

Phanindra S P

Doctoral student

Detail-oriented and an analytical individual with strong organizational skills. Experienced in computational modeling and simulation across various disciplines.



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EDUCATION

PhD: Computational Modeling and Simulation IIT Madras

07/2019 - Present

GPA: 9.00

PhD thesis

- Developed a novel particle-based model in C to simulate crack growth in solids interacting with fluids.
- Demonstrated failure of non-linear elastic solids interacting with fluids for the first time in the literature (Manuscript under review).
- Implemented a full ANN(neural network) from scratch in C to learn inter-particle force from simulation data.

B.Tech(Hons.)+M.Tech: Engineering Design, Minor: Physics IIT Madras

07/2014 - 05/2019

GPA: 9.19

Courses/Dual Degree Project

- Coursework in Data Structures and Algorithms, Stochastic processes in Science and Engineering, Statistical mechanics, Optimization methods in Engineering Design, Control of automotive systems, Quantum physics & Principles of Economics.
- Presented a paper at IHMTC 2019 (International Heat and Mass Transfer conference) on heat exchanger design using space-filling fractal curves as a part of final year project.

WORK EXPERIENCE

Industrial Intern Siemens Technology, Bangalore

12/2017 - 05/2018

Achievements/Tasks

- Developed a novel simulation framework to predict remaining life of a bearing due to electric erosion.
- Used coupled electric-thermal analysis and FEM to develop the model.
- European and US patents granted (Patent No: EP3870948B1, US11709112B2).

Summer Research Intern TU Munich, Germany

05/2017 - 07/2017

Achievements/Tasks

- Carried out numerical modeling of a PV panel integrated with a geothermal heat exchanger.
- Tuned the sensitive parameters using a Genetic algorithm and demonstrated an efficiency improvement of 1.5%.

SKILLS

Multi-physics modeling

Programming

Numerical methods

FEM

CFD

ANSYS

Neural networks

Optimization

Linux

Communication

Presentation

Technical writing

Critical thinking

POSITIONS OF RESPONSIBILITY

Placement coordinator (IITM) (05/2017 - 12/2017)

Coordinated with companies during campus recruitment.

NSS Project representative

Headed a team of 10 students for an animal welfare project (PAWS)

ACHIEVEMENTS

Best academic record in Dual Degree Programme, IIT Madras (2019)

Dr. K Gopinath and Padmini Gopinath Prize (CGPA: 9.19)

Selected for the prestigious PMRF programme

PMRF: Prime minister's research fellowship (2019-2023)

Secured an All India Rank of 678 (General category) in JEE Mains 2014

Among 13.5 lakh students (99.8 percentile)

Achieved fourth mark statewide in the Intermediate first year exam

Top 0.04 percentile in AP & Telangana states (in 2013)

LANGUAGES

Telugu

Native or Bilingual Proficiency

Hindi

Full Professional Proficiency

Tamil

Full Professional Proficiency

INTERESTS

Carnatic music

Stargazing

Philosophy