

ELANKOVAN M G

ME17S300 | 55/ME/21/038

Linkedin: [linkedin.com/in/elankovanmg](https://www.linkedin.com/in/elankovanmg)

Scholars Profile: scholars.iitm.ac.in/profile/ME17S300

GitHub Profile: [ilailabs.github.io/profile-elankovanmg](https://github.com/ilailabs/profile-elankovanmg)

ABOUT ME

I believe conscientiousness and patience to be my key personality traits. My exposure to research and proficiency in computers helped hone my skills further. I look forward for an opportunity to work in a highly-industry-driven research environment that is both challenging and provides me ample scope to build my career.

EDUCATION

Program	Institution	%/CGPA	Year
M.S.(Interdisciplinary)	Indian Institute of Technology Madras, Chennai	7.8/10	2020
B.E.(Mechanical)	Thanthai Periyar Govt. Institute of Technology, Vellore	7.32/10	2016
Class XII (TN State Board)	Velammal Matric. Hr. Sec. School, Surapet	92.9%	2012
Class X (Matriculation Board)	Velammal Matric. Hr. Sec. School, Surapet	91.8%	2010

COURSEWORK

Application of Molecular Dynamics (9/10)

Finite Element Analysis (8/10)

Foundations of Computational Materials Modelling (8/10)

Structure & Properties of Grain Boundaries and Interfaces (7/10)

Advanced Mechanics of Solids (7/10)

Innovative Entrepreneur-I (9/10)

Urban Resilience (9/10)

Winter School on Social Entrepreneurship (8/10)

SKILLS

Programming Languages	Python(intermediate)
Scientific Computing	MATLAB(proficient), SageMath, Mathematica
CAD Modelling	CATIA V5(proficient), SolidWorks, NX-CAD
Simulation Tools	Molecular Dynamics using LAMMPS, NX-Nastran, Ansys
Documentation	Markdown(proficient), LaTeX(intermediate)

WORK EXPERIENCES

Freelance Educator(Engineering Mathematics)

March 2018 - Current

- 300+ Hours of classroom teaching experience in the following topics: Determinants & Matrices; Calculus & Differential Equations; Vector Calculus; Functions of Complex Variables; Transforms; Numerical Methods; Applied Probability; Material Science

Project Lead(PrepLeaf Preparations Pvt. Ltd)

June 2020 - Current

- **Project OnlineTangedco:** Conceived a project idea and collaborated with PrepLeaf Preparations Pvt. Ltd as our technology partner
- Also responsible for strategic marketing and sales of the product

Project Associate(Chennai Urban Resilience Program)

May 2019 - July 2019

- **Social Project:** Closely collaborated with international student team to address solutions related to Chennai's solid waste management. This project was organized and sponsored by
- **University of Cambridge, IIT Madras, Yale NUS College, University of British Columbia**

Teaching Assistant(IITM)

- ME1480 Engineering Drawing, ME5201 Computational Methods in Engineering

ACADEMIC RESEARCH

Atomistic Simulations of Grain Boundary(GB) Interfaces using MD Simulations

- We computed the grain boundary energy curve of Si GBs with $\langle 100 \rangle$ and $\langle 110 \rangle$ misorientation axis. Further, these models are used to study the thermal heat transport properties. We used NEMD simulation technique to estimate the thermal resistance of the GBs

Elastic Phonon wave-packet scattering at 2D Grain Boundaries using Molecular Dynamics

- To get deeper insights into the mechanism of heat transport at the interfaces, the role of phonon wave-packet scattering is also studied in 2D grain boundaries modeled using LJ potential.

PROJECTS

- Investigation and Design of customized Airfoil for Low-Speed Vertical Axis Wind Turbine (UG)
- Kinetic Energy Recovery System Adopted Bicycles (UG Mini Project)
- Conceptual Design of Electromagnetic Damper for Motorcycle Suspension (Hobby Project)
- Numerical solution for plane problems using Finite Element approach. (ME6800)
- Uniaxial Tensile Test of Single Walled Carbon Nanotube: A MD approach (AM6512)
- MD Simulation of Dislocation Dipole (ME7244)
- Urban Horticulture Project (Social Project)

PUBLICATIONS

- **Elankovan M G**, Dr A. Sai Ramesh, 'Conceptual design of Electromagnetic Damper for motorcycle suspension', *IJERT*, Vol.4, Issue 08.

TRAINING & CERTIFICATIONS

- **Master Diploma in Automotive Design** (CADD Center-Chennai, March-2016)
(Autocad 2D, CATIA V5, CREO 2.0, NX-CAD, NX-CAM, NX-NASTRAN, ANSYS)

ACADEMIC ACCOMPLISHMENTS

- Selected in **International Winter School on Social Entrepreneurship**, IIT Madras
- **Winner** : Paper presentation in National Technical Symposium-2014, CIPET, Chennai
- **Best Paper presentation award** National Technical Symposium 2015, TPGIT, Vellore
- **Winner** ; CAD Modelling in National Technical Symposium-2014, CIPET, Chennai
- **Winner** ; CAD Modelling in National Technical Symposium-2015, Velammal Engg. College
- **Winner** ; CAD Modelling in National Technical Symposium-2015, Adhiparasakthi College of Engg.

OTHER INTERESTS

- Indian classical music & Guitar player
- Cycling, Cooking and Gardening