

I-STEM Software Request - Guide Approval Form

User Details

- **Name of Researcher:** Balamurugan
- **User Type:** Masters
- **Institution Name:** Indian Institute of Science
- **Institutional Contact No:** 80 2293 2228
- **Research Topic:** Investigation and Fabrication, Capillary Driven Evaporative Micro thrusters

Software Request Details

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

My research topic involves multiphase fluid flow, phase change, capillary driven fluid flow in microchannels, structural analysis, fluid structure interaction, heat transfer and acoustics relevant to aerospace propulsion application. COMSOL Multiphysics helps me to simulate coupled systems involved interface tracking, surface tension effect, stress analysis, heat transfer and multi-phase fluid flow. This helps me to optimize the geometry of the evaporator, microchannels, and nozzle before fabrication and to evaluate temperature distribution, heat losses, and heater performance.

- **Guide/Supervisor Approval**

I, Pratikash Panda (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: Pratikash P. Panda

Date: 09/07/26

Official Stamp/Seal:

Dr. PRATIKASH P. PANDA
Project Investigator