



6th INTERNATIONAL CONFERENCE ON

**Smart and Sustainable Developments in Materials,
Manufacturing and Energy Engineering
(SME-2025)**

**(Under the Aegis of ICETE 2025 Multi-Conference
Platform)**

February 6 - 7, 2025

Organized by

**Department of Mechanical Engineering
&**

Department of Robotics & Artificial Intelligence



**NMAM INSTITUTE
OF TECHNOLOGY**

(Established under Section 3 of UGC Act 1956)

Nitte – 574 110, Karkala Taluk, Udupi District, Karnataka, India

Placed under Category 'A' by MHRD, GoI

Accredited with 'A+' Grade by NAAC

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About the Institute

Nitte Mahalinga Adyantaya Memorial Institute of Technology (NMAMIT), Nitte, established in 1986 and recognized by the All India Council for Technical Education, New Delhi, is an off-campus centre of Nitte (Deemed to be University), Mangaluru, since June 2022. It is ranked between 101-150 in the National Institutional Ranking Framework (NIRF) 2023 by MoE, GoI among the engineering colleges in India. The College has been placed under 'Platinum' category for having high industry linkages by the AICTE-CII Survey of Industry-Linked Technical Institutes 2020. It has active collaborations with several international universities and organizations for faculty and student exchanges, research, internships and placements.

About the Organizing Departments

The Department of Mechanical Engineering started in 1986 with an intake of 40 students. Today, the undergraduate program in Mechanical Engineering has an intake of 120. The Department offers one Postgraduate programme - M.Tech. Machine Design with an intake of 18 students. The department has well equipped laboratories in Material testing, Foundry, forging and welding, Dynamics, Energy conversion, Heat transfer, Metrology & Measurements and CAD/CAM. With excellent infrastructural facilities in terms of classrooms and laboratories, the faculty are engaged in research activities and sponsored research projects worth more than Rs. 1Crore are already executed. The department has excellent research outputs in terms of publications in refereed International Journals and National and International Conferences.

The Department of Robotics and Artificial Intelligence Engineering started in 2021 and the first batch of students are presently studying in their 6th semester. The major focus of the Robotics & Artificial Intelligence Engineering program is to generate skilled manpower in the area of design and development of robotic systems required for industrial, medical, transportation and logistics, professional cleaning, agriculture, maintenance and inspection applications. The department has developed state-of-the art laboratories in the area of Robotic sensors and actuators, Wheeled Mobile Robots, Micro Aerial Vehicles, Microcontrollers, Image Processing applications in robotics, Application of AI for Robotics and Robot simulations and analysis.

The departments are recognized as established Research Centres under Nitte Deemed to be University, and there are several part-time and full-time doctoral students pursuing their doctoral research work in the campus.

About the Conference

The Department of Mechanical Engineering and the Department of Robotics and Artificial Intelligence, NMAM Institute of Technology, Nitte are organizing a Two Day International Conference on "Smart and Sustainable Developments in Materials, Manufacturing and Energy Engineering (SME-2025)" as a part of the

Multi-Conference “International Conference on Emerging Trends in Engineering” (ICETE- 2025) on 6– 7 February 2025.

The conference is dedicated to driving innovation in nearly every aspect of Mechanical Engineering, Robotics and allied areas. The conference provides a platform for researchers, and professionals from various research institutes, and industries to share and exchange their knowledge and experience on different themes of the conference. A series of invited presentations and technical paper presentations are planned to discuss the emerging trends, feasible solutions to pressing problems in the major domains of materials, manufacturing and energy.

Theme of the Conference

Smart and Sustainable developments in Materials, Manufacturing and Energy Engineering, is focused on the latest technological innovations. It showcases the commitment of NMAMIT in bringing together various disciplines and amalgamating new ideas. The theme encompasses a wide range of topics and technologies that promote the efficient use of resources, minimize environmental impact, and enhance the overall well-being of society. The conference focuses on the development of new generation materials, Shape memory materials and self-healing materials. It will discuss the use of innovative materials and technologies for efficient energy harvesting, storage, and showcasing cutting-edge manufacturing techniques and devices such as additive manufacturing, nanotechnology and sustainable process engineering and robotic technologies.

Thrust Areas

- ◆ Smart and Sustainable Developments in Materials
 - ◆ Smart and Sustainable Developments in Manufacturing
 - ◆ Smart and Sustainable Developments in Energy
 - ◆ Smart and Sustainable developments in Robotics and Automation
- Sub Themes to be addressed in this conference include, but not limited to the following:

Smart and Sustainable developments in Energy

- Alternative fuels
- Biogas and Biomass
- Energy Storage Batteries and other Storage Devices
- Fuel cell
- Sustainable Hydrogen Technologies
- Future Energy Technologies
- Global warming & Green Energy Options
- Health and Environment
- Hybrid vehicles & Integration
- Green Hydrogen
- Energy Efficiency
- Renewable Energy systems

Smart and Sustainable developments in Robotics and Automation

- Industrial Robots and cobots
- Drones and UAVs
- Autonomous Wheeled mobile Robot
- Agricultural robotics
- Medical Robotics
- Future Energy Technologies
- Defense Robotics
- Service Robotics

Smart and Sustainable developments in Manufacturing

- CAD/CAM/CAE/CIM
- Computational Mechanics & Techniques
- Control and Automation
- Flexible/ Lean Manufacturing
- High-Speed/Precision Machining & Inspection
- Measurement Control Technologies and Intelligent Systems
- Mechatronics, MEMS and Nanotechnology
- Metal Cutting and forming Processes
- Modeling, Analysis & Simulation of Manufacturing Processes
- Non-Conventional Machining Processes
- Surface Engineering
- Sustainable Manufacturing Technologies

Smart and Sustainable developments in Materials

- Advanced High strength steels
- New generation materials alloys
- Biomaterials
- Ceramic Materials
- Characterization & Testing
- Composite Materials
- Dynamic Behavior of Materials and Structures
- Functional Materials
- High temperature & Cryogenic Processing of Materials
- Materials for Automotive, Energy and Environment
- Nanomaterials
- Smart and Device Materials
- Smart Construction Materials

Invited Speakers

Eminent researchers, academicians and industrialists will be delivering invited talks on topics pertaining to the four major themes of the conference. The list of invited speakers and related details will be updated in the website.



Prof. Nand Kishore, FNASc
Department of Chemistry, and
Dean (Administrative Affairs)
Indian Institute of Technology Bombay
Powai, Mumbai, India



Mr. Rajaram Moorthy
Co-Founder and CTO RoshAI
Trans Asia Cyber Park Business
Centre in Kochi,
Infopark Sez, Phase II,
Kochi, Kerala, India

Patron:

Sri N. Vinaya Hegde

Chancellor, Nitte (Deemed to be University) & President, Nitte Education Trust, Mangalore

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Dr. Harish Kumar Madhyastha, Professor, University of Miyazaki, Japan

Dr. Omid Ansary, Senior Associate Dean and Professor, Penn State University, U.S.A

Dr. Shripad T. Revankar, Professor, Purdue University, U.S.A

Dr. Shuhaimi Mansor, Professor, University Technology Malaysia, Malaysia

Mr. Michio Kaida, Director, Chairman, NIDEC-READ Corp., Kyoto, Japan

Dr. Prasad Yarlagada, Queensland University of Technology, Australia

Mr. Tomonari Kobayashi, President, Kobayashi Create Co. Ltd.,Aichi-Ken, Japan.

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Dr. Shrinivasa Rao B. R., Vice Principal & Controller of Examinations, NMAM Institute of Technology, Nitte

SME 2025 Chair:

Dr. Srinivasa Pai P., Professor & Head, Dept. of Mechanical Engineering, NMAM Institute of Technology, Nitte

SME 2025 Co-chair:

Dr. Muralidhara., Professor & Head, Department of Robotics and AI, NMAM Institute of Technology, Nitte

Organizing Secretary:

Dr. Dilip Kumar K, Asst. Professor, Dept. of Mechanical Engg., NMAM Institute of Technology, Nitte,

Dr. Divijesh P, Asst. Professor, Dept. of Mechanical Engg., NMAM Institute of Technology, Nitte

Dr. Krishna Prasad K, Asst. Professor, Dept. of Mechanical Engg., NMAM Institute of Technology, Nitte

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Dr. Gururaj Upadyaya, Associate Professor, Dept. of Mechanical Engineering

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Dr Ajit Hebbale, Associate Professor, Dept. of Mechanical Engineering
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Dr. Rashmi P Shetty, Assistant Professor, Dept. of Robotics & Artificial Intelligence
Dr. Adarsh Rai, Assistant Professor, Dept. of Robotics & Artificial Intelligence
Dr. Udaya D, Associate Professor, Dept. of Mechanical Engineering
Dr. Grynal D'Mello, Associate Professor, Dept. of Mechanical Engineering
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Mr. Ravikiran Kamath, Asst. Professor, Dept. of Mechanical Engineering
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Mr. Srinivas Prabhu, Asst. Professor, Dept. of Mechanical Engineering
Mr. Raghavendra Pai, Asst. Professor, Dept. of Mechanical Engineering
Mr. Vincent Dsouza, Assistant Professor, Dept. of Robotics & Artificial Intelligence

Advisory Committee:

Dr. Dasappa S, Professor, Centre for Sustainable Technologies, Indian Institute of Science, Bangalore
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Dr. Nagahanumaiah, Director, Central Manufacturing Technology Institute
Mr. Kiran Sheelavant, Associate Vice President, Autoliv India

Scientific Committee:

Dr. Narasimha Marakala, Professor, NMAM Institute of Technology, Nitte
Dr. Narasimha Bailkere, Professor, NMAM Institute of Technology, Nitte
Dr. Gururaj Upadhyaya, Assoc. Professor, NMAM Institute of Technology, Nitte
Dr. Madeva Nagaral, Deputy Manager, Aircraft Research and Design Centre, Hindustan Aeronautics Limited, Bangalore
Dr. Channabasappa Hampali, Professor, Reva University, Bangalore
Dr. B M Rajaprakash, Professor, UVCE, Bangalore
Dr. Sharanappa, Associate Professor, NITK Surathkal
Dr. Sudheer Reddy, Professor, NMIT, Bangalore
Dr. Kapilan, HOD and Professor, NMIT, Bangalore
Dr. Ezil Vannan, Professor, MCE, Hassan
Dr. Sumana B G, Associate Professor, Government Engineering College, Hassan
Dr. Vishwanatha H M, Assistant Professor, MIT, Manipal

Important Dates

Submission of Full-length manuscript – Open	: 30/06/2024
Last date to submit Full-length manuscript	: 30/10/2024
Notification of acceptance	: 30/11/2024
Early Bird Registration Start	: 01/12/2024
Submission of Camera-Ready Manuscript	: 20/12/2024
Last date for registration	: 31/12/2024
Conference Dates	: Feb 6-7, 2025

Publishing Partners

- ❖ **All accepted papers will be published in Scopus Indexed Publications (Approval Awaited).**

Paper Submission

The research paper submitted should be an original work and should not have been submitted to any another conference or journal. To submit the paper login to conference website: <http://www.sme2025.in/>. Manuscript needs to be prepared by keeping plagiarism below 15%. Manuscripts in electronic format (.doc, .docx only) need to be submitted.

Conference Registration

Registration Link: <https://forms.gle/PjXnXWKnS67CY9cdA>

Registration Fees

Category	Registration Fees	Publication Charges
People from Industry /Academia/Researchers/ Students of (UG/PG/PhD) Early Bird Registration	7000	No additional publication charges
People from Industry /Academia/Researchers/ Students of (UG/PG/PhD) Late Registration Fees	8000	
Foreign Delegates	US\$200	

Mode of Payment

Registration fee can be paid through NEFT as per the details given below:

Name : Nitte Deemed to be University
Account Number : 110047322915
Type of account : Savings Bank
Bank : Canara Bank, Nitte
IFSC : CNRB0010115
MICR Code : 576015041

NOTE: Delegates must mention their **NAME** and “**SME-2025**” without fail during online payment. The proof of online transfer (UTR No., date & time) need to be scanned and uploaded in the registration portal.

Accommodation

Limited accommodation on payment basis is available in hostel / guest house (twin sharing) on a first come first served basis. Accommodation can be arranged in Hotels in Nitte, Belman and Karkala on prior request.

Conference Location

Nitte is a village in Karkala taluk of Udupi district, in the state of Karnataka. The village is on the way from Padubidri to Karkala. It is 8 km away from Karkala, 36 km from Udupi and 54 km from Mangalore. Nitte is surrounded by lush greenery, coconut groves, and paddy fields, providing a serene and picturesque

environment. The village is located close to the Western Ghats, a mountain range known for its biodiversity and scenic beauty. Nitte is well-connected by road and rail networks. The nearest major town is Udupi, which is about 30 kilometers away. Mangalore International Airport is the closest airport, situated approximately 60 kilometers from Nitte.

Famous places to visit nearby:

- Temples (Sri Krishna Math, Kollur, Kateel, Shringeri, Horanadu etc.)
- Malpe, Padubidri & Maravanthe Beach
- Thousand Pillar Temple, Moodbidri
- Karkala Gomateshwara & Chaturmukha Basadi, Karkala
- Attur Church, Karkala
- Light house, Kaup



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