

I-STEM Software Request - Guide Approval Form

User Details

- **Name of Researcher:** Partha Sarathi Das
- **User Type:** Ph.D. Scholar
- **Institution Name :** Gauhati University
- **Institutional Contact No:** +91-361-2570415 (Registrar)/ +91-8285333590 (Supervisor)
- **Research Topic:** Mechanical Energy Harvesting Devices using Piezoelectric and Triboelectric Effects

Software Request Details

- **Software Name:** COMSOL Multiphysics
- **Justification for Software Request:** COMSOL Multiphysics is essential for my research on Triboelectric Nanogenerators (TENGs) because it provides advanced simulation capabilities for studying the coupled electrical, electrostatic, structural, and mechanical phenomena involved in energy harvesting devices. TENG performance depends on complex interactions between contact electrification, charge transfer, electric field distribution, material properties, and mechanical deformation, which are difficult to analyze accurately using analytical methods alone.

Through numerical simulations, I will optimize device geometry, material selection, electrode configuration, and operating parameters to enhance power output, conversion efficiency, and device reliability.

- **Guide/Supervisor Approval**

I, Huidrom Hemojit Singh (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: H. Hemojit Singh 05/06/2022

Date: 09-June-2026

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

Dr. Huidrom Hemojit Singh
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