

## I-STEM Software Request - Guide Approval Form

### User Details

- **Name of Researcher:** Vaibhavi Sandip Mahadeshwar
- **User Type:** ☒ Ph.D. Scholar ☐ Postdoctoral Researcher ☐ Bachelor's ☐ Masters
- **Institution Name:** Indian Institute of Technology Bombay
- **Institutional Contact No:** +91-22-2576-7314
- **Research Topic:** Mechanochemistry of Active Structures

### Software Request Details

- **Software Name:** COMSOL Multiphysics
- **Justification for Software Request:** I am currently working on Mechanochemistry of Active Structures wherein the autonomous internal energy causes collective motions, patterns, and flows in self-driven structures. It is an interdisciplinary research area that bridges structural mechanics with chemical engineering and fluid dynamics. To support the finite element analysis required for this work, I have requested access to the Structural Mechanics, CFD, and Chemical Reaction Engineering modules. Additionally, since my research involves the study of orthotropic, anisotropic, and composite materials, I have also requested the Composite Materials module. To facilitate parametric studies and algorithmic control, I have included Livelink for MATLAB. Furthermore, the Optimization module is essential for refining various material parameters within my study.

### Guide/Supervisor Approval

I, Prof. Mandar Inamdar,

- Confirm that the above-mentioned researcher is affiliated with our institution
- Have reviewed the software request and its relevance to the researcher's academic work
- Approve the software request for research purposes

### Approval Confirmation

- I approve the software request
- The software aligns with the researcher's research objectives
- The request meets the institutional research guidelines

Guide/Supervisor Signature: M. Inamdar

Date: 30<sup>th</sup> May 2025

Official Stamp/Seal:

प्राध्यापक-Professor  
सिविल अभियांत्रिकी विभाग  
Department of Civil Engineering  
भारतीय प्रौद्योगिकी संस्थान मुंबई  
Indian Institute of Technology Bombay  
पवई/Powai मुंबई/Mumbai- 400 076 INDIA