Credentials

Ph.D. in Thermal Science (Mechanical Engineering) with more than 8 years of industry experience in software development at Dassault Systmes, PTC, and ESI Group.

Skill Sets

Domain: Numerical Methods, Fluid Mechanics, Heat Transfer, Porous Media Flow
Language: C/C++, Python
Open-Source: Gerris, Basilisk, OpenFOAM
Commercial Software: SolidWorks, Creo, CADDS5, Ansys-Fluent, ICEM-CFD, MATLAB/Simulink

Teaching Interests

- Fluid Mechanics & Fluid Machines
- Convective Heat Transfer
- Numerical Methods for Mechanical Engineers
- Computational Heat Transfer and Fluid Flow
- Thermodynamics
- Heat and Mass Transfer
- Design of Energy Systems
- Design of Hybrid Electric Vehicles

Research Interests

Numerical schemes, Machine learning in fluid mechanics and heat transfer, Transport phenomena in porous media, Energy systems design, Hybrid electric vehicles

Education

- **Ph.D. (Mechanical Engineering)**, I.I.Sc. Bangalore
- **M.S. (Mechanical Engineering)**, I.I.T. Kharagpur

Doctoral Thesis

Developed numerical framework for the simulation of transport phenomena in conjugate porous-clear system. Subsequently, studied shear driven flow as well as natural and mixed convection in the cavity partially filled with homogeneous/heterogeneous porous material.

Professional Experience

CDS, FSID, I.I.Sc. Bangalore – Post Doctoral Fellow

- For Foundation model - Data set generation

3DPLM Software (Dassault Systems), Pune – Senior Engineer

- For SolidWorks - Linear/Torsion Spring design, Swept Volume to check for interference, Trace path for CAM design, Traced Drag

Parametric Technology Corp., Pune – Senior Engineer, Engineer-2

- For Creo - Importation of AutoDesk Inventor
- For CADDS 5 - Provision of multiple butt weld lines, Creation of structural plates on closed surface, Generation of unfolded structural manufacturing drawing

Mindware Engineering (ESI Group), Pune – Engineer Consultancy

- For UH3D - Reorientation of elements normal of an unstructured mesh imported from ICEM-CFD
- For SimPack - Development of Octree mesh to calculate view factor

SRIC, IIT Kharagpur – Junior Research Fellow

- For BRNS, Mumbai - Development of computer code to simulate aerosol transport in nuclear reactor coolant system