

I-STEM Software Request - Guide Approval Form

User Details

- **Name of Researcher:** Aakash Manju
- **User Type:** ☒ Ph.D. Scholar ☐ Postdoctoral Researcher ☐ Bachelor's ☐ Masters
- **Institution Name** : Indian Institute of Technology, Jodhpur
- **Institutional Contact No:** 0291 280 1011
- **Research Topic:** Colloid Facilitated Contaminant Transport in Heterogenous Medium

Software Request Details

- **Software Name:** Comsol Multiphysics (**Basic + Advanced Modules**)
- **Justification for Software Request:** [COMSOL Multiphysics is essential for simulating colloid-facilitated contaminant transport (CFCT) in heterogeneous porous media, as it enables direct coupling of fluid flow, solute transport, and colloid dynamics. Its Porous Media and Subsurface Flow and Chemical Reaction Engineering Modules allow representation of heterogeneity, dual-permeability domains, and reactive transport processes. The PDE interface provides flexibility to implement custom governing equations beyond standard transport models. Advanced visualization and parameter estimation tools support calibration with experimental data and analysis of breakthrough curves.]

Guide/Supervisor Approval

I, Dr. Deepak Swami (Associate Professor, IITJ)

- 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: 25/8/25

Official Stamp/Seal: [Space for Institutional Stamp]

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Indian Institute of Technology Jodhpur
NH 62, Nagaur Road
Karwar, Jodhpur - 342037, Rajasthan, 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