

I-STEM Software Request - Guide Approval Form

User Details

- Name of Researcher : MALAIAPPAN SINDHU MUTHU
- User Type : Ph.D. Scholar
- Institution Name : National Institute of Technology Puducherry
- Institutional Contact No: 04368-265235 (Ext. 399)
- Research Topic: Graphene Reinforced Cementitious Materials

Software Request Details

- Software Name: COMSOL Multiphysics
- Justification for Software Request: The primary objective of this study is to analyse how the incorporation of graphene nanoplatelets influences the macro-scale engineering performance of cement concrete. Given the complex multi-phase nature of concrete, experimental validation alone is insufficient to capture the intricate physical interactions at the micro-structural level. COMSOL Multiphysics will be utilized to run critical coupled simulations, specifically focusing on: Mechanical, Durability and Thermal Properties.

Guide/Supervisor Approval

I, Dr. Perumalla Venkata Mallikarjun Rao,

- 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: 03/08/26

Official Stamp/Seal: *

Dr. Perumalla Venkata Mallikarjun Rao
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