



3rd INTERNATIONAL CONFERENCE ON

**Smart and Sustainable Developments in Materials,
Manufacturing and Energy Engineering**

(SME-2021)

**(Under the Aegis of ICETE 2021 Multi-Conference
Platform)**

November 19-20, 2021

Organized by

Department of Mechanical Engineering



(An Autonomous Institution affiliated to VTU, Belagavi)

Nitte – 574 110, Karkala Taluk, Udupi District, Karnataka, India
ISO 9001:2015 Certified, Accredited by UGC NAAC with 'A' Grade
Phone: +91 8258 281264; Fax: +91 8258 281265
Website: www.nmamit.nitte.edu.in/

About the Institute

Nitte Mahalinga Adyanthaya Memorial Institute of Technology (NMAMIT), affiliated to VTU, Belagavi, an autonomous Institution offering UG, PG and Doctoral programmes. It is a unit of Nitte Education Trust, Mangaluru. It currently offers 9 UG programmes in engineering, 8 M.Tech programmes, MBA and MCA programmes. All the UG programmes are accredited by NBA, New Delhi. The Institute is ISO 9001:2015 certified and also accredited by NAAC, New Delhi with A grade. The institute is ranked 133 in the NIRF ranking (Engg Institutes)-2020, Govt. of India. The Institute has been awarded "Diamond" rating by QS I-GAUGE Indian Institute Ratings. The college has signed MoU with reputed industries, research organizations, and International universities to promote close interaction in areas of recent technologies, Research & Development, and skill development programs.

About the Organizing Department

The Department of Mechanical Engineering at NMAMIT was established in the year 1986 with an intake of 40 BE students. Since then, the department has shown exponential growth and at present passing out strength of UG students is ~252 per year. The department has two master's degree programmes namely Machine Design and Energy Systems Engineering with an intake of 18 students each. The department is accredited by the National Board of Accreditation (NBA) under Tier-1. The department is also an established Research Centre of VTU Belagavi and so far, nine students have completed their PhD, and there are several part-time and full-time doctoral students. The department has six centres of excellence. The research work carried out in micro-machining has won four awards in the prestigious IMTEX exhibition in the last 5 years. The most recent one is 2nd best prize for Research on "Two axis TIG welding of Aluminium alloy with synchronized pulsating wire feeder" in the IMTMA-IMTEX-ToolTech2020 Exhibition held at Bengaluru in January 2020. The institute also won Best Student Project Award in the Fluid Power Society of India Exhibition 2019. Some of the products have been patented and some products have moved from Lab to Land. The students are provided with all-round development opportunities through professional societies, branch association, and several professional club activities.

About the Conference

Department of Mechanical Engineering, NMAM Institute of Technology, Nitte is organizing a Two Day International Conference on "Smart and Sustainable Developments in Materials, Manufacturing and Energy Engineering (SME-2021)" as a part of Multi-Conference "International Conference on Emerging Trends in Engineering" (ICETE- 2021) on 19th and 20th November 2021.

The conference is dedicated to driving innovation in nearly every aspect of Mechanical Engineering. The conference provides a platform for researchers, professionals, executives and practicing engineers from various research institutes, educational bodies and practicing engineers from industries to share and exchange their ideas on the theme of conference. A series of keynote presentations, technical paper and poster presentations are planned to discuss on emerging trends, feasible solutions to shape and enable the development of mankind.

Theme of the Conference

Smart and Sustainable developments in Materials, Manufacturing and Energy Engineering, which is focused on research and emphasizes the latest technological innovations. It showcases the commitment of NMAMIT in bringing together various disciplines, converge and amalgamate various new ideas, fields and technologies. The focus of the conference is to open a new paradigm to deliberate on eco-friendly and robust design use of materials with less environmental impact, use of fewer materials, optimal utilization of resources during manufacturing processes with zero defects. Also, produce less pollution, waste, reuse and recycle of materials. The emphasis is on application of Artificial Intelligence to enhance the productivity, safety and better management of the systems and processes.

Thrust Area

- ◆ Smart and Sustainable Developments in Materials
- ◆ Smart and Sustainable Developments in Manufacturing
- ◆ Smart and Sustainable Developments in Energy
- ◆ Application of AI in Mechanical Engineering

Sub Themes to be addressed in this conference include, but not limited to the following:

Smart and Sustainable developments in Materials

- Advanced High strength steels
- Aluminum Alloys
- Biomaterials
- Ceramic Materials
- Characterization & Testing
- Composite Materials
- Dynamic Behavior of Materials and Structures
- Functional Materials
- High temperature & Cryogenic Materials
- Luminescence Materials and Its Applications
- Materials for Automotive, Energy and Environment
- Materials for Solid State Ion Batteries
- Nanomaterials
- Porous Materials and Their Applications
- Smart and Device Materials
- Smart Construction Materials
- Transport Properties of Materials

Smart and Sustainable developments in Energy

- Alternative fuels
- Biogas and Biomass
- Energy Storage Batteries and other Storage Devices
- Future Energy Technologies
- Foundry and Casting
- Global warming & Green Energy Options
- Green Buildings
- Health and Environment
- Heat & Mass Transfer
- Hybrid vehicles & Integration
- Nanotechnology for sustainability
- Refrigeration & Air-conditioning
- Sustainable Product development
- Thermal Energy
- Thermo Electric Materials
- Nonlinear Dynamics

Smart and Sustainable developments in Manufacturing

- CAD/CAM/CAE/CIM
- Computational Mechanics & Techniques
- Control and Automation
- Electronic Manufacturing
- Flexible/ Lean Manufacturing
- High-Speed/Precision Machining & Inspection
- Industrial Robotics and Automation
- Machine Vision
- 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
- Production, Operations and Supply Chain Management
- Simulation and Optimization Techniques
- Surface Engineering
- Sustainable Manufacturing Technologies
- Welding Technology
- Tribology
- System Dynamics and Vibration

Application of AI in Mechanical Engineering

- Logistics and supply chain management
- Fault diagnosis and predictive maintenance
- Quality inspection
- Improving the safety of work place
- Design improvement of thermal systems
- Engineering design, analysis and manufacturing
- Expert systems in mechanical engineering design
- Robotics and Automation
- Intelligent machinery systems
- Predictive and Forecasting Modeling of Mechanical Systems

Invited Speakers

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



Prof. Prasad Yarlagada
Queensland University of
Technology, Australia



To be proposed
University of Antwerp
Faculty of Applied Engineering
Campus Groenenborger – office T.204
Groenenborgerlaan 171
2020 Antwerp – Belgium



Prof. Milind Atrey
Professor
Department of Mechanical Engineering
IIT-Bombay, India



Dr. Bharatheesh Jaysimha
Artificial Intelligence Implementation
Advisor
Numentrix consulting
Bengaluru, Karnataka, India

Paper Submission

The research paper submitted should be original work and should not have been submitted in another conference or journal. The respective journal format should be followed for the paper. To submit the paper kindly login to conference website: <http://www.sme2021.in/>. Manuscripts in electronic format (DOC, DOCX only) to be submitted

"THE BEST PAPER WILL BE AWARDED IN EACH STREAM"

committees

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Sri N. Vinaya Hegde

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Dr. Abhinav K Nair, Assistant Professor, Amal Jyothi College of Engineering, Kottayam

Dr. Drakshayani D N, Retired Professor, Sirmvit, Mechanical engineering, Bengaluru

Dr. Madhu P, Assistant Professor, Department of Mechanical Engineering, Malnad College of Engineering, Hassan

Dr. Satya Narayan, Mechanical Engineering, Institute of Engineering and Technology, Moodbidri

Dr. Ayub Ahmed Janvekar, School of Mechanical Engineering, VIT University, Chennai

Dr. Vignesh Nayak Ullal, MITE, Moodbidre, Mangalore

Dr. Arun Augustin, Associate Professor, Mechanical Engineering, Christ College of Engineering, Thrissur, kerala

Dr. M. Rajesh, Assistant Professor, Department of Botany, A.V.C. College (Autonomous), Mayiladuthurai, Tamil Nadu

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Dr. H C Chittappa, Professor, UVCE, Bangalore

Dr. B M Rajaprakash, Professor, UVCE, Bangalore

Dr. Sharanappa, Associate Professor, NITK Surathkal

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Dr. Sudheer Reddy, Professor and HoD, NMIT, Bangalore

Dr. Ezil Vannan, Professor, MCE, Hassan

Dr. Sumana B G, Associate professor, Government Engineering College, Hassan

Important Dates

Submission of Full-length manuscript – Open : **01/05/2021**

Last date to Submit Full-length manuscript : **01/08/2021**

Notification of acceptance : **20/08/2021**

Submission of camera-ready manuscript : **01/10/2021**

Last date for registration : **05/11/2021**

Publishing Partners

Conference Registration

Kindly fill the registration form attached along with the conference brochure and email to the conference coordinators. For more information kindly visit conference website.

Registration Fees

Category	Registration Fees	Publication Charges
Faculty/Researchers (UG/PG/PhD)/Industry		No additional publication charges
Late Registration Fees		
International Delegates		

Mode of Payment

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

Name : NITTE EDUCATION TRUST

Account Number: 01152200033493

Type of account : Savings Bank

Bank : Syndicate Bank, Nitte

SWIFT Code : SYNBINBB014

IFSC : CNRB0010115

MICR Code : 576025533

NOTE: Delegates must mention their NAME and SME-2021 without fail during online payment. The proof of online transfer (UTR No., date & time, Scan copy) needs to be uploaded in the registration portal.

Accommodation

Accommodation with nominal charges will be provided on twin sharing basis in the institute hostel on prior request depending on the availability and first come first serve basis.

Conference Location

Nitte is a village in Karkala taluk of Udupi district, India. Nitte is on the state highway from Padubidri to Kudremukh. It is 8 km away from Karkala, 36 km from Udupi and 54 km from **Mangaluru**. It is

located on the foothills of the Western Ghats Mountains and receives an annual rainfall of around 4830 mm. The state highway SH-1 cuts across Nitte which connects to the National Highway NH-66 at Padubidri and NH-13 near Karkala. There are ample number of tourism destinations near Nitte. To name a few:

- Sri Krishna Math, Udupi
- Beach, Malpe
- Thousand Pillar Temple, Moodbidri
- Chaturmukha Basadi, Karkala
- Attur Church, Karkala
- Durgaparameshwari Temple, Katil
- Light house, Kaup



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19 – 20 November 2021

Registration Form

Name :

Designation :

Department :

Institution :

Registration for:

Indian Foreign

Payment Details:

DD Details: DD No: Date:

Bank:

NEFT Details: NEFT ID: Date:

Accommodation required: Yes / No

Mobile No :

Email ID :

Date:

Place:

Signature of the participant

Signature & Seal of the Head of the Institution / Organization