

I-STEM Software Request - Guide Approval Form

User Details

- Name of Researcher: Pritam Bisi
- User Type: Ph.D. Scholar
- Institution Name: IISER Tirupati
- Institutional Contact No: __+91 877 2500 400__
- Research Topic: Chiral Sensing with Circularly Polarized Light in ion trap setup

Software Request Details

- Software Name: __Comsol Multiphysics__
- Justification for Software Request: We are currently working on the development of an ion trap setup for studying photo-detachment and fluorescence from trapped ions under high vacuum conditions. In this project, we have designed a 16-pole ion trap, along with a mass filter and ion funnel for efficient ion trapping.

To optimize the electrode geometry, simulate electric field distributions, and ensure effective ion confinement and transport, COMSOL Multiphysics is essential. It will allow us to model the RF fields, vacuum flow dynamics, and optical alignment critical to our system performance. The simulations will significantly reduce experimental trial-and-error and improve the reliability and precision of our measurements.

Guide/Supervisor Approval

I, __Dr S Sunil Kumar__ (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: Sunil Kumar

Date: __21.07.2025__

Official Stamp/Seal:

Dr. S. Sunil Kumar
Assistant Professor (Dept. of Physics)
Indian Institute of Science Education and Research Tirupati
Tirupati - 517507, Andhra Pradesh, India.