

I-STEM Software Request - Guide Approval Form

User Details

- **Name of Researcher:** Sourav Mondal
- **User Type:** ☐ Ph.D. Scholar ☐ Postdoctoral Researcher ☐ Bachelor's ☒ Masters
- **Institution Name:** Indian Institute of Technology Madras, Chennai 600036
- **Institutional Contact No:** +91 7079881036
- **Research Topic:** Investigation into the Flowrate, Compression and Operational Considerations for Conversion of Natural Gas Pipelines to Hydrogen Service

Software Request Details

- **Software Name:** COMSOL Multiphysics
- **Justification for Software Request:** COMSOL Multiphysics is needed for this project because it allows integrated, physics-based simulations of hydrogen transport in repurposed pipelines, capturing the complex interactions between flow dynamics, compression requirements, structural integrity, and operational conditions. Its ability to handle Multiphysics coupling, run parametric studies, and provide industry-relevant outputs makes it an indispensable tool for evaluating the technical feasibility and safety of hydrogen pipeline conversion.

Guide/Supervisor Approval

I, ARAVIND KUMAR CHANDIRAN (Guide/Supervisor Name),

- 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: _____

Date: 22 Aug 2025

Official Stamp/Seal:

Important Notes

1. This form must be signed and scanned
2. The scanned copy must be uploaded with the software request
3. Electronic signatures are acceptable if from an official institutional email

