

I-STEM Software Request - Guide Approval Form

User Details

- Name of Researcher : SENTHIL KUMAR G
- User Type : [☒] Ph.D. Scholar [☐] Postdoc Researcher [☐] Bachelor's [☐] Masters
- Institution Name : Anna University, Chennai – 600 025
- Institutional Contact No : 044-22357354 7602
- Research Topic : Enhancing transient current loading performance of Hydrogen (H₂) Proton Exchange Membrane Fuel Cell (PEMFC) by improving transient flow behaviour in bipolar plate design to meet transient automotive application.

Software Request Details

- Software Name: COMSOL - Basic + Advanced Module
- Justification for Software Request: This project work involves design of Hydrogen PEM fuel cell with new model bipolar plate to improve transient performance. COMSOL SW will be used for simulating PEM fuel cell performance. CFD simulation and optimisation will be done for bipolar plate flow for Hydrogen, Oxygen and water draining. CFD flow simulation helps to optimise the flow during transient flow of hydrogen, Oxygen and its impact on fuel cell performance current output, starvation of gases flow and water flooding in flow channel. The optimised design will help to improve the transient response of Hydrogen PEM fuel cell in automotive applications.

Guide/Supervisor Approval

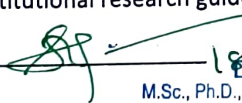
I, ~~Dr.D.Sangeetha~~ (Guide/Supervisor Name),

- 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: _____

 18/03/2025

Dr. D. SANGEETHA
M.Sc., Ph.D., (Polymers), MBA(Tech), M.E., Ph.D.(Manufg.)
Professor

Date: _____

Institute for Energy Studies
Department of Mechanical Engineering
Anna University, Chennai-25

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