

I-STEM Software Request - Guide Approval Form

User Details

- Name of Researcher : VENKATA KISHORE PODAMEKALA
- User Type : Ph.D. Scholar (Roll No: PF052352)
- Institution Name : National Institute of Technology (NIT) Andhra Pradesh
- Institutional Contact No : (+91) 88612 90060
- Research Topic : Design and Development of Energy Efficient Magnet Free Motor with Advanced Inverter fed Control for Electric Vehicle Applications

Software Request Details

- **Software Name:**
COMSOL Multiphysics (AC/DC Modelling, Heat Transfer Module, LiveLink™ for MATLAB, LiveLink™ for Simulink, and LiveLink™ for AutoCAD)
- **Justification for Software Request:**
COMSOL Multiphysics is used to model, simulate, and optimize the proposed research for usage in electric vehicles. The software offers finite element analysis (FEA) of electromagnetic, thermal, and mechanical phenomena in a single setting. It is used to assess critical performance metrics such as torque, efficiency, power factor, magnetic flux distribution, losses, and temperature rise under a variety of operating circumstances. Parametric and optimization studies are carried out to enhance motor performance by reducing losses and torque ripple while increasing efficiency and torque density. The simulation findings are evaluated using analytical and MATLAB models, allowing for the creation of an optimized, dependable, and energy-efficient motor.

Guide/Supervisor Approval

I, Dr. V SANDEEP, Asst. Professor, NIT Andhra Pradesh,

- 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

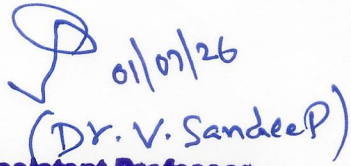
Approval Confirmation

- 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: 01/07/26

Official Stamp/Seal:


01/07/26
(Dr. V. Sandeep)
Assistant Professor
Department of Electrical Engineering
National Institute of Technology (NIT)
Andhra Pradesh, Tadapalligudem-534101

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