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### **Author Guidelines**

Original and unpublished research papers are invited for presentation in this conference with maximum 6 pages. Author Guidelines are available from the conference website (under construction). Conference proceedings may be published in Scopus indexed proceedings (under process).

## CALL FOR PAPERS

Call for paper: 30<sup>th</sup> August 2024 (See website (under construction)

Acceptance of paper: 30th September, 2024.

#### CONFERENCE REGISTRATION FEES:

Registration fee includes refreshments, lunches, proceedings (printed and/or /online)

NORMAL RATES -See the website (under construction)

## **ACCOMMODATIONS**

Accommodations will be arranged by the organizer on request basis. The registration fee does not include the accommodation charge. If accommodation is required, extra charge is required to pay by \$100 for foreign delegates and INR 2000/- for Indian delegates. Accommodation will be provided on a sharing basis in hotel.

# 1st International Conference on Multidisciplinary Research in Mechanical Engineering and Nanotechnology (ICMRMEN-2024)

website (under construction) (in hybrid mode)







Organized by Department of Mechanical Engineering (Date: 21-12-2024 to 22-12-2024)

Government Engineering College, Samastipur Sarairanjan, Narghoghi, Samastipur, Bihar - 848127

#### Introduction

Mechanical engineering, with its focus on the design, analysis, and optimization of mechanical systems, has long been instrumental in shaping our modern world. New technologies are being introduced every day, progressively transforming the future of the field. In an era defined by rapid technological advancement and interdisciplinary collaboration. the convergence of Mechanical Engineering and nanotechnology stands as a beacon of innovation and progress. Nanotechnology. with its ability to manipulate matter at the nanoscale, has opened doors to a wealth of opportunities across various industries, from materials science to healthcare and beyond. Nowadays, academia and researchers are not only contemplating but also experiencing the overwhelming outcomes of interdisciplinary research. Moreover, it has been widely encouraged by governments, research agencies, and academic institutions.

The context of the conference is to foster and amplify the research culture among academia and industry, facilitated by the exchange of ideas. Furthermore, the activity intends to acquaint participants with transcendent growth, recent trends, innovations, and security issues involved in the domain of Mechanical Engineering and their impact on societal applications through various brainstorming sessions. The vision of this conference is to promote excellence in scientific knowledge and innovations in multidisciplinary research and nanotechnology within the field of mechanical engineering to inspire researchers.

The conference is structured with plenary lectures followed by parallel sessions. The plenary lectures will be delivered by

eminent personalities invited to introduce the theme of the conference. Each parallel session starts with an invited talk on a specific topic followed by contributed papers. Papers are invited from prospective authors from industries, academic institutions, R&D organizations, and professional engineers. Potential topics to be addressed in this conference include, but are not limited to, the following.

# A) THERMAL AND FLUID

- Internal Combustion Engines
- Computational methods in Thermal Engineering
- · Refrigeration and Air conditioning
- · Heat and Mass Transfer
- Computational Fluid Dynamics
- Thermal Power and Heat transfer
- Renewable and Non-Conventional Energy Sources
- Propulsion
- Experimental Fluid Mechanics
- Fluid Mechanics & Fluid Machinery
- · Microchannel flows
- Nano Technology

# **B) DESIGN AND MANUFACTURING**

- Modeling and Simulation of Systems and Processes
- CAD/CAM/CIM
- FEM
- Optimization Techniques
- · Automation and Robotics
- Micro/ Nano /Non-Conventional Machining
- Nanomaterials: Synthesis and Characterization
- Mechatronics
- Tribology

#### Smart material

- Dvnamics & Vibration
- Supply Chain Management
- Nano-Materials and Manufacturing
- Composites/Ceramics/Polymers
- Foundry/ Castings/ Welding/ Corrosion
- Advanced Manufacturing Processes
- Design and development of orbiting satellites

- Rockets and satellite launch vehicle structural mechanics
- Additive manufacturing
- 3D Printing & Design
- Tribology, Nano mechanics and MEMS

# C) MULTIDISCIPLINARY AREA

- Healthcare Engg
- Biomechanics
- · Biomedical Engineering
- Bio instrumentation
- Instrumentation and control
- Mems & Nanotechnology
- Bio fluid dynamics
- Computational Biology
- Microfluidics and Its Therapeutic Applications Orthopaedic Biomechanics
- Magnetic Drug-Targeting
- Magnetic Nanoparticles Diagnostic Development
- Non-intrusive measurement techniques in healthcare Applications
- Nanoparticle Assisted LASER Irradiation
- · Electric vehicle
- Artificial Intelligence
- Internet of Things (IoT)

# **Background:**

Government Engineering College, Samastipur is an engineering college under Department of Science Technology and Technical Education, Bihar. The college is spread over an area of 19 Acres at Near Sarairanjan, Narghoghi Block, Samastipur.. This college is affiliated with Bihar Engineering University. It was established in 2019.

## ADDRESS FOR CORRESPONDENCE

Patron: Dr. R. M. Tugnayat, Principal

Convenors: Dr. Dipak Kumar Mandal, HOD, ME,

Dr Vaishali, ME,

#### Co-ordinators:

Mr Ashish Kumar, M:9529805062 Mr Prem Kumar, M:7888649459 Ms. Arpita, M:8603974264

Department of Mechanical Engineering Government Engineering College, Samastipur Sarairanjan, Narghoghi, Samastipur, Bihar – 848127

Mail: dkm@gecsamastipur.ac.in, dipkuma@yahoo.com, dipkuma1969@gmail.com