

MITE-RESEARCH COUNCIL

Research @ MITE

MITE envisions emerging as a pioneer in Research and Development over the next decade by fostering a vibrant, application-oriented research ecosystem where science and engineering converge. Driven by accomplished faculty engaged in prestigious, grant-funded research, the Institute integrates innovation and practical learning into its curriculum while nurturing a strong research culture among research scholars and faculty. Through this commitment, MITE aims to create impactful solutions that contribute to the advancement of the Institute, society, and the nation.

Research Centre Facilities

The Research Centre facilities at MITE are designed to strengthen the research capabilities of the faculty through a structured and collaborative approach, fostering a robust R&D ecosystem across departments. By enhancing existing research strengths and promoting interdisciplinary collaboration, the Centre supports faculty, researchers, and research scholars in pursuing high-quality research, enabling the broad dissemination of research excellence and contributing to MITE R&D ecosystem innovation and academic impact.

The Research Centre focuses on strengthening departmental laboratories through the expansion of research infrastructure and the procurement of essential software and hardware required for advanced research, model development, prototyping, and innovative solutions. By supporting research in frontier areas of science, engineering, and technology, it creates new opportunities for faculty and research scholars, fosters scientific inquiry, and promotes high-quality publications, innovation, and product development.



ANNUAL REPORT-2025

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1. Research Council for the Year 2025-26

Sl. No.	Role	Name	Designation
1	Chairperson	Dr. Prashanth C M	Principal
2	Member	Dr. Vinayambika S Bhat	Dean, Quality Assurance & Prof. & HoD, ECE
3	Member	Dr. Sujesh Kumar	Sr. Assistant. Professor, Dept. of AE
4	Member	Dr. Sunil Kumar S	Associate Professor & HoD Dept. of AI & ML
5	Member	Dr. Clara Kanmani A	Professor, Dept. of CSE
6	Member	Mr. Sandeep Seetaram Naik	Assistant Professor, Dept. of CSE(IoT & CS)
7	Member	Dr. Sreeja Rajesh	Associate Professor, Dept. of ISE
8	Member	Dr. Suraj Bhat	Assistant Professor, Dept. of Mechatronics
9	Member	Dr. Adithya Hegde	Assistant Professor, Dept. of Robotics & AI
10	Member	Dr. Vignesh Nayak Ullal	Sr. Assistant Professor, Dept. of ME
11	Member	Dr. Jayaprakash M C	Sr. Assistant Professor Dept. of CE
12	Member	Dr. Vineetha Telma D'souza	Associate Professor, Dept. of Chemistry
13	Member	Dr. Mitra K	Assistant Professor, Dept. of Mathematics
14	Member	Dr. Raghavendra Sagar	Associate Professor, Dept. of Physics
15	Member	Dr. Shreekant G Naik	Associate Professor, Dept. of MBA
16	Member	Dr. Anushree Raj	Sr. Assistant Professor Dept. of MCA
17	Member Secretary	Dr. Pradeep B S	Dean Research & Professor, Dept. of CSE

2. Overview

Mangalore Institute of Technology & Engineering (MITE) has made **significant strides in research and development** during the academic year **2025–2026**.

- At present, **49 faculty members with Ph.D qualifications** have been recognized as **Research Supervisors** by **VTU, Belagavi**, and other universities to guide Ph.D. scholars in their doctoral and M.S. (Engineering by Research) programs.
- During the year, **11 research scholars** were admitted to various research centres of MITE to pursue their Ph.D. degree.
- Additionally, **3 research scholars** registered under MITE research centres have **successfully defended their theses** and have been awarded the **Ph.D. degree** from Visvesvaraya Technological University.

Faculty members of MITE have made remarkable contributions to research and scholarly activities during the year **2025 till date**.

- A total of **162 full-length research papers** were published in **Scopus / Web of Science indexed journals, UGC CARE listed journals, and other refereed journals**.
- Faculty members have also **authored books and contributed book chapters** published at both **National and International levels**.

To further strengthen the research culture, the **MITE- Research Council** has consistently organized various **Faculty Development Programs (FDPs), Workshops** and **Faculty Enablement Programs** focusing on:

- Writing effective R&D project proposals.
- Identifying **funding opportunities** from Government scientific departments.
- Enhancing the quality of research publications.

As an outcome of these initiatives, in the **financial year 2024–25**, faculty members have submitted **more than 11 research proposals** to various prestigious funding agencies, including **NQM, MeitY, WISE-KIRAN, NCSTC, PMKVY, NGP, NPNST, ICSSR, ANRF, IIT Indore** and etc.

MITE also received a research grant of **INR 15,00,000/-** from **DST** under the scheme **SERB-TARE** for the proposal on “**Development of Crashworthy multilayer Honeycomb structure for Vehicular safety by Additive Manufacturing method**” submitted by **Dr. Mohankumar**, Associate Prof. Mechanical Engineering department and another research grant of **INR 6,73,920/-** from **IIT Indore** under the scheme **AgriHub: Innovation Hub for Agriculture** for the proposal **AI_ML Techniques**

for **Groundwater Management and Data Analysis** submitted by **Dr. Suraj Bhat**, Assistant Professor, Mechatronics department.

To nurture a collaborative research ecosystem, the **Research Council of MITE** organizes a '**Peer-Learners-Meet**' on every **4th Saturday of the month**. This forum serves as a platform for:

- Faculty with doctorates and research scholars to **share ideas and ongoing research work**.
- **Reviewing and discussing research progress**, challenges, and solutions and receiving **constructive feedback** and fostering a culture of **knowledge exchange** across disciplines.

These initiatives reflect MITE's commitment to **research excellence, interdisciplinary collaboration, and innovation-driven growth**.

To strengthen the R&D ecosystem and promote the enhancement of quality research work across departments, **MITE Internal Funding – 2024 Scheme** has granted a financial support of around **INR 13 lakhs** to various departments including Mechatronics, IT departments, Mechanical Engineering, Physics, and Chemistry departments.

In addition, to encourage faculty members to present research papers in International Conferences, MITE extended financial assistance along with special leave provisions:

INR 20,000/- for presenting papers at **International Conferences within India**, and **INR 80,000/-** for presenting papers at **International Conferences outside India**.

Several faculty members have successfully availed these benefits, reflecting the institute's commitment to fostering a robust research culture and global academic engagement.

3. Research Progress Details

Table1: Details of research centers, researchers and the progress during the year 2025

Sl. No.	Details of Research activities	
1	No. of VTU, Belagavi recognized research centers at MITE	08
2	No. of Research Guides recognized by VTU, Belagavi at MITE	49
3	No. of Ph.D awarded	03
4	No. of Ph.D Scholars existing at MITE research centers	52
5	No. of Ongoing Funded Projects	02

Table 2: Details of research centers -08

Sl. No.	Departments recognized as Research centers by VTU	Progress
1	Computer Science & Engineering	Continuing Affiliation
2	Electronics & Communication Engineering	
3	Mechanical Engineering	
4	Civil Engineering	
5	Physics	
6	Mathematics	
7	Chemistry	
8	Master of Computer Applications	

Table 3: Details of research supervisors: Total – 49 (existing), during 2025: Recognized - 10

Sl. No.	Research Centre	Faculty Name	Area of Research/Specialization
1	Computer Science & Engineering	Dr. Clara Kanmani A	Machine Learning, Cloud Computing, Semantic Web, Cyber Security
2	Electronics & Communication Engineering	Dr. Sathisha	Soft Computing in Control Systems, Image Processing
3	Mechanical Engineering	Dr. Suraj Bhat	Mechanical Design, Robotics
4	Mechanical Engineering	Dr. Aveen K P	Composite Material machining, 3-D Printing, Coating
5	Computer Applications	Dr. Anushree Raj	AI & ML in Health Domain, Big data Anonymization, DNA Computing, Quantum Computing
6	Physics	Dr. Sumanth Joishy	Condensed matter physics, Thin film technology, Non-linear properties
7	Physics	Dr. Guru prasad L	Material Science, Non-linear Optics, Computational Physics
8	Chemistry	Dr. Ashwini Kamath	Physical Chemistry, Environmental Chemistry
9	Mathematics	Dr. Gangavathi	Applied Mathematics (Fluid Mechanics)
10	Mathematics	Dr. Dhanyashree	Radio Path coloring of graphs

Table 4: Details of Ph.D awarded from MITE, Research Centers: Total - 25, and during 2025: Awarded - 03

Sl No.	Name of the Research Scholar	Guide Name	Research Center	Title of the Thesis
1	Sunil kumar S	Dr. P Venkataramana Bhat Dr. Dinesha L (Co-guide)	CSE	Precision agriculture using enhanced wireless sensor network technology
2	Megha B E	Dr. G L Easwaraprasad Dr. B S Keerthi Gowda (Co-guide)	Civil Engg.	Prognostication of Mechanical properties of Banana jute fibre hybrid polyester composites as alternative Building material
3	Shamitha	Dr. Asha Crasta	Maths	Numerical Simulation of High-speed flow past oscillating delta wing for variable leading edge

Table 5: Details of Research scholars at MITE, Research Centers: Total - 52, during 2025: Registered for Ph.D – 11

Sl. No	Name	Year of Registration	Research center	USN No	Guide Name
1	Rajesh N Kamath	2025	CSE	4MT24PCS01	Dr. Maryjo M George
2	Ravina Nimmi Rodrigues	2025	CSE	4MT24PCS02	Dr. Terence Johnson
3	Yogitha M	2025	CSE	4MT24PCS03	Dr. Terence Johnson
4	Prashanth K	2025	ME	4MT24PME01	Dr. Shivaramu H T Dr. Vignesh Nayak Ullal
5	Ashreetha K M	2025	Mathematics	4MT24PMA01	Dr. Mitra K
6	N Namitha	2025	Mathematics	4MT24PMA02	Dr. Mitra K
7	Raksha Salian	2025	Mathematics	4MT24PMA03	Dr. Jyothi S Dr. Gangavathi P
8	Thanuja N P	2025	Mathematics	4MT24PMA04	Dr. Gangavathi P Dr. Jyothi S
9	Vivek Bhat	2025	Chemistry	4MT24PCY01	Dr. Pavithra G P
10	Shreenidhi	2025	Chemistry	4MT24PCY02	Dr. Pavithra G P
11	A Aishwariya	2025	MCA	4MT24PMC01	Dr. K G Madhwaraj

Ongoing funded project:

DST – SERB - TARE

MITE received a research grants of INR 15,00,000/- from DST under the scheme SERB-TARE for the proposal on “Development of Crashworthy multilayer Honeycomb structure for Vehicular safety by Additive Manufacturing method” and is being carried out by Dr. Mohankumar, Associate Prof. Mechanical Engineering department.

AgriHub – IIT, Indore

MITE received a research grant of INR 6,73,920/- from IIT Indore under the scheme AgriHub: Innovation Hub for Agriculture (AI/ML and Deep Learning CoE) during March, 2025 for the proposal “AI_ML Techniques for Groundwater Management and Data Analysis” submitted and is being carried out by Dr. Suraj Bhat, Assistant Professor, Mechatronics department.

4. Publication Details

The details of department-wise publication for the Year – 2025 (January to August).

Sl. No.	Department	Q1	Q2	Q3	Q4	Others	Conference Proceedings	Total
1	AE			5	4		7	16
2	AIML/CSE(AIML)				2	1	3	6
3	CV		1	2			8	11
4	CSE	1	2	2	1	1	17	24
5	CSE (IoT)					17	1	18
6	ECE	6	1		1		11	19
7	ISE					4	4	8
8	ME	3	2	2	4		1	12
9	MTR	1		1		1	6	9
10	Robotics & AI	1						1
11	CHEMISTRY			1				1
12	MATHS	5	2	3	1			11
13	PHYSICS	3	1	1				5
14	MBA	1				3		4
15	MCA		1		1		15	17
Total		21	10	17	14	27	73	162

5. Research promotional Activities Conducted during 2025

- 1 **Title:** Three Day Workshop on “Ethical Hacking for Secure prototyping and process design”

Dates conducted: 21st -23rd April, 2025

Resource Person: Ms. Swathi Kanthraj, Portfolio Cyber lead /Senior manager cybersecurity, DLithe Consultancy Services Pvt Ltd



The Department of Computer Science and Engineering (IoT and Cyber Security with Blockchain Technology) organized a three-day hands-on workshop on “**Ethical Hacking for Secure Prototyping and Process Design**” from **April 21st to 23rd, 2025**, at the Post-Graduation Block. The event was held in association with the **Research Council, MITE**, and **sponsored by CYBOTIC**.

The workshop was facilitated by **Ms. Swathi Kanthraj**, a cybersecurity professional with over 12 years of industry experience in organizations such as IBM, Amazon, and Capgemini. She holds certifications including **CISM, Security+**, and **CCNA**. The sessions provided participants with an in-depth understanding of ethical hacking principles, ethical and legal responsibilities, and the role of ethical hackers in safeguarding digital systems. Participants explored the phases of hacking—reconnaissance, scanning, gaining and maintaining access, and covering tracks—focusing on their application in developing secure defences. Practical sessions included configuring **Kali Linux**, using **Nmap** for vulnerability scanning, studying the **OWASP Top 10** vulnerabilities, and conducting **penetration testing** with **Metasploit** and **web application analysis** with **Burp Suite**. Tools such as **Snort** and **Suricata** were introduced for **Intrusion Detection and Prevention Systems (IDS/IPS)**, along with hands-on exercises in **cryptography** and **OpenSSL**.

The workshop successfully blended theory and practice, enhancing participants’ technical proficiency and ethical awareness in designing robust and secure systems.

2. Title: Workshop on “Mastering Python for Product & Process Development: Beginner to Practitioner”

Dates conducted: 28th to 29th April, 2025

Resource Person: Mr. Karthik Kumar S Co-founder, India Israel CyberSpark Academy & Founder, EduElevate & Pelwhiz Technologies Pvt. Ltd.





MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING
(A Unit of Rajalaxmi Education Trust®, Mangalore)
Autonomous Institute affiliated to VTU, Belagavi, Approved by AICTE, New Delhi
Accredited by NAAC with A+ Grade & ISO 9001:2015 Certified Institution

Department of Computer Science & Engineering
and Research Council, MITE
Jointly presents
Workshop with Hands-on Session
on
“**MASTERING PYTHON FOR PRODUCT & PROCESS DEVELOPMENT: BEGINNER TO PRACTITIONER**”
DATE : April 28th & 29th, 2025
In Association With






Department of CSE and MITE- Research Council jointly hosted a comprehensive two-day workshop on “**Mastering Python for Product & Process Development: Beginner to Practitioner**” from 28th to 29th April, 2025. The workshop, conducted by **Mr. Karthik Kumar S, Co-founder of India Israel CyberSpark Academy and Founder of EduElevate & Pelwhiz Technologies Pvt. Ltd.**, provided participants with comprehensive hands-on experience in **Python-based application development**. Students gained practical exposure to **GUI Application Development** using Python, learning design principles and creating an interactive **ToDo App**. They further explored **Game Development** using **PyGame**, applying concepts of event handling, sprite animation, and scoring systems to develop an engaging **Alien Invasion Game**. The workshop also covered **Web Application Development** using **Flask**, where participants integrated frontend and backend components through Jinja templating, routing, and form handling to build **Personal Portfolio Websites**. The acquired skills were applied in a **Capstone Project on Farm Animal Behaviour Monitoring using Machine Learning**, encouraging innovative and analytical thinking. The program concluded with an insightful session on **Interview Preparation**, during which Mr. Karthik shared expert tips, common **Python interview questions**, and strategies for excelling in technical interviews. The workshop effectively enhanced students’ technical proficiency, problem-solving ability, and industry readiness.

3. Title: Guest lecture on Assured Innovation for Atmanirbhar Bharat

Date conducted: 7th July, 2025

Speaker: Dr. B. E. Rangaswamy, Registrar, Visvesvaraya Technological University (VTU), Belagavi



The MITE - Research Council organized a guest lecture on “**Assured Innovation for Atmanirbhar Bharat**” on 7th July, 2025 for all the faculty members of MITE. **Dr. B. E. Rangaswamy, Registrar, VTU, Belagavi**, delivered an inspiring and forward-looking address highlighting **India’s remarkable innovation journey** over the past two decades. He presented data-driven insights on how consistent policy reforms, enhanced R&D investments, and a thriving startup ecosystem have propelled India to the **39th position in the Global Innovation Index**.

A key focus of his talk was on **technology translation**—transforming academic research into market-ready solutions. Dr. Rangaswamy emphasized that **patent filing, intellectual property protection, and productization of research** are essential for achieving meaningful societal impact, particularly in areas such as affordable healthcare and sustainable energy.

He also underlined the vital role of **academic incubators, seed funding, mentorship networks**, and robust **IP ecosystems** in nurturing faculty and student entrepreneurs. Through real-world examples, he showcased how **frugal, scalable innovations** can establish India as a leader in cost-effective technologies. Concluding his address, Dr. Rangaswamy urged the academic community to align with **Atmanirbhar Bharat** and **Startup India**, promoting interdisciplinary research, industry collaboration, and entrepreneurship to drive national growth and self-reliance.

4. Title: Three-day Faculty Development Program on “Translating Applied Research from Lab to Market”

Dates conducted: 22nd to 24th July, 2025

Keynote Speaker: Dr. P. R. Hariharan, Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Government of India



The MITE - Research Council organized a Three-day FDP on Translating Applied Research from Lab to Market from 22nd to 24th July, 2025. Event was conducted by **Dr. P. R. Hariharan, Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology, Government of India** as the **resource person**. The sessions offered participants a comprehensive understanding of **applied research, innovation management, intellectual property, and commercialization strategies**. Dr. Hariharan emphasized the importance of translating research into real-world solutions that address societal and industrial challenges, aligned with national R&D priorities in **healthcare, sustainability, digital technologies, and advanced manufacturing**.

Participants were introduced to key **government initiatives**, including the **National Research Foundation** and various sector-specific missions, designed to strengthen India's research and innovation ecosystem. Sessions on **Intellectual Property (IP) management, patent filing, and technology transfer** provided faculty with essential knowledge to safeguard and leverage innovations. Guidance on **research funding platforms** from government and industry enabled participants to identify suitable avenues for project support.

Hands-on workshops on **Problem-Solution Fit** and **Value Proposition Design** enhanced the ability to frame impactful and feasible projects. The program concluded with a **Pitch Lab**, where faculty presented proposals and received expert feedback, strengthening their capability to transform research outcomes into **market-ready, sustainable innovations**.

6. Status of Funded Projects

Details of the funded projects.

Sl. No	Title of project	Principal Investigator	Grant Agency	Current status	Grants sanctioned (in Lakh)
1	Technology-based agriculture sensors	Dr. Venkataramana Bhat P	Vision group of Science And Technology (VGST), Govt. of Karnataka	Completed	40.00
2	Sustainable Grey water Management System using Phytoremediation Technique	Dr. Jayaprakash M C	Vision group of Science And Technology (VGST), Govt. of Karnataka	Completed	5.00
3	Quality Improvement & Up-Gradation of the Existing Fish Meal and Fish Oil Industries and Extraction of Bio-diesel & Fishnure in Ecofriendly environment from their products	Dr. Lokesh	Karnataka Council for Technological Upgradation	Completed	42.00
4	Improvement of Industrial Wastewater Treatment Process through Robust Controller Design	Dr. Vinayambika S Bhat (PI), & Dr. Sukhwinder Sharma (Co-PI)	Vision group of Science And Technology (VGST), Govt. of Karnataka	Completed	2.97
5	Experimental Investigation on Behavior of GPC Block Arches and Validation Using ANN.	Dr. Ganesh Mogaveera (PI) & Prof. AnushaJain (Co-PI)	Visvesvaraya Technological University	Sanctioned/ Withdrawn	10.00
6	Development of Humanoid Robotic Arm based Personal Massager with Human Touch	Dr. Sukhwinder Sharma (PI) & Dr. Pradeep B S (Co-PI)	Visvesvaraya Technological University	Sanctioned/ Withdrawn	8.00
7	Study of supersonic jets using passive control methods	Dr. Ezhilmaran G	Karnataka State Council for Science and Technology FPP	Completed	4.97
8	Development of Crashworthy multilayer Honeycomb structure for Vehicular safety by Additive Manufacturing method	Dr. Mohankumar	DST-SERB-TARE	Ongoing	15.00
9	AI_ML Techniques for Groundwater Management and Data Analysis	Dr. Suraj Bhat	AgriHub- IIT, Indore	Ongoing	6.74

7. Institution Grants for Research

Internal Funding during Academic Year 2024-2025

Financial support extended for the Proposals submitted by various departments of the Institution for the establishment/expansion of Advanced Laboratories.

Sl No	Department(s)	Proposal Title	Budget in INR	Remarks
1	Mechatronics Engineering	Establishment of Advanced Mechatronics Laboratory	2,70,000.00	Phase -1 approved
2	Physics & Chemistry	Center of Nano and Soft materials for Nano structures Engineering	2,21,500.00	Phase -1 approved
3	CSE, ISE, AI&ML and CSE(IoT & Cyber Security with Block chain)	Establishment of System Engineering Laboratory	5,40,000.00	Phase -1 approved
4	Mechanical Engineering	Study on Advanced Composite Materials	2,65,624.00	Phase -1 approved
Total			12,97,124.00	

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