

I-STEM Software Request - Guide Approval Form

User Details

- **Name of Researcher:** Oindrila Banik
- **User Type:** ☒ Ph.D. Scholar, ☐ Postdoctoral Researcher, ☐ Bachelor's, ☐ Masters
- **Institution Name:** National Institute of Technology Rourkela
- **Institutional Contact No:** 0661-246-2020

- **Research Topic:** Optimization of two immiscible fluids within microfluidic device for pharmaceutical studies.

Software Request Details

- **Software Name:** COMSOL Multiphysics
- **Justification for Software Request:** COMSOL Multiphysics advanced module will enable to simulate the mixing of two immiscible fluids under laminar flow conditions in the microfluidic device. Different studies, mass transfer, heat transfer, velocity and pressure gradient, flow rate optimization, channel length optimization will be executed on this software. This study will realize the efficiency of the microchannels for mixing required for drug delivery and drug development applications.

Guide/Supervisor Approval

I, Dr. Earu Banoth,

- 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: _____

TS Banik

Date: 28/07/2026.

Official Stamp/Seal: [Space for Institutional Stamp]

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