## I-STEM Software Request - Guide Approval Form

**User Details**

- **Name of Researcher:** Rohit Singh Bhandari
- **User Type:** [✓] Ph.D. Scholar [ ] Postdoctoral Researcher [ ] Bachelor's [ ] Masters
- **Institution Name** : IISc. Bengaluru
- **Institutional Contact No** (+91) 80-2293-3620
- **Research Topic:** Experimental Condensed matter physics (2D materials)

**Software Request Details**

- **Software Name:** COMSOL (BASICS + ADVANCED MODULES)
- **Justification for Software Request -** We need COMSOL with the AC/DC and Structural Mechanics modules for two independent research projects.
  **(1) Graphite Superlattice Electrostatics:** Using the AC/DC module, we will model the potential profile, electric field, displacement field, and surface charge density generated by patterned graphite superlattice gates under applied voltages. This is essential for understanding gate-induced modulation in 2D materials.
  **(2) Strain on Flexible Kapton Substrates**: Using the Structural Mechanics module, I will study the bending-induced strain in devices fabricated on Kapton. This helps optimise strain-engineering on 2D materials.
- **Guide/Supervisor Approval**

I, Chandni U. (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:**

**Date:** 2/12/2025

**Official Stamp/Seal:**

Prof. Chandni U.
Associate Professor
Dept. of Instrumentation & Applied Physics
Indian Institute of Science
Bangalore - 560 012

**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