

I-STEM Software Request - Guide Approval Form

User Details

- Name of Researcher: Kaushal Konde
- User Type : Bachelor's
- Institution Name : MIT WORLD PEACE UNIVERSITY __
- Institutional Contact No: +91 8329094318
- Research Topic: Safe insulation design for a metal pipe carrying hot fluid

Software Request Details

- Software Name: COMSOL Multiphysics
- Justification for Software Request:

COMSOL's Heat Transfer and Fluid Flow Module allows me to simulate fluid flow and heat analysis:

Conduction through the pipe wall and insulation layers

Convection on the inner (fluid-side) and outer (air-side) surfaces

Radiation to ambient if the pipe is exposed to surroundings

Laminar flow through circular pipe

I can simulate **steady-state** or **transient** heat transfer, helping you understand how the pipe temperature evolves over time under various insulation setups.

- Guide/Supervisor Approval

I, Dr. Pratiksha Khurpade,

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

Approval Confirmation prove the software request

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

Guide/Supervisor Signature: Pratiksha Khurpade

Date: 9/4/2025

Official Stamp/Seal:

