

I-STEM Software Request - Guide Approval Form

User Details

- Name of Researcher: Hareesh Muddamalla
- User Type: ☐ Ph.D. Scholar ☐ Postdoctoral Researcher ☐ Bachelor's ☒ Masters
- Institution Name: Indian Institute of science Bengaluru
- Institutional Contact No: +91 80 2293 2361/ 3170, 2360 0566
- Research Topic: Grid tied inverter.

Software Request Details

- Software Name: COMSOL Multiphysics
- Justification for Software Request: I request approval for COMSOL Multiphysics with Heat Transfer, CFD, CAD Import, AC/DC, Pipe Flow, and Structural Mechanics modules to perform heat transfer thermal analysis of our high-power liquid-cooled inverter with cold plates using real CAD geometry. These modules are required to accurately predict temperature hotspots, coolant flow/pressure drop, loss-based heating, under rated and worst-case operating conditions. This simulation capability will minimize thermal risk and improve inverter performance and reliability before hardware validation.

Guide/Supervisor Approval

I, Dr. Samir Hazra

- 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: 15/01/2026

Official Stamp/Seal:


Assistant Professor
Dept. of Electrical Engineering
Indian Institute of Science
Bangalore - 560 012, India

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