



# ME@75: RESEARCH FRONTIERS

ORGANIZED BY

Department of Mechanical Engineering

Indian Institute of Science

June 29-July 01, 2022



Mechanical Engineering activities at Indian Institute of Science (IISc) started around 1945 in the Department of Internal Combustion Engineering that later merged with the subsequently created Mechanical Engineering department. On this important milestone of 75 years of Mechanical Engineering at IISc, the department is organizing an international conference to be held from June 29-July 1, 2022 to bring together researchers from around the world to interact and establish mutually beneficial research partnerships in all areas of Mechanical Engineering. The conference will feature a number of invited lectures from eminent researchers in the field. Contributed papers are sought primarily from young researchers in all areas of Mechanical Engineering. It is hoped that this combination of invited talks and contributed papers would lead to an intellectually stimulating meeting.

## SCOPE

The conference will cover all fields within the broad area of Mechanical Engineering, with equal emphasis on experimental, computational, and analytical studies. Contributed papers are invited in all the (non-exhaustive) list of topics primarily from young researchers in the field. Please see website given below for submission details.

### 1. Mechanical systems and MEMS

Solid and fracture mechanics, Geometric modelling, Compliant mechanisms, Micro and nano mechanical devices and systems, Soft matter mechanics, Multi-disciplinary optimization, Robotics and autonomous systems, Nonlinear dynamics, Control systems design, Biomechanics and biodesign, Analytical and computational mechanics

### 2. Material science and nanotechnology

Nanomechanics, Tribology, Material characterization, Nanostructured materials, Computational material science

### 3. Thermal sciences and fluid mechanics

Bio-fluid mechanics, Turbulence, Stability and transition, Fluid-structure interaction, Turbomachinery, Multiscale flow physics and transport, Combustion and spray research, Convection, Transport phenomena in manufacturing, Computational fluid dynamics, Flow and combustion in IC engines and gas turbines, Energy engineering

### 4. Vibrations and acoustics

Structural acoustic systems, Vibrations of plates and shells, Wave propagation, Industrial noise control, Active noise control, Fluid-structure interaction, Flow noise

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## VENUE

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## EMAIL

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## SUBMIT ABSTRACT ONLINE AT

<https://tiny.one/me75conference>

## IMPORTANT DATES

15<sup>th</sup> May: Extended abstract submission

1<sup>st</sup> June: Acceptance notification