

WORKSHOP ON

On

Design and Analysis of Turbomachines

10th December 2021

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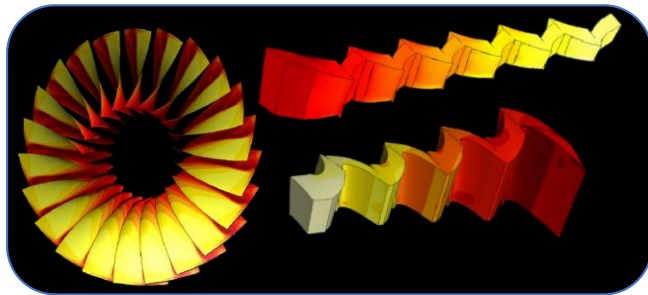
Department of Science and Technology



Organized by

**Department of Aerospace Engineering
&
Centre for Continuing Education**

Indian Institute of Technology Madras



BACKGROUND

Turbomachines find numerous applications in the aviation, space, automobile, and energy sectors. Gas-turbines employed in these sectors offer high power to weight ratio and high efficiencies. In this workshop, we will provide an overview of the tools used to design and analyse the flow in turbomachines. We will firstly introduce the basic fluid dynamic and thermodynamic principles involved. Subsequently, we will have hands-on sessions using the open-source codes. Meanline design and CFD analysis of turbine/compressor blades/stages will be covered in the afternoon session.

OBJECTIVES:

1. Introduce the primary fluid dynamic and thermodynamic principles in turbomachines.
2. Provide hands-on experience in designing compressors and turbines using mean line design & 3d simulations.
3. Introduce post-processing techniques to analyze the flow field under different operating conditions to estimate losses in turbomachines.

DURATION & VENUE

Friday, 10th December 2021

Lectures & Hands-on training will be delivered in online mode only.

ELIGIBILITY

The course is open to **FACULTY** in *Aerospace and Mechanical Engineering*, (with background in *Fluid Mechanics and Heat Transfer*) and allied branches from engineering colleges approved by AICTE. *No course fee* is charged. Participants selected for the workshop will be informed over email.

REGISTRATION LINK:

Please register to the workshop using the following QR Code:



ORGANIZING TEAM:

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