# About Us:

NIT Rourkela, a premier national institution funded by the Government of India, has been elevated to a deemed university status and ranked 13th, 30th, and 34th in the NIRF 2025 rankings for Engineering, Research, and Overall categories, respectively. It is also placed in the 9th in the NIRF Sustainable Development Goals Ranking - 2025. The institute is committed to providing quality education in a diverse and multicultural environment, offering PhD and M.Tech by Research programs in 21 branches of Engineering. NIT Rourkela's research centers actively engage with government bodies and industries, including DST, DAE, CSIR, DRDO, BARC, and ISRO, for consultancy and research activities.

About workshop:

Rotordynamics plays a crucial role in the design and analysis of rotating machinery such as turbines, compressors, pumps, and electric motors. This six-day intensive workshop aims to bridge the gap between theoretical fundamentals and real-world applications of rotordynamics and bearing design. The workshop focuses on:

a. Fundamental concepts of rotordynamics and bearing systems

b. Hands-on modelling and analysis using MATLAB, ANSYS, and COMSOL

c. Practical exposure to industrially relevant simulation tools

d. Experimental studies using a rotordynamic simulator.

This program is designed for students, faculty members, and industry professionals seeking practical insights into rotordynamic analysis and design.

ROTORDYNAMICS IN PRACTICE
MATLAB - ANSYS - COMSOL

Sponsored By.

KINETICA BEARING
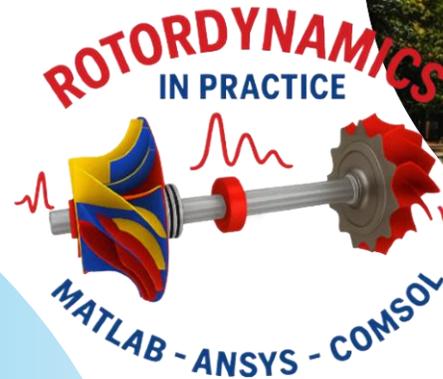
Six Days Workshop on Rotordynamics in Practice: MATLAB – ANSYS – COMSOL
(1st-6th June 2026)

Coordinator : Prof. Suraj Kumar Behera
Co-Coordinatos : Prof. Manoj Kumar Moharana
: Prof. Hara Prakash Mishra

Resourse Persons:

Mr. Ravindra Bucherla(ARK Infosolutions Pvt. Ltd.)
Mr. Rajan Gupta(COMSOL Multiphysics Pvt. Ltd.)
Prof. Manoj Kumar Moharana, NIT Rourkela
Prof. Suraj Kumar Behera, NIT Rourkela
Dr. Hara Prakash Mishra (BPUT, Rourkela)
Mrs. Srusti Priyadarsani (PhD Scholar, NIT Rourkela)

Contact Details:

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PAYMENT DETAILS:

The fee structure for participants:

Participants	Early Bird (Before 30th April 26)	Regular
Students	Rs. 5000/-	Rs. 6000/-
Others	Rs. 10,000/-	Rs. 12,000/-

- The registration fee includes:
  - Course material
  - Working lunch during workshop days
  - Accommodation in institute hostels or guest house during the program subjected to availability of sponsorship.
- Travel Allowance:
  To-and-fro travel expenses from the workplace to NIT Rourkela will be reimbursed as per institute rules, subject to availability of sponsorship.

Registration fees should be bank transferred through UPI/NEFT/IMPS to the following:
- Account Number (Name): **10138951784 (CONTINUING EDUCATION NIT ROURKELA)**
- IFSC Code: **SBIN0002109**
- Bank & Branch Name: **SBI, NIT Campus, Rourkela**

"Engineering the future, one innovation at a time."

IMPORTANT DATES:

Last date for receipt of application: **25th May 2026**

Only **30** number of outstation participants will be selected on the first-cum-first-serve basis. A notification regarding registration will be sent within 48 hours of registration.
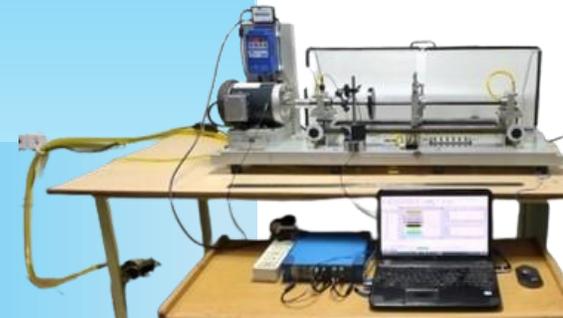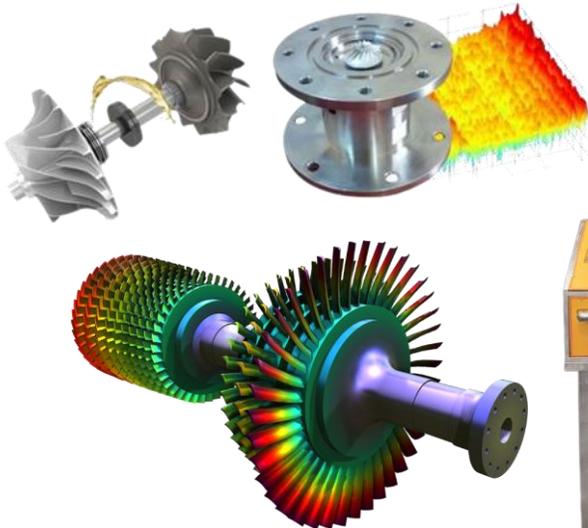
Registration Link:

https://docs.google.com/forms/d/e/1FAIpQLSeFaKsu3qwag0XUi0xcEcxbfQIGvJZ0bY4hEKj8RgnuhgR0mA/viewform?usp=dialog

Workshop schedule :

Day 1: Introduction to Bearings and Rotordynamics
Day 2: Hands-on Workshop on Rotordynamic and Bearing Design using MATLAB®
Day 3: Introduction to ANSYS® and Bearing Design
Day 4: Rotordynamics Analysis using ANSYS®
Day 5: Introduction to COMSOL and Bearing Design using COMSOL®
Day 6: Rotordynamics Analysis using COMSOL® and Experimental Studies on Rotordynamic Simulator

Technical program details of Six Days Workshop on
Rotordynamics in Practice: MATLAB – ANSYS – COMSOL

Date	Details of technical programs	Durations
Day 1 **01/06/2026, (Monday)**	• Design of Gas, water and oil lubricated bearings. • Experiments: Experimental investigation with locomotive turbocharger and bearing simulator	• Presentation: 03 Hours • Exercises: 02 Hours
Day 2 **02/06/2026, (Tuesday)**	• Rotordynamics of high-speed rotors and introduction to MATLAB • Exercises: Hands-on exercise on Rotordynamic and bearing design using MATLAB.	• Presentation: 03 Hours • Exercises: 02 Hours
Day 3 **03/06/2026, (Wednesday),**	• Introduction to ANSYS for Bearing Design • Exercises: Hands-on exercise on bearing design using ANSYS.	• Presentation: 03 Hours • Exercises: 02 Hours
Day 4 **04/06/2026, (Thursday)**	• Rotordynamic Analysis Using ANSYS • Exercises: Hands-on exercise on Rotordynamic analysis using ANSYS.	• Presentation: 03 Hours • Exercises: 02 Hours
Day 5 **05/06/2026, (Friday)**	• Bearing Design and Analysis using COMSOL • Exercises: Hands-on exercise on bearing design analysis using COMSOL.	• Presentation: 03 Hours • Exercises: 02 Hours
Day 6 **06/06/2026, (Saturday)**	• Rotordynamic Analysis of Rotor–Bearing Systems using COMSOL • Exercises: Hands-on exercise on Rotordynamic analysis using COMSOL.	• Presentation: 03 Hours • Exercises: 02 Hours