professional engagement and advancement in the field of civil engineering.
- Prof. Aniket V. Kataware has actively contributed to skill development and industry–academia collaboration by organising multiple technical workshops. In 2025, he coordinated a specialised workshop on "Advancements in Asphalt Binder Rheology: Towards Resilient Road Infrastructure for Industry, Academia & Research Professionals." In 2024, he organised two hands-on training programmes: "Ansys Solutions for Civil Engineering Applications" and "Civil 3D Software: Industrial Practices for Civil and Infrastructure Engineering Students," benefitting learners and professionals in the domain of civil and infrastructure engineering.

- Prof. Aniket V. Kataware has served on multiple academic and professional committees, contributing to curriculum development, recruitment, and competitive assessments in the civil engineering domain. He was a member of the Board of Studies (BoS) of the Civil Engineering Department at Walchand College of Engineering, Sangli (2025) and the Board of Studies (BoS) of the Civil Engineering Department at Rajarajeshwari College of Engineering, Bangalore (2023–24). He also served on the selection committee for the recruitment of a Technical Assistant at CSIR – National Institute of Oceanography, and contributed as a committee member for the competitive examination (Surveying and Transportation Engineering) at Anna University, Chennai (2024).
- Prof. Amarnath Hegde Civil & Infrastructure Engineering (CIE) has been placed among the Top 2% Scientists in the World for the single year category (2023), as per the latest data released by Stanford University in association with Elsevier publishers. This marks his consecutive recognition for four years (2021-2024). This recognition is based on citation metrics, including the h-index and a composite c-score, which emphasize on citation impact over publication volume. Additionally, in September 2024, he was honored with the Prof. Satish Dhawan Young Engineers State Award in Engineering Sciences by the KarnATakA State Council for Science & Technology (KSCST), In BengaLUru, karnATakA.
- Prof. Ramesh Nayaka, Department of CIE, has been felicitated as a jury member at the ICI-Ultratech Awards Ceremony in HubbaLLi on November 14, 2024. Prof. Nayaka had evaluated and acknowledged some of the most outstanding and innovative concrete structures in the North KarnATaka region.
- Prof. Aniket Kataware, Dept. of CIE, has published multiple research articles on pavement materials and sustainable infrastructure in reputed journals including Construction and Building Materials, Road Materials and Pavement Design, and Journal of Adhesion Science and Technology. He delivered guest lectures on research methodology and AI in pavement technologies, and served as Chief Guest and keynote speaker at ICMRTET 2025, LakSHmEshwar. Under his mentorship, students Shri Shubham Raj, Shri Vivek Kumar, and Shri Tanishq Singh received the Hyundai Hope Scholarship for their project "Empowering Sustainable Mobility: Electrical Pavement for Smarter Cities."
- PRof. Amarnath Hegde, Dept. of CIE, delivered an invited talk on the topic of "Sub-Soil Exploration for Infrastructure Projects" at the Department of Civil Engineering, GITAM School of Technology BengaLUru, on 4th February 2025. During the visit, PRof. Hegde interacted with faculties & students of the department and visited various laboratory facilities.
- PRof. Amarnath Hegde, Dept. of CIE, delivered an invited talk on the topic of "Sub-Soil Exploration for Infrastructure Projects" at the Department of Civil Engineering, GITAM School of Technology BengaLUru, on 4th February 2025. During the visit, PRof. Hegde interacted with faculties & students of the department and visited various laboratory facilities.

COMPUTER SCIENCE AND ENGINEERING

About the Department

The Department of Computer Science and Engineering at IIT DHARWAD, established in 2016, was among the first departments introduced at the institute. It offers a comprehensive range of academic programs, including a four-year B.Tech., a two-year M.Tech., and two research-intensive degrees—M.Tech. (by Research) and Ph.D.—all specialising in "Computer Science and Engineering." Additionally, it offers an interdisciplinary B.Tech. in "Mathematics and Computing" in collaboration with the Department of Mathematics, as well as two minor programs: one in Data Science and Artificial Intelligence (jointly with the Department of Electrical, Electronics, and Communication Engineering) and another in Computer Science.

Our faculty research focuses on three core areas: (a) theoretical foundations (including logic, graph theory, and algorithms), (b) systems (such as computer architecture, networks, and parallel programming), and (c) intelligent systems (covering machine learning and artificial intelligence). In addition to these, the department is engaged in cutting-edge interdisciplinary research on cyber-physical systems, smart grids, and natural language processing, addressing challenges in data science, distributed computing, cybersecurity, and other related fields.

The B.Tech./M.Tech. The curriculum uniquely combines fundamental courses in Computer Science with advanced topics aligned with our faculty's research expertise. Regular curriculum revisions ensure the program remains at the forefront of both academic developments and industry needs.

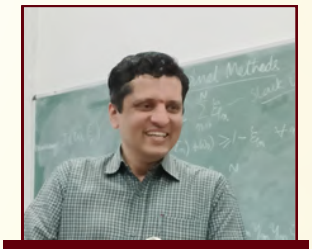
The department is committed to advancing research and innovation through active collaborations with prestigious academic institutions, government organisations, and industry leaders. Equipped with state-of-the-art computing facilities and labs, our students and researchers are empowered to turn innovative ideas into impactful prototypes. The department's global collaborations are reflected in its consistent contributions to leading conferences and top-tier journals.

Faculty Profile and Research Areas

Achyut Mani Tripathi
Assistant Professor

Research Area (s)

Designing Deep Learning Architectures for Image, Audio, Time Series, and Video. Deep Model Compression, Adversarial Deep Learning, Machine Unlearning, Multimodal Learning, and Continual Learning.



Dileep A D
Professor

Research Area (s)

Pattern Recognition, Kernel Methods for Pattern Analysis, Machine Learning and Deep Learning, Speech Technology, Computer Vision.

Gayathri Ananthanarayanan
Assistant Professor

Research Area (s)

Embedded Systems, Computer Architecture, EdgeAI: Hardware-software co-design approaches for efficient deployment and execution of AI/ML applications on edge devices.

Kedar Vithal Khandeparkar
Assistant Professor

Research Area (s)

Cyber Security in Smart Grids, Applied Machine Learning

Academic Departments

Koteswararao Kondepu
Associate Professor

Research Area (s)

Open Radio Access Networks, AI/ML for Networks, Quantum Networks Network Protocol Design, Convergence of Access and Transport Networks.

Konjengbam Anand
Assistant Professor

Research Area (s)

Natural Language Understanding, Sentiment Analysis, Machine Translation, Information Management, Data Mining

Nikhil D Hegde
Assistant Professor

Research Area (s)

Parallel and Distributed computing, and Programming Languages.

Rajshekar K
Assistant Professor

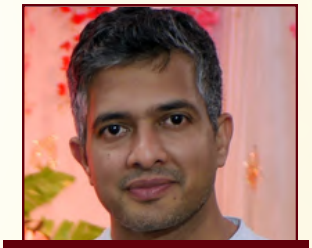
Research Area (s)

Computer Architecture, Microarchitectural simulation, Performance modeling, Runtime Verification.

Ramachandra Phawade
Assistant Professor

Research Area (s)

Concurrency, Automata Theory and Logic in Computer Science.



Sandeep R B
Assistant Professor

Research Area (s)

Algorithms, Graph Theory.

Siba Narayan Swain
Assistant Professor

Research Area (s)

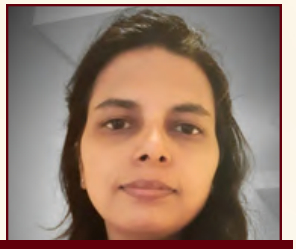
5G and Beyond, Data Driven Networking, AI Native Networks, Cybersecurity, Blockchains.

Tamal Das
Assistant Professor

Research Area (s)

Cybersecurity, Software defined networking, Data center network architectures, Network function virtualization.

Academic Departments



Vandana Bharti
Assistant Professor

Research Area (s)

Machine Learning / Deep Learning for Computer Vision, Data Science, Generative AI, Multiobjective Evolutionary Computation, Quantum-Inspired Optimization, Federated Learning.

Vijeth J Kotagi
Assistant Professor

Research Area (s)

Wireless Communication Networks such as 4G and 5G Networks, Internet of Things Network, Vehicular Networks, Applied Machine Learning in Communication Networks.

Jivnesh Balasaheb Sandhan
Visiting Assistant Professor
[upto 27-11-2024]

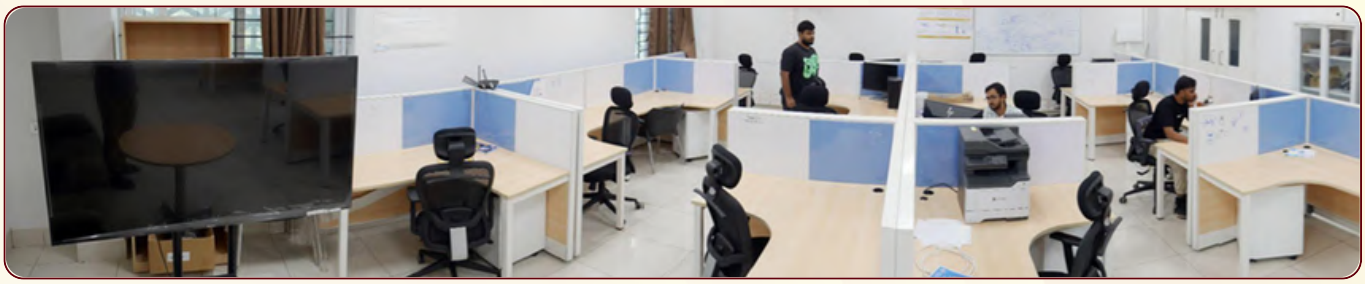
Research Area (s)

Deep learning, machine learning, Natural Language Processing, Sanskrit Computational Linguistics

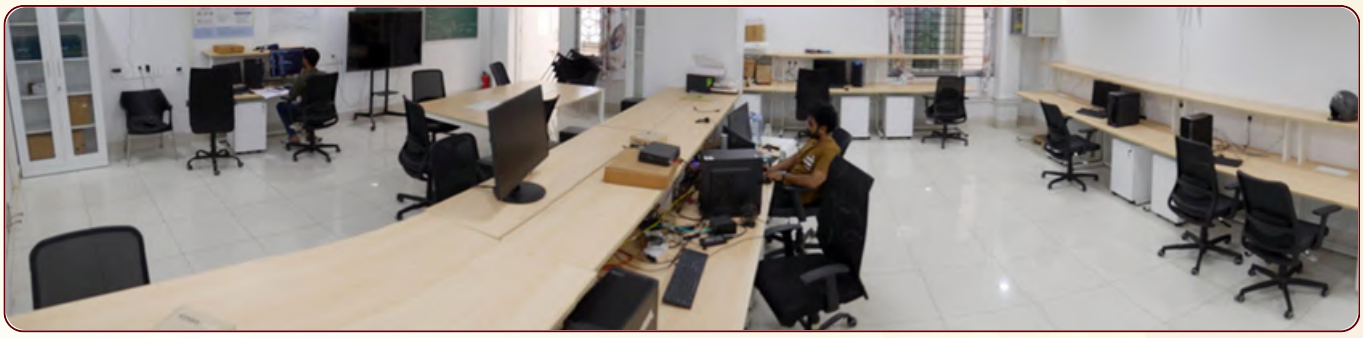
State of the Art Facilities

Instructional Labs

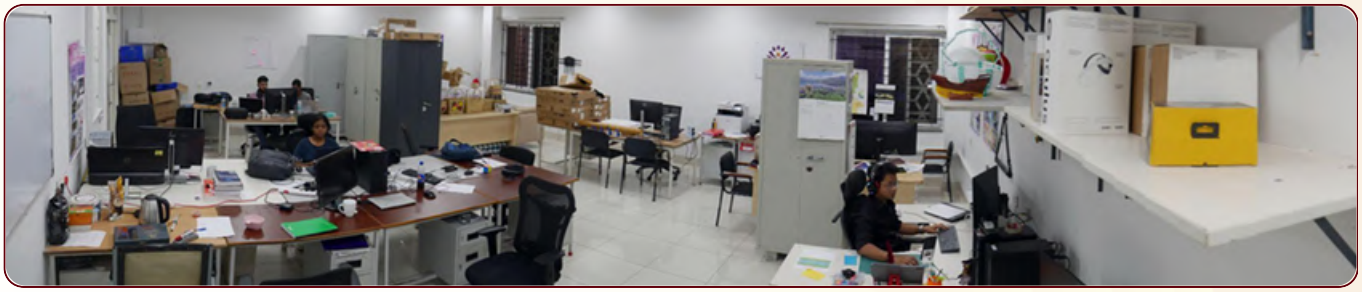
Academic Departments



FutureG Networks Lab



CARES Lab

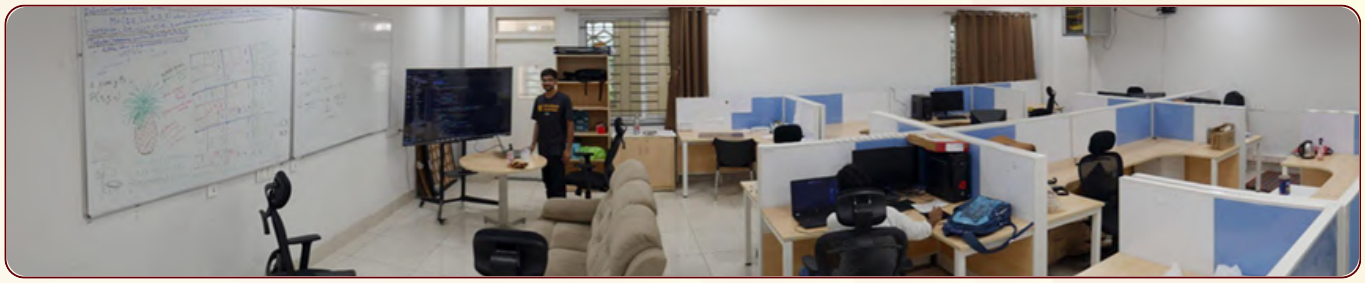


Emerging Multimedia and AI (EMA) Lab

!DEAS Lab

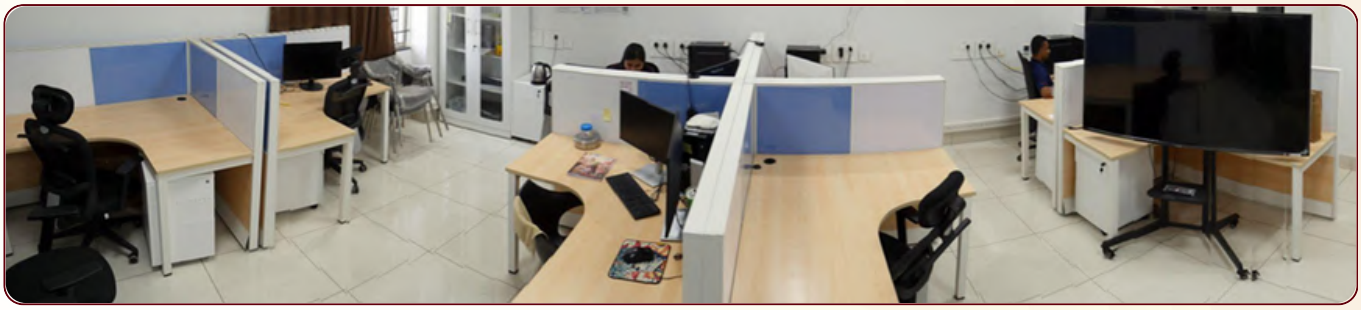
Next Generation Computing Lab

Networks Lab



Theory Lab

Showcase Lab



SPEC Lab

MINDS Lab

Applied AIML Lab

Conference Room

Seminar Room

Professional Outreach Activities

- Prof. Gayathri Ananthanarayanan has actively contributed to academic and research evaluation in the computing domain. She served as the external examiner for the M.S. (Research) thesis of Ms. Harshita from the Department of Computer Science & Engineering, IIT Palakkad. She has also reviewed manuscripts for IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems and for ACM India Pingala Interactions in Computing 2025. In addition, Prof. Gayathri served as a member of the Technical Programme Committee of the IEEE Services Conference (EDGE) 2025, reflecting her continued involvement in professional service and scholarly activities.

- Prof. Koteswararao Kondepu has made significant contributions to the global research community through his active involvement in major international conferences on communication networks and emerging technologies. He served on the Technical Program Committee (TPC) of several prestigious conferences in 2024, including the IEEE Global Communications Conference (GLOBECOM), IEEE International Conference on Communications (ICC), IEEE International Conference on Computer Communications (INFOCOM), IEEE European Wireless (EW), IEEE Future Network World Forum (FNWF), IEEE Conference on Network Functions Virtualisation and Software-Defined Networking (NFV-SDN), IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), IEEE Wireless Communications and Networking Conference (WCNC), and the IEEE World Forum on Internet of Things (WF-IoT). Further, he served as Technical Program Chair and Technical Early Research Forum (ERF) Co-Chair for the IEEE ANTS 2023 conference, held at IIT Guwahati from 15–18 December 2024. In addition, he contributed as Workshop Co-Chair for the IEEE 17th International Conference on COMmunication Systems & NETworkS (COMSNETS) during the India Internet Governance Workshop (IIGW), held in Bangalore from 6–10 January 2025.
- Prof. Nikhil D. Hegde contributed significantly to high-performance computing education and research dissemination during 2024–25. He co-taught a course on Parallel Computing at IIIT Dharwad during August–November 2024 and collaborated with CDAC Pune to provide participants of the course with exposure to the state-of-the-art ParamRudra HPC cluster. In addition to his academic engagements, Prof. Hegde served as a Technical Program Committee member for multiple premier international conferences — including the research papers track of Principles and Practice of Parallel Programming (PPoPP'25), the tutorials track of Supercomputing (SC'25), and the research papers track of HiPC'24 — reflecting his continued contribution to the global HPC research ecosystem.
- Prof. Ramchandra Phawade contributed to academic and research evaluation through multiple professional engagements in 2024. He served as a reviewer for the ACM Transactions on Embedded Computing Systems (2024) and evaluated a Ph.D. thesis from the Department of Computer Science and Engineering, IIT Bombay. In addition, he organised the Formal Methods Update Meeting 2024, further strengthening collaborative research and knowledge exchange in the formal methods community.
- Prof. Sandeep R. B contributed extensively to research dissemination and scholarly evaluation in theoretical computer science and data science during 2024–25. He reviewed research articles for the journals Theoretical Computer Science (completed in March 2025) and Discrete Mathematics and Theoretical Computer Science (completed in February 2025), and evaluated a conference submission for the 42nd International Symposium on Theoretical Aspects of Computer Science (STACS 2025), with the review completed in November 2024. He delivered a talk at the 49th International Symposium on Mathematical Foundations of Computer Science (MFCS 2024) held in Bratislava, Slovakia, in August 2024, and an invited talk at the 2nd Frontiers Symposium in Data Science (FS-DSC 2025) on 1 February 2025 at IISER Thiruvananthapuram. Additionally, Prof. Sandeep hosted Dr. Suchismita Mishra for a three-week research visit in November 2024, fostering academic collaboration and knowledge exchange.
- Prof. Tamal Das has actively contributed to teaching, academic auditing, leadership development, editorial service, and technical programme roles across premier institutes. He taught a course on "Web-based Development" at the Indian Institute of Management (IIM) Rohtak during July–September 2024 and delivered several lectures for the course "Introduction to Programming" at IIM Rohtak during November–December 2024. He attended the Nurturing Future Leadership Program, sponsored by the Ministry of Education, Government of India, at IIT Bombay in February 2025. Prof. Das also served as an External Expert for the Academic Audit of the Departments of Computer Science and Engineering and Information Science and Engineering at Shri Dharmasthala Manjunatheshwara College of Engineering and Technology, Dharwad, in October 2024. Additionally, he was a Technical Program Committee Member for IEEE Advanced Networks & Telecommunication Systems (ANTS) 2024 and the International Conference on Communication Systems & Networks (COMSNETS) 2025. He contributes to scholarly publishing as an Associate Editor for Springer Wireless Networks: The Journal of Mobile Communication, Computation, and Information, and served as an External Examiner for the JRF-to-SRF conversion of a Ph.D. student in the Department of Computer Science and Engineering at IIT Indore in January 2025.

- Prof. Vijeth J. Kotagi delivered a lecture on "Application of Machine Learning in Agriculture" at the University of Agricultural Sciences (UAS), Dharwad, on 12 February 2025. He served as the Publication Co-Chair of the 2nd IEEE Conference on Engineering Informatics 2024, held at IIT Dharwad from 26–28 November 2024, and contributed to scholarly evaluation as a reviewer for the Springer Computer Networks journal. He was also invited as an expert speaker for the Joint Faculty Development Program (FDP) on IoT Applications with Sensors, Embedded Systems, and Data Analytics conducted by IIT Roorkee from 18–20 February 2025. Here, he gave an expert session on "Technologies Enabling IoT". Under his guidance, Ph.D. scholar Shri Vinay M. Talageri conducted a training program on Arduino programming for government school teachers, enabling them to effectively utilise Atal Tinkering Labs. The initiative equipped teachers with hands-on skills in Arduino to inspire school students in STEM learning through technology-driven projects and activities, with participants from five government schools in the Dharwad district. The programme is expected to strengthen STEM education and foster a culture of innovation among young learners. He also gave a talk titled "From Connectivity to Care: Can Potential of IOMTs be Unlocked for Remote Communities? Challenges and Opportunities" at the 59th Meeting of the Asia Pacific Advanced Network (APAN59) on 6 March 2025.
- Prof. Vandana Bharti made significant academic and professional contributions during 2024–25 through expert lectures, conference leadership, and scholarly service. She delivered expert sessions on "Advanced Deep Learning Models" (25 February 2025) and "Optimization" (27 February 2025) during the FDP on Deep Learning and Optimization for Healthcare organized by the E&ICT Academy, NIT Patna. She also delivered talks on "Self-supervised Learning" during the online Workshop on Generative AI organized by InterMedia Research Group and LNMIIT Jaipur (12 March 2025), and on "Generative AI for Healthcare" and "Optimization" during the FDP on Sustainable Resource Management organized by the E&ICT Academy, IIT Guwahati (20–21 March 2025). In addition, she served as an External Examiner for the Research Experience for Undergraduates (REU) course at KLE Technological University, Hubballi, on 8 March 2025. Prof. Bharti held key roles in major international conferences, including serving as Member of the National Advisory Committee for ARIIA 2024 (20–21 December 2024), Technical Program Committee Chair and Session Chair for ISPDA 2024 (13–15 December 2024), and AI/ML Track Chair and Associate Editor for the 2nd IEEE ICEI 2024 (26–28 November 2024). She also delivered an invited session on Neural Networks and CNN during the Training of Teachers Program at IIT Patna (20–21 June 2024). Complementing her outreach, she reviewed articles for IEEE Transactions on Evolutionary Computation, IEEE Transactions on Computational Social Systems, and IEEE Transactions on Multimedia, reflecting her sustained leadership in AI, deep learning, and data science.
- Prof. Anand Konjengbam, Dept. of CSE, delivered a session on AI Applications in Health Research and Yoga at a workshop organized by MDNIY, Ministry of Ayush, on 28th February 2025.

Awards and Achievements

- Prof. Vandana Bharti was elevated to the status of IEEE Senior Member in April 2024, recognising her significant professional contributions and leadership in the field. She was also honoured with the Best Paper Award at the 6th MINDS Conference, organised by NIT Goa in 2024, reflecting the impact and excellence of her research work.
- Prof. Konjengbam Anand, Department of CSE, announced the launch of 'Eyongkart,' an e-commerce platform designed to support Internally Displaced Persons (IDPs) in Manipur. Speaking at the event held at Koubru Hall, Manipur Press Club, he highlighted that over 60,000 IDPs are currently in relief camps, striving to sustain their livelihoods through handloom, handicraft, and other products. Developed collaboratively by IIT dhArwAD, NIT Manipur, and Manipur Technical University, Eyongkart aims to address the marketing challenges faced by IDPs by providing an online platform to sell their goods. Prof. Anand appealed to the public to support this initiative, which also seeks to promote local products and empower displaced communities through sustainable economic opportunities.

Academic Departments

Electrical, Electronics and Communication Engineering

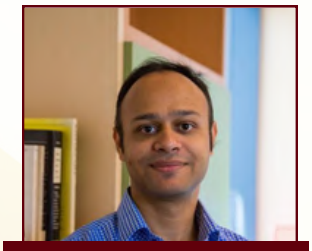
About the Department

Established in 2016, the Department of Electrical Engineering at IIT DHARWAD has rapidly grown to become one of the largest and most dynamic departments within the Institute. With an impressive faculty strength of over 20 members, we cater to a diverse student body comprising more than 100 postgraduate students and over 250 undergraduate students. Our department offers two highly sought-after BTech programs: Electrical and Electronics Engineering (30 seats/year) and Electronics and Communication Engineering (45 seats/year), providing students with a solid foundation in the principles of electrical engineering. The department also offers a minor program in Artificial Intelligence and Machine Learning along with the computer science and engineering department. The department also contributes to the running of the B.Tech. in Engineering Physics program.

Our department is committed to fostering cutting-edge research and innovation, with a strong focus on interdisciplinary collaborations. We offer three MTech programs with specializations in Microelectronics and VLSI; Communications, Signal Processing & Machine Learning; and Power Electronics and Power Systems. Additionally, our MTech by Research and PhD programs enable students to delve deeper into their areas of interest, under the guidance of distinguished faculty members who hold Ph.D. degrees from renowned institutes worldwide. Our research focus areas include emerging technologies such as 5G and 6G communication systems, IoT, machine learning, Mixed signal VLSI, sensors for biomarkers, power electronics etc.

The Department of Electrical Engineering at IIT DHARWAD is equipped with state-of-the-art laboratory infrastructure that supports our students and researchers in their pursuit of knowledge and innovation. We have established collaborations with international researchers and industry partners on various projects, further enriching our research ecosystem. Our faculty members are actively engaged in sponsored research projects, ensuring that our department remains at the forefront of electrical engineering research and education. By fostering a culture of innovation and excellence, we aim to produce top-notch engineers who can make a meaningful impact in their chosen fields.

Faculty Profile and Research Areas



Abhijit Kshirsagar
Assistant Professor

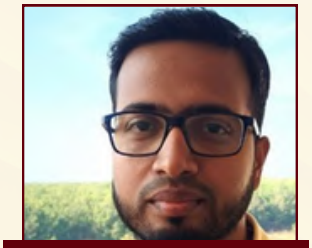
Research Area (s)

Power Electronics and Drives, Renewable Energy, Solar Inverters, EV Chargers, and Power Supplies.

Amarkumar Ayodhyasingh Kushwaha
Assistant Professor

Research Area (s)

Design and optimization of electromagnetic devices, Electromagnetic analysis of electric machines, Modelling and control of permanent magnet machines, Eddy-current couplers and brakes, Thermal analysis of power-electronic converters.



Ameer K Mulla
Associate Professor

Research Area (s)

Multi-agent systems, Decentralized control, System identification, Static and differential games, Algorithm development, Optimization and optimal control, Traffic modeling.

Animesh Kumar Sahoo
Assistant Professor

Research Area (s)

Renewables, Grid-tie Inverters Control, Power Electronic Systems, Grid Forming Technology, Microgrids.

Academic Departments

B N Bharath
Assistant Professor

Research Area (s)

Signal processing for wireless communications, Wireless networks, mm Wave communications, Learning algorithms for next generation wireless, Decentralized algorithms and stochastic optimization.

Gopal Krishna Kamath M
Assistant Professor

Research Area (s)

Control and Security of Cyber-Physical Systems, Intelligent Transportation Networks, Delayed Dynamical Systems, Communication-Control Co-Design.

Naveen M B
Associate Professor

Research Area (s)

4G/5G/beyond 5G mobile communications, Non-orthogonal multiple access (NOMA), Massive multi-input multi-output (MIMO) systems, Internet of Things (IoT).

Pratyasa Bhui
Associate Professor

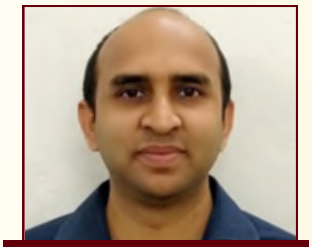
Research Area (s)

Power Systems, Smart Grid, Renewable Energy.

Rahul Jashvantbhai Pandya
Assistant Professor

Research Area (s)

Wireless Communication, Optical Communication, Optical Networks, Computer Networks, Machine Learning, Artificial Intelligence.



Rajshekhar V Bhat
Assistant Professor

Research Area (s)

Wireless communications, Low-latency communications, Machine learning for communications, Satellite communications.

Ruma Ghosh
Assistant Professor

Research Area (s)

Resistive Gas sensors, Biosensors, Nanomaterials, Sensors for environmental monitoring, healthcare, and precision agriculture.

S R Mahadeva Prasanna
Professor
[On lien from 01-05-204]
as Director, IIT DHARWAD

Research Area (s)

Speech Signal Processing, Speech Enhancement, Speaker Recognition, Speech Recognition, Speech Synthesis, Handwriting Recognition.

Academic Departments

Sairam Boggavarapu
Assistant Professor

Research Area (s)

Electromagnetic Design of Electric Motors and Transformers, Electromagnetic Design Aspects of Electric Vehicles, Computational Electromagnetics, Modelling and Loss Characterization of magnetic materials.

Samatha Benedict
Assistant Professor

Research Area (s)

Flexible electronics, Biomedical sensors.

Samba Raju Chiluveru
Assistant Professor

Research Area (s)

Edge computing accelerator for ML/AI applications, High performance deep learning accelerators, Inference model optimizations, Speech processing/enhancement, and Digital signal processing.

Saroj Mondal
Assistant Professor

Research Area (s)

Microelectronic Circuits Power Management Integrated Circuits, Radio Frequency Integrated Circuits, Energy Harvesting Circuits for Powering the IoTs.

Satish Naik
Assistant Professor

Research Area (s)

Power Electronics, Converters for electric vehicle (EV) battery charging, Hybrid medium voltage DC circuit breakers, Grid connected multilevel inverters, High voltage power electronics.

Sashaank Aswatha Mattur
Assistant Professor

Research Area (s)

Digital Image Processing, Computer Vision, Pattern Recognition, Remote Sensing, Applied Machine Learning.

Vigneshwara Raja P
Assistant Professor

Research Area (s)

GaN-based High-Electron Mobility Transistors, Silicon Carbide Power Devices,
Semiconductor Radiation Detectors, Deep-Level Transient Spectroscopy (DLTS).

Naveen Kadayinti
Assistant Professor

Research Area (s)

Design of Mixed signal circuits, High speed interconnects Equalizers and clock re-timing circuits, Testability of mixed signal circuits, Instrumentation circuits, Interface circuits for MEMS based sensors.

Nagaveni S
Assistant Professor

Research Area (s)

**RF Energy Harvester System in RFID, Piezo/Thermal/Solar Energy Harvesting Systems, Wireless Power Harvesting in Bioimplants,
RF Integrated Circuits.**

State of the Art Facilities

Teaching Labs/Workshops

1. CIF 201 - Electronics Lab: The Electronic lab is a specialized space designed for the study, testing, and development of electronic circuits and systems. It is equipped with various tools and instruments, such as oscilloscopes, multimeters, signal generators, and soldering stations, to facilitate hands-on experimentation and troubleshooting of electrical circuits, microelectronics, and embedded systems. The lab is equipped with major EDA tools (Cadence, Synopsis, Xilinx etc.) for circuit and device simulation.

2. CIF-102 - Digital Signal Processing (DSP): DSP laboratory is a specialized environment focused on the study and experimentation of digital signal processing techniques. It is equipped with tools such as DSP kits, SDR, software platforms (like MATLAB or LabVIEW), and signal analysis instruments. In a DSP lab, students, engineers, and researchers work with signals in digital form, performing tasks like filtering, compression, modulation, and transformation. The lab is commonly used to explore applications in audio processing, image processing, communications, radar, and other fields where signals are analysed.

3. CIF-106 - Control Lab: A Control Laboratory is a specialized environment for studying and experimenting with control systems, which are used to manage and regulate the behavior of dynamic systems. The lab is equipped with various tools and instruments, such as controllers, sensors, actuators, and simulation software (MATLAB), along with microcontroller boards like Arduinos, stepper and servo motors etc. to facilitate hands-on learning and testing of control strategies.

4. CIL-012 - EMPE Lab: An Electric Machines and Power Electronics Laboratory is a specialized facility for studying and experimenting with electrical machines, drives, and power electronic circuits. The lab is equipped with machines such as motors, generators, transformers, and associated power electronic devices like inverters, converters, and controllers. It allows hands-on exploration of the operation, control, and performance analysis of various electrical machines, including AC, DC, and induction motors.

The department has advanced research labs like –

- Control of Autonomous Robotic systems lab
- Electronics systems and testing labs
- Communications labs (Mobile protocols, wireless communications etc.)
- Learning and Inferencing labs
- Speech processing labs
- Power and energy systems labs etc.

The department has a NVIDIA DGX with 8xH100 GPU server, which is used for advanced high performance AI simulations. Further, each of the labs is equipped with research equipment and facilities as follows:

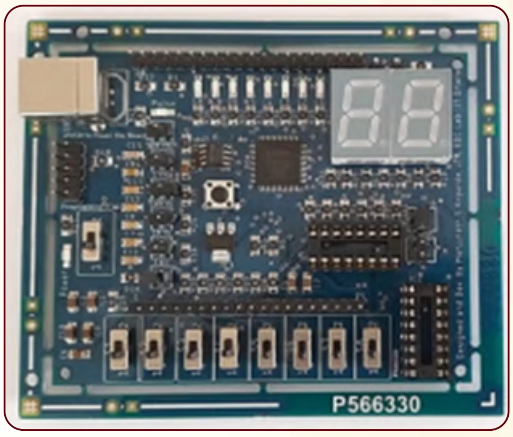
Academic Departments

Lab Name	Equipment Available
Control of Autonomous and Robotic Systems (CARS)	Motion capture systems, Nano drones, Haptic devices, robotic arms
Electronics Systems lab	1 NAS server, 10 Workstations
IC Clinic	6 GHZ Signal source, 3 GHz signal source, 7.5 GHz Spectrum analyzer 612digit multimeter, 4 GHz 4 ch. oscilloscope, 44 GHz Spectrum analyzer, 70 GHz VNA Source measure unit
Mobile Protocols and Communication Technologies (MPaCT) Lab	3 units of Lekha wireless advance SDR (4G Base station) 6 workstations
Learning Inference and Networks (LIaN) Lab	7 workstations, 77 GHz radar evaluation board, Jetson nano edge computing boards
WyX Lab	5 Workstations
AI Nexus Lab	1 GPU and 8 workstations
Speech processing & AI accelerator lab	9 Workstations
Shabdavedi lab	22 Workstations, 1 NAS storage server, 2 GPU servers
Power electronics and Electric machines Research lab	16 workstations, OPAL RT simulator, Grid simulator, 2 power analyzers, 400V DC supplies, Isolation transformers auto transformers RTAC, PMU, GPS Clock
Devices Lab	12 workstations
Circuits and Systems lab	16 workstations
Power, Energy and Renewables Lab (PEARL)	12 workstations, 200MHz MSO and DSO, 400V and 600V power supplies, Grid simulator including DC supply, 3 Phase inverter, Winding machines, Reflow oven, Microscope with camera, LCR Meter
Sensors lab	11 workstations, 2 Gas sensing setups, DC Sputtering system, Thermal evaporation, cryogenic bath, Centrifuges, Hot air oven, Ultrasonic cell disruption, DAQ, weighing machine, Hot plates, Muffle furnace, Two zone CVD furnace, BOD Incubator, 2 Sonicators, DI water machine
Anechoic Chamber	Sound Data acquisition unit (8 channel), Head Simulator - with ear models, Sound level meters, Studio headphones, Studio Microphone
Space Data Science Lab	1 GPU, 1 UPS, 2 large 80 inch displays and 8 workstations

Research and Developmental Works

- We have designed a bench-top programmable regulated power supply for use in UG labs. The unit is named 'Europa' and features coarse and fine output control along with current limit. More than 50 units have been made in the lab itself and have been used since last 2 semesters for lab courses.

- Designed an in house CPLD board for use in digital systems lab courses.



- A 2 MHz bandwidth PC based DSO and Arbitrary function generator are in progress.
- Design of low cost HV probe for education use.
- A Fire rescue assistant drone designed as a part of TiHAN funded project. As per our estimate, the current TRL of this drone is 5/6
- We could develop 2-port resistive sensors for protein and RNA based cancer biomarkers which have excellent translational potential. Four Indian patents have been filed to protect the IP of the developed device.
- Project Title: Mesh Network-Based Agriculture Data Collection and Generative AI-Based Data Analytics System for Precision Agriculture Funding Agency: Bio CYTIH, BITS Pilani under their BioCPS TIH Timeline: Approximately six months for the final product.
- Project Title: DVB-S2/X Modem Funding Agency: ISRO - RESPOND Timeline: Ongoing, expected to take one year for the prototype to be ready.
- Unified LTE and NBIoT Base station currently commercialized by Lekha Wireless Pvt. Ltd. as part of SERB IMPRINT sponsored project.

Academic Departments

Professional Outreach Activities

International Collaborations

- Prof Parth K Thakkar (Mitsubishi Electric Research Laboratories, USA).
- Volvo Cars Corporation, Sweden, in the form of a consultancy project through L&T Technology Services, India.
- Prof Mehul Motani (NUS Singapore).
- Prof Nikolaos Pappas (Link¨oping University, Sweden).
- Prof Shuenn-Yuh Lee (National Cheng-Kung University, Taiwan though "India-Taiwan Programme of Cooperation in Science & Technology").
- Prof Girish Chowdhary (University of Illinois at Urbana Champaign, US).
- Prof Andrew Margenot (University of Illinois at Urbana Champaign, US).
- Prof Anna L¨ahde (University of Eastern Finland, Finland).
- Prof Anna Ignaszak (University of New Brunswick, Canada).
- Prof Vincent Poor (Princeton University).
- Prof Deniz G¨und¨uz (Imperial College London).
- Prof Tharm Ratnarajah (Edinburgh).
- Prof Lutz Lampe (UBC Vancouver).
- Prof Rodolfo Oliveira (University of Nova de Lisboa, Portugal).
- Prof Prashant Khanduri (Wayne State University).
- IGSTC PECFAR

National Collaborations

- Prof Seena V (IIST Thiruvananthapuram).
- Prof Nitya Tiwari (IIT Bhubaneshwar).
- Prof Sreelakshmi Manjunath (IIT Mandi).
- Prof Debayani Ghosh (TIET Patiala).
- Prof Prashant K Wali (BITS-Pilani Hyderabad Campus).
- Prof Chetan Kumar V (BITS-Pilani Hyderabad Campus).
- Ms. Cynthia C (BITS-Pilani Hyderabad Campus).
- Bharat Heavy Electricals Limited (BHEL).
- Prof Rahul Vaze (TIFR Mumbai).
- Collaboration with ABCR Labs through C2S.
- Collaboration with SignalChip Solution Pvt Ltd through consultancy project.
- Collaboration with HCL through University Program.
- Collaboration with Intel, Altera through University Program.
- Prof L Umanand (IISc Bangalore).
- Prof Ravi Prakash Reddy (IIT Bombay).
- Prof. Ranjitha R Prasad (IIIT Delhi)
- Prof. Harshan Jagadeesh (IIT Delhi)
- Joint sponsored project with IIT Guwahati (PI: Prof. Srinivasan Krishnaswamy) (MoE-STARS).
- Dr Kamala Jayanthi P.D. (IIHR Bangalore).
- Prof Potdar (UAS Dharwad).
- Dr Purushottam Reddy (Department of Pathology, KIMS Hubli).
- Dr Sashidhara Kallappa (Department of Onco-Surgery, KIMS Hubli).
- Dr Rajendra B. Nerli (Department of Urology, KLE's Dr. Prabhakar Kore Hospital & Medical Research Centre, Belagavi).
- Dr Shridhar Ghagane (Department of Urology, KAHER Belagavi).

- A 5-day online Winter Course titled "Skill Development in Research and Publications," organized by the Department of EECE, was held during 16th - 20th Dec. 2024. The course covered essential skills for research and academic publishing, including writing grant proposals, research papers and review articles, along with insights into journal indexing and ethical considerations. Interactive sessions focused on AI tools, time management and preparing participants for roles as Ph.D. guides.

Awards and Achievements

- Prof. Abhijit Kshirsagar, Assistant Professor in the Department of EECE and currently serving under the Assistant Chair Professorship at Karnataka Renewable Energy Development Limited (KREDL), has been actively contributing to the areas of power electronics and smartgrid technologies. He delivered a presentation on "Multilevel Converter Development: Simulation to Power Hardware Testing with OPAL-RT" at RT24 India, OPAL-RT's Regional Conference on Real-Time Power Systems, Power Electronics, Automotive, and Aerospace Applications, held on 17–18 December 2024. He was also invited as a speaker for the One-Week Faculty Development Program on "AI-ML Based Smartgrid" at Basaveshwar Engineering College, Bagalkot, conducted from 30 January to 3 February 2025.
- Prof Naveen Kadayinti has been awarded 'Meity Visvesvaraya Young Faculty Research Fellowship (YFRF) award'
- Prof Satish Naik, Assistant Professor, appointed as an Associate Editor for the IEEE Power Electronics Society's IEEE Transactions on Power Electronics.
- Ms Vaidehi Painter obtained the Raman Charpak fellowship for spending 6 months in a University in France.
- Prof. Sai Ram Boggavarapu, Assistant Professor in the Department of EECE, received the Best Paper Award at IEEE PEDES 2024 for his work titled "Design of a Low Leakage Pulse Transformer for Gate Driving of Multiple SiC MOSFETs for Induction Heating Applications," co-authored with Mr. Arun K. Paul from Electronics Devices Worldwide Pvt. Ltd. He also delivered a talk on "Magnetic Design for Power Electronics and Finite Element Method" at a research colloquium on energy and power organized by the IEEE Bombay Section in coordination with VJTI, Mumbai, on 19 October 2024. Further strengthening his industry engagement, Prof. Boggavarapu conducted a three-day in-house short-term course for Bharat Heavy Electricals Limited (BHEL) on the Development of Electromagnetic Design Programs for Transformer Applications (27–29 January 2025) and initiated a new consultancy collaboration with DB Potential LLP with a project budget of ₹2.36 lakhs.
- Prof. Animesh Kumar Sahoo, Dept. of EECE, delivered a talk on "Grid Code Requirement for Inverter-based Resources" at the Workshop on Stability and Protection of Renewable Dominated Power Grids, held at IISc, BengaLUru (6–9 Jan 2025). He also spoke at the FDP on AI-ML Based Smartgrid at Basaveshwar Engineering College, BAgalkOT (30 Jan – 3 Feb 2025).

Academic Departments

Humanities, Economics, Arts and Rural Technologies

About the Department

The Department of Humanities, Economics, Arts and Rural Technologies was established in the year 2016. Interdisciplinary by nature, the department has faculty specializing in fields such as Literature, Gender Studies, Digital Humanities, Philosophy, Political Economics, Economics of Conflict, among others. The department offers a diverse range of courses to B. Tech., M.S. and PhD students, aiming to promote critical and analytical thinking, appreciation of arts and aesthetics, and an increased awareness of concepts, debates and contexts.

Engaged in teaching, research, training and outreach activities, the department also offers a full-time doctoral program to aspiring researchers.

The Department invites researchers, academics and organizations to collaborate with it, as it looks to expand its outreach and impact through interdisciplinary contributions.

Faculty Profile and Research Areas

Debalina Chakravarty
Assistant Professor

Research Area (s)
Energy Economics, Urban Economics.

Gopal Sharan Parashari
Assistant Professor

Research Area (s)
Applied Microeconomic theory, Applied game theory, Economics of Conflict, Agriculture.

Jolly Thomas
Assistant Professor

Research Area (s)
Metaphysics, Philosophical Logic, Ethics.

Mohana Rao Balaga
Assistant Professor

Research Area (s)
Currency Crises, International Price System, Exchange Rate Pass-Through and International Finance.

Ridhima Tewari
Assistant Professor

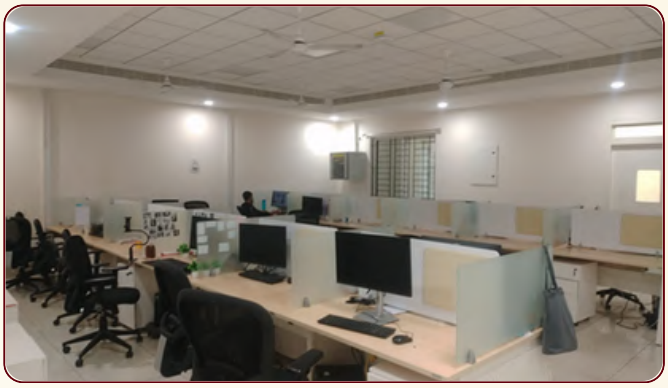
Research Area (s)
Literature, Gender Studies, Modernism, Feminist Philosophy.

Mahitosh Mandal
Assistant Professor Till September 2024

Research Area (s)
Literary and Cultural Studies.

Academic Departments

State of the Art Facilities



Research Scholar's Lab 1
Facility for Department of HEART

Research Scholar's Lab 2
Facility for Department of HEART

Professional Outreach Activities

- Prof. Debalina Chakravarty, Assistant Professor in the Department of Humanitas, Economics, Arts and Rural Technologies, delivered an invited lecture at the Faculty Development Program on Statistical Modelling and Data Analysis, organised by the School of Social Sciences and Humanities (VISH) and the School of Computer Science and Engineering (SCOPE) at VIT-AP University, Amravati, in February 2025.
- Prof. Jolly Thomas, Assistant Professor in the Department of Humanitas, Economics, Arts and Rural Technologies, conducted a GIAN (Global Initiative of Academic Networks) course titled "Ethics, Trust and Usability in Speech Technology" from 3rd to 7th March 2025, under the Ministry of Education's prestigious national programme.
- Prof. Mohana Rao Balaga, Assistant Professor in the Department of Humanitas, Economics, Arts and Rural Technologies, was invited as a resource person for the two-day workshop "Applied Econometrics: Leveraging with Software and Database" held on 7–8 March 2025 at SRM University AP.
- Prof. Ridhima Tewari, Associate Professor in the Department of Humanitas, Economics, Arts and Rural Technologies, actively contributed to national and international academic discourse through numerous conference presentations, invited talks, keynote addresses, and scholarly engagements during 2024–25. In August 2024, she co-presented two research papers titled "'We are the Jogathis from Savadatthi Hill Performing for You': Reclaiming Public Spaces and Gender through the Cult of Yellamma" and "Posthumanism and Transhumanism in Indian Science Fiction: A Study of Machinehood" at the International Conference on Whither Integrative Humanities? Paths and Challenges, organised by EFL University, Hyderabad. She later co-presented "Poetics of Vulnerability: Caste, Gender, and Resistance in Chandini Gagana's Trans Narratives" at the National Conference on Trans Lives: Celebrating Identity and Empowerment, organised by Mannar Thirumalai Naicker College and the Transgender Resource Center, Madurai in December 2024. In January 2025, she co-presented the papers "The Neo-mythologization of Sundarbans: Problematizing Ecotourism and Contemporary Representations in Popular Media" at the ICSSR-sponsored International Conference at Mount Carmel College, Bengaluru, and "Demystifying the 'Thriving' Traditional Fishing Culture: A Study of Fishing Songs from the Vypeen Fishing Community" at the 10th Annual Conference of the Oral History Association of India, themed Coastal Histories: Stories of Resistance and Resilience, organised in collaboration with the Kerala Museum. In February 2025, she co-presented "The Human–Machine Hybrid: Exploring Cyborg through Transhumanist and Posthumanist Lenses" at the International Conference on Graphic Narratives and Comic Studies as World Literature Phenomena at EFLU, Hyderabad, and in March 2025 she co-presented "From Traditional to Digital: Jogatti Folk Narratives as Digital Storytelling in the 21st Century" at the International Conference on Reimagining Communication in the 21st Century, organised by St. Philomena's College, Mysuru. Alongside these paper presentations, Prof. Tewari delivered numerous invited lectures, including "Feminist Methodologies and Social Science Research" at a five-day FDP at Presidency University, Bengaluru (June 2024), a session on academic writing for students at KLE Lingaraj College, Belagavi, and a lecture titled "'Though this be

madness, there is method in it': Rethinking Feminist Methodologies through Texts" during the National FDP on Research Methods for English Studies organised by Presidency University (June 2024). She delivered a Keynote Address on "Indian Perspectives on Humanities and Social Sciences at Technical Institutes" at the One-Day Conclave on Emerging Trends in Humanities and Social Sciences at Technical Institutes, KLE Technological University (July 2024), followed by a workshop lecture on "Academic Writing and Communication" at KLE Technological University (August 2024). She also delivered an invited lecture titled "Feminism's Fourth Wave: Navigating the Complexities of Contemporary Feminist Thought" at Graphic Era Hill University, Haldwani (October 2024), and presented the Prof. Sarojini Shintri Endowment Lecture in Women's Studies at Karnatak University, Dharwad in January 2025. Further, she served as Session Chair at the International Conference on Graphic Narratives and Comics Studies as World Literature Phenomena at the English and Foreign Languages University, Hyderabad, chairing a session on History and Memory in Graphic Narratives with participation from researchers and faculty across premier universities in India and abroad. Through her extensive scholarly presentations, keynote addresses, invited lectures, and conference leadership, Prof. Tewari continues to advance cutting-edge dialogues in gender studies, digital humanities, oral histories, literary and cultural studies, and interdisciplinary social sciences.

Awards and Achievements

- Ms. Arpita Banerjee presented a research paper titled "The Household Energy Transition Toward Cleaner Energy Resources in India" in the doctoral colloquium at the 6th Rajagiri Management Conference, held in online mode on 14–15 February 2025.
- Ms. Arpana Yadav presented her research work titled "Analysis of ERPT into Trade Prices and Trade Quantities of India" at multiple reputed academic forums in 2024. She first presented the study at the 5th Doctoral Colloquium on Management and Development, held from 6–9 November 2024, followed by the 1st International Conference on Sustainable Finance organised by IIT Bhubaneswar from 6–8 December 2024. She further presented the same research at the 9th Conference on Empirical Issues in International Trade and Finance, hosted by IIFT Kolkata from 12–13 December 2024, demonstrating consistent scholarly engagement in the field of international trade and finance.
- Ms. K. Baishnobi Patro (HS23DP002), pursuing her Ph.D. in Economics under the supervision of Prof. Mohana Rao Balaga, received the Best Paper Award at the 1st International Conference on Sustainable Finance hosted by IIT Bhubaneswar for her paper titled "Beyond the Crises: Unravelling the Real Effects of Currency and Banking Crises", which explores the aftermath of currency and banking crises and identifies significant macroeconomic factors explaining their consequences (6–8 December 2024). She also presented her research across multiple prestigious academic platforms in 2024. Her study "Dominance of the Dollar: A Privilege or a Catastrophe?" was presented at the 5th Doctoral Colloquium on Management and Development (6–9 November 2024) and later at the DSE Winter School Conference (12–14 December 2024). Her award-winning research "Beyond the Crises: Unravelling the Real Effects of Currency and Banking Crises" was also presented at the 1st International Conference on Sustainable Finance organised by IIT Bhubaneswar (6–8 December 2024) and at the 9th Conference on Empirical Issues in International Trade and Finance hosted by IIFT Kolkata (12–13 December 2024), reflecting her strong academic engagement and recognition in the field of international finance.
- Mr. Debashis Biswas from the Department of HEART successfully completed the NPTEL course "Philosophy and Critical Thinking" (January–April 2025 session) with an outstanding score of 92%, earning the Elite + Gold certification. The 12-week course, recommended for 3–4 academic credits, was offered under the course code NPTEL25HS64S1044300140. In addition, Mr. Biswas, a Ph.D. scholar under the supervision of Prof. Jolly Thomas, successfully completed the certificate course "Ethics in the Teaching Profession" under the Malaviya Mission Teacher Training Programme (MMTTP), organised by the Department of Humanities and Social Sciences, IIT Madras, from 21–25 March 2025 as part of the National Initiative on Capacity Building of Faculty (NICBF).
- Ms. Devayani Kamal participated in the National Workshop on Critical Thinking held at the University of Hyderabad from 16–20 October 2024, enhancing her academic exposure and skills in analytical and reflective inquiry.

- Ms. Karthika Mohan presented a paper titled "From Narrative to Spectacle: The Changing Face of Graphic Violence in Contemporary Malayalam Cinema" at the International Conference on "Disruptive Frames in the Post-Colony: Locating South Asian Cinema Beyond Global Cosmopolitanism" held at Midnapore College (Autonomous) on 10 August 2024. She also participated in the International Conference on "Whither Integrative Humanities? Paths and Challenges," organised by the Department of English Literature at the English and Foreign Languages University (EFLU), Hyderabad, from 28–30 August 2024, contributing to scholarly discussions in the domain of cinema and humanities.
- Mr. Lemon Sam has contributed significantly to scholarly research through multiple publications in 2024 across international academic platforms. His entry titled "Populism and Ventriloquism" was featured in the Encyclopedia of New Populism and Responses in the 21st Century, published by Springer in 2024. He also authored the article "From Esoteric Religiosity to Ethical Inclusivity: An Investigation of the Detrimental Effects of Religious Trauma in The Saint of Bright Doors*," published in Critical South Asian Studies (Vol. 2, No. 1, 2024). Additionally, his paper "Investigating the Interrelationship between the Desire for a Cohesive Community and Opioid Abuse: A Neuropsychological Study of Demon Copperhead" appeared in American, British and Canadian Studies (Vol. 41, No. 1, 2024), highlighting his interdisciplinary engagement across literature, psychology, and cultural studies.
- Ms. Sanjana Sukkyi actively contributed to academic discourse through multiple conference presentations in 2024–25. In December 2024, she co-presented a paper titled "Poetics of Vulnerability: Caste, Gender, and Resistance in Chandini Gagana's Trans Narratives" at the National Conference on Trans Lives: Celebrating Identity and Empowerment, organised by Mannar Thirumalai Naicker College, Madurai, and the Transgender Resource Center, Madurai. Earlier, in August 2024, she co-presented the paper "'We are the Jogathis from Savadatthi Hill Performing for You': Reclaiming Public Spaces and Gender through the Cult of Yellamma" at the International Conference on Whither Integrative Humanities? Paths and Challenges, organised by EFL University, Hyderabad. Most recently, in March 2025, she co-presented the paper "From Traditional to Digital: Jogatti Folk Narratives as Digital Storytelling in the 21st Century" at the International Conference on Reimagining Communication in the 21st Century, organised by St. Philomena's College, Mysuru, demonstrating her continued scholarly engagement in the fields of gender studies, folklore, and digital humanities.
- Mr. Tonmay Das [HS24DP005], Ph.D. Research Scholar under the supervision of Prof. Ridhima Tewari in the Department of HEART, achieved outstanding academic merit by successfully completing and topping the NPTEL course on Forensic Linguistics with a remarkable score of 90%, earning the prestigious Gold Medal Certificate. He actively participated in academic forums, including the International Conference on "Whither Integrative Humanities? Paths and Challenges" organised by the Department of English Literature at the English and Foreign Languages University, Hyderabad, from 28–30 August 2024. He also presented a research paper titled "Performing Rituals, Performing Resilience: The Politics of Spirituality and Occupational Vulnerabilities in Sundarbans" at the Doctoral Scholars' Conference on "People, Culture, Spaces" (ICSSR-Sponsored), held on 9–10 January 2025 at the Centre for Studies in Social Sciences, Calcutta (CSSSC). Additionally, he co-presented a research paper with Dr. Ridhima Tewari titled "The Neo-mythologization of Sundarbans: Problematizing Ecotourism and the Contemporary Representations of Sundarbans in Popular Media" at the International Conference on "Navigating Cross-Functional Collaboration for Ecological Security Pattern" (ICSSR-Sponsored), held from 16–18 January 2025 at Mount Carmel College, Autonomous, Bengaluru, reflecting his strong research engagement and contribution to interdisciplinary humanities scholarship.
- PRof. Ridhima Tewari, Dept. of HEART, co-presented a paper on "The Human-Machine Hybrid" at the International Conference on Graphic Narratives, EFLU, HyderAbAd, and chaired a session on 'History and Memory in Graphic Narratives'. Her essay "Whither diasporas?" was published in South Asian Diaspora (Q1, Taylor & Francis), and she delivered the Prof. Sarojini Shintri Endowment Lecture at KarnATak University dhArwAD.
- Prof. Debalina Chakravarty, Dept. of HEART, delivered an impactful invited lecture at the Faculty Development Program on Statistical Modelling and Data Analysis, organized by the School of Social Sciences and Humanities (VISH) and the School of Computer Science and Engineering (SCOPE) at VIT-AP University, AmarAvati.

- Mr. Tajuddhin Nadaf actively participated in prestigious academic forums by presenting his research at multiple national and international conferences in 2024. He presented a paper titled "Exploring the Impact of Artificial Intelligence on Literary Creativity: A Comparative Analysis of Human-Written and AI-Generated Content" at the 13th Annual Academic Conference, held at IIT Madras on 6 April 2024. He later presented "Technological Evolution in English Language Teaching: A Comprehensive Investigation into Contemporary Practices and Pedagogical Implications" at the International Conference on "Appropriate Teaching Methodologies in Interdisciplinary Contexts: Mapping Sociolinguistic Diversity," organised by the Department of English, Aligarh Muslim University, from 14–16 May 2024 in hybrid mode and sponsored by ICSSR, New Delhi. Most recently, he presented a research paper titled "Posthumanism in Hulu's The Handmaid's Tale: Intersections of Identity, Ethics, and Speculative Futures" at the one-day multidisciplinary symposium "The Hulu Adaptation of The Handmaid's Tale (2017–2025)", organised at the Newcastle City Campus of Northumbria University, United Kingdom, on 13 September 2024, reflecting his research engagement across digital humanities, English language pedagogy, and literary studies.
- Mr. Vinayak B. Patil (HS24DP006), Junior Superintendent and Ph.D. Scholar under the Institute Staff category, presented a research paper titled "Does transition to renewables upsurge energy security and sustainability? A review for Karnataka" at the IX International Conference on Sustainable Energy and Environmental Challenges, held at IIT Mandi from 13–15 December 2024. The paper examined Karnataka's renewable energy profile over the past decade, assessing its implications for energy security and long-term sustainability.
- Ms. Vinita John presented a research paper titled "Thriving Traditional Fishing Culture: A Study of Fishing Songs from the Vypeen Fishing Community" at the 10th Annual Conference of the Oral History Association of India (OHAI), organised in collaboration with the Kerala Museum, from 24–26 January 2025.
- PRof. Ridhima Tewari, Associate Professor, Department of Humanities, Economics, Arts and Rural Technologies, delivered an invited lecture "Feminism's Fourth Wave: Navigating the Complexities of Contemporary Feminist Thought", for the Department of English and the Department of Media and Mass Communication, Graphic Era Hill University, Haldwani, Uttarakhand on 07.10.2024.

Academic Departments

Mathematics

About the Department

Established in 2016 with the inception of the institute, the department has grown into a vibrant centre of teaching and research. Although young, it hosts a strong and dynamic faculty engaged in high-quality research and instruction across multiple levels. The department aims to provide students with a diverse and solid foundation in mathematics while nurturing their interest in advanced studies and research. We offer a regular Ph.D. program along with interdisciplinary academic pathways. The department jointly conducts the BS-MS (Interdisciplinary Sciences) program in collaboration with the Departments of Biosciences and Bioengineering, Chemistry, and Physics, and leads the Mathematics Major within this program. Additionally, we administer the B.Tech. (Mathematics and Computing) program in collaboration with the Department of Computer Science and Engineering.

Our faculty members pursue research across a broad spectrum of mathematical disciplines, including commutative algebra, functional analysis, graph theory, number theory, numerical analysis, and representation theory, contributing actively to the advancement of mathematical sciences.

Faculty Profile and Research Areas

Amlan K Barua
Associate Professor

Research Area (s)
Computational materials science, Computational methods for PDEs.

Dhriti Ranjan Dolai
Assistant Professor

Research Area (s)
Random Schrodinger operator, Functional analysis.

S H Kulkarni
Adjunct Professor

Research Area (s)
Functional Analysis, Operator Theory, Spectrum, Pseudo-spectrum, Condition Spectrum

Sagnik Sen
Assistant Professor

Research Area (s)
Structural graph theory, Graph homomorphisms.

Shivprakash Patel
Assistant Professor

Research Area (s)
Representation theory, Automorphic forms, Covering groups.

Shraddha Srivastava
Assistant Professor

Research Area (s)
Representation theory: Diagram algebras, Finite groups, Lie algebras.

Shreedevi Masuti
Assistant Professor

Research Area (s)

Commutative Algebra.

Veekesh Kumar
Assistant Professor

Research Area (s)

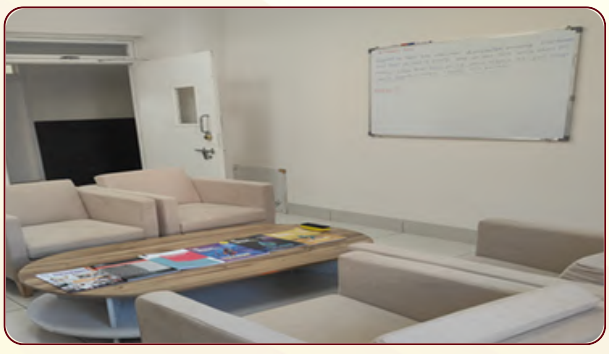
Transcendental Number Theory, DiophantineApproximation, Applications of Schmidt Subspace Theorem, Irrationality of Odd Zeta values and related questions.

State of the Art Facilities

Mathematics Cafe: A multipurpose laboratory for discussion, seminars, and brainstorming sessions.

Facility for Mathematics Department Research Schorlor's Lab

Seminar Room



Thoughtorium

Professional Outreach Activities

- Prof. Dhriti Ranjan Dolai contributed to academic and research activities through multiple professional engagements. He coordinated the NBHM Entrance Examination hosted on 25 January 2025. As part of an ongoing research collaboration, he engaged in academic interactions with Prof. Krishna Maddaly from Ashoka University, who visited the Department of Mathematics from 22–26 July 2024. In addition, Prof. Dolai supported scholarly review activities as a reviewer for the journal Review of Mathematical Physics and also for MathSciNet, reflecting his active involvement in the mathematical research community.
- Prof. Sagnik Sen, Assistant Professor in the Department of Mathematics, conducted a GIAN (Global Initiative of Academic Networks) course titled "Sparse Graphs: Treewidth, Planarity, Bounded Expansion" from 24 February to 7 March 2025, under the Ministry of Education's prestigious national programme.
- Prof. Shraddha Srivastava, Assistant Professor in the Department of Mathematics, actively contributed to academic and collaborative research activities during 2024–25. She delivered an invited talk at the symposium "Groups and Its Representations" organised by the Ramanujan Mathematical Society at Christ University from 27–29 December 2024. Earlier in the year, she participated in the international workshop "Advances in Lie Theory, Representation Theory, and Combinatorics: Inspired by the Work of Prof. Georgia M. Benkart," held at SL Math, Berkeley, USA, from 1–3 May 2024. She also delivered an invited lecture in the AIS Series on Representation Theory of Quivers and BGG Category O for Semisimple Lie Algebras from 2–21 December 2024. As part of her ongoing research collaboration, Mr. Tirtharaj Basu from the Institute of Mathematical Sciences, Chennai, visited the Department of Mathematics for academic interaction with her on two occasions — from 1–7 October 2024 and again from 21 February to 7 March 2025 — further strengthening collaborative work in the field of representation theory.
- Prof. Shreedevi Masuti, Assistant Professor in the Department of Mathematics, has been actively involved in academic outreach, research collaboration, and international engagements during 2024–25. She conducted a one-day symposium titled "Algebra and Geometry" on 2 April 2024, funded by SPARC. As part of sustained research collaboration, Prof. Enrico Carlini from Politecnico di Torino, Italy, visited the department twice — from 24 March to 7 April 2024 and from 2 to 18 January 2025 — for academic interaction with her, and she also visited him at Politecnico di Torino from 24 to 29 April 2024. Prof. Masuti was one of the organisers of the NCMW Workshop on Recent Trends in Commutative Algebra (2024) held at IIT Bombay from 17–22 June 2024. She further strengthened her international research exposure by visiting ICTP, Trieste, Italy under the regular associate programme from 24 April to 24 May 2024, and by participating in the Preparatory School on Lefschetz Properties in Algebra, Geometry, Topology, and Combinatorics, held in Krakow, Poland, from 5–11 May 2024. In addition, she delivered an invited talk at the RMS Annual Conference, held at Christ University, Bengaluru, from 27–29 December 2024, reflecting her continued scholarly contribution to algebra and geometry research communities.
- Prof. Veekesh Kumar actively contributed to international research exchange and mathematical scholarship through invited talks, academic visits, and collaborative projects during 2024–25. He was an invited speaker at TRADE – International Conference on Transcendence, Arithmetic and Diophantine Explorations, hosted at KSOM Kozhikode in January 2025, and earlier at the 39th Annual Ramanujan Mathematical Society (RMS) Conference held at Christ University, Bengaluru, in December 2024. He also delivered a talk at the ICDEPRA 2024 Conference organised by the Indian Statistical Institute, Delhi, in November 2024. As part of collaborative research activities, he visited Adam Mickiewicz University, Poznań, Poland from 10–20 July 2024 to work with Prof. William Mance on transcendence criteria for certain expansions of real numbers. Prior to that, he undertook an academic visit to the University of Duisburg–Essen, Germany from 12–19 May 2024 to collaborate with Prof. Johannes Sprang, initiating a project on the period length of continued fraction expansion of linear recurrence sequences—now completed and submitted for publication—and another ongoing project on the arithmetic nature of odd zeta values. Further strengthening research collaborations at IIT Dharwad, he hosted multiple visiting scholars: Dr. Shruti Hegde from the Ramakrishna Mission Vivekananda Educational and Research Institute, Belur, Howrah, from 26 June to 8 September 2024; Mr. Oais Ahmad Bhat, Ph.D. scholar from the Harish-Chandra Research Institute, Prayagraj, from 13 August to 13 September 2024; and Dr. Gorekh Prasad Sena, Postdoctoral researcher from the Harish-Chandra Research Institute, Prayagraj, from 6–31 January 2025, underscoring his sustained contribution to global research networks in transcendence theory and number theory.

List of Talks

Date	Title	Speaker
Apr 4, 2024	Different perspective on mathematical objects.	Enrico Carlini, Politecnico di Torino, Italy.
Jun 20, 2024	The nullity theorem, its generalization and applications.	S.H. Kulkarni, IIT DHARWAD, India.
Jun 27, 2024	On Computing the Vertex Connectivity of 1-Planar Graphs.	Karthik Murali, Carleton University, Canada.
Jul 18, 2024	Degenerate Whittaker space for GL_4(o_2)	Ankita Parashar, IIT Delhi, India.
Jul 25, 2024	Random operators and their eigenvalues	Krishna Maddaly, Ashoka University, India.
Aug 8, 2024	Weighted zero-sum constants and inverse problems	Shruti Hegde, RKMVERI, India.
Aug 22, 2024	Density functions and integral dependence	Sudeshna Roy, IIT DHARWAD, India.
Sep 12, 2024	Random walks on infinite (hyperbolic) groups	Debanjan Nandi, IISc Bangalore, India.
Oct 1, 2024	Saturation density functions and some applications	Suprajo Das, IIT Madras, India.
Oct 3, 2024	Koszul duality for Schur algebras and q-Schur algebras	Tirthraj Basu, IMSc Chennai, India.
Oct 20, 2024	The Relationship between vertex coloring and complete graphs	Suchismita Mishra, Universidad Andres Bello, Chile.
Jan 16, 2025	Geometry of smooth Gaussian fields	Akshay Hegde, University of Oxford, UK.
Jan 23, 2025	Lehmer's problem and inertia degrees of primes	Gorekh Prasad Sena, Harish-Chandra Research Institute (HRI), Prayagraj, India.
Feb 13, 2025	Representations of GL_n(Q_p) and various models for them	Mahendra Kumar Verma, IIT Roorkee, India.

Awards and Achievements

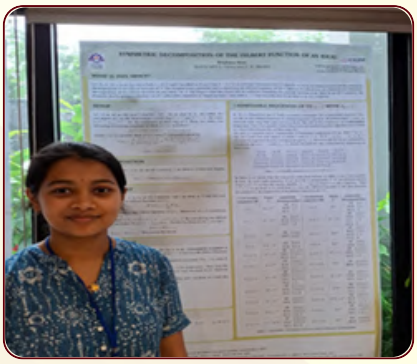
- Prof. Sagnik Sen has been actively involved in several funded research projects in graph theory. He is the Principal Investigator of the ongoing SERB–MATRICS project "Oriented Chromatic and Clique Number of Planar Graphs" (2022–2025) and co-Principal Investigator of the NBHM-funded project "Graph Theoretic Model of Channel Assignment Problem (CAP) in Wireless Networks" (2022–2025). He also completed two AAP-DRIF funded international collaboration projects in 2024 and 2025 for research visits to LIMOS, University of Clermont Auvergne, France. Additionally, he is the co-Principal Investigator of the GIAN-funded project "Sparse Graphs: Treewidth, Planarity, Bounded Expansion," reflecting his continued research contributions to structural and applied graph theory.
- Prof. Shraddha Srivastava is currently Principal Investigator for two ongoing funded research projects: "Restriction and Kronecker Problems in Representation Theory from the Diagram Algebra Viewpoint" supported by ANRF-PMECRG (2025–2028), and "Problems in Combinatorial Representation Theory" funded through the DST-INSPIRE Faculty Fellowship (2022–2027).
- Prof. Shreedevi Masuti is Principal Investigator for three ongoing funded projects on Hilbert functions: "On the Ubiquity of Hilbert Functions" funded by MOE-SPARC (2023–2025), "The Algebra and Geometry of Hilbert Functions" funded by SERB-CRG (2023–2026), and "The Hilbert Functions of K-Algebras and its Applications" funded by SERB-MTR (2023–2026).

Academic Departments

- Prof. Veekesh Kumar is Principal Investigator for two ongoing funded projects: "Diophantine Approximation of Algebraic Numbers and its Applications to Transcendence and Continued Fraction Expansions" supported by ANRF-PMECRG (2025–2028), and "Fractional Parts Powers of Real Algebraic Numbers and Related Problems" funded by NBHM (2023–2026).
- Ms. Meghana Bhat undertook a research visit to Politecnico di Torino, Italy from April–June 2024 (hosted by Prof. Enrico Carlini), where she delivered a seminar titled "On Gorensteinness of Associated Graded Rings of Filtrations" in the Seminars of Algebra, Algebraic Geometry and Their Applications. She presented a poster on the same work at the International Conference on Local Rings and Singularities at IIT Bombay in June 2024, and also participated in the One-Day Symposium on Algebra and Geometry at IIT Dharwad as well as the NCM Workshop on Recent Trends in Commutative Algebra at IIT Bombay (17–22 June 2024).
- Mr. Naveen Kumar attended the Conference on Operator Algebra and Research Topics held at IIT Bombay on 1 March 2025, contributing to his academic exposure in the field.
- Mr. Vivek Singh attended the AIS Workshop on "The Subspace Theorem and Its Applications" conducted by the Chennai Mathematical Institute (CMI), Kelambakkam, from 16–28 December 2024.
- Ms. Zin Mar Myint participated and volunteered in the GIAN 2025 course on Sparse Graphs hosted by the Department of Mathematics at IIT Dharwad. She is also a member of the Organising Committee for the CALDAM 2026 Conference and serves as a reviewer for the journal Discrete Applied Mathematics (DAM).

- Prof Sagnik Sen, Assistant Professor, Department of Mathematics, conducted a GIAN (The Global Initiative of Academic Networks (GIAN) is a program of the Ministry of Education) course named "Sparse graphs: treewidth, planarity, bounded expansion", 24 February 2025 - 7 March 2025.

- Prof Sagnik Sen, Assistant Professor, Department of Mathematics, conducted a GIAN (The Global Initiative of Academic Networks (GIAN) is a program of the Ministry of Education) course named "Sparse graphs: treewidth, planarity, bounded expansion", 24 February 2025 - 7 March 2025.



Mechanical, Materials and Aerospace Engineering

About the Department

The Department of Mechanical, Materials, and Aerospace Engineering (MMAE) was established in 2016, alongside the founding of IIT DHARWAD. Initially known as the Department of Mechanical Engineering, it was renamed in 2019 to reflect its broadened academic and research scope.

The Department currently offers a B. Tech in Mechanical Engineering, and M. Tech as well as Ph.D. programs in Mechanical, Materials, and Aerospace Engineering. With effect from the current academic year, the curricula for both the B. Tech and M. Tech programs have been revised. Additionally, three new M. Tech specializations have been introduced, replacing the previously offered single specialization.

Faculty Profile and Research Areas

Amar Keshav Gaonkar
Associate Professor

Research Area (s)

Sustainable Energy Efficient Infrastructure, Solar and Geothermal Energy, Greenhouse Controlled Environment Agriculture, Building Thermal Modelling.

Ambarish Kulkarni
Adjunct Professor

Research Area (s)

Mobility, Manufacturing cognitive twins, Critical infrastructure

Anbukkarasi Rajendran
Assistant Professor

Research Area (s)

Computational Mechanics,
Applied Mechanics,
Model order reduction,
Thin Film Dynamics characterization,
Physical Metallurgy,
Mechanical Metallurgy.

Dhiraj V Patil
Associate Professor

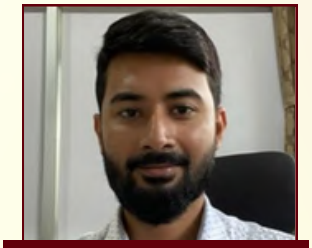
Research Area (s)

Computational Fluid Dynamics (CFD): Mesoscopic and particle-based approaches as: lattice-Boltzmann method, discrete element method, for the analysis of thermal fluid flows, non-Newtonian flows, turbulence, high-speed flows.

Group Captain Prahlad Joshi
Professor of Practice

Research Area (s)

Blast analysis of composite and monolithic materials, Blast mitigation and fragment estimation of materials under dynamic loading.



Hiranya Deka
Assistant Professor

Research Area (s)

Multiphase Flow, Drops, Bubbles, Rheology, Thermal Safety Analytics in Li-ion batteries, Aerodynamics of Ceiling fan.

Academic Departments

Keerthi M C
Assistant Professor

Research Area (s)

Turbomachinery aerodynamics, flow control, experimental fluid mechanics.

Meenatchidevi Murugesan
Assistant Professor

Research Area (s)

Combustion, Thermoacoustic instabilities, Nonlinear dynamics, Hydrogen, Ammonia, Optical flow and Combustion diagnostics, Reduced-order modeling.

Omkar Baswaraj Bembalge
Assistant Professor

Research Area (s)

Liquid state processing of Metals and Composites, Establishing Manufacturability via Processing Maps and Wear Maps, Modelling and Constitutive Analysis of Electric Assisted Deformation, Severe Plastic Deformation, and Metal Foam Casting.

Pradeep Gururaj Yammiyavar
Visiting Professor

Research Area (s)

Industrial Product Design & Innovation, UX-UI User Experience Design, Human Computer Interaction Design, Built Environment & Infrastructure Design.

Punnag Chatterjee
Assistant Professor

Research Area (s)

Smart structures, vibration and dynamics, aeroelasticity, energy harvesting.

Rakesh Lingam
Assistant Professor

Research Area (s)

Metal Forming & Plasticity, Incremental Sheet Forming, Numerical analysis of forming processes, Computer aided design and manufacturing (CAD/CAM), Digital Twins in Manufacturing.

Ramjee Repaka
Professor

Research Area (s)

Heat Transfer, Applied Thermal Engineering, Bioheat Transfer, Cancer Diagnosis and Therapy (RFA and MWA), Biofluid Mechanics, Refrigeration and Air Conditioning and Thermal Management of Electric Vehicles.

Samarth S Raut
Assistant Professor

Research Area (s)

Cardiovascular Biomechanics, 3D Geometric modeling, Patient-specific modeling, Soft-robotics, Computer-vision applications.

Academic Departments

Sangamesh Deepak R
Assistant Professor

Research Area (s)

Kinematics and Dynamics of Mechanical Systems, Static Balancing, Compliant Mechanisms.

Satyapriya Gupta
Assistant Professor

Research Area (s)

Crystal Plasticity Modeling, Lightweight and High temperature Materials, Dislocation Dynamics, Deformation Mechanisms in Metals, Computational Materials Design.

Shrikanth V
Assistant Professor

Research Area (s)

Vibrations, Experimental Mechanics, Tribology, Nonlinear dynamics, Low velocity impact mechanics, Signal modulation using chaos.

Somashekara M A
Associate Professor

Research Area (s)

Additive Manufacturing, 3D/4D Printing, Gradient Objects Fabrication, Directed Energy Deposition, Smart Material (shape memory alloys).

Somil Yadav
Assistant Professor

Research Area (s)

Sustainable Energy Efficient Infrastructure
Solar and Geothermal Energy
Greenhouse Controlled Environment Agriculture
Building Thermal Modelling.

Sreepathi L K
Visiting Professor

Research Area (s)

Condensation Heat transfer, Biodiesel, Solar Thermal energy, Gasification.

Sudheer Siddapureddy
Associate Professor

Research Area (s)

Fire dynamics, heat transfer, jet impingement cooling, battery thermal management, thermal runaway, AI application on thermal images in medical diagnosis.

Surya Prakash Ramesh
Assistant Professor

Research Area (s)

Atomization and Sprays, Multiphase Flows, Combustion, Experimental Fluid Mechanics.

Academic Departments

Sushanta Kumar Sethi
Assistant Professor

Research Area (s)

Computational Materials Science, Self-clean coatings, Multi-functional coatings, Graphene CNT intercalation.

Tejas Prakash Gotkhindi
Associate Professor

Research Area (s)

Elasticity, Mechanics of Composite materials, Fracture Mechanics, Cellular Solids, Computational Mechanics.

Vyom Sharma
Assistant Professor

Research Area (s)

Advanced Machining Processes, Hybrid Manufacturing, Electrochemical based Manufacturing Processes, Smart Manufacturing, Acoustic Metamaterials, Industry 4.0.

State of the Art Facilities

CNC Lathe Trainer

Hands-On Learning: A CNC lathe trainer provides practical, hands-on experience with operating and programming CNC lathes, enabling learners to grasp complex concepts through direct interaction with the machinery.

Skill Development: It helps develop essential skills in precision machining, tool selection, and material handling, preparing trainees for real-world applications in manufacturing and engineering sectors.

Safety and Best Practices: Training emphasizes safety protocols and best practices, ensuring that learners understand how to operate equipment responsibly and effectively, reducing the risk of accidents and improving overall workplace safety.

Specification

1. Spindle Motor: H.P DC Motor (200 - 3000 RPM) or More
2. Resolution: 0.005 mm or better
3. Repeatability: ± 0.01 mm

Wire cut EDM Machine

Precision Machining: Wire cut EDM (Electrical Discharge Machining) machines are known for their ability to produce highly accurate and intricate shapes. They use a thin, electrically charged wire to cut through conductive materials with precision, making them ideal for complex designs and tight tolerances.

Material Versatility: These machines can work with a variety of materials, including hardened steel, brass, and titanium. This versatility allows for applications across different industries, such as aerospace, automotive, and mold making.

Minimal Material Waste: Wire cut EDM is highly efficient, as it generates minimal material waste compared to traditional machining methods. The process removes material only where needed, making it an environmentally friendly option for precision manufacturing.

Academic Departments

Robot Welding Machine

Automation: Robot welding machines automate the welding process, improving speed and reducing manual labor.

Precision: They offer high accuracy and consistency, ensuring uniform welds and minimizing defects.

Efficiency: Enhances production rates and reduces cycle times, leading to increased output.

Specification:

1. 6 Axis Machine
2. Payload -25kg
3. Reach of 1831mm
4. Repeatability = ±0.02mm

Micro Hardness Testing Machine

1. Data acquisition: 24-bit 32 kbps
2. Indenter: Calibrated Berkovich, Vickers, Knoop, Spherical
3. Micro Indentation:

- Load Application: F = 500 milli N to 20N
- Load Resolution: 2 µN
- Displacement Range: 0.2 µm to 250 µm
- Displacement Resolution: 250 pm
- Hardness Range: 3 to 3000 HV
- Hardness Accuracy: 0.1% of HV

SI Engine

Specification:

Product: Research Engine test setup 1 cylinder, 4 stroke, with open ECU for petrol mode (Computerized).

Dynamometer Type: eddy current, water cooled, with loading unit.

Propeller Shaft: With universal joints coupled to Gearbox with engine (Gear Shift up to 6).

Air Box: M S fabricated with orifice meter and manometer.

Fuel Tank: Capacity 15 lit, Type: Dual compartment, with fuel metering pipe of glass.

Calorimeter Type: Pipe in pipe.

ECU: Make PE USA, Model PE3, full build, potted enclosure.

Piezo Sensor Combustion: Range 5000 PSI, with low noise cable.

Crank Angle Sensor: Resolution 1 Deg, Speed 12000 RPM with TDC pulse.

Data Acquisition Device: NI USB-6210, 16-bit, 250kS/s.

Piezo Powering Unit: Make-Apex, Model AX-409.

Engine Control Unit: PE3 SP series ECU, full build potted enclosure.

Creep Testing Machine

Specification:
Main Testing Load Frame:
Capacity: 50KN or more Minimum load: 0.5 KN or less.
Crosshead Travel: 200 mm or more Span Length: 650-700 mm.
Load Accuracy: ±0.5 % or better of Calibrated range.
Loading Speed: 0.01 to 50 mm/min.
Drive Systems: AC Servo-motor & Servo control Drive Systems.
Electric Power Supply: 220 VAC, 50 Hz, Single phase.
Vibration isolator mounts with level screws, Furnace Mounting Sliding Fixtures: Upper and lower pull rods, specimen adaptors, made of high temperature material with operation capability of 1100°C or more, Continuous operation with constant temperature and load for number of days during creep testing.
Furnace: 3 zone split cylindrical Furnace with mountings and Furnace Control Panel.

Temperature Range: 100-1100°C.
Operating Temperature Stability and Uniformity: 1000°C, it should be over a specimen gauge length of 7 mm to 150 mm.
Deformation Measurement System: Extensometer: 4 rod type, adjustable gauge length over the range of 7 mm to 150mm with 100% extension capacity and frame made of high temperature materials for high temperature operation.
Accuracy and Stability: ± 1 µm or better over 24 h under no load.
Test Types, Grips, and Features: Creep test, stress rupture test, stress relaxation test, uniaxial tensile test, compression test, flexural test (at Room temperature) at constant load / stress, strain / displacement rate/ displacement rate from crosshead at all temperature conditions crosshead controlled for other tests and extensometer controlled for creep.

Single Point Laser Vibrometer

Non-contact, single point vibration measurement sensor.
Specification:

1. Frequency bandwidth of 0 - 25 kHz.
2. Speed measurement ranges upto 1000 mm/s.
3. Working distance from 0.36 - 20 meters.
4. Class 2 HeNe laser.
5. IP 64 protection.

3D Surface Points and Texture Scanner

Non-contact, handheld, portable 3D surface scanner.
Make and Model - Artec Eva.
Specification:

1. 16 FPS capturing speed.
2. 0.2 mm 3D resolution.
3. 1.3 MP texture resolution.
4. 3D accuracy up to 0.1 mm

Professional Outreach Activities

- Prof. Sangamesh Deepak R served as a reviewer for research articles submitted to the ASME Transactions on Mechanisms and Robotics, contributing to scholarly evaluation in the field.
- Prof. Dhiraj V. Patil reviewed a Ph.D. thesis from the Department of Applied Mechanics, IIT Madras, contributing to academic evaluation at the doctoral level.
- Prof. Hiranya Deka reviewed research articles for Physics of Fluids, Langmuir, and Industrial and Engineering Chemistry Research, and delivered an invited talk at the Workshop on Interfacial Engineering at Multiple Spatio-Temporal Scales held at IISc Bengaluru from 29–31 January 2024.
- Prof. Meenatchidevi Murugesan reviewed a Ph.D. thesis from the Department of Aerospace Engineering, IIT Madras, and served as a reviewer for journals including Journal of Fluid Mechanics, Chaos, and Physics of Fluids. She also delivered an invited talk to the Chair of Thermo-Fluid Dynamics at TU Munich, Germany, reflecting her active research engagement in fluid dynamics.
- Prof. Rakesh Lingam delivered an invited lecture on "Hybrid Metal Forming Processes" during the Karyashala workshop on Recent Advances in Metal Forming organised by NIT Warangal on 28 March 2024. He also served as a reviewer for the Journal of Manufacturing Processes and the International Journal of Advanced Manufacturing Technology.
- Prof. Ramjee Repaka reviewed a Ph.D. thesis from Andhra University, contributing to academic evaluation and research assessment at the doctoral level. He also delivered an invited talk on "Smart Thermal Management for Sustainable EV Battery Technologies" as part of a Faculty Development Program (FDP) organized by GITAM Deemed to be University, ViShAKhapaTnam, AndHra PradEsh, on 4th March 2025.
- Prof. Samarth S. Raut reviewed a Ph.D. thesis from the Department of Applied Mechanics, IIT Delhi, and served as an Associate Editor and organising team member for IEEE-ICEI 2024 at IIT Dharwad. He delivered an invited talk at the One-Day Workshop on Artificial Intelligence & Mechatronics in Agriculture and Food Industry at DSSLD, Devihosur, Haveri campus, UHS Bagalkot (July 2024), and also reviewed an NPTEL course for an event conducted by the Global Centre of Excellence.
- Prof. Somashekara M. A served as an external examiner and reviewer for a Ph.D. thesis from the Department of Mechanical Engineering, IIT Madras, and is a Board of Studies (BoS) member for the Department of Mechanical Engineering at Reva University, Bengaluru, as well as at SDM College of Engineering, Dharwad, contributing to academic evaluation and curriculum development.
- On 19.10.2024, Prof. Rakesh Lingam, Department of MMAE, organized an industrial visit to RSB Transmissions for BTech Mechanical Engineering students as part of their manufacturing processes course. IIT dhArwAD being located in the manufacturing hub of North KarnATaka, this initiative aims to strengthen the relationship between academia and local industries, contributing to the "Make in India" initiative and the development of the manufacturing sector.
- The Aerospace Resources Panel of the Aeronautics Research & Development Board (AR&DB), Defence Research and Development Organisation (DRDO) and the Department of MMAE, IIT dhArwAD co-organized a seminar on Advances in Aerospace Applications on 23.10.2024 at IIT dhArwAD. The seminar focused on research gaps, funding opportunities and the technological outlook in aerospace systems. Esteemed speakers included Dr. V. Sudhakar, Aeronautical Development Agency, BengaLUru, Dr. Amit Saraiya, Defence Materials and Stores Research and Development Establishment, Kanpur, Dr. Vidyadeesh P, Gas Turbine Research Establishment, BengaLUru, PROF. G. Jagadeesh, Indian Institute of Science, BengaLUru and Dr. S.K. Pandey [Secretary, AR&DB].
- The Department of Mechanical, Materials, and Aerospace Engineering successfully hosted the 4th MMAE Annual Research Symposium, "ShOdhaYAntriki-2024," on 30.11.2024. Distinguished speakers, including Dr. Ravi Guttal (CTO, Aequs Pvt. Ltd.), Shri Rajesh Lingam (Applications Senior Manager, Dassault Systems), Shri Rohit Pitale (Chief Product Officer, Unbox Robotics), Shri Gunjan Verma (Technical Account Manager, Ansys) and Shri Hemanth Satyanarayana (Founder & CEO, Imaginate Software Labs), delivered insightful talks. The symposium also included panel discussions on topics such as Mechanical Engineering Curriculum from an Industry Perspective and Transitioning from Student to Industry-Ready Professional: A Practical Approach.

- Prof. Pradeep Gururaj Yammiyavar was invited as a keynote speaker at the RISE – Research Innovation & Incubation Showcase Event held at the Creative Interface Lab, IIIT Delhi, where he delivered a lecture titled "Design for India – Opportunities for Designers in AI." He also served as Chair, Speaker, and Panelist at the Conference on Futuring Design Education (FDE 2024) held at IIT Delhi on 10–11 February 2024. In addition, he was an Invited Member of the Curriculum Review Committee for Computer Science and Design at IIIT Delhi (May 2023) and served as a Member of the Faculty Selection Committee at Shiv Nadar University during 2023–24.
- Prof. Somashekara M. A delivered an invited talk titled "Additive Manufacturing and 4D Printing Lab Research Activities" during the Industry–Academia R&D Connect event organised as part of the CSIR One Week One Lab Program at CSIR-4PI, IISc Bengaluru, on 13 July 2023. He was also invited as Chief Guest at the Workshop on "Experimental Skill-Based Training on Optimization Framework for Design of Experiments and Pseudo-Ternary Phase Diagram" held at KLE College of Pharmacy, HubbaLLI (31 Jan–1 Feb 2025).
- Prof. Vyom Sharma, Assistant Professor, Department of MMAE, delivered an expert talk on "Role of Advanced Manufacturing in Industry 4.0" during a one-week Faculty Development Program (FDP) held from 15 - 20.10.2024 at NIT Delhi.
- Prof. Vyom Sharma, Dept. of MMAE, delivered an invited talk on "Industry 4.0 and Beyond" at the 2nd International Faculty Development Program (FDP) on "New Era of Manufacturing – Challenges & Opportunities", held on 11th March 2025. The event, attended by over 175 participants online, was jointly organized by D. Y. Patil College of Engineering & Technology, Kasaba Bawada (DYPCET), and the University of Naples Federico II.

Awards and Achievements

- CSR project expansion proposal from BioM3D lab (PI: Prof. Samarth S. Raut and Prof. Punnag Chatterjee) was selected by AGI-Milltec to further conduct research on computer vision applications in agro harvesting totalling the grant amount to Rs. 1.19 Cr in Affordable and Clean Energy (GCoE-ACE) IIT DHARWAD and Lowe's India Pvt Ltd. Bangalore, Prof. Pradeep Yammiyavar worked with participants on innovation aspects in products such as Wind Energy Turbines for Roads and Tall buildings; Solar Energy generators, Solar cookers. The event was held on 22nd and 23rd of March 2024.
- Prof. Hiranya Deka received the "Young Scientist Speaker" award at the Workshop on Interfacial Engineering at Multiple Spatio-Temporal Scales, recognising his emerging contributions to the field.
- Prof. Meenatchidevi Murugesan was awarded the TUM Global Visiting Professorship 2024 by the Technical University of Munich, Germany, recognising her excellence in research and international academic engagement.
- Prof. Sushanta Kumar Sethi was recognized among the Top 2% Scientists in the World (single-year category, 2023), according to the latest global rankings released by Stanford University in collaboration with Elsevier.
- Prof. Somashekara M.A. together with Shri Rakshith B. Sreesha and Shri Saiyad Ladakhan, has been granted an Indian patent titled "An assembly for creating programmable Shape Memory Alloys (SMA) for the process of 4D printing." This achievement underscores the outstanding research and development efforts at IIT Dharwad. Prof. Somashekara's work holds the promise of revolutionizing 4D Printing and its applications across diverse industries.
- Prof. Somashekara M A is one of the innovators of a patent recently granted by the United States Patent Ofce. This invention provides an electromagnet alignment system for Additive Manufacturing (AM) or 3D printing technology. It enhances in-situ alignment of magnetic particulate material during deposition, allowing for precise control, either unidirectional or multidirectional, as the material forms a 3D structure.

Physics

About the Department

The Department of Physics at IIT DHARWAD started functioning from July 2016 with an aim to train and support young Engineering undergraduate students on the basic topics in Physics through the courses like Modern Physics, Electromagnetism, and basic Physics Laboratory. The department has also provided an opportunity to learn several interdisciplinary and advanced topics in Physics like, Astrophysics for Engineers, Introduction to Quantum Information and Computation, Classical Mechanics, Quantum Mechanics, etc, through elective courses at higher semesters. In 2018, the Department started its dedicated PhD program and at present several PhD students are working in various research fields. The institute has started a B.Tech. in Engineering Physics Program from

2021-22 academic year. It is an innovative collaborative program involving courses offered from the Department of Physics, Electrical, Electronics and Communication Engineering (EECE), Mechanical Materials, and Aerospace Engineering (MMAE) together with a choice of elective courses which give the student career and research options in Physics or Engineering. We have also started the Integrated and Interdisciplinary BS-MS dual degree program from Autumn 2022-23 semester. These two programs will allow the department to offer several advanced courses in Physics. There are ongoing research projects funded by external funding agencies in the department. The faculty in the department are regularly publishing research articles in Science Citation Index (SCI) Journals.

The broad areas of research activities in the department are as follows:

- Astrophysics.
- Nonlinear optics, Optical parametric oscillators, Frequency combs, High-power coherent sources; Trace-gas sensing, Laser physics and systems, Laser- matter interactions.
- Atomic, Molecular and Optical Physics.
- Remote Sensing.
- Quantum Information Theory and its interface with Quantum Optics; Many-Body Physics; Relativistic Quantum Information; Quantum Communication; Quantum Computation.
- Experimental Condensed Matter Physics: Superconductivity, Magnetism and Single Crystal Growth.
- Materials Science: Thin films and Photovoltaics.

Faculty Profile and Research Areas

D Narasimha
Visiting Professor

Research Area (s)

Supernova IA as standard candle, AI/ML in Climate.

Dhriti Sundar Ghosh
Associate Professor

Research Area (s)

Photonics and Nonlinear Optics, Optical Parametric Oscillators, Nonlinear frequency conversion.

Kavita Devi
Assistant Professor

Research Area (s)

Photo-physics of atoms, molecules and clusters, Molecular dissociation dynamics, Electron and ion spectroscopy, Ion dynamics in traps, Remote Sensing.

Koushik Saha
Assistant Professor

Research Area (s)

Quantum Information Theory and its interface with Quantum Optics; Many-Body Physics; Relativistic Quantum Information; Quantum Communication; Quantum Computation.

R Prabhu
Associate Professor

Research Area (s)

Experimental Condensed Matter physics- Superconductivity: Vortex dynamics, Vortex phase transition and Phase diagram studies, Permanent Magnets- Rare-earth transition metal based permanent magnets, Single-Crystal Growth.

Sreepathi L K
Assistant Professor

Research Area (s)

Superconductivity- Vortex Dynamics, Permanent Magnets, Single Crystal Growth.

Shivaprasad Sonnada Math
Visiting Professor

Research Area (s)

Surfaces, Interfaces, Thin Films and Nanostructures of metals and semiconductors.

Shrinivas R Kulkarni
Distinguished Honorary Professor

Research Area (s)

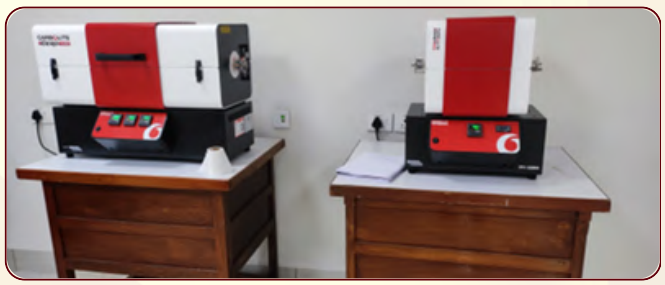
Atomization and Sprays, Multiphase Flows, Combustion, Experimental Fluid Mechanics.

State of the Art Facilities

Superconductivity Research Laboratory

Arc Melting Furnace

- This system is used for preparation of polycrystalline samples in the Argon atmosphere.
- A variety of inter-metallic polycrystalline samples can be prepared using this system.



High Temperature Furnaces

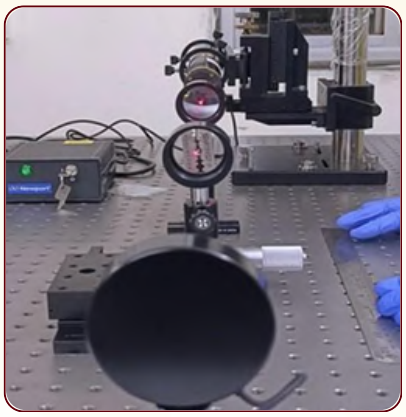
- Chamber furnace is used for synthesis of oxide materials using solid state reaction.
- It is also used for single crystal growth using the flux method.
- The furnace is used for annealing the samples at higher temperatures (up to 1200 °C).

Academic Departments

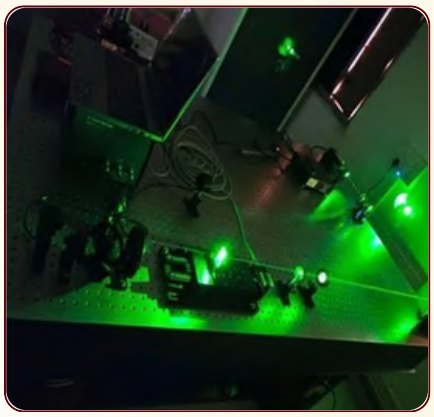
Three-Zone and Single-zone Tubular Furnace

- These furnaces are used for synthesis of single crystals using Chemical Vapor Transport (CVT).
- Maximum Temperature: 1200°C.
- Operating Temperature: 1100°C.

Non-linear Optics & Photonics Research Laboratory

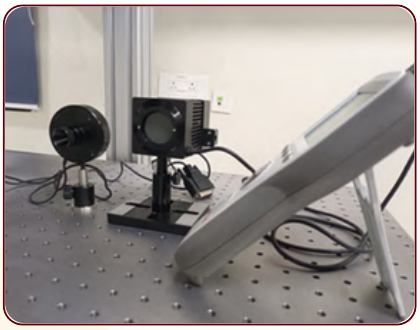


Knife Edge Setup
- **Measures Beam Quality**



Z Scan Setup-Characterization of Nonlinear Optical Response of Materials
- **Nonlinear refraction.**
- **Nonlinear absorption.**

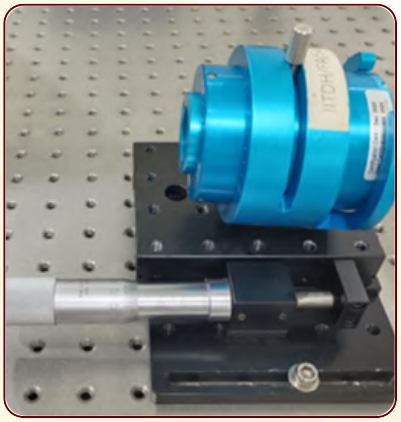
Autocorrelator



Power Meter and Power Sensor

Laser Spectrum Analyzer

Single Photon Counting Module



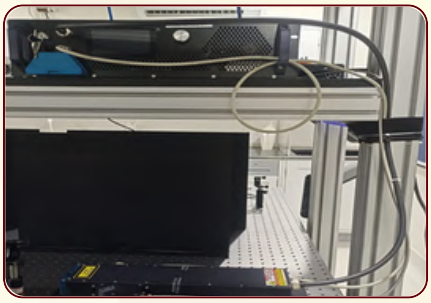
Power Meter and Power Sensor

Fast Oscilloscope

Ultrafast Photodetector

Spectrometer

Pharos fs Laser



Continuous-wave Laser

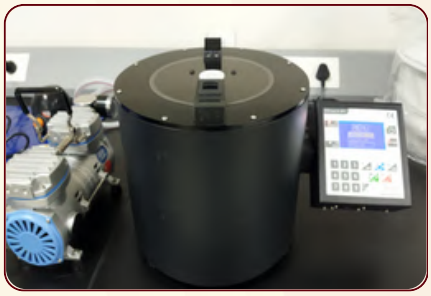
RF Spectrum Analyzer

Chopper

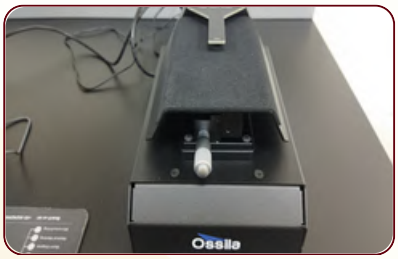
Thin Film and Photovoltaics Research Laboratory

Wet Bench Facility

UV-Ozone Cleaner, Ossila, UK



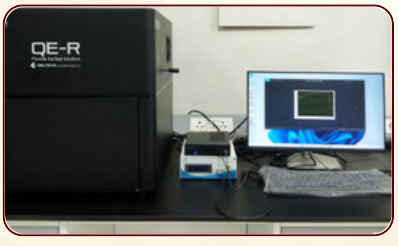
Spin Coater, EZSpin- A1, Apex Instruments, India



Four-Point Probe, Ossila, UK

UV-Vis Spectrophotometer 2600i, Shimadzu, JAPAN

Solar Simulator AAA Class, 40 x 40 Sourcemeter, Uniformity Area, HPCS-100, Enlitech, Taiwan (with Keysight B2901BL Sourcemeter)



Quantum Efficiency Measurement System, QE-R, Enlitech, Taiwan

Inert Gas Workstation, LabPro 1500, Integrated Thermal + E-Beam Evaporator, RANVAC Technologies, Bengaluru, India

Professional Outreach Activities

- Prof. Dhriti Sundar Ghosh reviewed research articles for Next Energy, Optical Materials, and Journal of Science: Advanced Materials and Devices, and served as an External Member of the School Research Committee in the Department of Physics at KLE Technological University, Hubballi.
- Prof. Kavita Devi delivered invited talks on "Continuous-Wave Optical Parametric Oscillators: Exploratory Design and Architecture for Short Pulse Generation" at the 16th International Conference on Fiber Optics and Photonics – 2024 held at IIT Kharagpur, and on "Exploratory Design and Architecture of Continuous-Wave Optical Parametric Oscillators" at SCOP 2024 hosted at PRL, Ahmedabad.
- Prof. Koushik Saha is a member of the National Work Group for the "Organics in Space" initiative and has served as a reviewer for articles submitted to Advances in Space Research, reflecting his research engagement in astrochemistry and space science.
- Prof. R. Prabhu evaluated Ph.D. theses from the Harish-Chandra Research Institute, Prayagraj, and Vellore Institute of Technology, Vellore, and is a Board of Studies member at Basaveshwara Engineering College, Bagalkot. He also served on the drafting committee for the Strategy Paper on "Quantum Technologies for Karnataka" led by KSTA, Bengaluru, and delivered an invited talk at the 1st International Webinar Series on Quantum Science and Technology, organised by KSTA, Bengaluru.
- The Department of Physics hosted a series of expert talks on 20–21 January 2025, delivered by members of its Academic Advisory Committee—Prof. K. G. Suresh (IIT Bombay), Prof. Aninda Sinha (IISc BengaLUru) and Prof. T. S. Mahesh (IISER Pune). Covering topics in Condensed Matter Physics, Quantum Information and High Energy Physics, the sessions drew participation from faculty and students across departments, including attendees from IIIT dhArwAD. The visit also featured interactions with students and faculty, along with guided tours of the department's instructional and research labs.

Awards and Achievements

- PhD student Ms. Debajani Rout was awarded for best oral presentation in the third international conference on Materials Science and Technology (ICMST 2025) held at St. Thomas college Palai, Kerala during 12-14 Mar 2025.
- PRof. R. Prabhu, Dept. of Physics, served as a resource person at the Talent Search Program – Career Development organized by the Karnataka Science and Technology Academy (KSTA) in BengaLUru (27 Jan – 7 Feb 2025). He delivered a session on "Classical and Quantum States" on 1st February 2025, aimed at inspiring PU students to pursue careers in science, research, and technology.

RESEARCH AND DEVELOPMENT

Sponsored Projects

Sl.No.	Investigator(s)	Department	Title of the Project	Sponsoring Agency	Date of Sanction	Project Value [in ₹ lakh(s)]	Duration [in Years]
1	Shraddha Srivastava	Mathematics	DST-INSPIRE Faculty Fellowship	DST-Inspire Faculty Award	27.12.2022	35	5
2	Meenatchidevi Murugesan	Mechanical, Materials and Aerospace Engineering	Thermoacoustic characteristics of 3D printed LPG/H2 fueled triple-swirl turbulent burner using optical diagnostics	SERB-CRG	28.05.2024	17.19	3
3	Gayathri Ananthanarayanan	Computer Science and Engineering	AXTRADE: approximation-Aware training of Deep Neural for edge AI Hardware	INRIE-FRANCE	May 2024	--	3
4	Keerthi M C	Mechanical, Materials and Aerospace Engineering	Experience Study of an Oscillating Transonic Shock-wave Boundary layer interaction	SERB-CRG	10.06.2024	59.12	3
5	Somashekara M. A.	Mechanical, Materials and Aerospace Engineering	Development of Personalized, focal and deep transcranial magnetic Stimulation (TMS) Coils using metal addictive Manufacturing	SPARC-MOE	1.04.2024	52.8	2
6	Meenatchidevi Murugesan	Mechanical, Materials and Aerospace Engineering	Investigation on explosion dynamics of hydrogen-rich fuels with a parametric variation of fuel components and obstacles	SERB-CRG2	31.05.2024	15.18	2
7	Sudhanshu Kumar Shukla	Biosciences and Bioengineering	Decoding the role of oncofetal LncRNA LINC01456 in cancer development and its clinical relevance	DBT-2	16.07.2024	42.35	3
8	Ravi Chandra Dutta	Chemical Engineering	Understanding of Transport Barriers in Ultrathin Nano Materials	KSTEPS VGST	10.06.2024	10	2
9	Sudhanshu Kumar Shukla	Biosciences and Bioengineering	Exploring the Cancer-Testis Genes: Understanding the biological and clinical role of Linc01206, Lung squamous cell carcinoma-specific LncRNA	SERB-CRG-2	16.10.2024	45.2955	3

10	Ruma Ghosh	Electrical, Electronics and Communication Engineering	Design and Development of Carbon Nanomaterials modified Chemiresistive Sensors for SF6 and H2S	DAE-BRNS	11.10.2024	39.827	3
11	Aniket Vasantrao Kataware	Civil & Infrastructure Engineering	Investigation of The Interfacial Adhesion Performance Between Bitumen and Different Types of Slags for Sustainable Road Construction	CSIR HRDG	16.12.2024	12.21	3
12	Koteswararao Kondepu	Computer Science and Engineering	SMART-RIC6G: Smart Drift-Handling Enabler for RAN Intelligent Controllers in 6G Networks	TTDF-DOT	15.12.2024	138.03	3
13	Rajshekhar V Bhat	Electrical, Electronics and Communication Engineering	AI-Native Radio for 6G Semantic Communications: From Theory to Chips	TTDF-DOT	16.12.2024	247.5	3
14	Vyom Sharma	Mechanical, Materials and Aerospace Engineering	Light-weight bunker for protection against small-arms fire	6 Engineer Regiment, West Bengal	28.03.2025	29.53	1.5
15	Amarnath Hegde	Civil & Infrastructure Engineering	Reusability assessment of Coal Tailing Extracts (CTE) for large-scale geotechnical fill applications	Central Mine Planning & Design Institute Limited, Jharkhand	27.03.2025	27.74	2
16	Rahul Jashvantbhai Pandya	Electrical, Electronics and Communication Engineering	cGAN enabled resource allocation strategies for Six G Semantic Communication	TTDF-DOT	16.12.2024	45.37	3
17	Naveen Kadayinti	Electrical, Electronics and Communication Engineering	Low-cost patient friendly binaural hearing aid development: Custom ASIC and custom product	YFRF, DCI, MEITY	27.01.2025	25	5
18	Punnag Chatterjee	Mechanical, Materials and Aerospace Engineering	Light weight infantry foot bridge	235 Engineer Regiment, West Bengal	27.03.2025	15.25	1.5

Consultancy Projects							
Sl.No.	Principal Investigator(s)	Department	Title of the Project	Sponsoring Agency	Sanction Date / Date of Agreement	Project Value [in ₹ lakh(s)]	Duration
1	Sai Ram Boggavarapu	Electrical, Electronics and Communication Engineering	Modelling and analysis of bearing currents and partial discharges for assessing the reliability of traction motors	L&T Technology Services Ltd.	25.07.2024	4.5	6 Months
2	Ramesh Nayaka	Civil & Infrastructure Engineering	Proof Check of Structural Design and Drawing for the Proposed reconstruction of existing ROB No. 290A of span of 1x26.20m PSC girder as 1x30.0m composite girder at km 106/253, at Shantinagar Area, Dabolim, Goa	Rail Vikas Nigam Limited, Hubli	28.05.2024	0.91	1 Month
3	Ramesh Nayaka	Civil & Infrastructure Engineering	Proof Check of Structural Design and Drawing for the Proposed reconstruction of existing ROB No. 290B-1A of span of 1x26.20m PSC girder as 1x30.0m composite girder at km 106/280, at Shantinagar Area, Dabolim, Goa	Rail Vikas Nigam Limited, Hubli	27.05.2024	0.47	3 Weeks
4	Venkappayya R Desai	Civil & Infrastructure Engineering	Vetting of Structural designs and Drawings of new foundations to support the existing steel girder near Hassan, Karnataka	Rail India Technical and Economic Service (RITES) LTD	12.04.2024	2	1 Week
5	Hemanth Kumar Chinthapalli	Civil & Infrastructure Engineering	Concrete Mix Design for EPC Package of Waste to Energy Facility at Hubballi (M20, M25 & M30)	Macawber Beekay Pvt. Ltd	18.04.2024	1.73	2 Month 1 Week
6	Amarnath Hegde	Civil & Infrastructure Engineering	Stability analysis of Panam Dam in Gujarat	Panam Project Division, Gujarat	12.09.2024	29.5	6 Months
7	Ramesh Nayaka	Civil & Infrastructure Engineering	Proof Check of Drawing and Design of foot over Bridge at Heelalige Railway Station	SRICO Projects Pvt. Ltd.	04.05.2024	2.24	2 Weeks

8	Venkappayya R Desai	Civil & Infrastructure Engineering	Vetting of Structural designs and Drawings of the proposed construction of 4-retaining walls of different height at bridge no 111 @ KM:88/800-900 between Holenarasipura-Mavinakere Stations of southwestern railways, Karnataka	Dhatri Infra, Bengaluru	30.04.2024	2.36	1 Month
9	Amarnath Hegde	Civil & Infrastructure Engineering	Stability Investigation work of college of community sciences, UAS, Dharwad	University of Agricultural Sciences, Dharwad	18.06.2024	6.49	3 Months
10	Omkar Baswaraj Bembalge	Mechanical, Materials and Aerospace Engineering	Aerodynamic shape optimization of ceiling fan blades for energy efficiency	Crompton Greaves Consumer Electricals Limited, Experience and Innovation Centre	05.08.2024	8.23	6 Months
11	Venkappayya R Desai	Civil & Infrastructure Engineering	Proof checking of structural design and drawing for proposed district office complex, Belagavi	Jalavahini Management Services Pvt. Ltd., Dharwad	01.07.2024	17.09	1 Month
12	Amar Keshav Gaonkar	Mechanical, Materials and Aerospace Engineering	Method development for FEM vibration assessment	Man Energy Solutions India Private Limited	01.07.2024	26.13	12 Months
13	Ramjee Repaka	Mechanical, Materials and Aerospace Engineering	Vetting of Design and Drawing of AC Plant work for site at common hospital Chandimandir, Chandigarh	A.S. Construction Co.	01.07.2024	2.95	2 Weeks
14	Ramesh Nayaka	Civil & Infrastructure Engineering	Preliminary visit to site to check stability of structure to make sure feasibility of proof checking of extended proposed construction of Academic Buildings, Veterinary College, Gadag	P Ravindranath Construction Pvt. Ltd.	09.07.2024	0.64	1 Week
15	Ramesh Nayaka	Civil & Infrastructure Engineering	Proof Check of extended proposed construction of Academic Buildings, at veterinary College, Gadag	P Ravindranath Construction Pvt. Ltd.	26.07.2024	6	3 Weeks
16	Ramjee Repaka	Mechanical, Materials and Aerospace Engineering	Vetting of HVAC Design of Storage ACCN at AF station Leh	Shiva Sharan Gupta & Sons	14.08.2024	1.8	2 Weeks

17	Nikhil D Hegde	Computer Science and Engineering	Development of Domain-Specific Language (DSL) for Radio Access Network (RAN) Software	TEJAS NETWORKS LIMITED	16.09.2024	11.53	4 Months
18	Venkappayya R Desai	Civil & Infrastructure Engineering	Structural audit for FOBs of Eight railway Stations of Southwestern Railway (SWR)	Swarnaa Techno Constructions Pvt, Ltd.	28.10.2024	3.77	1 Month
19	Ramesh Nayaka	Civil & Infrastructure Engineering	Proof checking of Retaining Wall at CH 107 KM in Railway Doubling Line.	Surya Constructions Pvt, Ltd. Hyderabad	22.11.2024	2.06	2 Weeks
20	Rakesh Lingam	Mechanical, Materials and Aerospace Engineering	Analysis of forming defects and characterization in precession stamping process	Aequs Private Limited	01.08.2024	11.8	12 Months
21	Hemanth Kumar Chinthapalli	Civil & Infrastructure Engineering	Concrete Mix design of M20, M25 & M30 for EPC Package of waste energy facility at Hubballi, Karnataka.	NTPC Vidyut Nigam Limited	31.12.2024	2.7	2 Months
22	Nikhil D Hegde	Computer Science and Engineering	Technical Training on Advanced Compiler Optimizations in LLVM Compiler Framework	QUALCOMM India Pvt. Ltd.	11.03.2025	6	3 Months
23	Venkappayya R Desai	Civil & Infrastructure Engineering	Vetting of structural strength and stability design documents of terminals of JSW airport, Toranagallu	JSW Steel Limited, Ballari	17.03.2025	9.44	6 Months
24	Amarnath Hegde	Civil & Infrastructure Engineering	Study & remedial measures for the differential settlement in the foundation/sinking in the switchyard area (civil technical issue) at 400 KV Kudgi GIS.	Power Grid Corporation of India Limited, Vijayapura	21.01.2025	3.37	2 Months
25	Hemanth Kumar Chinthapalli	Civil & Infrastructure Engineering	Testing RNS Buildtech Paver Blocks	RNS Buildtech	19.12.2024	0.1	2 weeks
26	Aniket V. Kataware	Civil & Infrastructure Engineering	Proof checking of rigid payment design for the proposed Goods loading/unloading Platform at Gokak Railway Station.	SUR Engineering Services, Bengaluru	30.01.2025	0.94	1 Month

27	Hemanth Kumar Chinthapalli	Civil & Infrastructure Engineering	BSPL Integrated Steel Plant-Halavarthi, Koppal – Concrete Mix Design (M7.5 to M45).	Baldota Steel & Power Limited	11.03.2025	4.77	2 weeks
28	Ramesh Nayaka	Civil & Infrastructure Engineering	Compressive Strength Test on Crore Cutter Specimens taken on Sankeshwar Bypass to MH-KNT border Section of NH-48.	National Highways authority of India, PIU Dharwad	27.03.2025	0.56	2 weeks
29	Sai Ram Boggavarapu	Electrical, Electronics and Communication Engineering	Design and Analysis of an Axial Flux Angular Solenoid	DB Potential LLP	19.02.2025	2.36	3 Months
30	Ramesh Nayaka	Civil & Infrastructure Engineering	Proof check structural design and drawings for multipurpose hall, MLIRC.	Mr. Dayanand Sarnobat	17.03.2025	1.7	2 weeks
31	Ramesh Nayaka	Civil & Infrastructure Engineering	Structural audit of income tax and CGST staff quarters, Hubballi.	Central Public Works Department, Dharwad	31.03.2025	9.08	6 weeks
32	Ramesh Nayak	Civil & Infrastructure Engineering	Proof Checking of Design and Drawing of Rub No.427A.	Railway Infrastructure Development Company (Karnataka) Limited, Bangalore	25.11.2024	1.18	2 weeks
33	Venkappayya R Desai	Civil & Infrastructure Engineering	Vetting of the Structural design drawings of the proposed construction 5 RC box culverts for rehabilitation of 5 bridges (no. 94, 95, 96, 98 and 108) of new BG line between Gadag - Wadi station of southwestern Railways, Karnataka.	Chetana Infratech Consultants Pvt. Ltd	22.01.2025	1.47	1 Month
34	Ramesh Nayak	Civil & Infrastructure Engineering	Proof checking of Structural design of vocational lab in KV 01 AT AFS SAMBRA.	Aaradhya Enterprises, Belagavi	27.01.2025	0.75	1 week

CSR Donation Activities							
Sl.No.	Principal Investigator(s)	Department	Title of the Project	Sponsoring Agency	Date of Sanction	Project Value [in ₹ lakh(s)]	Duration [in Years]
1	Satish Naik	Electrical, Electronics and Communication Engineering	Towards better Global Sustainability through electric Vehicles and DC microgrids Technologies	AVNET Pvt. Ltd.	28.03.2025	24	1
2	Abhijit Kshirsagar	Electrical, Electronics and Communication Engineering	CSR support for power electronics research	HEXMOTO	27.03.2025	6	1

Seed Grant and Networking Fund Projects						
Sl.No.	Principal Investigator(s)	Department	Title of the Project	Value of Projects [in ₹ lakh(s)]	Date of Sanction	Duration [in Years]
1	Debalina Chakravarty	Humanities, Economics, Arts and Rural Technologies	Micro-credit societies for climate resilience adaption fund	5	19.04.2024	2
2	Ramjee Repaka	Mechanical, Materials and Aerospace Engineering	Thermal management of Li-Ion Batteries for EVs	5	21.05.2024	2
3	Kundan Kumar Singh Sagar	Chemistry	Ligand-induced reactivity on metal nano cluster: Developing a new class of catalyst	5	21.05.2024	2
4	Swananda Marathe	Biosciences and Bioengineering	Investigation of Molecular Mechanisms Underlying Astrocytic Role in Antidepressant's Behavioral Effects	5	20.08.2024	2
5	Bal Krishna Chaube	Biosciences and Bioengineering	Understanding the metabolic crosstalk within the Tumor microenvironment	5	20.08.2024	2
6	Hemanth Kumar Chinthapalli.	Civil & Infrastructure Engineering	study on Fire Endurance of Pre-Stressed Concrete Members	5	27.08.2024	2
7	Mahesh Gudem	Chemistry	Portion Assisted Conversion of Chemical Energy into Photon of Light Energy	5	30.08.2024	2

Research and Development

MoU(s) with Indian Academic and R&D Organization		
Sl.No.	MoU(s) of IIT DHARWAD	Coordinator
1	NIT Warangal	C Ravikumar
2	IISc Bangalore	C Ravikumar
3	Manipal Academy of Higher Education, Manipal Karnataka (MAHE)	Subhas Mehto
4	Indian Council of World Affairs, New Delhi	Venkappaya R. Desai
5	IIT Guwahati & CDAC	Rajshekar Bhat
6	Central Power Research Institute (CPRI)	Animesh Kumar Sahoo

MoU(s) with International Universities		
Sl.No.	MoU(s) of IIT DHARWAD	Coordinator
1	Norwegian University of Science and Technology (NTNU), Trondheim, Norway	Dileep A D

Patents Filed / Published						
Sl.No.	Inventors	Title	Patent Application Number	Patent Filed Date	Patent Published Date	Status
1	Shashikumara S R, Abhishek R, Ramesh Nayaka, S M Basutkar, Sachin K C,Pramukh N	Caduceus Fiber for Enhanced Concrete Reinforcement	202541010840	09.02.2025	14.02.2025	Published
2	Souvik Das, Abhijit Kshirsagar, Pratyasa Bhui	A power interface system for online transmission line inspection robots and method thereof	202441098289	12.12.2024	20.12.2024	Published

Patents Awarded							
Sl.No.	Inventors	Title	Patent Application Number	Patent Filed Date	Patent Published Date	Patent Number	Patent Award Date
1	Naveen Kadayinti and Mayur Shivamurthy	A Circuit for Expanding, Compressing, or Delaying a Signal	202041019813	11.05.2020	13.12.2021	555660	02.12.2024
2	Somashekara M A, Saiyadali H L, Rakshith BS	An assembly for creating programmable Shape Memory Alloys (SMA) for the process of 4D printing	202141047340	19.10.2021	29.10.2021	531392	01.04.2024

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INSTITUTE INNOVATION COUNCIL

The Institute Innovation Council (IIC) of IIT DHARWAD aims to foster a culture of innovation and entrepreneurship among students and faculty members. In alignment with the vision of the Ministry of Education's Innovation Cell (MIC), IIC IIT DHARWAD organised various events throughout the academic year to inspire creativity, cultivate entrepreneurial skills, and promote innovation. The council has been instrumental in connecting students with mentors and providing a platform to nurture innovative ideas into viable entrepreneurial ventures. This report highlights the key initiatives, events, and achievements of IIC IIT DHARWAD for the year.

E-Summit 2024

The flagship event of the IIC, the E-Summit 2024, brought together entrepreneurs, innovators, students, and industry leaders to engage in discussions on entrepreneurship, design, and innovation. This multi-day event featured a range of activities designed to foster collaboration, networking, and idea sharing.

- **E-Summit'24 Industry Meet**

  The inauguration of the Industry Meet took place as part of the E-Summit 2024 at IIT DHARWAD. The event, attended by over 200 participants, featured notable guests, including Director Venkappayya R. Desai, Prof. Amar Gaonkar (Convener of IIC), and other academic and industrial figures. The session featured key discussions on bio-incubation, the growth of the bioeconomy, and collaborative opportunities in biotechnology. It also highlighted the theme of Global Bio-India 2024, "Transforming Lives: Bioscience to Bioeconomy."

- **TECHNOSTROPHE**

  The Techno strophe quiz is designed to test and improve participants' knowledge and understanding of entrepreneurship, startups, finance, and business. The event's goal is to raise awareness and interest in these fields and to encourage participants to enhance their entrepreneurial and financial skills. Individuals who take the Techno strophe quiz can gain insights into the latest business trends, practices, and challenges, as well as learn from the experiences of successful entrepreneurs and business leaders

- **FIND THE BUG**

  The primary objective of "Find the Bug" was to assess students' problem-solving and analytical skills. To help them analyse case studies. To enhance their communication and presentation skills. Case studies, such as "Find the Bug," help students enhance their comprehensive knowledge. This was a flagship event of the E summit, where students were given the problems faced by a hypothetical company and asked to suggest strategies to help the company return to profitability. Conducting the 'Find the Bug' exercise helped students understand the concept of entrepreneurship. This helped them to increase their knowledge in the field of entrepreneurship.

Research and Development

- **Finance For All – Talk Series 2.0**

  This talk aims to enhance financial literacy, a critical skill in today's complex financial landscape. The more people know about money management, budgeting, and investing, the better equipped they are to make sound financial decisions. The objective is to provide education and information to individuals who may lack a strong background in finance, investing, and personal money management. The series aims to empower people with the knowledge and skills they need to make informed decisions about their financial lives.

- **STRATEGIX**

  The strategy aimed to engage cricket enthusiasts in a competitive environment, testing their knowledge and strategic thinking through a two-round event.

- **IDEATE**

  Promoting a startup's ideation phase and providing financial assistance are crucial steps in fostering entrepreneurship. By supporting the initial brainstorming and development stages, startups can refine their ideas and create viable business models. Financial assistance further enables these startups to scale their operations, invest in necessary resources, and navigate early challenges, ultimately contributing to a vibrant and innovative entrepreneurial ecosystem.

- **GENESIS**

  The goal of Genesis is to foster entrepreneurship by promoting startups in their ideation phase and offering financial assistance to help innovative ideas grow into successful ventures.

Research and Development

- **Open Box Show – (Intersect)**

  The objective of the talk show event is to inspire and motivate the audience by sharing the stories of successful individuals who have overcome challenges and achieved success in their respective fields. The event aims to provide valuable insights and practical advice on various topics, including finance, career options, technical knowledge and entrepreneurship, to help the audience navigate their own paths to success. Through the experiences shared by the speakers, the event seeks to encourage the audience to pursue their goals with determination and resilience, and to learn from the failures and obstacles they may encounter along the way.
  Notable Speakers included Mr Vishal Sengar, CEO of Brand Provoke, and Mr Sushant Ajnikar, Founder of How Does It Matter. Design, Mr Zain Saeed - COO and Co-Founder of Enord and Mr Siddharth Kammar - Marketing Specialist at Kammar Udyog.

- **Summiting Life's Challenges**

  Ms Nandita Nagangoudar, a renowned adventurer and motivational speaker, shared her incredible journey of conquering some of the world's most challenging peaks and exploring remote corners of the planet. She emphasised the importance of pushing boundaries, overcoming obstacles, and making a positive impact through social and environmental initiatives.

- **CI/CD Workshop**

  To introduce participants to CI/CD systems, providing them with practical skills to set up automated build, test, and deployment pipelines, and empowering them to optimise their software development lifecycle.

- **CRAFTING THE FUTURE**

  To provide participants with a comprehensive, hands-on workshop that enables them to develop a 360° business plan. The focus will be on fostering creativity, strategic thinking, and collaborative problem-solving among the participants.
  Guest Speaker: Badri Narayan, Alumnus of IIT Madras

HEADSTART 2025

The Headstart '25 is a financial and startup domain-focused event featuring various activities, including pitch deck events, case-study competitions, interactive talk shows, and intriguing quizzes. The event was organised by the IIC. The event's agenda was to contribute to the growing entrepreneurial culture in the college and the country.

- **AVADHAN**

  Case studies like Avadhān help students to improve their comprehensive knowledge. Conducting Avadhān helped students understand the idea of entrepreneurship. The major advantage of Avadhān was that the students were actively engaged in figuring out the principles by abstracting from the examples. This helped them to increase their knowledge in the field of entrepreneurship.

- **BIZZARO**

  Bizzaro is designed to ignite creativity, innovation, and marketing ingenuity among participants. The event challenges individuals to think beyond convention by turning seemingly useless or absurd objects into marketable products. Through persuasive storytelling, quick thinking, and strategic presentation, participants must convince the judges that their bizarre product can become the next big sensation. The objective of Bizzaro is to foster critical thinking, improvisation, and communication skills—core traits of successful marketers and entrepreneurs—by pushing participants to see potential and value where others see none.

- **ENIGMA**

  The competition is designed to blend strategic thinking, creativity, and marketing acumen through a two-stage challenge: The Treasure Hunt and The Marketing Challenge. In the first round, participants put their analytical and problem-solving skills to the test by decoding clues and racing against time to uncover hidden treasures. This round promotes teamwork, logical reasoning, and quick decision-making. The second-round challenges participants to utilise their creativity and communication skills by developing innovative marketing campaigns for a selected product. Together, the two rounds aim to simulate real-world business scenarios where strategy, creativity, and collaboration converge to deliver impactful results.

FACULTY WELFARE

The Faculty Welfare Section's accomplishments for the Financial Year 2024 – 2025:

- Floated a Rolling Regular Recruitment Drive advertisement on the institute website to receive applications for all the faculty positions across all the departments.
- Completed Faculty Recruitment in the Department of Chemical Engineering for Assistant Professor and Associate Professor levels.
- Several Committees (i.e., Director Discretionary Quota, School Committee, Space Allocation Committee) have been constituted to provide their recommendations for the betterment of the institute.
- A school committee was formed to establish a school on the campus. Currently, it is under processing.
- Services of 28 faculty members have been confirmed.
- Grade level conversion of 9 faculty members from Grade II to Grade I (i.e., APL 11 to APL 12 conversion) has been completed.
- The Academic Pay Level movement (12 to 13) of 3 faculty members has been completed.
- A total of 4 Institute Post-Doc Fellows and 4 Research Associates joined the institute. Further, 7 faculty members and 2 IPDF have been relieved from the institute.
- Successfully conducted the Institute Faculty Meeting (IFM- 9 & 10).
- Framed and implemented a policy to host Inspire, Ramalingaswami Re-entry, and Ramanujan faculty fellows at the institute.
- Framed and implemented a policy for hiring Research Associates (RAs) at the institute.
- A Memorandum of Understanding (MoU) was signed between the Karnataka Renewable Energy Development Limited (KREDL) and the Renewable Energy Research (RER) at IIT DHARWAD. Subsequently, the KREDL-RER Chair appointment process was completed.

SECTION 8 [NOT FOR PROFIT] COMPANY

DHARWAD RESEARCH AND TECHNOLOGY INCUBATOR (DHARTI) FOUNDATION

About dhaRti

Dharwad Research and Technology Incubator (dhaRti) Foundation, established in October 2022, is a section 8 not-for-profit company promoted by IIT DHARWAD. It is a Research Park cum Technology Business Incubator.

Our Mission:

- Nurture innovation by providing startups with resources, mentorship, and infrastructure to help them thrive.
- Bridge the gap between research and industry by fostering collaborations and partnerships.
- Support sustainable entrepreneurship that addresses key challenges in sectors like healthcare, agriculture, clean energy, and manufacturing

Our Board of Directors(BoD):

PROF. Venkappayya R. Desai
Chairman of BoD, Dharti

PROF SR Mahadeva Prasanna
Director, Dharti

Prof Anand Khusre
Director, Dharti

Prof Rajkumar Hirwani
Director, Dharti

Dr. Poyni Bhatt
Director, Dharti

Dr. Krishna Kulkarni
Director, Dharti

Shri Sanjeev Kumar Gupta
Director, Dharti

Dr. Amar Gaonkar
Director, Dharti

Section 8 [Not for Profit] Company

Our Team:

Dr. Sudhanshu Shukla
Project investigator, dhaRti BioNEST

Dr. Swananda Marathe
Co-Project investigator, dhaRti BioNEST

Mr. Rakshit Kalyani
Chief Operating Officer

Mr. Malathesh L
Program Head

Miss. Pavithra M J
Administrative Assistant

Our team of researchers, entrepreneurs, mentors, and support staff at dhaRti Foundation is passionate about helping startups grow, scale, and thrive. With expertise spanning multiple industries—including biotech, clean energy, agritech, AI, and manufacturing—our team provides hands-on guidance and strategic direction to early-stage ventures.

Impact Areas DhaRti Foundation Focuses

Biosciences Innovations
Drug Discovery & Development
Biotechnology
Medical Technologies
Healthcare Solutions

NewGen Technologies
Defence Technologies
Industry 4.0
Additive Manufacturing & Advanced Materials
Transportation & Mobility

Clean Energy & Sustainability
Renewable Energy Technologies
Clean Water & Sanitation Solutions
Circular Economy
Sustainable Infrastructures

Sustainable Food & Agriculture
Nutrition
FoodTech
Precision agriculture
BioAgri

DHARTI BIONEST INCUBATION CENTRE

सत्यमेव जयते

बाइरैक
इग्नाइट इनोवेट इंक्यूबेट
birac
Ignite Innovate Incubate

dhaRti
BIONEST
Incubation Centre

The dhaRti BioNEST Incubation Centre, promoted by the dhaRti Foundation and located at IIT DHARWAD, is at the forefront of fostering innovation and entrepreneurship in the biotechnology and healthcare sectors of North Karnataka. Established with the funding support of the Biotechnology Industry Research Assistance Council (BIRAC) and supported by Smt. Nirmala Sitharaman, Minister of Finance, Government of India, the centre focuses on empowering startups in drug discovery, medical technologies, and sustainable biotechnology solutions.

Centre of Incubation

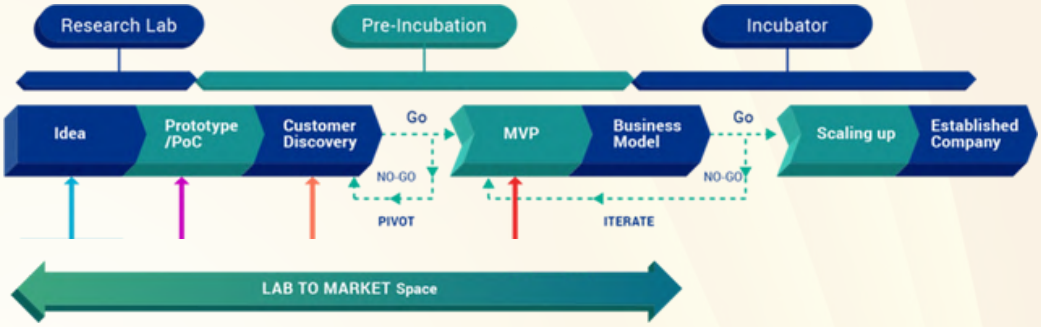
Vision

To empower innovators in the fields of drug discovery, medical technologies, biotechnology, and healthcare solutions, enabling the development of transformative products that address pressing rural health challenges.

Mission

To provide end-to-end support to startups in the biotech and healthcare sectors, guiding them from research and development to market readiness while cultivating a collaborative ecosystem that drives sustainable innovation.

DHARTI BIONEST INCUBATION CENTRE



Physically Incubated Startups: 2% Equity

Virtually Incubated Startups: 25,000 per year for the first 25 Startups & Rs. 1,00,000/- for the next set of startups

Progress Achieved

Since its inception, the dhaRti BioNEST Incubation Centre has made significant strides:

Infrastructure Development: Significant progress has been made using the existing funds disbursed to date. The details are as follows

1. Preclinical Testing Facility
2. Cell Culture Lab
3. Research & Instrumentation Lab
4. Proteomics and Small Molecule Analysis Lab
5. Prototyping Lab
6. Administration Office, Co-working Spaces, Seminar Hall and Meeting rooms

Centre of Incubation

NOTABLE ACTIVITIES AND PROGRAMS IN INNOVATION AND ENTREPRENEURSHIP

a) Sahayog 2024, an Industry Meetup of Biotechnology and Life Sciences companies, was held on 24th September 2024, in which 30+ industry leaders participated and extended support.

Centre of Incubation

b) Participated and exhibited dhaRti-BioNEST Incubation Centre at Global Bio India 2024 - An international conference held on 12-14th September 2024 at New Delhi.

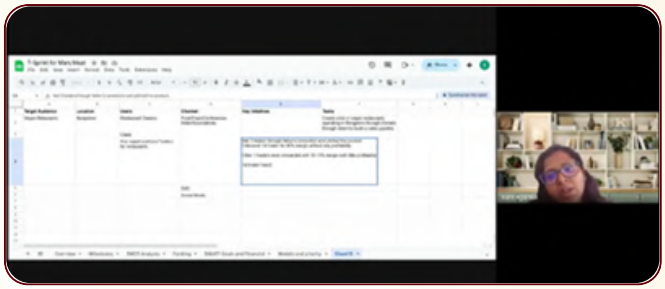
c) Invited as a speaker at the Incubator Meetup "InnovateX" held on 4th October 2024, at GINSERV, Bengaluru. Rakshit Kalyani, COO - dhaRti BioNEST Incubation Centre, will be one of the committee members leading the association of Incubators in Karnataka.

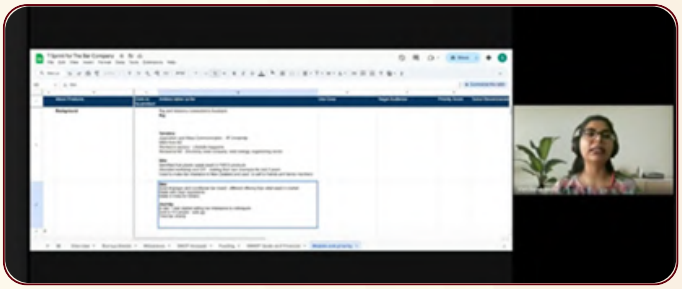
d) Participated in the prestigious events like the TiE Global Summit 2024

e) The Bengaluru Tech Summit 2024, showcasing its initiatives and connecting with global innovators and investors.

f) Visited CFTRI, Mysuru to explore potential collaborations in the mutual areas of interest

g) After onboarding 9 Startups, we planned to kick off the program with a needs assessment. Partnered with the ThinkingSpree company to conduct a startup need assessment. The needs assessment was conducted for all 9 companies over a 3-day period, from April 14, 2025, to April 16, 2025. The sessions were virtually conducted at the designated time slots of 2 hours, and a T-Sheet was generated for all 9 companies.





h) **Startup Bootcamp (BioBloom)**

The startup bootcamp named "BioBloom" was scheduled on 25th and 26th April 2025, a residential bootcamp for our incubated startups. 7 out of 9 companies have attended the Bootcamp.

The sessions were conducted by the experts Vani Agarwal and Sakshi Agarwal, who are both successful entrepreneurs and now startup consultants.

PARTNERSHIP DETAILS

A. Wadhwani Foundation: Wadhwani Foundation's Liftoff Program is an online program and a no-cost program that is helpful for DhaRti Foundation Incubated Startups, and hence, the partnership with Wadhwani Foundation's Liftoff Program will facilitate interest among the IIT students to start an entrepreneurship journey. We have already signed an MoU and onboarded all our startups. The Orientation program of Liftoff has begun.

B. KAHER(KLE Academy of Higher Education & Research) University & KIIF, Belagavi: The KAHER Incubation and Innovation Foundation (KIIF) in Belagavi is a newly established incubation centre under KAHER University. KAHER stands as a distinguished institution renowned for its unwavering commitment to excellence in health science education and pioneering research. Comprising 11 esteemed institutions, KAHER offers a comprehensive array of courses spanning Medicine, Dentistry, Pharmacy, Ayurveda, Physiotherapy, Nursing, Homoeopathy, and Allied Health Sciences. Our institutions are strategically aligned with leading hospitals such as KLES(Karnatak Lingayat Education Society) Dr Prabhakar Kore Charitable Hospital, providing students with unparalleled clinical exposure and hands-on training. Signed the MoU.

Centre of Incubation

FUNDING UPDATES

- 2 Startups have received an overall of Rs. 65,00,000/- worth of grants from different schemes of the Government of Karnataka and the Government of India. The two Companies are VKF AgriFarms Private Limited, Dharwad (MSME 2023 - ₹ 15 lakhs + Karnataka ELEVATE 2024 - ₹ 25 lakhs) and Suvihaan BioNobel Solutions Private Limited, DharwadA promising HealthTech and Biotech startup incubated with us has been selected under the Open Challenge Program (OCP) 6.0 of the STPI OctaNE Centre of Entrepreneurship (CoE) at Gangtok, marking a significant milestone in its innovation journey.
- As part of this national recognition, Suvihaan has been awarded a grant of ₹25 lakhs to advance its pioneering work in molecular diagnostics, particularly in the early detection of cancer and other critical health conditions. The support aims to help the company scale its innovative, AI-driven healthcare solutions and accelerate product development for real-world impact.
- The Open Challenge Program is an initiative by the Software Technology Parks of India (STPI), supported by the Ministry of Electronics and Information Technology (MeitY), Government of India, aimed at promoting deep-tech innovation and entrepreneurship nationwide, with a special focus on underserved regions.

CENTRE OF EXCELLENCE IN AFFORDABLE AND CLEAN ENERGY

About the Centre of Excellence

The Centre of Excellence in Affordable and Clean Energy (CoE-ACE) has received CSR funding from Honeywell for FY21-22 and FY22-23 and from Lowe's India Pvt. Ltd. for FY22-23 and FY23-24. As part of the Upskilling and Awareness Programs sponsored by Lowe's India Pvt. Ltd., in the recent year, eight workshops were conducted which saw participation of over 450 audience members. The topics of the program ranged from energy as well as sustainability practices, such as a hands-on and theory session on solar energy systems, net-zero energy buildings, high-performance computing, open source energy model for Indian zero-carbon pathway, design thinking, and digital preservation and technology development for Lambani language.

CENTRE OF EXCELLENCE IN INDIAN KNOWLEDGE SYSTEM

About the Centre of Excellence

The Center for Excellence in Indian Knowledge Systems (CoE-IKS) has been set up at IIT DHARWAD in 2023 to promote all activities related to Indian

1. Water Resource Management
2. Transliteration into different Indian languages.
3. Sanskrit Sambhashanam
4. Panchang
5. Vruksha Nakshtra
6. Modernisation of traditional materials for restoration of heritage structures
7. Employing natural language technologies to make Sanskrit manuscripts more accessible to wider end users
8. Creation of linguistic technologies such as dictionaries, part of speech taggers, morphological analyzers, machine translation systems, text-to- speech technologies, and speech-to-speech translation for Lambani language
9. Engineering and spiritual aspects of temple architecture
10. Revisiting the knowledge of Vimana Shastra
11. Relations between ancient shastras and modern economic theories

More structured academic courses are planed to be offered in subsequent years. An association called Prabhodini has been formed which regularly conducts Knowledge Systems. Some of the key topics pursued by the centre are:

12. Digitization and three dimensional printing of yogic postures
13. Relation between music, meditation and neurophysiology
14. Applications of Vedanta sutras for personal and social development
15. Understanding ancient manufacturing and metallurgical technologies
16. Astronomical significance of Panchanga

The centre also offers a few academic courses. Some of the prominent courses are:

a) Happiness and Wellbeing (that includes Patanjali Yogasutras and Bhagavadgeeta as a significant part of the course)

b) Introduction to Indian Knowledge Systems-1 that includes Darshanas, Indian Classical Music, Sanskrit, Indian classical dance, Arthashastra, Ayurveda, temple architecture and Astronomy as a part of the course.

seminars and discussion on several aspects related to education and philosophy of life based on Indian values.

MANEKSHAW CENTRE OF EXCELLENCE FOR NATIONAL SECURITY STUDIES & RESEARCH (MCOENSSR)

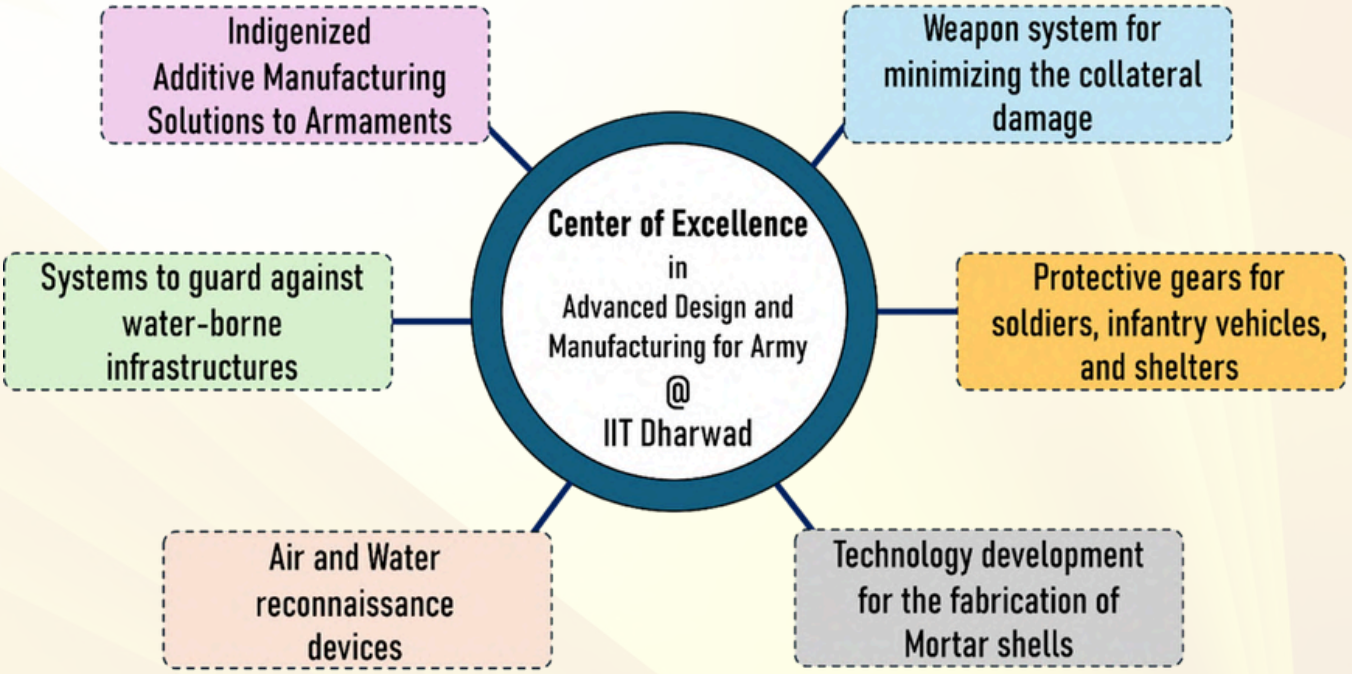
The Manekshaw Centre of Excellence for National Security Studies & Research (MCOENSSR) at IIT DHARWAD is a first-of-its-kind pan-India initiative focusing on next-generation warfare studies, strategic research, and futuristic technologies for national security. Established under the aegis of MoD, MHA, NSCS, and MeitY, the Centre operates as part of a national CoE network coordinated by IIT Guwahati, IIT Kanpur, IIT Jodhpur, IIT DHARWAD, IIIT Delhi, and CDAC Kolkata.

The Centre aims to strengthen India's defence innovation ecosystem by integrating advanced research, capability development, training, and policy-oriented studies. Key research verticals include defence materials and additive manufacturing, aerospace and propulsion, autonomous and intelligent systems, cyber-physical and communication security, energy security, and AI/ML for defence applications.

MCOENSSR serves as a nodal platform, enabling convergence among the Armed Forces, security agencies, academic institutions, R&D laboratories, and defence industries, facilitating joint problem-solving and translational research. The Centre develops indigenous prototypes, supports TRL advancement, and drives productization of technologies with emphasis on new-age hybrid and non-contact warfare capabilities.

As part of its academic mandate, the Centre offers specialised certificate programs, customised Master's and PhD programs aligned with NEP, and resettlement/upskilling modules for Officers, JCOs/ORs, and Agni veers. The Centre also promotes international collaborations for research, training, and capacity building in defence and security domains.

Supported by IIT DHARWAD's expanding research ecosystem, including advanced additive manufacturing facilities, autonomous systems labs, and high-performance computing infrastructure, the Centre conducted workshops, expert lectures, and collaborative activities during the year. MCOENSSR continues to position IIT DHARWAD as a significant national contributor to defence technology, strategic studies, and security-driven innovation.



Centre of Excellence

Team

PRof Somashekara M A
Centre Head

Research Area (s)
Additive Manufacturing, 3D/4D Printing, Gradient Objects Fabrication, Directed Energy Deposition, Smart Material (shape memory alloys).

Prof [Ms] Anbukkarasi Rajendran
Member

Research Area (s)
Computational Mechanics, Applied Mechanics, Model order reduction, Thin Film Dynamics characterisation, Physical Metallurgy, Mechanical Metallurgy.

PROF Group Captain Prahlad Joshi
Member

Research Area (s)
Blast analysis of composite and monolithic materials, Blast mitigation and fragment estimation of materials under dynamic loading.

Prof Punnag Chatterjee
Member

Research Area (s)
Smart structures, vibration and dynamics, aeroelasticity, energy harvesting.

Prof Shashaank Aswatha Mattur
Member

Research Area (s)
Digital Image Processing, Computer Vision, Pattern Recognition, Remote Sensing, Applied Machine Learning.

Prof Vyom Sharma
Member

Research Area (s)
Advanced Machining Processes, Hybrid Manufacturing, Electrochemical based Manufacturing Processes, Smart Manufacturing, Acoustic Metamaterials, Industry 4.0.

Prof Satish Naik

Research Area (s)
Power Electronics, Converters for electric vehicle (EV) battery charging, Hybrid medium voltage DC circuit breakers, Grid connected multilevel inverters, High voltage power electronics.

Centre of Excellence

SOPHISTICATED CENTRAL INSTRUMENTATION FACILITY

About the Centre of Excellence

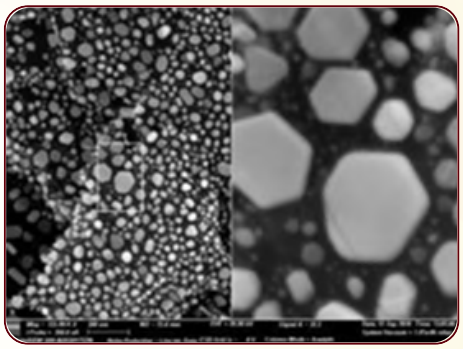
A sophisticated Central Instrumentation Facility (SCIF) was established at IIT DHARWAD in 2020 to cater to the research and development (R&D) activities at IIT DHARWAD and its surrounding areas. The facility consists of state-of-the-art instruments that will be useful in carrying out cutting-edge research in various fields of science, engineering, and Materials science. The SCIF houses a variety of highly sophisticated instruments, including Atomic Force Microscopy (AFM), Field Emission Scanning Electron Microscopy (FESEM), Universal Testing Machine (UTM), Nuclear Magnetic Resonance (NMR) spectrometer, Probe station, UV-Vis-NIR spectrophotometer, Fluorimeter, Metal 3D printer, P-XRD, etc. Additionally, the facility features a High-Performance Computing (HPC) facility for performing advanced and complex theoretical calculations. All these facilities are extended to external academic and industrial users on a charge basis

The SCIF houses a DC+RF Probe station also for the internal users of IIT DHARWAD.
Website: https://scif.iitdh.ac.in/
Number of Sci-Indexed Publications so far: 20+

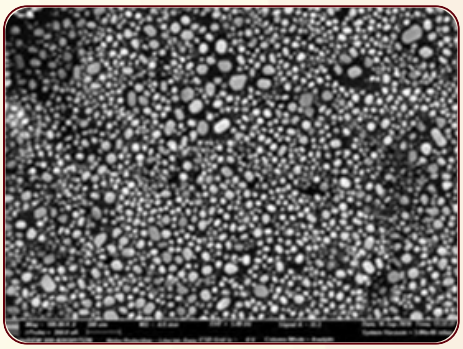
A glimpse of the available instruments is given next

FIELD EMISSION SCANNING ELECTRON MICROSCOPE (FESEM)

Instrument Model:
Carl Zeiss GEMINISEM300



Instrument Model:
Carl Zeiss GEMINISEM300



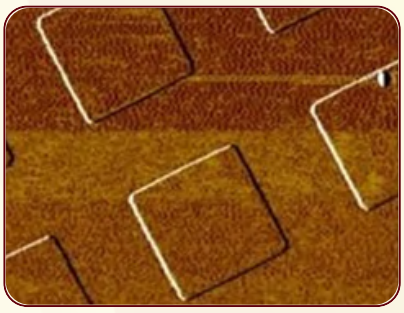
Instrument Model:
Carl Zeiss GEMINISEM300

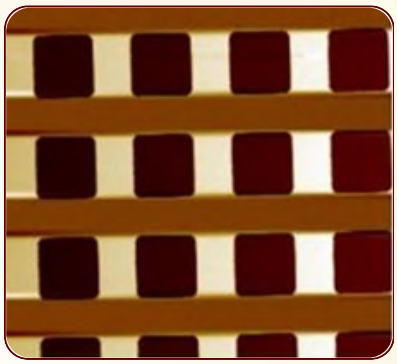
SPUTTER COATER

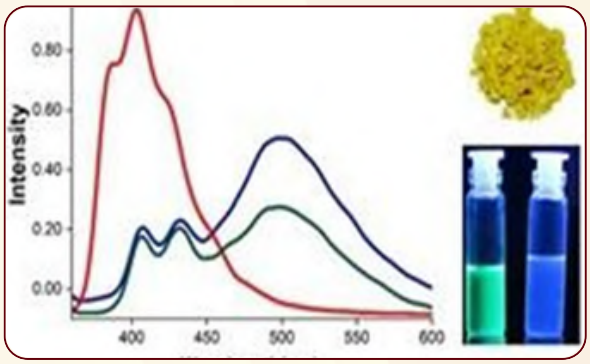
Instrument Model:
QUORUM (Q150T S)

FESEM is used for studying surface topology and morphology of nano materials and micro/nano structures. Different detectors, like the Inlens SE detector, SE detector, and BSE detector, are available with the system. Additionally, the elemental analysis and composition of the samples can be determined using the Oxford instrument EDX detector. The electron microscope is capable of characterising conducting, semiconducting, and non-conducting samples, including polymers. The facility is augmented with a gold sputter coat (Quorum Q150T S) to aid in the characterisation of insulating and semiconducting samples.

ATOMIC FORCE MICROSCOPE (AFM)







Instrument Model:

PARK SYSTEMS NX10

Description of the instrument: AFM is primarily used to get the 3D images and thickness profiles of nanostructures using interactions between a sharp cantilever tip and the sample surface. The Imaging modes available with the AFM are contact, non-contact, and tapping modes. Apart from these basic measurements, electrical, mechanical, and magnetic properties of materials can also be studied using NX10. The vertical resolution of NX10 is less than 0.1 nm.

FLUORIMETER

Instrument model: Perkin Elmer -FL6500

Description of the instrument:

The equipment helps study the fluorescent characteristics and measure the quantum yields of the compounds in solution, thin films and solid state. The instrument is coupled with an integrating sphere, enabling the measurement of absolute quantum yields of the fluorescent samples (solution and thin film/solid-state).

HIGH PERFORMANCE COMPUTING (HPC)

Typical results from the scientific computations performed on HPC

Description of the instrument:

The HPC facility consists of 31 nodes with all CPU cores. The system is connected to the Intel Omni-Path InfiniBand and features 100 TB of storage, utilising a parallel file system. The compute nodes have 20 cores per socket and 2 sockets per node. The following is basic information on the facility:

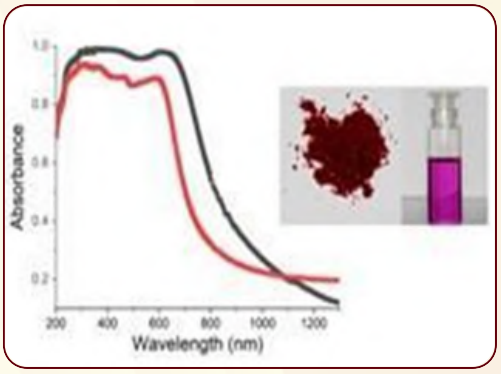
- 1 Master node (40 cores, 2x Intel Xeon Gold 6146 processor; with 384 GB RAM)
- 31 Compute nodes (40 cores each, 2x Intel Xeon Gold 6146 processor; with 192 GB RAM/node).

The total theoretical TeraFlops for this cluster are 90TF. The machines are of Fujitsu make. These machines are housed in the smart-rack with precision cooling. The DGX box of nVIDIA for AI/ML kind of workloads is also integrated into the smart rack.

Currently, we have 2 DGX servers. The DGX-V100 and DGX-A100 are integrated with a single master node. The storage is shared through the parallel file system. DGX -A100 is part of the Space Data Science Lab.

UV-Vis-NIR (Near Infra Red) SPECTROPHOTOMETER

Instrument model: Agilent Cary 5000



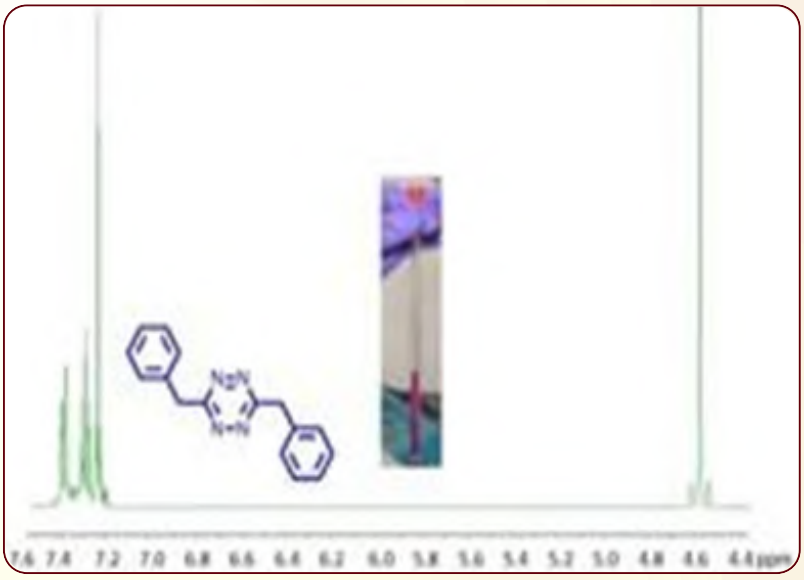
Typical results from the instrument

Description of the instrument:

The instrument helps study the absorption characteristics of organic/inorganic compounds that absorb UV, visible and Infrared spectrum regions. It can also assist in the identification and determination of the concentration of unknown compounds. The equipment can also characterise solution, thin-film, and powder state samples.

NUCLEAR MAGNETIC RESONANCE SPECTROMETER (NMR)

Instrument model: Jeol 400 MHz NMR spectrometer



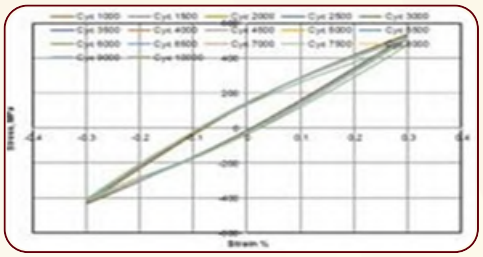
Typical results from the instrument

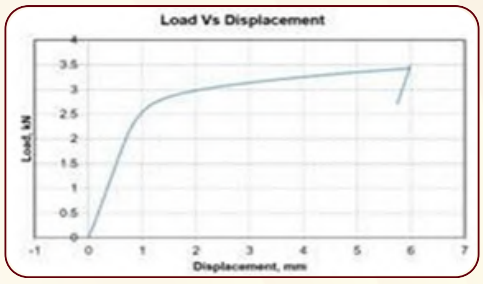
Description of the instrument:

The facility will be useful in the structured determination, quantification, and analysis of the purity of chemical compounds. The instrument can record 1D- and 2D-1H, 13C and many more heteronuclear (19F, 31P, 14N, 11B, etc.) spectra. It is capable of characterising both in solution and solid-state samples.

UNIVERSAL TESTING MACHINE (UTM) /AXIAL TORSION TESTING MACHINE

Typical results from the instrument:





Description of the instrument:

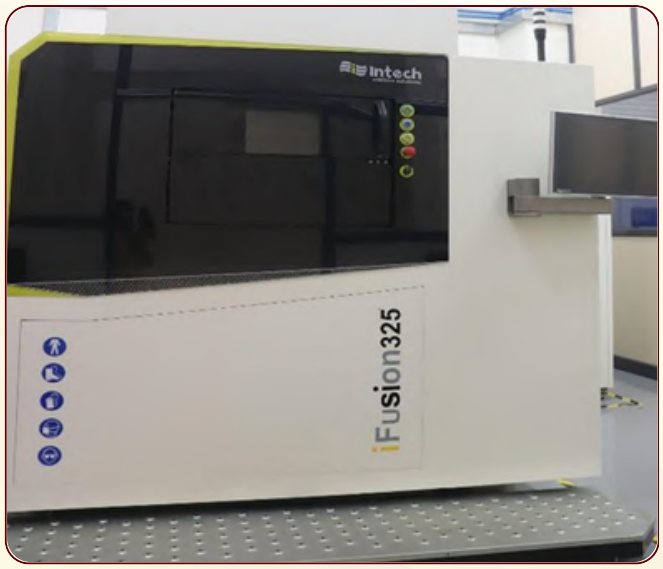
The 100 kN capacity UTM can be employed to conduct tests including FJ1C tests by introducing fatigue-crack, low-cycle and high-cycle fatigue, tensile (flat and round specimens), compression, and flexural tests.

The 25 kN capacity UTM can be employed to conduct tests including monotonic axial and torsional loadings, dynamic axial and torsional loading test, and a combination of axial and torsional loadings which are in- and out-of-phase. The specimens include flat, round, and tubular specimens.

Powder Bed Fusion Metal 3D Printer:

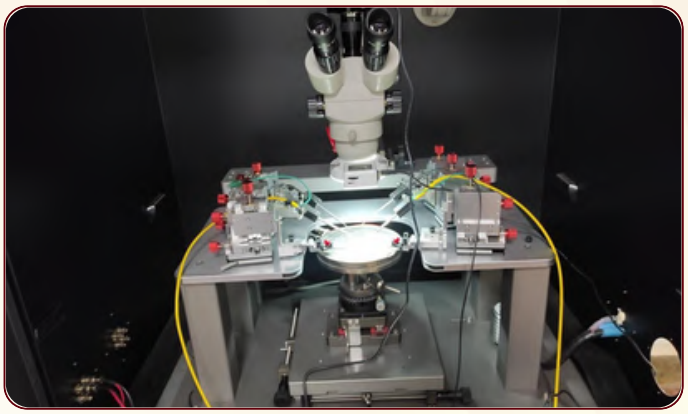
The metal 3D printer, based on powder bed fusion technology, is used primarily to manufacture customised aerospace, medical, and automotive components. A metal 3D printer operates using a layer-by-layer material build-up approach. This toolless manufacturing method can produce fully dense metallic parts in a short time with high precision.

In Powder bed fusion technology, each powder bed layer is selectively fused by using an energy source, like a laser. It is the most promising additive manufacturing technology that can be used for manufacturing small, low-volume, complex metallic parts.



Probe Station

SPS6 Manual DC/RF Probe Station is a Wafer-level electrical measurement of electronic devices and samples. The sample chuck temperature variation is from room temperature to 300 °C.



Model: SPS6 Manual DC/RF Probe Station.

Powder X-ray Diffraction (PXRD);

It is a rapid, non-destructive analytical technique and an indispensable tool in material science, chemistry, geology, and pharmaceuticals, used for characterising crystalline materials and gaining insights into their structure and properties. When a crystalline sample is exposed to an X-ray beam of known wavelength, a unique diffraction pattern is generated. If the material consists of more than one phase, the diffraction patterns for each phase overlap. By identifying each pattern within the diffractogram, individual materials or phases can be identified and quantified.

From the interpretation of the observed diffraction patterns using the PXRD technique, we will be able to:

- Identify the crystalline phases present in the given material
- Measure crystallite/crystal domain size within discrete crystalline phases
- Calculate unit cell dimensions through pattern indexing
- Phase quantify using standard methods such as simple profile fitting, LeBail, Pawley or Rietveld refinements.

Model: Malvern Empyrean Series 3

SPACE DATA SCIENCE LAB

About the Lab

With the financial contribution from Antrix Corporation Ltd. as part of its CSR donations, IIT DHARWAD, Karnataka, India, has established the Space Data Science Lab (SDSL), which is highly equipped with the latest technological tools and resources. Further promoting the research and development among the research scholars and the undergraduate students of IIT DHARWAD in the field of Space Science and Technology, this dedicated lab, abbreviated as SDS lab, provides the necessary environment and tools.

There are many underlying areas that need to be explored and researched using the widely available space data, and solutions to these issues can be found using state-of-the-art methodologies. The objectives of the SDS lab are:

- To conduct fundamental research, develop, and implement novel data processing/analysis algorithms for processing space data.
- Train human resources in the areas of space data processing to meet the market demand of the space research, entrepreneurial and industrial sectors.
- Space data cleaning, standardisation, and repository formation, providing access to researchers, startups, and industry in the space domain.

Facilities in the Lab:

- State-of-the-art GPU facility
- High-definition data visualisation wall
- Workstations and dedicated lab space

Activities:

- Analysis of variable climatic patterns affecting the agricultural sector
- Water crisis management
- Study of diversity in Western Ghats
- Exploration of essential climate variables from satellite data
- Analysis of EM spectra from deep space
- Activities from Space Data Science Club

Faculty Involved:

- Prof. Rajshekhar V. Bhat
- Prof. Rahul J. Pandya
- Prof. Shashaank Aswatha Mattur (In-charge)
- Prof. Dileep A. D.

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CAREER DEVELOPMENT CELL

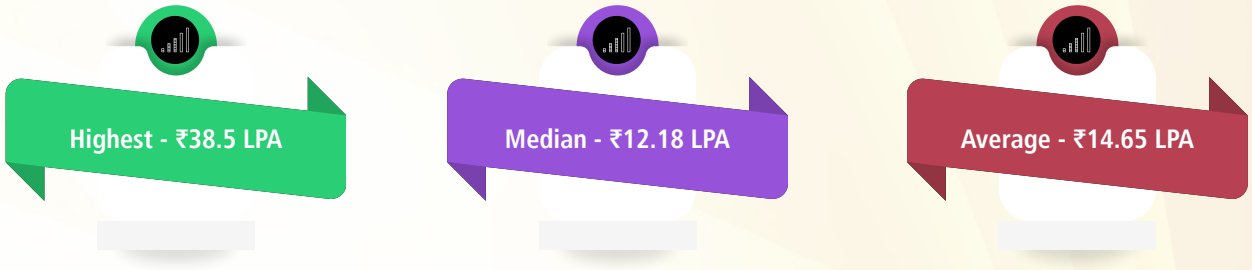
About the Cell

The Career Development Cell (CDC) conducts various activities to help students launch their careers successfully. It provides exposure to students on available career and internship opportunities in various fields, facilitates internship opportunities within IIT DHARWAD for external students, provides training on soft-skills required for students to thrive in a team-oriented job environment, facilitates hiring companies to come to campus and conduct recruitment drives for the students' valuable feedback from hiring companies on our academic programs.

PLACEMENT STATISTICS

Number of Registered Students	Number of Companies Participated in the Placement Season	Number of Students Placed	Number of Students Opted for Higher Education	Number of Students Opted for UPSC/Govt. Exams	Number of Students Interested in Entrepreneurship
147	109	123	14	3	1

Statistics of Cost to Company (CTC)



Activities/Training Sessions Conducted by CDC:

- The Career Development Cell (CDC) conducted a one-week training program for the 2025 graduating batch to enhance their placement readiness.
- CDC conducted a session on "Careers in Professional Services Companies" with Mr Anantha L, Asst. Director, Global Services, KPMG.
- CDC organised an "HR Connect - Bengaluru Chapter" to strengthen the industry-academic collaboration.

Key Recruiters Participated in the Placement Season:

- Texas Instruments
- Arista Networks
- Accenture Japan
- Aequs
- Hospet Steels
- BEL
- Ittiam
- Amazon
- MAQ Software
- Oracle
- Eurofins
- TCS
- Cognizant
- Capgemini
- Accordion
- Cubastion
- HCL and more

IIT DHARWAD ALUMNI ASSOCIATION

About the Association

The Indian Institute of Technology Dharwad Alumni Association (IITdhAA) is an association of the alumni of the Indian Institute of Technology, Dharwad. It is a non-profit organisation and is registered as a society under the Government of Karnataka. The Registration Number of the society is DRDW/SOR/130/2023- 2024. There are approximately 677 members as of 31 March 2025. The objective of this association is to maintain a strong connection between the Institute and its alumni. The association aims to serve its alumni and students by offering social, educational, and professional opportunities through its extensive network. The association aims to promote and facilitate education, research, sports, cultural activities, and other human development activities in the Institute.

GOVERNING BODY

I.	Honorary President	Director, IIT DHARWAD
II.	President	Kunal Kumar
III.	Secretary	Subhamoy Rana
IV.	Treasurer	Sonu Sourav
V.	Members	a) Dr Amitkumar Gawas b) Arpit Shukla c) Parishapranay Raj d) Rohan Deshpande e) Unnati Athwani
VI.	Faculty In-Charge (member)	Prof. Hiranya Deka

Total number of alumni members in the alumni association: 677

Alumni contribution towards IIT DHARWAD: Monetary contributions, contributions in kind (equipment donated, etc.).

Sl. No.	Event Name	Event Details
1	Inauguration of IIT DHARWAD Alumni Association Bengaluru Chapter	Date: 31/08/ 2024 Location: IIT Alumni Centre Bengaluru Attended by: Approximately 15 invited speakers, including Prof. Saurav Mukherjee, Dean, IIM Bengaluru

KNOWLEDGE RESOURCE CENTRE

The Knowledge Resource Centre (KRC) is a cornerstone support service for IIT DHARWAD, fuelling the Institute's commitment to excellence in research, teaching, and lifelong learning.

The KRC's journey began in 2016, even before the Institute's formal inauguration, operating from a modest room under the mentorship of IIT Bombay at the WALMI campus. Today, it has evolved into a vibrant and fully equipped resource centre housed in the dedicated **Knowledge Resource and Data Centre (KRDC) Block.**

Our Mission

The KRC aims to support the IIT DHARWAD community by providing seamless access to print and digital resources, information services, and research support—enabling scholarly growth for all its patrons.

Facilities at a Glance:

The KRC is housed in the KRDC Building and offers modern, dedicated spaces for study and research.

- **24x7 General Reading Area:** Located on the upper ground floor of the KRDC Building, this area is open around the clock. It offers a comfortable, well-lit reading space with over 300 seats, suitable for individual and group study.
- **First Floor Facilities:** The first floor of the KRDC Building includes:
  - A Circulation desk for easy check-out/check-in services.
  - A Comprehensive stack area for housing textbooks, reference books, newspapers, theses, and dissertations.
  - An Additional reading area with seating for over 50 users, which is perfect for focused study sessions.

KRC Working Hours

Monday Through Friday: 9 AM to 5.30 PM

Resources and Memberships

The KRC provides a wealth of both print and digital resources, which are crucial for research scholars and faculty members to access state-of-the-art knowledge.

- **Key Memberships & Subscriptions:**
  - The Institute is a **Life Member** of the prestigious **"Current Science Association"** of the "Indian Academy of Sciences" and receives the "Current Science" journal.
  - It receives various national newspapers, light-reading magazines, and popular science and technology (S&T) content.
  - As part of the **One Nation One Subscription (ONOS)** initiative by the Government of India implemented through INFLIBNET, serious readers can access nearly **13,000+** reputed E-Journals from 30 publishers, including Science Direct, IEEE, Springer Nature, and Wiley.
  - The Institute subscription includes E-Journals (SIAM, OSA, RSC, ASTM DL & 16 Individual Journals), Databases (MathSciNet, Scopus, JSTOR, Indiastat, The EPWRF India Times Series, ASTM DL, and McGraw-Hill Access Engineering), Standards (ASTM), Membership (arXiv), the **Grammarly** writing tool, and **Turnitin** Plagiarism Detection Software.

Resources of the KRC

The KRC's collection, encompassing both print and digital assets, has undergone significant enhancements during the fiscal year 2024-25.

Category	Description	Nos
Print Collection	Print Books	359 (Cumulatively 6550)
	Print Journals (Journal of the Ramanujan Mathematical Society and Current Science)	02
	Print Magazine (Sambhashana Sandesha)	01
	Print Newspapers (The New Indian Express & Deccan Herald)	02
	Digital Media (CD-ROM)	100
E-Resources & Databases	E-Journals – ONOS Subscription (30 Publishers)	13000+
	E-Journals - Institute Subscribed (SIAM, OSA, RSC, ASTM DL & 16 Individual Journals)	115
	E-Books (McGraw-Hill, ASTM DL, Pearson)	2421
	Standards (ASTM & ISO/ASTM)	91803
	Conference Proceedings (ACM & IEL)	45884
	Technical Reports (ASTM DL)	12
	Databases (MathSciNet, Scopus, JSTOR, Indiastat, The EPWRF India Times Series, ASTM DL, and McGraw-Hill Access Engineering)	07
Membership	arXiv	01
Research Tools	Writing tool and citation audit database (Grammarly)	01
	Plagiarism Detection Software (Turnitin Feedback Studio)	02
Interactive Content	Interactive videos (McGraw-Hill Access Engineering)	1430
	Interactive data visualisation tool	28
	Case Studies (McGraw-Hill Access Engineering)	13
	Spreadsheet Calculators	90

GYMKHANA UNIT

About the Department

The Sports Unit at IIT DHARWAD promotes fitness and sportsmanship through organised events and well-maintained facilities. It manages inter-departmental, inter-hostel, and inter-IIT sports competitions, provides training, and supports wellness programs. The unit oversees the maintenance of gyms, courts, and fields, ensuring top-notch sports infrastructure. It also fosters collaborations and sponsorships to enhance resources and plays a key role in integrating sports with NSS, NCC, and NSO activities. Overall, the unit creates a vibrant sports culture and encourages broad participation across campus.

The Sports Officers at IIT DHARWAD oversee the organisation of sports events and ensure the proper maintenance of facilities, such as gymnasiums and courts. They coordinate training programs for students and staff, promoting skill development and fitness. Additionally, they manage budgets, procure equipment, and secure sponsorships for events.

Inter IIT Sports Meet

The Inter IIT Sports Meet is the largest annual sporting event for students and staff across all IITs. It embodies the spirit of healthy competition, teamwork, and sportsmanship, bringing together participants from different IITs to compete in a wide range of sports, including athletics, cricket, volleyball, basketball, badminton, and more.

The meet provides a national platform for athletes to showcase their talent while promoting camaraderie and physical fitness among the IIT fraternity. It is one of the most anticipated events of the year, with rigorous preparation, selection trials, and training sessions conducted at each IIT well in advance of the competition, ensuring excellence both on and off the field.

The 57th Students' Inter-IIT Sports Meet (2024) was jointly hosted by IIT Kanpur and IIT Indore. The IIT DHARWAD contingent participated in the inaugural ceremony with great enthusiasm, reflecting the institute's growing presence and competitive spirit at the national level.

57th Students Inter IIT Sports Meet at IIT Kanpur & IIT Indore.
IIT DHARWAD Contingent During Inaugural Ceremony

**57th Students Inter IIT Sports Meet at IIT Kanpur & IIT Indore.
IIT Dharwad Contingent During Inaugural Ceremony**

Football Match: IIT Dharwad Vs IIT Delhi

Football Match: IIT Dharwad Vs IIT Delhi

GC Inter-Hostel Outdoor Games


GC 2024-25: Honouring Champions and Cherishing Moments



IIT Dharwad has introduced health-related activities for Divyajnana students, focusing on fitness, mental well-being, and accessibility. This initiative aims to promote their overall health and inclusivity on campus.


The Temporary Ground and Volleyball Court have been inaugurated, marking a key enhancement in inclusive sports infrastructure at IIT Dharwad.


Permanent Basketball Court

INSTITUTE EVENTS

TITLE	DRONE DESIGN AND AUTONOMOUS NAVIGATION IN FIRE RESCUE (DDANFR 2024)
Month/Year	May to June 2024
Description	The Indian Institute of Technology, DHARWAD, hosted a two-day workshop titled "Drone Design and Autonomous Navigation in Fire Rescue (DDANFR 2024)" on May 31 and June 1, 2024. This event, organised by the Fire and Thermal Research Laboratory (FTRL) and the Control Systems and Robotics Laboratory, featured the unveiling and demonstration of the world's first fire rescue assistant drone. The drone was developed at IIT DHARWAD by a team led by Prof. Sudheer Siddapureddy and Prof. Ameer Mulla, with funding from the TiHAN Foundation and IIT Hyderabad (NMICPS, Government of India). Prof. Sudheer Siddapureddy, faculty-in-charge of FTRL, highlighted the significance of the new drone for the fire safety community, noting the challenges in designing a drone that is both small enough to navigate indoor spaces and capable of withstanding high temperatures. The FTRL has made significant contributions to the fire research community, including identifying sensors that can operate in sooty environments and developing flexible protective shields for drones, following numerous fire experiments. This research team continues to explore other critical aspects of fire safety, such as evacuating people during emergencies. Prof. Ameer Mulla explained how their group at the Control Systems and Robotics Laboratory overcame the challenge of navigating the drone in smoky conditions. This breakthrough has applications beyond fire safety, including crowd management at large gatherings like railway stations, malls, and pilgrimages. Prof. Venkappayya R Desai, the Director of IIT DHARWAD, shared his insights on the historical establishment of IITs and highlighted that IITs have significantly contributed to the development of biotoilets for Indian Railways. He emphasised the exceptional quality of research conducted at IITs, illustrating the pivotal role these institutions play in fostering technological advancements and innovative solutions for real-world problems. In line with the green campus initiative led by Prof. Desai, the workshop emphasised sustainability by promoting waste minimisation and reuse practices. The workshop, DDANFR 2024, fostered innovation and collaboration, reinforcing IIT DHARWAD commitment to advancing fire rescue technologies through pioneering research. The workshop is inaugurated by Prof. Pratyasa Bhui (Dean R&D), in the presence of Prof. Somashekara, Head of MMAE, and Prof. Naveen Kadayinti, Head of EECE. Keynote speakers included Prof. Bhaskar Dixit of Jain University and Dr Siva Bathina, a postdoctoral researcher from IIT Madras. The first day focused on fire safety, drone design, and various navigation algorithms. The second day featured hands-on demonstrations by Mr Arvind Pandit (Senior R&D Engineer at Indrones Solutions Pvt. Ltd.) and Mr Rajat Joshi on the fire-evacuation and the navigation software. The event successfully inspired young minds to pursue research, demonstrating that simple yet innovative ideas can have a global impact.

TITLE	WORLD ENVIRONMENT DAY – VRIKSHA NAKSHATRA PLANTATION
Month/Year	June 2024
Description	The NSS Unit of IIT DHARWAD planted trees in the permanent campus near the Knowledge Resource and Data Centre (KRDC) building to mark World Environment Day. The Vriksha Nakshatra plantation (vegetation constellation) program signifies a commitment to creating a better future for all, drawing inspiration from the traditional Indian Knowledge System (IKS).

TITLE	10TH INTERNATIONAL YOGA DAY CELEBRATION
Month/Year	June 2024
Description	We joyfully celebrated the 10th International Yoga Day with a series of events conducted by our Physical Education and NSS Unit, which highlighted the physical, mental, intellectual, and spiritual benefits of yoga. Participants from all age groups joined together for a community yoga session, embracing the practice's power to promote health and well-being.

TITLE	FACULTY DEVELOPMENT PROGRAM ON "FULL CUSTOM DESIGN AND FIELD PROGRAMMABLE GATE ARRAY (FPGA) DESIGN FLOW"
Month/Year	June 2024
Description	Faculty Development Program on "Full Custom Design and Field Programmable Gate Array (FPGA) Design Flow" successfully conducted by Dr Nagaveni, Assistant Professor, EECE, at IIT DHARWAD in collaboration with #CoreEL on 25th and 26th June 2024. Day 1 featured a Technical Workshop on FPGA design flow using PynqZ2, with Day 2 focusing on an Analogue Integrated Circuit (IC) design flow using Mentor Graphics.

TITLE	FORMAL METHODS (FM) UPDATE MEETING 2024
Month/Year	July 2024
Description	The Formal Methods (FM) Update Meeting, organised annually by the FM community in India, was held at IIT DHARWAD from July 11th to 12th, 2024. Researchers from industry and academia, including FM researchers, came together to present and discuss developments in the areas of verification, program design, and theoretical computer science.

INSTITUTE EVENTS

TITLE	5TH ANNUAL CONVOCATION OF IIT DHARWAD
Month/Year	July 2024
Description	IIT DHARWAD celebrated its fifth annual convocation on Monday (22nd July 2024), with a keynote address delivered by the Chief Guest Prof. Shrinivas Ramachandra Kulkarni, GE Hale Professor of Astronomy and Planetary Science at CalTech, Pasadena, California, USA. Speaking to the fresh graduates, Prof. Kulkarni highlighted the importance of adapting to the rapidly changing world by reorienting and reinventing oneself. Industries are evolving, and the types of workers they require are shifting. To stay relevant and to succeed, it is crucial to continuously reorient and reinvent yourselves," he advised the graduates. In addition to professional success, Prof. Kulkarni emphasised the importance of staying fit and addressing broader global challenges, such as climate change. He noted that South Asia is predicted to face a substantial rise in temperature over the next three decades. "The only way to eradicate poverty is by fostering rapid economic growth while addressing the impacts of climate change simultaneously. I hope that you, the graduates, will work diligently, think creatively, and diversify the Indian economy to tackle both poverty and climate change," he urged. The convocation also featured remarks from Prof. Venkappayya R. Desai, Director of IIT DHARWAD, who shared the updates on the Institute's progress. He praised the students for their dedication, academic excellence, and groundbreaking research initiatives. "Our aim is to equip students with a broad skill set that enables them to pursue their entrepreneurial dreams with confidence and determination," Prof. Desai said. He also announced an exciting academic milestone for IIT DHARWAD: for the first time in the institute's eight-year history, the Department of Electrical, Electronics, and Communication Engineering (EECE) will offer two new four-year BTech programs in Electrical and Electronics Engineering, as well as Electronics and Communication Engineering. In total, 195 graduates received their degrees, with special awards and accolades given to the top performers. The event marked a momentous occasion for the IIT DHARWAD community as it continues to grow and make strides in both education and research.

TITLE	INDO-FINNISH JOINT COURSE ON "CIRCULAR ECONOMY AND SUSTAINABILITY"
Month/Year	August 2024
Description	IIT DHARWAD's Biosciences and Bioengineering (BSBE) Department conducted an Indo-Finnish joint course on "Circular Economy and Sustainability" from 19th to 23rd August 2024. The course, which included master's and PhD students, covered sustainability theories, the circular economy, and interdisciplinary research, with case studies from India and Finland. The event, held in collaboration with IIT Delhi, IIT Guwahati, and the University of Eastern Finland, aimed to equip attendees with future environmental technologies through featured lectures by experts from both nations.

TITLE	VISIT OF DELEGATES FROM THE UNIVERSITY OF LIMOGES, FRANCE
Month/Year	August 2024
Description	Prof. Jean-Christophe Nallatamby and Dr Raphael Sommet from eXperimental Laboratory for Innovative Materials (XLIM) Laboratory, Joint Research Unit (UMR) 7252, National Centre for Scientific Research (CNRS), University of Limoges, France, visited IIT DHARWAD from 20th to 22nd August 2024. They gave seminar talks on "Comprehensive Trap Characterisation and TCAD Physics-based Simulation Studies for High Electron Mobility Transistors (HEMTs)" and "Thermal characterisation and simulation studies for AlGaN/GaN HEMTs" and interacted with our research scholars.

TITLE	WORKSHOP ON DESIGN AND ANALYSIS OF MAGNETICS FOR ELECTRIC POWER APPLICATIONS
Month/Year	August 2024
Description	A Workshop on Design and Analysis of Magnetics for Electric Power Applications was held on 24th August 2024 at IIT DHARWAD, focusing on magnetic components in electric systems, featuring the latest advancements in Magnetics. This workshop was supported by the Technology Innovation Hub on Autonomous Navigation (TiHAN), IIT Hyderabad, the Power and Energy Group [EECE Department, IIT DHARWAD], and the IEEE Student Branch [IIT DHARWAD].

TITLE	8TH FOUNDATION DAY CELEBRATION
Month/Year	August 2024
Description	On 24th August 2024, IIT DHARWAD had its 8th Foundation Day Event with a lecture by Prof. T.G. Sitharam, Chairman, AICTE, on the topic "Unlocking the Potential of Technical Education to Shape Tomorrow." Prof. Sitharam's insights on innovation and skill development were inspiring, especially for future generations. The event also featured the presentation of the 8th Foundation Day Awards, honouring outstanding students of IIT DHARWAD.

INSTITUTE EVENTS

TITLE	E-SUMMIT '24: NURTURING FUTURE ENTREPRENEURS AT IIT DHARWAD
Month/Year	August 2024
Description	IIT DHARWAD's Institute Innovation Council (IIC) successfully hosted E-Summit '24 on 24–25 August 2024. This fest featured a range of activities, including talk shows, workshops, and competitions on entrepreneurial skills in students. Participants from IIIT DHARWAD, KLE Tech University, Hubballi, and other institutions took part in the event. The event was inaugurated by Dr Jitendra Kumar, MD of the Biotechnology Industry Research Assistance Council (BIRAC). Key events included Ideate'24, a pitching competition with 600 participants, and Genesis, a brand-building event in collaboration with dhaRti BioNEST Incubation Centre (BIC). Other highlights included Find-the-Bug 2.0, a biotech case study competition, and Strategix '24, a cricket-themed strategy game. Workshops on Design and Creativity led by Prof. Badri Narayan [IIT Madras] and Shri Saksham Chhimwal [IIT DHARWAD] drew over 100 participants. A talk show on "Finance for All 2.0," by Chartered Accountant and Company Secretary Ms Akshata Amar, offered personal finance advice, while mountaineer Nandita Nagangoudar inspired with her speech. The summit concluded with a cultural night, featuring Sapphire Dance Club, IIIT DHARWAD students, and Moh Musical Band.

TITLE	NATIONAL SPORTS DAY CELEBRATION
Month/Year	August 2024
Description	The National Sports Day, commemorating Major Dhyan Chand Jayanti, was celebrated on 28th August 2024 with a range of activities promoting sports and fitness, including a 6 km run for students and a 4 km run for staff/faculty. Our women's Badminton Team won against Karnataka University, and both our Basketball and TT Teams secured the 1st place.

TITLE	CODING CLUB EVENTS – AUGUST TO DECEMBER 2024
Month/Year	August to December 2024
Description	The Coding Club of IIT DHARWAD organised several events over the last semester, aimed at enhancing programming, cybersecurity, and game development skills. Highlights include Arcadia, an Intra-Institute Game Development Competition held from August to October 2024, as well as workshops such as "Python for Beginners" and "Introduction to Competitive Programming," which were tailored for first-year students in August 2024. The club also hosted the Code Compete Conquer Competitive Programming Contest on September 1, 2024, and Cyber Security Workshops in October 2024. The Sleepless Coding Saga, the annual Intra-Institute Hackathon, was conducted from October 26th to 27th, 2024, followed by Industry Lectures on Computer Systems in November, featuring experts from Qualcomm and ReInfoSec. In December, the club organised Capture the Geese, an Intra-Institute Capture the Flag competition focused on security and system puzzles. Additionally, weekly discussions covered a diverse range of topics, including eBPF, Game Development, Debuggers, Cloud Computing, and Version Control using Git.

TITLE	TEACHERS' DAY CELEBRATION
Month/Year	September 2024
Description	On Teachers' Day (5th September 2024), we had four distinguished speakers who shared their experiences and insights. Prof. K.V. Venkatesh from IIT Bombay discussed how research can be translated into market applications. Prof. Ganapati from IISc emphasised the importance of staying young at heart, encouraging everyone to spread knowledge. Prof. Pushpavanam from IIT Madras shared his experiences as a student, the motivation provided by his teachers, and the significance of interactions beyond the classroom. Prof. Venkappayya R. Desai, Director of IIT DHARWAD, shared his memories of his teacher-mentors, from his high school days to his PhD studies.

TITLE	HINDI DIWAS – "SRIJAN" HINDI WRITING COMPETITION
Month/Year	September 2024
Description	On the eve of Hindi Diwas, i.e., on 13th September 2024, in collaboration with the Rajbhasha VibhAg, IIT DHARWAD, a Hindi writing competition titled "Srijan" was organised.

TITLE	"SWACHHATA HI SEVA" (SHS) FORTNIGHT CAMPAIGN
Month/Year	September to October 2024
Description	"SwachhatA Hi SEvA" (SHS) fortnight was organised from 17th September to 2nd October 2024, as a national campaign initiated by the Govt of India, Ministry of Housing and Urban Affairs. IIT DHARWAD organised a variety of activities under this campaign, including a cleanliness drive at the lake and other initiatives such as pledges and public awareness programs.

INSTITUTE EVENTS

TITLE	INDUSTRIAL VISIT TO RSB TRANSMISSIONS
Month/Year	October 2024
Description	On 19th October 2024, Prof. Rakesh Lingam, Department of MMAE, organised an industrial visit to RSB Transmissions for BTech Mechanical Engineering students as part of their manufacturing processes course. IIT DHARWAD, being located in the manufacturing hub of North Karnataka, this initiative aims to strengthen the relationship between academia and local industries, contributing to the "Make in India" initiative and the development of the manufacturing sector.

TITLE	SEMINAR ON ADVANCES IN AEROSPACE APPLICATIONS
Month/Year	October 2024
Description	The Aerospace Resources Panel of the Aeronautics Research & Development Board (AR&DB), Defence Research and Development Organisation (DRDO), and the Department of MMAE, IIT DHARWAD, co-organised a seminar on Advances in Aerospace Applications on 23rd October 2024 at IIT DHARWAD. The seminar focused on research gaps, funding opportunities, and the technological outlook in aerospace systems. Esteemed speakers included Dr V. Sudhakar, Aeronautical Development Agency, Bengaluru; Dr Amit Saraiya, Defence Materials and Stores Research and Development Establishment, Kanpur; Dr Vidyadeesh P., Gas Turbine Research Establishment, Bengaluru; Prof. G. Jagadeesh, Indian Institute of Science, Bengaluru; and Dr S. K. Pandey, Secretary, AR&DB.

TITLE	SPARC WORKSHOP ON ADDITIVE MANUFACTURING AND FUNCTIONAL MATERIALS FOR ENERGY AND BIOMEDICAL APPLICATIONS
Month/Year	November 2024
Description	The Scheme for Promotion of Academic and Research Collaboration (SPARC) sponsored a one-week workshop on Additive Manufacturing and Functional Materials for Energy and Biomedical Applications, held from November 25th to 29th, 2024, at IIT DHARWAD, in collaboration with Virginia Commonwealth University (VCU), USA. Featuring insightful talks by Prof. Somashekara M. A., Prof. Ravi Hadimani, Prof. Anbukarasi Rajendran, and Dr Saiyad Ladakhan, the workshop engaged 70 participants in discussions, project-based tasks, and research activities. Awards were presented for exceptional contributions to product development and research.

TITLE	EK BHARAT SHRESHTHA BHARAT YUVA SANGAM – PHASE V
Month/Year	November to December 2024
Description	As part of the fifth phase of the Government's cultural and educational initiative, Ek Bharat Shreshtha Bharat Yuva Sangam, a delegation of 44 students from higher education institutions in and around Bihar visited IIT DHARWAD, Karnataka, from 26th November to 1st December 2024. Coordinated by the Central University of Bihar as the nodal institute for Bihar and IIT DHARWAD for Karnataka, the program fostered cultural exchange, promoted tourism, showcased progress, and enhanced mutual understanding between the states.

TITLE	4TH MMAE ANNUAL RESEARCH SYMPOSIUM "SHODHAYANTRIKI-2024"
Month/Year	November 2024
Description	The Department of Mechanical, Materials, and Aerospace Engineering successfully hosted the 4th MMAE Annual Research Symposium, "ShOdhaYAntriki-2024," on 30th November 2024. Distinguished speakers, including Dr Ravi Guttal (CTO, Aequs Pvt. Ltd.), Shri Rajesh Lingam (Applications Senior Manager, Dassault Systems), Shri Rohit Pitale (Chief Product Officer, Unbox Robotics), Shri Gunjan Verma (Technical Account Manager, Ansys), and Shri Hemanth Satyanarayana (Founder & CEO, Imaginate Software Labs), delivered insightful talks. The symposium also included panel discussions on topics such as Mechanical Engineering Curriculum from an Industry Perspective and Transitioning from Student to Industry-Ready Professional: A Practical Approach.

TITLE	WINTER COURSE ON "SKILL DEVELOPMENT IN RESEARCH AND PUBLICATIONS"
Month/Year	December 2024
Description	A 5-day online Winter Course titled "Skill Development in Research and Publications," organised by the Department of EECE, was held from 16th to 20th December 2024. The course covered essential skills for research and academic publishing, including writing grant proposals, research papers, and review articles, as well as insights into journal indexing and ethical considerations. Interactive sessions focused on AI tools, time management, and preparing participants for roles as PhD guides.

TITLE	VISIT OF DR R. BALASUBRAMANIAM, MEMBER (HR), CAPACITY BUILDING COMMISSION, GOVT. OF INDIA
Month/Year	December 2024
Description	Visit of Dr R. Balasubramaniam, Member (HR), Capacity Building Commission, Government of India (GoI) on 26th December 2024.

INSTITUTE EVENTS

TITLE	ARDUINO PROGRAMMING TRAINING PROGRAM FOR GOVERNMENT SCHOOL TEACHERS
Month/Year	2024
Description	Under the guidance of Prof. Vijeth J. Kotagi, Department of CSE, a PhD scholar, Shri Vinay M. Talageri, conducted a training program on Arduino programming, aimed at empowering government school teachers to effectively utilise the Atal Tinkering Labs. The program focused on equipping teachers with hands-on skills in Arduino, enabling them to inspire students in STEM fields through innovative projects and activities. Teachers from five government schools in the DHARWAD district actively participated, gaining insights into integrating technology into their classrooms. This initiative is expected to enhance STEM education and foster a culture of innovation among young learners.

TITLE	FROM SCHOOL CLASSROOMS TO IIT DREAMS: MOTIVATING THE NEXT GENERATION
Month/Year	3rd Quarter FY-2024-25
Description	In the last quarter, our campus welcomed numerous students from schools, PU college, and engineering degree programs, offering them a firsthand experience of the state-of-the-art facilities and academic environment that define our institute. The students were left amazed and inspired by the resources and infrastructure, which foster innovation and excellence. The primary aim of these visits was to motivate students to pursue careers in STEM (Science, Technology, Engineering, and Mathematics) fields and create awareness about the opportunities available at IITs, particularly IIT dhArwAD. Visitors, including students and faculty, also appreciated our efforts in achieving a Net Zero water, energy, and waste green campus, which showcases our commitment to sustainability. During their visit, they explored the indoor Common Facility, various specialised labs, and the Central Learning Theatre (CLT). They were also shown fascinating experiments in the physics, biology, and chemistry labs, which sparked their curiosity and deepened their interest in scientific exploration. The hands-on experiences left the students intrigued and excited about the possibilities within STEM fields. Students were in awe of our infrastructure. Addressing the school students, Prof. Shivaprasad S.M., Dean Outreach, emphasised the importance of staying updated with emerging technologies and the pivotal role of Artificial Intelligence (AI) across all fields. His insights encouraged students to embrace the rapid advancements in technology as a foundation for their future careers. Prof. Dileep A.D., Head, CSE Department, inspired students to value time and work hard to secure better opportunities in life. He also spoke about the groundbreaking research happening at our institute, which encouraged students to consider a career in research. His words resonated with the audience, igniting a passion for discovery and innovation. Adding to the inspiration, Prof. Vijeth J. Kotagi, CSE (Computer Science & Engineering) Department, shed light on the value of hard work and perseverance. He spoke about the myriad of opportunities available after securing admission into IITs, motivating students to set high aspirations and work diligently to achieve them. Prof. Tamal Das, Assistant Professor, CSE Department, provided detailed career guidance, outlining the pathway to IITs and showcasing the cutting-edge facilities and academic support available. He also delved into the transformative research being conducted at IIT dhArwAD, sparking curiosity and ambition among the students. Highlighting the current trends in AI research and its practical applications, Prof. Achyut Mani Tripathi, Assistant Professor, CSE Department, showcased how innovative projects are shaping the future. His talk illustrated the real-world impact of AI, further inspiring students to explore this dynamic field. Addressing the students, Dr. Keerthi Kumar M., the Sports Officer, highlighted the state-of-the-art sports facilities available at our institute and emphasized the significant role of physical education in overall student development. He encouraged students to actively engage in sports and fitness activities, stressing how regular physical exercise not only enhances physical health but also contributes to improved mental focus, discipline, and teamwork. Students from Civil Engineering backgrounds also had the opportunity to interact with Ph.D. scholars and faculty members of our CIE Department. During these interactions, Prof. Giridhar Rajesh Bande, Head, CIE (Civil & Infrastructure Engineering) Department, highlighted the promising growth of Civil Engineering and its pivotal role in building a greener, smarter, and more resilient world. This exchange of ideas further motivated the students to explore the discipline's vast potential and its impact on society. These engaging and insightful interactions left a profound impact on the students, motivating them to aim higher and consider pursuing education at prestigious institutes like IITs. Such initiatives underline our commitment to nurturing the next generation of innovators and leaders in STEM fields.

TITLE	MENTAL HEALTH SENSITISATION WORKSHOP
Month/Year	January 2025
Description	On 7th January 2025, IIT DHARWAD conducted its first Mental Health Sensitisation Workshop, organised by the Student Welfare Section. The workshop focused on raising awareness, early detection, and effective intervention for mental health concerns among students and staff. Held at the Central Lecture Theatre, the event began with a welcome by Prof. Ridhima Tewari, followed by opening remarks from Prof. Venkappayya R. Desai, Director, IIT DHARWAD. Sessions led by Prof. Pradeep G. Yammiyavar and Prof. Rajshekar K. addressed key mental health challenges and institutional support protocols.

INSTITUTE EVENTS

TITLE	10TH INSTITUTE FACULTY MEETING (IFM-10)
Month/Year	January 2025
Description	IIT DHARWAD conducted its 10th Institute Faculty Meeting (IFM-10) on January 9, 2025, at 2:00 PM. The meeting brought together faculty members to discuss key updates and foster collaboration for the upcoming semester. Updates from major administrative sections such as Research and Development (R&D), Faculty Welfare, and Student Welfare were shared, highlighting achievements, ongoing initiatives, and plans for the future. The event concluded with a commitment to achieving the institute's goals and a shared vision for a successful semester.

TITLE	PARTICIPATION IN PAN IIT WORLD OF TECHNOLOGY 2025 (PIWOT 2025)
Month/Year	January 2025
Description	IIT DHARWAD was honoured to participate in the PAN IIT World of Technology 2025 (PIWOT 2025), held from 17th to 19th January 2025, at the Jio World Convention Centre, Mumbai.

TITLE	EXPERT TALK SERIES BY THE DEPARTMENT OF PHYSICS
Month/Year	January 2025
Description	The Department of Physics hosted a series of expert talks from 20th to 21st January 2025, delivered by members of its Academic Advisory Committee—Prof. K. G. Suresh (IIT Bombay), Prof. Aninda Sinha (IISc Bengaluru), and Prof. T. S. Mahesh (IISER Pune). Covering topics in Condensed Matter Physics, Quantum Information, and High-Energy Physics, the sessions drew participation from faculty and students across departments, including attendees from IIIT DHARWAD. The visit also featured interactions with students and faculty, as well as guided tours of the department's instructional and research labs.

TITLE	SITE VISIT TO PEB STEEL STRUCTURE – DESIGN OF STEEL STRUCTURES COURSE
Month/Year	January 2025
Description	As part of the Design of Steel Structures course, taught by Prof. Ramesh Nayaka, third-year B. Tech Civil and Infrastructure Engineering students visited the construction site of a PEB steel structure on Wednesday, January 29, 2024. The site visit to the ongoing project at KIADB, Belur Industrial Area, provided the students with valuable practical exposure to real-world construction practices. Under the guidance of Prof. Ramesh Nayaka and the NIDEC team, these visits enabled students to gain a deeper understanding of various steel sections, structural connections, and execution techniques employed in PEB steel structures.

TITLE	PARSEC 5.0: A CONFLUENCE OF INNOVATION, INGENUITY, AND IMAGINATION
Month/Year	January to February 2025
Description	The IIT Dharwad campus buzzed with energy from 31st Jan to 2nd Feb 2025 as Parsec 5.0 returned in full glory. With 2 lakh+ online impressions and 2,000+ registrations, the fest became a vibrant celebration of technology, creativity, and collaboration. Supported by the institute and generous sponsors, Parsec 5.0 delivered a seamless and high-impact experience. Sponsors: • Title: Swarna Group of Companies • Silver: Nilkamal Edge, Netweb Technologies • Bronze: CloudDefense.AI • Event Partners: StockGro, Unstop Highlights of Parsec 5.0: • DevHack: A 36-hour hackathon solving real-world challenges with AI/ML. • AlgoStrike 5.0: A tough offline coding contest with top programming talent. • Build-a-Bot 2.0: A 30-hour robotics build-a-thon featuring autonomous designs. • BitHunt 3.0: Tech quiz + campus treasure hunt with algorithmic clues. • Stonkz 3.0: Online mock trading in a dynamic market simulation. • Veni Vidi Vici: Online CTF with challenges in cryptography and penetration testing. • Solid Edge: CAD and simulation challenge using SolidWorks and Ansys. • Idea Hub: Online startup pitch competition with funding up to $20,000. • Cultural Night: Performances and a live concert by the Anand Bhaskar Collective.

INSTITUTE EVENTS

TITLE	SPARC WORKSHOP ON "COMPUTATIONAL FLUID DYNAMICS MODELLING OF TWO-PHASE FLUID FLOWS:THEORY AND APPLICATIONS"
Month/Year	February 2025
Description	The SPARC-sponsored one-week workshop, "Computational Fluid Dynamics Modelling of Two-Phase Fluid Flows: Theory and Applications," was held at the Indian Institute of Technology, DHARWAD (IITDH), from February 17th to 21st, 2025. The workshop featured expert talks by ·Dr. Julien Chauchat, Université Grenoble Alpes, France; ·Prof. Hermes Gadelha, University of Bristol, UK; ·Prof. Rajendra K. Ray, IIT Mandi; Prof. Dhiraj V. Patil, Prof. Hiranya Deka, and Prof. Sontti Somasekhara G., IIT DHARWAD. The event brought together 30 participants from various institutions, fostering knowledge exchange and collaboration in the domain of computational modelling of complex fluid flows.

TITLE	INTERNATIONAL MOTHER LANGUAGE DAY CELEBRATION
Month/Year	February 2025
Description	On 21st February 2025, IIT DHARWAD celebrated International Mother Language Day with great enthusiasm. Organised by the Rajbhasha VibhAg, the event highlighted the institute's commitment to linguistic and cultural diversity. Faculty, staff, students, and their families participated in multilingual presentations, cultural exchanges, and discussions on the role of language in unity. Director Prof. Venkappayya R. Desai delivered a thought-provoking address on the significance of preserving mother tongues. Representatives showcased languages Ahomiya, Bangla, Gujarati, Kannada, Kashmiri, Konkani, Malayalam, Marathi, Manipuri, Odia, Sanskrit, Tamil, Telugu, Urdu, and Tulu—celebrating India's linguistic richness and reinforcing the spirit of unity in diversity.

TITLE	MOU SIGNING BETWEEN IIT DHARWAD AND NIT WARANGAL
Month/Year	February 2025
Description	IIT DHARWAD and NIT Warangal have signed a Memorandum of Understanding (MoU) on 24th February 2025 to foster collaboration in cutting-edge research, faculty and student exchange programs, and industry-driven R&D initiatives. The MoU was signed by Prof. Venkappayya R. Desai, Director, IIT DHARWAD, and Prof. Bidyadhar Subudhi, Director, NIT Warangal, formalizing a commitment to advancing scientific research, technological innovation, and academic excellence.

TITLE	PARTICIPATION IN IINVENTIV-2025 – THE PREMIER R&D FAIR
Month/Year	February to March 2025
Description	IIT DHARWAD participated in IInvenTiv-2025, the premier R&D fair held at IIT Madras from 28th February to 1st March 2025. Represented by Prof. Pratyasa Bhui, Prof. Ramesh Nayaka, Prof. Rakesh Lingam, and research scholars from EEE, CIE, and MMAE, the institute showcased innovations across three exhibition stalls under the themes: • Aviation, Defence & Space • Smart Cities & Infrastructure • Circularity & Sustainability The exhibits received enthusiastic engagement, underlining IIT DHARWAD contributions to impactful and sustainable research. Additionally, faculty participated in a roundtable discussion with the Minister of State for Education, IIT Directors, global industry leaders, and consulate representatives, strengthening IIT DHARWADs ties with global academia and industry.

TITLE	TECHNICAL VISIT TO BRICK MANUFACTURING UNIT – INTRODUCTION TO CIVIL ENGINEERING COURSE
Month/Year	March 2025
Description	First-year students of Civil and Infrastructure Engineering at IIT DHARWAD undertook a technical visit to the brick manufacturing unit near Belur, dhArwAD on 11th March 2025. The objective of the visit was to understand the manufacturing process, assess the production techniques, and analyse the quality control measures implemented in the unit. The visit was organised by Prof. Amarnath Hegde, Associate Professor of Civil and Infrastructure Engineering, as part of the course 'Introduction to Civil Engineering'. The visit provided valuable insights to the students about the practical aspects involved in the brick manufacturing process.

TITLE	DISTINGUISHED LECTURE SERIES – "NAVIGATING THE INDO-PACIFIC: INDIA'S STRATEGY"
Month/Year	March 2025
Description	On 18th March 2025, IIT DHARWAD hosted the inaugural session of the Distinguished Lecture Series, an initiative by the Ministry of External Affairs (MEA), Government of India. Ambassador Anil Wadhwa, Distinguished Fellow and Former Secretary (East), MEA, delivered a compelling lecture on "Navigating the Indo-Pacific: India's Strategy." The event was graced by Ambassador Deepa Gopalan Wadhwa, Prof. Venkappayya R. Desai, Director, Prof. S.M. Shivaprasad (Dean of Outreach), and Prof. K.V. Jayakumar (Visiting Professor and Advisor to Outreach). Ambassador Wadhwa spoke about the region's geopolitical importance, India's Look East and Act East policies, and the role of multilateral platforms, such as the Quad.

INSTITUTE EVENTS

TITLE	ANRF-INAE CONCLAVE 2025 – "ATMANIRBHAR TECHNOLOGIES: ENGINEERING A SECURE FUTURE"
Month/Year	March 2025
Description	IIT Dharwad hosted the ANRF–INAE Conclave 2025 on 21st March, themed "Atmanirbhar Technologies: Engineering a Secure Future." The event brought together academia, industry, and entrepreneurs to discuss India's path to technological self-reliance, featuring keynote talks, a panel discussion, and poster presentations on innovative indigenous technologies.

TITLE	RASAAYAN SANGOOSHTHI – CHEMISTRY RESEARCH SYMPOSIUM
Month/Year	March 2025
Description	The Department of Chemistry, IIT DHARWAD, recently organised a one-day chemistry research symposium, "Rasaayan Sangooshthi," on 22nd March 2025. The event featured insightful and enlightening research talks by eminent speakers from IISc Bengaluru, IIT Bombay, TIFR Hyderabad, and IIT DHARWAD, along with experts from Rani Channamma University, Belagavi, KLE Technological University, Hubballi, and Karnataka University DHARWAD.

TITLE	NCC SKILL DEVELOPMENT PROGRAM
Month/Year	March 2025
Description	The NCC Unit at IIT DHARWAD conducted a Skill Development Program on 22nd March 2025, led by Col. V. C. Prakash and Flt. Lt. Deeksha. The session focused on instilling discipline, leadership, and essential life skills in cadets, empowering them to make meaningful contributions to both civil and defence domains.

TITLE	NSS VILLAGE CAMP
Month/Year	March 2025
Description	IIT DHARWAD successfully organised a two-day NSS Village Camp from 22nd to 23rd March 2025 with the participation of 65 student volunteers. The camp included activities such as a cleanliness drive, awareness rally, tree plantation, interaction with school children, and household surveys.

TITLE	MOU SIGNING BETWEEN IIT DHARWAD AND KARNATAKA RENEWABLE ENERGY DEVELOPMENT LTD (KREDL)
Month/Year	March 2025
Description	On 24th March 2025, IIT DHARWAD and Karnataka Renewable Energy Development Ltd (KREDL) signed an MoU in Bengaluru, establishing a Renewable Energy Research Chair to advance research, teaching, and outreach in sustainable energy. Prof. Abhijit Kshirsagar has been appointed the first RER Assistant Chair Professor and will lead collaborative initiatives with the Global Centre of Excellence in Affordable and Clean Energy. This partnership, supported by Shri K.P. Rudrappaiah (M.D., KREDL) and led at IIT DHARWAD by Prof. Venkappayya R. Desai, Prof. S.S. Murthy, Prof. Dhiraj V. Patil, and Prof. Pratyasa Bhui, marks a key step in fostering innovation in renewable energy.

TITLE	MOU SIGNING BETWEEN IIT DHARWAD AND IREU TECH EDUCATION, BENGALURU
Month/Year	March 2025
Description	IIT DHARWAD and IREU Tech Education, Bengaluru, have signed a Memorandum of Understanding (MoU) on 26th March 2025 to establish a collaborative partnership between IIT DHARWAD's incubation centre, DhaRti, and IREU Tech Education Private Limited, Bengaluru. This collaboration aims to support the incubation of high-potential startups founded by students enrolled in IREU's Startup Co-Founders Program, Budding Entrepreneurs Program, or similar start-up initiatives.

TITLE	WORLD WATER DAY CELEBRATION – "GLACIER PRESERVATION"
Month/Year	March 2025
Description	World Water Day was observed at IIT Dharwad on 25th March 2025, centred on the global theme "Glacier Preservation." Dr. B. Venkatesh (Scientist G & Head, Hard Rock Regional Centre, NIH) graced the event as Chief Guest. Director Prof. Venkappayya R. Desai highlighted India's traditional respect for water and the institute's goal of achieving net-zero water and energy. Dr. Venkatesh stressed the urgency of glacier conservation, explaining climate change impacts through climate models, SSPs, and regional case studies.

TITLE	GIAN (GLOBAL INITIATIVE FOR ACADEMIC NETWORK) COURSES SANCTIONED UNDER PHASE IV
Month/Year	2025
Description	Four GIAN (Global Initiative for Academic Network) courses have been sanctioned to IIT DHARWAD under Phase IV of the Ministry of Education, Government of India. These courses, coordinated by our faculty in collaboration with international experts, aim to bring global perspectives and state-of-the-art knowledge to our classrooms.

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Abhishek Kumar
Junior Assistant

Akash Pol
Junior Engineer

Ammanola Praveen Kumar
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Amol Diwate
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Ghanshyam
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Executive Engineer

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Vinayak B Patil
Junior Superintendent

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Junior Assistant

INFRASTRUCTURE DEVELOPMENT

Brief Summary on Infrastructure Development

Ministry of Education, Government of India, vide its Office Memorandum No.F.No.40-1/2015/T.S. I dated 8-6-2016 has given its approval to set up the Indian Institute of Technology in the State of Karnataka at Dharwad, Dharwad District.

- A crucible for scientific breakthroughs & innovative technologies for addressing global challenges
- Globally recognised for our education & research by nurturing a receptive, flexible learning environment
- Vibrant, enabling creative & critical thinkers to collaborate towards the betterment of human life

IITDh started its operations from its transit campus at the Water & Land Management Institute (WALMI) Campus, situated next to the High Court Bench in Dharwad, in August 2016. The transit campus spans approximately 135 acres, comprising 25 buildings and sheds. IITDh has thoroughly renovated, retrofitted and completely refurbished all the buildings. There are approximately 11 hostels, playgrounds, classrooms, laboratories, a well-furnished kitchen, and dining facilities.

About 470 acres of land have been allotted by the Karnataka Government for the permanent campus of IIT DHARWAD. Phase 1A of the permanent campus is scheduled for completion by the end of March 2023. The Construction of the compound wall was completed by the State PWD in December 2019.

Some of the major Milestones as a part of the Project life cycle have been summarised such as –

- **Date of MoU with CPWD: 29th May 2018.**

- **Masterplan Details and Diagram**

IITDh has been allocated 470.21 acres of land by the State Government of Karnataka for the proposed construction. IITDh has developed a Master Plan that will be green, smart and world-class with state-of-the-art infrastructure. The campus Master Plan, designed for over 12,000 students, has been visualised to be developed in three phases. For Phase A and Phase B, the engineering designs are planned for 2500 students. Suitable area is also earmarked for further expansion beyond that. The campus is planned to be 100% residential, serving both students and staff.

Key Features of Planning

- Existing Water bodies (lakes and swales) are used as the main student Hubs.
- The academic zone is located near the entrance, adjacent to the student hostels & Research Park.
- Faculty accommodation and/ or students' hostels and their adjoining facilities are accommodated to have easy access to entry points.
- Recreational zones for community gatherings
- Separate zone for organising student events (technical, cultural, etc.)
- Integrated Passive & Active Architectural Design Features
- EPI Reduction of minimum 50% over GRIHA 4 LD Energy Benchmark
- "NEAR NET ZERO ENERGY" Building through Renewable Energy System
- Enhanced energy metering & monitoring by BMS
- Smart mini-grid system & integration with renewable energy system
- Reduce Fresh Water Demand by more than 50%
- 100% Wastewater Treatment & Reuse in Flushing, HVAC & Landscape
- 100% Rainwater Harvesting through Ponds & Swales
- Central water monitoring & control by SCADA
- Building & site infrastructure designed for differently abled
- Fly Ash/engineering waste content in RCC
- Low VOC Paints, Adhesives, Finishes & Sealants

Considering the parameters of Environment, Water Management, Energy Management, Human Comfort, Sustainable Materials & Resources, etc., IITDh received

i)The first runner-up Exemplary Passive Design Award by the GRIHA Council in December 2021, and

ii) FIVE-STAR GRIHA LD masterplan rating for Green Rating for Integrated Habitat Assessment in December 2022

The theme of the Master Plan is "sustainable green campus, inspired by historical origins of Hubli DHARWAD as the 'dwAr' city (gateway) to Western Ghats and vast sea beyond. The design envisions the campus as a Gateway to Knowledge, integrating the natural features and valleys".

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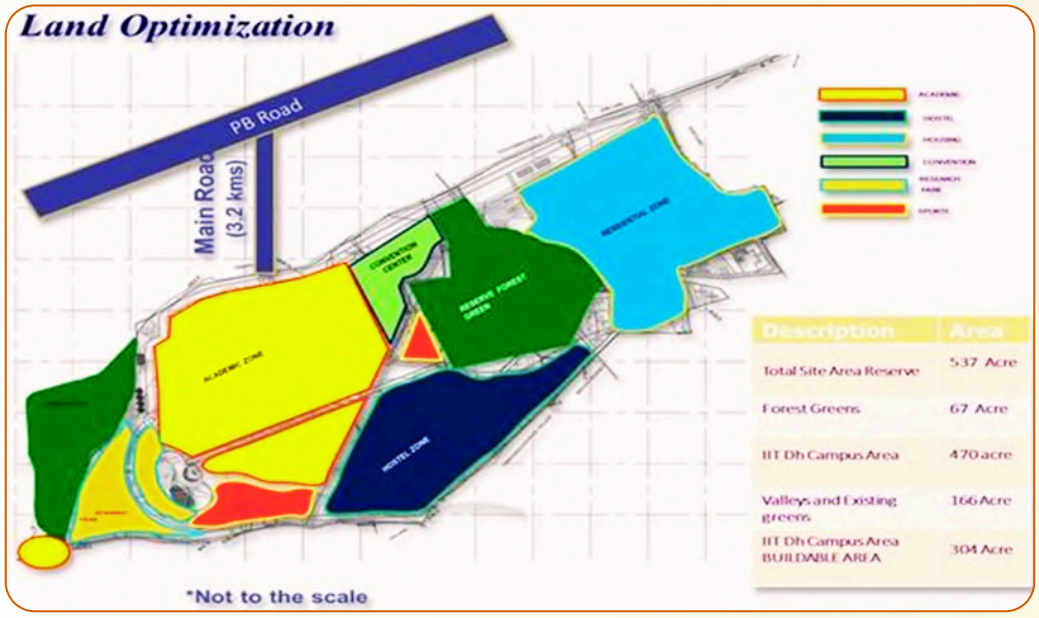

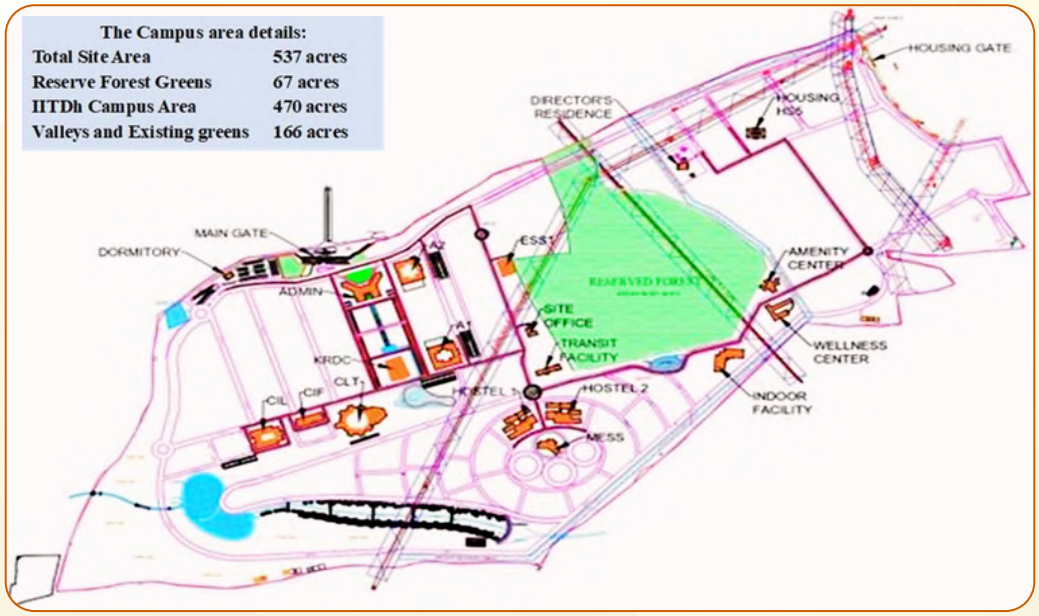

All Approvals / NoCs in Place

Meanwhile, IITDh has obtained all the necessary approvals (Environment, master plan & building plan, GRIHA 4 [LD] pre-certification, etc.) and NoCs (Firefighting, AIAA, etc.) for the commencement of construction work.

HDUDA Approval	Approval from the Hubli-Dharwad Urban Development Authority for the Master Plan Layout.
State Pollution Control Board (PCB)	"Consent to Establish" from the State Pollution Control Board (SPEB) obtained (20 November 2020).
Environmental Clearance	Environment Clearance obtained on 28th February 2020.
Fire Clearance	NoC report received from DG, Police, 27th November 2019.
Airport Authority of India	NoC received it on 28th August 2019.
Local Body Approval of Plans	Approval for building plan & the master plan obtained from KIADB on 29th August 2019.

Project Execution

In the phase that is taken up (phase 1A), it was proposed to build facilities comprising a built-up area of about 1, 70,000 sqm.

CPWD has taken up the role of PMC on a deposit basis. On behalf of IITDh, CPWD initiated the NIT process on 5th October 2019 for the Construction of a Permanent Campus for the Indian Institute of Technology DHARWAD (Phase- 1A) that comprises:

Sl. No.	Name of Buildings/ Facilities	Sl. No.	Name of Buildings/ Facilities
1.	Academic Block-I	2.	Academic Block-II
3.	Knowledge Resource & Data Centre	4.	Central Lecture Theatre
5.	Administration Block	6.	Central Instrumentation Facilities
7.	Central Workshop	8.	Indoor Common Facilities
9.	Dormitory/Security Barrack	10.	Director's Residence
11.	Mess Block	12.	Site Office/ Engineering Block
13.	Wellness Centre	14.	Transit Facility
15.	Common Amenities Building	16.	Hostel Block I and II
17.	Housing	18.	External Development

The technical bids were opened on 8th January 2020 for the development of a permanent campus under Phase 1A. After technical scrutiny, the CPWD opened the financial bids on 22nd February 2020. The financial bid of M/s B.G. Shrike was the lowest among the three qualified bidders. The estimated cost put to tender (ECPT), including external development by CPWD, was Rs. 726.88 crores, whereas the lowest bid was for Rs. 643.33 crores. The work commenced after the relaxation of lockdown due to COVID-19 from 21st May 2020.

INFRASTRUCTURE DEVELOPMENT

Construction Contracts Awarded

Name of the Contractor	Scope of Work	Contract Award Value in Crores (₹)	Date of Commencement of Work	Date of Completion
M/s B G Shirke Construction Technology Pvt. Ltd., Pune	Development & Construction of Permanent Campus of IIT DHARWAD under Phase-1A	643.86	21st May 2020	16th October 2023

The project for the development of IIT DHARWAD was sanctioned on October 24, 2017, with an initial project cost of ₹1,062.83 crore, including ₹851.88 crore for civil works and ₹210.95 crore for equipment and furniture. Following revisions, the total cost increased to ₹1,161.47 crore, with ₹930.36 crore allocated to civil works and ₹231.11 crore for equipment and furniture. Construction commenced on May 21, 2020, with a scheduled completion date of May 20, 2022. The project stands completed on 16-10-2023 with the following fully operational facilities.

Sl. No.	Name of Buildings/ Facilities	Features
1	Administration Block	Director's office, Registrar's office and administrative staff office space
2	Academic Block-1	Faculty office and research labs
3	Academic Block-2	Faculty office and research labs
4	Knowledge Resource and Data Centre	Library and data centre
5	Central Learning Theatre	Lecture halls and auditoriums
6	Central Instructional Lab	Teaching labs
7	Central Instrumentation Facility	Central special equipment facility
8	Hostel Block-1	Students hostel
9	Hostel Block -2	Students hostel
10	Directors Residence	The Director's home
11	Housing Block	Faculty housing
12	Wellness Centre	Occupational health centre
13	Common Amenities Centre	-
14	Indoor Common Facility	Sports complex
15	Mess Block	Dining facility
16	Transit Facility	Guest rooms
17	Engineering Site Office	PMC office
18	Main Gate Complex	-
19	Housing Gate Complex	-

INFRASTRUCTURE DEVELOPMENT

The Project was completed on 16-10-2023, and the shifting from the Transit campus was completed by mid-December 2023. IIT DHARWAD has been fully operational from the permanent campus since December 2023.

Brief details of support extended by –

Incoming Water Supply: Phase 1 of the 2.6 km incoming water supply is complete, and supplies have commenced.

33 Kv Incoming Power Supply: The Dedicated cable for the incoming power supply laying is completed, and the charging of the line is completed

NKN Connectivity: The laying of cable by the service provider, BSNL, and the Power grid is complete.

Shifting of 220 KV HT Lines Passing Over the Campus: The work stands completed as of December 2023.

Academic Block I

Academic Block II

INFRASTRUCTURE DEVELOPMENT

Administration Block

Knowledge Resource And Data Centre

INFRASTRUCTURE DEVELOPMENT

Central Learning Theatre

Central Instrumentation Facility

INFRASTRUCTURE DEVELOPMENT

Central Instructional Laboratories

Transit Facility

INFRASTRUCTURE DEVELOPMENT

Hostel Block I

Hostel Block II

INFRASTRUCTURE DEVELOPMENT

Mess

Indoor Sports Complex

INFRASTRUCTURE DEVELOPMENT

Wellness Center

Director's Residence

INFRASTRUCTURE DEVELOPMENT

Housing Block I

Swimming Pool

Pond

Housing Gate

INFRASTRUCTURE DEVELOPMENT

Main Gate Complex

Engineering Site Office Block

Electric Sub Station II

Electric Sub Station III

Electric Sub Station IV

Security Barrack

Sewage Treatment Plant

SUMMARY OF THE ACCOUNTS

BALANCE SHEET AS ON 31/03/2025

(Amount in ₹)

PARTICULARS	Schedule	Current Year 2024-2025	Previous Year 2023-2024
SOURCES OF FUNDS			
CAPITAL FUND	1	11,689,528,115.00	10,855,067,366.00
DESIGNATED / EARMARKED / ENDOWMENT FUNDS	2	104,147,237.00	95,199,610.00
LOANS	2A	-	-
CURRENT LIABILITIES AND PROVISIONS	3	345,749,243.09	297,497,491.50
TOTAL (A)		**12,139,424,595.00**	**11,247,764,468.00**
APPLICATION OF FUNDS			
FIXED ASSETS			
TANGIBLE ASSETS	4	10,114,519,198.00	9,144,171,110.00
CAPITAL WORKS-IN-PROGRESS	4	91,135,636.00	339,119,144.00
INTANGIBLE ASSETS	4	51,229,129.01	44,756,168.00
INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS/CORPUS FUND/RESERVE FUND	5	676,375,813.00	391,633,965.00
INVESTMENTS OTHERS	6	-	-
CURRENT ASSETS	7	718,879,727.00	743,708,032.00
LOANS, ADVANCES AND DEPOSITS	8	487,285,092.00	584,376,049.00
TOTAL (B)		**12,139,424,595.00**	**11,247,764,468.00**

SUMMARY OF THE ACCOUNTS

INCOME & EXPENDITURE FOR THE YEAR ENDED ON 31/03/2025

(Amount in ₹)

PARTICULARS	Schedule	Current Year 2024-2025	Previous Year 2023-2024
INCOME			
ACADEMIC RECEIPTS	9	155,446,895.00	128,744,907.00
GRANTS / SUBSIDIES	10	623,701,355.00	622,034,043.00
INCOME FROM INVESTMENTS	11	44,422,451.00	39,573,683.00
INTEREST EARNED	12	617,112.00	183,380.00
OTHER INCOME	13	12,310,337.00	6,742,326.00
PRIOR PERIOD INCOME	14	13,686,695.00	137,850.00
TOTAL (A)		**850,184,845.00**	**797,416,189.00**
EXPENDITURE			
STAFF PAYMENTS AND BENEFITS (ESTABLISHMENT EXPENSES)	15	356,901,414.00	356,859,562.00
ACADEMIC EXPENSES	16	146,956,665.31	104,316,779.00
ADMINISTRATIVE AND GENERAL EXPENSES	17	131,253,641.00	146,725,936.00
TRANSPORTATION EXPENSES	18	10,137,961.00	12,289,674.00
REPAIRS & MAINTENANCE	19	41,152,479.81	27,170,271.00
FINANCE COSTS	20	11,050.41	34,638.00
DEPRECIATION		417,721,143.00	309,455,918.00
OTHER EXPENSES	21	-	-
PRIOR PERIOD EXPENSES	22	-	-
TOTAL (B)		**1,104,134,354.53**	**956,852,778.00**
Balance being excess of Income over Expenditure (A-B)		-253,949,509.53	-159,436,589.00
Adjusted from Capital Fund (Depreciation)		0.00	0.00
Transfer to Capital Fund		-253,949,509.53	-159,436,589.00
Transfer to/from Designated fund		0.00	0.00
Building Fund		0.00	0.00
Others (specify)		0.00	0.00
BALANCE BEING SHOWN AS CAPITAL FUND		**-253,949,509.53**	**-159,436,589.00**

SUMMARY OF THE ACCOUNTS

RECEIPTS AND PAYMENTS FOR THE PERIOD FROM 01/04/2024 TO 31/03/2025

Receipts		Amount In ₹	Payments		Amount In ₹
I Opening Balances			**I Expenses**		
a) Cash in hand			a) Establishment Expenses	248,176,055	
b) Bank Balances			b) Academic Expenses	146,629,550	
I. In Current Account	-	**125,674.32**	c) Administrative Expenses	121,385,305	
II. In Current Account - R&D		**178,372,781.08**	d) Administrative Expenses - SW	200	
III. In Deposit Account	-	**955,911,921.00**	e) Transportation Expenses	9,905,234	
IV. Earmarked/Endowment fund	391,633,964.70		f) Repairs and Maintenance	40,639,032	
V. Institute Fund	564,277,956.30		g) Prior Period Expenses	-	**566,735,376.42**
VI. Deposits - R and D					
VII. In Saving Account	-	**76,015**	**II Payment against Earmarked / Endowment Funds**		**1,160,589**
			III Payment against Sponsored Projects / Schemes - R&D		
II Grant Received			a) PMRF Fellowship		**5,571,465**
a) From Government of India	1,701,500,000.00				
b) From State Government			**IV Payment against Sponsored Fellowships and Scholarship**		
c) PMRF Grant	6,054,513.00				
d) From other sources	689,874.00	**1,708,244,387.00**			
			V Investments and deposits made		
III Academic Receipts			a) Out of Earmarked / Endowment Fund	-	
a) Fees from Students	249,223,572.00		b) Out of Own Funds	-	
b) Other Receipts from Students	563,140				
b) Other Receipts from Students - SW	352,241		**VI Term deposits with Schedule Banks for earmarked funds**	-	
c) All India Entrance Examination Receipts					
c) Other Course fees	1,140,605				
d) From other sources	0.00	**251,279,558.00**	**VII Expenditure on Fixed Assets, deferred revenue expenditure and Capital Work in Progress**		
			a) Fixed Assets and deferred revenue expenditure	842,761,146.00	
IV Receipts against Earmarked / Endowment Fund	-	**1,669,982**	b) Work-in-progress	205,256,728.00	**1,048,017,874.00**
V Receipts against Sponsored Projects /Schemes - SW	-	**694,728**	**VIII Other Payment including Statutory Payments**		
V Receipts against Sponsored Projects /Schemes - R&D		**122,650,399.68**	a) Other Adjustable Account	-	
			b) Bank charges	131,164	
VI Receipts against Sponsored Fellowships and Scholarship	-	**3,870,409.00**	b) Bank charges - SW	654	
			b) Bank charges - R&D	7158.76	

SUMMARY OF THE ACCOUNTS

RECEIPTS AND PAYMENTS FOR THE PERIOD FROM 01/04/2024 TO 31/03/2025

Receipts		Amount In ₹	Payments		Amount In ₹
VII Income on Investment from			d) Statutory Payments	100,067,418.00	
a) Earmarked / Endowment Fund	-	**22,634,312.00**	d) Statutory Payments - SW	32,079	**100,238,473.76**
b) Other Investment	-				
			IX Refund of Grants		**3,332,875.00**
VIII Interest Received on					
a) On Bank Deposits	30,677,229.00		**X Deposits and Advances**		
b) On Bank Deposits - R&D	11,131,988.05		a) Advances Account	20,986,404	
c) Loans, Advances etc.	0.00		a) Advances Account - SW	1,548,031.00	
d) Saving Bank accounts	1,604.00		b) Refundable Deposits	9,657,660.00	
e) TDS refund	617,112.00	**42,427,933.05**	c) Recoverable Deposits	-	
			d) Fees from students for specified purposes	47,703,934.00	**79,896,029.00**
IX Investment Encashed	-	**0.00**			
X Term Deposits with Schedule Bank		**0.00**	**XI Other Payment**		
Encashed			a) Grant from other organizations	3,835.00	
			b) Sundry Creditors	3,209,442	
XI Other Income (Including Prior Period Income)			b) Sundry Creditors - SW	2,620,625.00	
a) Continuing Education Programme	0.00		b) Sundry Creditors - R&D	76448937.5	
b) Miscellaneous Receipts			c) O/S Exp		
c) Workshop / Courses			d) Mess Expenses	39,877,959	
d) Other Income	7,007,100		e) R and D	15,874,073.00	
e) Other Income - SW	526,621		f) Grant OH-31 - Asean scholarship	-	
f) Guest House Receipts	1,342,372.72	**8,876,093.72**	g) Professional Development Fund -R&D	2093785	
			h) Bank chargeS		
XII Deposits and Advances			i) Project Payment	43835593.33	
a) Advances Account	8,181,611		j) JRF SRF Stipend - R&D	20462427	
b) Advances Account - SW	2,138,865		k) Workshop and courses - R&D	2747984.85	
c) Refundable Deposits	16,518,568		l) Institute Development Fund - R&D	-37303.72	
d) Recoverable Deposits			m) CSR	-	
e) Fees from students	5,061,923		n) Department Devlopment Fund - R&D	43274.5	
f) Fees from students - SW	34,404,694		o) Cash Award to Students - R&D	130000	
g) Other Receipts	22,781,182		p) SCIF Development Fund - R&D	1410	
h) Other Receipts - SW	52,092	**89,138,935.00**	s) IEEE-Student Branch - R&D	22587	
			t) KREDL-RENEWABLE ENERGY	122947	

SUMMARY OF THE ACCOUNTS

RECEIPTS AND PAYMENTS FOR THE PERIOD FROM 01/04/2024 TO 31/03/2025

Receipts		Amount In ₹	Payments		Amount In ₹
XIII Miscellaneous Receipts Including Statutory Receipts -R&D		**3,632,801.00**	u) Other Payments	12,031,823	
a) Other Adjustable Accounts			v) Student Welfare	76,101	**219,565,500.46**
XIV Any Other Receipts			**V Closing Balances**		
a) Grants from other Organisations	12,500.00		a) Cash in hand	-	
b) Sundry Debtors	-		b) Bank Balances	-	
c) Income Tax Refund	11,770,385.00		I. In Current Account - Main	-	**155,627.00**
d) R & D	10,638,706.00		II. In Current Account - SW		**18,967,652.00**
e) Project Receipts -SW	-		III. In Current Account - R&D		**61,528,175.48**
f) Summer Courses/ Fellowship - R&D	707,566.00		IV. In Deposit Account	-	**1,179,592,814.02**
g) Performance Bank Guarantee -R&D	-21822		V. Earmarked/Endowment fund	676,272,045.70	
h) Unclaimed amount	-		VI. Institute Fund	503,320,768.32	-
i) Duties and Taxes collected -R&D	766,527.89		VII. In Deposit Account - SW		**15,000,000.00**
j) Professional Development Fund -R&D	283,825.00		VIII. In Deposit Account - R&D		**115,000,000.00**
k) SCIF Development Fund			IX. In Saving Account	-	**28,747.00**
l) Student Welfare	15,079.00				
m)GTRE MMAE KMC - R&D	16,885.00				
n)KREDL-RENEWABLE ENERGY - R&D	981,591.00				
o) IEEE-Student Branch Fund - R&D	14025	**25,185,267.89**			
Total		**3,414,791,198.00**	**Total**		**3,414,791,198.00**

॥ सा विद्या या विमुक्तये ॥

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भारतीय प्रौद्योगिकी संस्थान धारवाड़

Indian Institute of Technology Dharwad

2024-25

INDIAN INSTITUTE OF TECHNOLOGY DHARWAD

PERMANENT CAMPUS, CHIKKAMALLIGAWAD DHARWAD

KARNATAKA - 580 011

BHARATA (INDIA)