

I-STEM Software Request - Guide Approval Form

User Details

- Name of Researcher: Yuvraj Singh
- User Type: ☐ Ph.D. Scholar ☐ Postdoctoral Researcher ☐ Bachelor's ☒ Masters
- Institution Name: Reva university
- Institutional Contact No: 7760884884
- Research Topic: physics of nanoscale devices

Software Request Details

- Software Name: COMSOL multiphysics
- Justification for Software Request: [Provide detailed explanation of how the software supports your research objectives]

Guide/Supervisor Approval

I, Deepak K (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: Deepak K 5.10.26

Date: 05/10/2026

Official Stamp/Seal: [Space for Institutional Stamp]

Important Notes

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

ml
5/10/2026

Head, Department of Physics
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Kattigenahalli, Yelahanka, Bengaluru - 56

The research on nanoscale devices requires precise finite element analysis and coupled multiscale modeling of quantum confinement effects, carrier transport dynamics, and electrothermal interactions at nanoscale.

COMSOL multiphysics, specifically with its semiconductor module, is essential for solving coupled Schrödinger-Poisson equations, drift-diffusion equations, and heat transfer phenomena within novel device geometries. Access to this software is required to simulate current-voltage characteristics, analyze thermal dissipation, and optimize structural parameters before physical fabrication, ensuring an accurate validation of theoretical models for high performance nanoscale applications.