



2nd INTERNATIONAL CONFERENCE (ONLINE) ON

**Smart and Sustainable Developments in Materials,
Manufacturing and Energy Engineering
(SME-2020)**

**(Under the Aegis of ICETE 2020 Multi-Conference
Platform)**

**December 22-23, 2020
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 7 UG programmes in engineering, 11 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 128th in the NIRF ranking (Engg Institutes)-2019, 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, six 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-2020)" as a part of Multi-Conference "International Conference on Emerging Trends in Engineering" (ICETE- 2020) on 22nd and 23rd December 2020.

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. Also, produce no or less pollution & waste and reuse, recycle of materials. The emphasis is on zero defects or do it right at first design, Materials in Biomedical applications, Operation and management of systems with sustainable initiatives.

Thrust Area

- ◆ Smart and Sustainable Developments in Materials
- ◆ Smart and Sustainable Developments in Manufacturing
- ◆ Smart and Sustainable Developments in Energy

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
- 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

Smart and Sustainable developments in Manufacturing

- CAD/CAM/CAE/CIM
- Computational Mechanics & Techniques
- Control and Automation
- Electronic Manufacturing
- Flexible/ Lean Manufacturing
- Foundry and Casting
- High-Speed/Precision Machining & Inspection
- Industrial Engineering
- Industrial Robotics and Automation
- Machine Vision
- Measurement Control Technologies and Intelligent Systems
- Mechatronics
- MEMS and Nanotechnology
- Metal Cutting Processes
- Metal Forming Processes
- Micro Machining Technology
- Modeling, Analysis & Simulation of Manufacturing Processes
- Non-Conventional Machining Processes
- Production, Operations and Supply Chain Management
- Simulation and Optimization Techniques
- Subtractive Manufacturing
- Surface Engineering
- Sustainable Manufacturing Technologies

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 KDV Yarlagadda OAM

Ph.D FIE Aust., FIE(India), Fellow AMME,
Fellow IAAM, C.Eng, C.P.Eng.

Professor in Smart Systems

Project Director: Airports of the Future

School of Mechanical, Medical and Process
Engineering

Science and Engineering Faculty



Mr. V.V. Kamath

Managing Director

Fronius India Private Limited

Gat no- 312, Nanekarwadi Chakan, Taluka-
Khed

District - Pune 410501, 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.sme2020.in/in> and use the easy chair link. <https://easychair.org/conferences/?conf=sme2020>.

Manuscripts in electronic format (DOC, DOCX only) to be submitted

"THE BEST PAPER WILL BE AWARDED IN EACH STREAM"

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Sri N. Vinaya Hegde

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

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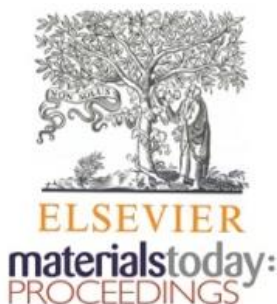
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Dr. Sharath P C , Asst. Professor, Jain Deemed to be University, Bangalore
Dr. Arun Augustin, Asst. Professor, Christ college of Engineering, Kerala

Important Dates

Submission of Full-length manuscript – Open	: 01/07/2020
Last date to Submit Full-length manuscript	: 10/10/2020
Notification of acceptance	: 01/10/2020
Submission of camera-ready manuscript	: 10/11/2020
Last date for registration	: 01/12/2020

Publishing Partners

All presented and accepted papers from the conference will be published in indexed journals of **Elsevier- Material Today Proceedings (Scopus)**, **MATEC-Web of Conferences (Web of Science)** and **IOP Conference Series-Material science and Engineering (Scopus)**. The papers will go through a stringent review process by the respective journals and only papers that pass these checks will be published.



The authors are requested to follow the instructions of the respective journal and prepare the manuscript accordingly with the help of templates.

1. Materials Today Proceedings: <https://www.elsevier.com/journals/materials-today-proceedings/2214-7853/guide-for-authors>
2. MATEC web of conferences: https://www.matec-conferences.org/for-authors#anchor_Instructions-for-authors
3. IOP Conference Series-Material science and Engineering: <https://iopscience.iop.org/journal/1757-899X>

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	Rs. 5000	No additional publication charges
Late Registration Fees	Rs. 5500	
International Delegates	\$100	

Note : *Rs.76 = 1USD at current Prize.

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

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MICR Code : 576025533

NOTE: Delegates must mention their NAME and SME-2020 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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Karkala Taluk, Udupi District (Karnataka State), India.



2020
SME
Nitte, Karnataka

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(Under the Aegis of ICETE 2019 Multi-Conference Platform)

22 – 23 Dec 2020

Registration Form

Name :

Designation :

Department :

Institution :

Registration for:

Indian Foreign

Payment Details:

DDDetails: DD No: Date:

Bank:

NEFTDetails: NEFT ID: Date:

Accommodation required: Yes / No

Mobile No :

Email ID :

Date:

Place:

Signature of the participant

Signature&Sealofthe HeadoftheInstitution/Organization