



## Two-Days Workshop on “Revolutionizing Structural Health Monitoring with Guided Wave-Based Machine Learning Technique ”



June 27–28, 2024

### Funded by

IIT Bombay Under the Scheme of “Seed Funding for Collaboration and Partnership Projects”

### Organized by

Indian Institute of Technology Bombay, India and University of Southampton, UK

### Resource Persons

Prof. Nitesh P. Yelve  
(IIT Bombay, India)

Prof. Susmita Naskar  
(University of Southampton, UK)

### About Workshop

Structural health monitoring (SHM) techniques offer several approaches for localizing damages, including time-of-flight-based and damage-index-based imaging algorithms. However, these methods have certain limitations, such as the need for signal decomposition or a dense sensor array. In contrast, machine learning-based methods can localize damage by comparing the monitored signal to a dictionary of signals with known damaged states. These algorithms can bypass the need for signal interpretation and dense sensor arrays, provided they have access to a sufficiently large and high-quality training dataset. Prof. Nitesh P. Yelve has conducted substantial work in damage localization using guided waves using TOF and DI-based methods, whereas, Prof. Susmita Naskar has extensive experience in analytical work on composites using machine learning-based methods. The workshop aims at giving basic idea of guided wave-based SHM, machine learning, and their amalgamation. The workshop will comprise of resourceful lectures and practical hands-on session at the WaVE Lab of IIT Bombay.

### Eligibility Criteria to Attend:

- The workshop is open to Faculty and Students of IIT Bombay.
- Selection shall be on the first come first serve basis, with preference to candidates whose research interests align with the theme of the workshop.
- Total number of seats is limited to 20.
- The selection for the workshop will be informed through email.
- To fill in the Registration Form, the applicants need to scan the below given QR code or [click here](#) to go to the form.
- There is no registration fees.

### For any further queries, the applicants may contact:

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