

International Conference on Materials, Mechanical and Energy Engineering (MMEE2021) 7th – 8th May 2021



Organized by Department of Mechanical Engineering BAPATLA ENGINEERING COLLEGE (Autonomous) Bapatla 522101, Andhra Pradesh, India www.becbapatla.ac.in

Chief Patron:

Sri. B. Venkata Siva Rama Krishna President, Bapatla Education Society Sri. M. Nageswara Rao, Secretary, Bapatla Education Society

Patron:

Dr. V. Damodara Naidu Principal, Bapatla Engineering College Dr. K. Vizay Kumar Academic Adviser, Bapatla Education Society

Head of the Department:

Dr. T. Nancharayya, Professor & HOD Department of Mechanical Engineering, BEC Conveners:

Dr. B. Ratna Sunil, Associate Professor Department of Mechanical Engineering, BEC Dr. D. Sameer Kumar, Associate Professor Department of Mechanical Engineering, BEC Co-Conveners:

Dr. V.V. Kondaiah, Associate Professor Department of Mechanical Engineering, BEC

Organizing committee:

Dr. M. Venkateswara Rao, Professor, Dept. of ME, BEC Dr. T. Nancharaiah, HOD & Professor, Dept. of ME, BEC Dr. B. Ravi Sankar, Professor, Dept. of ME, BEC Dr. Ch. Lakshmi Srinivas, Professor, Dept. of ME, BEC Sri. T. Siva Sankar, Asso. Prof., Dept. of ME, BEC Sri. G. Kantha Prasad, Asso. Prof., Dept. of ME, BEC Sri. K. Prasada Rao, Asso. Prof., Dept. of ME, BEC Sri. D Narayana Chowdary, Asso. Prof., Dept. of ME, BEC Dr. B. Ifthekar Hussain, Asso. Prof., Dept. of ME, BEC Dr. J. Laxmi Lalitha, Asso. Prof., Dept. of ME, BEC Dr. P. Ravikumar, Asso, Prof., Dept. of ME, BEC Dr. P. Ravi Kumar, Asso. Prof., Dept. of ME, BEC Sri. K. Srinivasa Rao, Asst. Prof., Dept. of ME, BEC Sri. P. Uma Maheswara Rao, Asst. Prof., Dept. of ME, BEC Sri. S. Vijay, Asst. Prof., Dept. of ME, BEC Sri. Y. Narendra Babu, Asst. Prof., Dept. of ME, BEC Sri. S. Krugan, Asst. Prof., Dept. of ME, BEC Sri. S. Ravi Kumar, Asst. Prof., Dept. of ME, BEC Sri. D. Vijay Praveen, Asst. Prof., Dept. of ME, BEC Sri. K. Rajasekar Babu, Asst. Prof., Dept. of ME, BEC Sri. M. Pardha Saradhi, Asst. Prof., Dept. of ME, BEC Sri. A. Praveen, Asst. Prof., Dept. of ME, BEC Sri. V. Srinivasulu, Asst. Prof., Dept. of ME, BEC Sri. M. Subramanyam, Asst. Prof., Dept. of ME, BEC Sri. A Suresh, Asst. Prof., Dept. of ME, BEC

Sri. Ch. L. Prudhvi Raz, Asst. Prof., Dept. of ME, BEC

About the College:

Bapatla Engineering College (Autonomous) was established in the year 1981 with a total intake of 180 students in CE, ME & E.C.E branches. The college was initially affiliated to Andhra University and later to Nagarjuna University from 1984 Onwards. An additional section with an intake of 60 was sanctioned for Mechanical Engineering branch in 1987. From the year 1994, The College embarked on programs of expansion in terms of courses and intake, infrastructure and facilities. With requisite infrastructure facilities and competent human resources, the college is one of the "Largest Institutions in the State of Andhra Pradesh ". The college is widely acclaimed for its meticulous planning, resource scheduling and Institutional management. The college has solicited appropriate accreditation for Civil, Computer Science, Electronics and Communications, Electrical and Electronics, Electronics and Instrumentation and Mechanical Engineering branches twice by AICTE-NBA and for subsequently started Chemical Engineering, Information Technology and Bio-Technology once.

About the Department:

Mechanical Engineering Department was established in the year 1981. The Department has excellent lab facilities with state of the art equipment and has highly qualified, experienced and committed faculty members. The Department gives importance not only to academic education; research and development but also ethical values and personality development of students. The Department of Mechanical Engineering regularly organizes various technical & extracurricular events and brings out magazine annually under MECHANICAL ENGINEERING STUDENTS ASSOCIATION. The Department has exclusive Computer Centers equipped with high capacity servers and systems with high configuration. Number of Mechanical related software packages like ANSYS-18.0, Pro/ENGINEER 4.0, CATIA V5 R15, ADMSS, INVENTOR SERIES, AUTOMATION STUDIO, STAR-CD for CAD lab and packages like Master CAM, Emco off line simulation etc., for CAM and Automation lab are available. The department strives hard to impart quality education and to keep the students on the competitive edge of the present-day technology

About MMEE2021:

Recent developments in the fields of materials engineering revolutionized the engineering applications in different strategic sectors including automobile, aerospace, marine, biomedical, agriculture, energy engineering and structural and construction engineering. Developing new material systems and novel manufacturing processes enhanced the ability of engineers to address several technological challenges in various industrial applications. Understating the behavior of the materials helps to develop potential engineering applications to improve the quality of the human life. Utilizing computational tools to analyze the materials and processes brings additional advantage to understand the complex issues and accelerates the development of science and technology. Interdisciplinary research couples the expertise of several professionals belong to diversified fields and promotes rapid growth in achieve a common goal in addressing the research challenges. In this context, MMEE2021 becomes a viable platform for knowledge shearing among the experts from various research fields in materials and mechanical engineering. The dissemination of interdisciplinary knowledge at MMEE 2021 helps the young researchers and professionals to engage in R and D activities to bring promising yields for the society.

Call for Papers:

A one page abstract not more than 300 words with complete details of authors and affiliations is invited from prospecting authors to present their research work in the following areas but not limited to:

- Advanced materials
- Nanomaterials
- Biomaterials
- Energy materials
- Materials for thermal engineering applications
- Structural materials
- Materials for construction & building applications
- Composite materials
- Material testing and characterization
- Smart materials
- Computational methods in materials engineering
- Materials for food processing and storage
- Materials for agriculture

- Minerals, metals and alloys
- Mechanical behavior of materials
- Additive manufacturing
- Unconventional machining
- Advanced manufacturing processes
- Design and optimization
- Welding, machining and forming of materials
- Modeling and simulation in manufacturing
- Materials for thermal applications
- Materials for energy storage applications
- Solar materials
- Materials for electronics applications
- Surface engineering

Technical & Advisory Committee:

- Prof. Martin Urik, Faculty of Natural Sciences, Comenius University in Bratislava, Slovak republic.
- Dr. M. Paparao, Senior Scientist, Jawaharlal Nehru Aluminium Research Development and Design Centre, Nagpur, India
- Dr. M. Jagannatham, Manager, R&D, TVS Wheels India, Chennai, India
- Dr. N. Rameshbabu, Associate Prof., Dept. of MME, NIT Tiruchirapalli, India
- Dr. Ravikumar Dumpala, Asst. Prof. Department of Mechanical Engineering, VNIT Nagpur, India.
- Dr. S. Anandkumar, Asst. Prof., Department of Mechanical Engineering, IIT Jammu, India.
- Dr. T. Hanas, Asst. Prof., School of Materials Science and Engineering, NIT Calicut, India.
- Dr. K. N. S. Suman, Associate Prof., Department of Mechanical Engineering, Andhra Univeristy, India

- Dr. P. Poddar, Principal Scientist, CSIR-NML Jamshedpur, India
- Dr. T. K. Mahanta, Asst. Prof., Department of Mechanical Engineering, VIT Chennai, India
- Dr. M. Ravikumar, Asst. Prof., Department of Mechanical Engineering, MNIT Bhopal, India

Key note speakers:

- Prof. Marek Colencik, Slovenská poľnohospodárska univerzita v Nitre, Slovak republic.
- Dr. M. Ananda Rao, Senior Scientist, CSIR NML Madras Complex, Chennai, India

Instructions to participants:

- > Invited talks will be delivered by experts from industry and academia
- > All accepted contributed papers based on their merit given an opportunity to present orally
- All the sessions are conducted through online
- All papers are subjected to peer review process and accepted papers will be published in IOP: Materials Science and Engineering (indexed in SCOPUS and Web of Science).
- > All the papers must be free from plagiarism. Similarity index must be less than 20%.
- > All papers must be original and not been submitted to any other conferences or journals.
- > Registering at least one author per paper is mandatory
- > Registration fee includes access to attend all technical sessions, participation certificate and publication charges
- > At least one author must present the paper in the given time slot
- > Submit your abstracts and register using the following link

http://tinyurl.com/1p39rkj7

Important dates:

Abstract submission closing	05-03-2021	Registration starts	01-04-2021
Acceptance of the abstracts ends	08-03-2021	Camera ready full paper ends	15-04-2021
Full paper submission ends	30-03-2021	Conference dates	07 & 08-05-2021

Registration fee details:

	Indian participants (Rs/-)	Foreign participants (\$)
Academia	5000	100
Industry	7000	150
Attendees	1000	50

Contact details:

Dr. B. Ratna Sunil

Convener, MMEE 2021 Associate Professor, Department of Mechanical Engineering Phone: 7799111300, 9677119819 e-mail: <u>bratnasunil@becbapatla.ac.in</u> <u>bratnasunil@gmail.com</u>

Dr. D. Sameer Kumar

Convener, MMEE 2021 Associate Professor, Department of Mechanical Engineering Phone: 8978013595 e-mail: <u>me2meer@gmail.com</u>

Dr. V.V. Kondaiah Co-Convener, MMEE 2021 Associate Professor, Department of Mechanical Engineering Phone: 8978013595 e-mail: vvkondaiah@gmail.com