

Online Short Term Course on

**Advances in Condition Based Maintenance
using Vibration and Noise Monitoring
(19-21 February 2021)**



Course Coordinator
Dr. Anand Parey
Professor

**Discipline of Mechanical Engineering
INDIAN INSTITUTE OF TECHNOLOGY INDORE**

About this Course:

The demand is increasing day by day for increasing the load carrying capacity, enhancing the performance and service life of mechanical systems. Failure of machines causes huge monetary losses. Condition Based Maintenance (CBM) can help in preventing the catastrophic failure thereby saving down-time and monetary losses. Vibration and Noise monitoring are one of the most successful techniques used for CBM of the mechanical systems. This short-term course is aimed at providing the sound fundamental knowledge of various CBM techniques with emphasis on noise and vibration monitoring of mechanical systems.

Course Contents:

Condition based maintenance, basic of vibration monitoring, various types of transducers, data acquisition system, vibration analysis techniques, basics of noise monitoring, various acoustic

quantities and their relations, measurement of sound pressure, sound intensity and sound power etc., bearing and gear fault diagnosis, dynamic modeling of bearing and gearbox for fault diagnosis, tribodynamics of spur gears, signal processing techniques for analysis of vibration and noise signals, various case studies on fault detection of mechanical and electrical rotating machines.

Speakers:

1. **Prof. Naresh Tandon, PhD (IITD):** Prof. Naresh Tandon is working as a professor emeritus at IIT Delhi. He has over 40 years of experience in the field of noise and vibration monitoring and control. Apart from teaching and research, he has consulted many industries and government agencies.
2. **Prof. Achintya Choudhury, PhD (IITD):** Prof. Achintya Choudhury is currently working as a Vice Chancellor, Bhartiya Skill Development University. He has more than 35 years of experience in the field of academics.
3. **Prof. Anand Parey, PhD (IITD):** Prof. Anand Parey is working as a professor at IIT Indore. He has around 20 years of experience in teaching, research and consultancy in the field of CBM.
4. **Prof. Vinod Patel, PhD (IITD):** Prof. Vinod N Patel is working as a professor at GH Patel college of Engineering and Technology, Vallabh Vidyanagar, Gujarat. His research area is machine dynamics.
5. **Prof. Sudeep U, PhD (IITD):** Prof. Sudeep is working as a professor at NSS college of Engineering, Palakkad, Kerala. His research areas are tribology and surface engineering.
6. **Dr. Sidra Khanam, PhD (IITD):** Dr. Sidra Khanam is working as an assistant professor at Aligarh Muslim University. Her areas of interest are condition monitoring of bearings, signal processing of the vibration signals of rotor bearing system.
7. **Dr. Swati Gautam, PhD (IITD):** She has recently completed her PhD from IIT Delhi in the area of gear fault diagnosis.

8. **Ms. Niharika Gupta:** She is currently pursuing PhD from IIT Delhi in the area of gear tribology.
9. **Mr. Manish Raj:** He is currently pursuing PhD from IIT Delhi in the area of acoustic materials.

REGISTRATION FEE:

Rs. 10,000* (for industry personnel)
Rs. 5,000* (for faculty members)
Rs. 2,000* (for students)

*including GST

MODE OF PAYMENT:**For Online payment**

<http://www.iiti.ac.in/page/e-payments>

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Account number: 1476101027440
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NUMBER OF SEATS: Limited

IMPORTANT DATES:

The soft copy of completely filled registration form should be sent to the following e-mail ID on or before **18 February 2020**.

Address for correspondence

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REGISTRATION FORM**Name:****Designation:****Institution/Organization:****Address:****E-mail id:****Phone/Mobile No.:****Payment details****Bank Name:****Reference ID:****Amount transferred:****Date of transaction:****Any other relevant information:**