



INDIAN SOCIETY FOR APPLIED MECHANICS

presents

Mechanics Lecture Series

on

Vibration Analysis of Flight Vehicles

by

Mr. Ashish Kumar

Scientist 'G', Defence Research and Development Organisation (DRDO) - ASL

on

10:30 AM, January 31, 2026

at

**Seminar Room, Department of Mechanical Engineering,
MANIT Bhopal**

Introduction

The Mechanics Lecture Series (MLS) is an outreach initiative by the Indian Society for Applied Mechanics (ISAM) aimed at popularizing key topics in mechanics through a hybrid learning format. Each session will feature an offline lecture hosted at a campus, with simultaneous online transmission nationwide, ensuring wide accessibility.

A unique 'things to do' component will engage participants in hands-on tasks, allowing them to demonstrate their work after three weeks. The best presentations will be awarded, and certificates will be provided to all participants, promoting practical learning and innovation in mechanics education.

About the Speaker

Mr Ashish Kumar is a Scientist 'G' in Defence Research and Development Organisation (DRDO) Advanced Systems Laboratory (ASL). He has a master's degree in Mechanical Engineering from IIT Kharagpur and a bachelor's degree from NIT Kurukshetra. His area of interest includes mechanical vibrations, structural design of aerospace vehicles, and finite element analysis.

Organizing Committee

Dr. Deepak Kumar, Dr Vinod Yadav, Dr. Lal Singh Devsoth, MANIT
Dr. Swathika Meenraj, ISAM | SLB, Contact: vp.industry@isam.co.in

About the lecture

Vibration analysis of flight vehicles is critically important in aerospace applications due to dynamic loading, structural flexibility, and operational safety requirements. The seminar focuses on:

- **Fundamental vibration behavior:** free, forced, damped, and harmonic vibrations.
- **Dynamic response characteristics:** natural frequency, resonance, and mode shapes, including effect of stiffness, mass distribution, and excitation conditions.
- **Influence of operational environments:** launch loads, acoustic excitation, and shocks.
- Experimental methods and testing standards in vibration & dynamic analysis.

Venue and Dates

The Mechanics Lecture Series (MLS) is scheduled to be held on **31st January 2026 at 10:30 AM** at Seminar Room, **Department of Mechanical Engineering, MANIT Bhopal, Madhya Pradesh**. The lecture will be streamed live to various institutions across India.

How to register

Please register for the workshop using the following QR Code or Google Form link: [Click here for Registration Form](#)

