

I-STEM Software Request - Guide Approval Form

User Details

- Name of Researcher: Naveen Kumar Sain
- User Type: ☒ Ph.D. Scholar ☐ Postdoctoral Researcher ☐ Bachelor's ☐ Masters
- Institution Name : Birla Institute of Technology and Science, Pilani (BITS-Pilani)
- Institutional Contact No: 01596-255221
- Research Topic: Zero Leak Hydraulic Cylinder

Software Request Details

- Software Name: COMSOL Multiphysics *(latest As per availability)*
- Justification for Software Request: We request to support our project on developing a zero-leak hydraulic cylinder. COMSOL's advanced simulation capabilities are essential for hydraulic cylinder simulation, dynamic meshing, also modeling fluid-structure interactions, seal deformation, and pressure dynamics.
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Guide/Supervisor Approval

I, **Professor M S Dasgupta** (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: _____

M. S. Dasgupta

Date: 19.09.2025

Senior Professor
Dept. of Mechanical Engineering
Birla Institute of Technology & Science
PILANI 333031 (Raj.) India

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