Prashant Metri

CFD-CAE Engineer & ERASMUS FELLOW

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in/metrip

Profile

I am experienced as a research engineer and CFD engineer, have a solid understanding of the concepts of Fluid Dynamics and Heat transfer. Committed to delivering innovative solutions for complex fluid flow and thermal challenges. Have a proven track record of using computational fluid dynamics (CFD) software to analyze and optimize fluid flow patterns, heat transfer rates, and turbulence effects. Experience includes implementing simulations for thermal analysis.I am proficient in using industry-leading software such as ANSYS Fluent CFX, and STAR-CCM+ to model and simulate fluid dynamics and heat transfer phenomena. Highly-motivated employee with desire to take on new challenges. Strong worth ethic, adaptability and exceptional interpersonal skills. Passionate about staying current with advancements in the field and applying innovative solutions to engineering challenges.

Areas of Expertise

Fluid dynamics, Heat transfer, CFD and Thermal analysis

Professional Experience

CAE Engineer Trainee, *(BETA CAE Systems India Pvt. Ltd)* **Bangaluru, INDIA** *01/2024 - present*

- Developed and implemented CAE analysis plans for product design verification.
- Created CAE models from CAD data, including mesh generation and boundary conditions.
- Collaborated with other engineering teams to ensure accuracy of CAE models.
- Provided technical support to engineers in order to improve overall product quality.
- Expertise in ANSA for Automotive FE Modelling.
- Hands on experience in Plastic and BIW components.
- Ability to work independently in a team and delivering high quality work.
- Enthusiastic learner who quickly grasps concepts and technical skills.

CFD Engineer Trainee, *(Niharika Institute of Computational Engineering)* **Bangaluru, INDIA** *09/2023 - 12/2023*

- Focused on flow and heat transfer in aerospace and manufacturing industry.
- Implement physics models into the CFD tools to expand their capabilities.
- Independently perform all stages of the Fluid-dynamic, and Heat Transfer project and performed the solution for Steady state and Transient.
- Generation of computational meshes and performing CFD analyses using standard commercial mesh generators.
- The latter includes monitoring convergence of both steady state and transient simulations.
- Generate reports, specifications, and 3D modelling of the obtained CFD results and present them verbally in meetings.

Assistant Professor, *(Dept. of Mechanical Engineering, WIT, Solapur)* **Solapur, MH, INDIA** *12/2020 - 05/2023*

- Taught undergraduate and graduate courses in mechanical engineering, including subjects such as fluid mechanics, and heat transfer.
- Supervised graduate and undergraduate research project work.
- Participate in outreach activities, such as hosting workshops, presentations. and Engage in professional development activities, such as attending workshops, conferences, and seminars to stay current with the latest advancements in the field.

CFD Projects

Rotor Vaccum brazing furnace,

- Thermal radiation analysis on vacuum furnace heating and cooling cycle.

High temperature composite processing unit,

- Thermal radiation analysis on high temperature special resins on heating cycles.

CFD modelling for heat transfer of two-phase loop thermosyphon (TPLT),

- Charecteristics and mechanism of two-phase loop thermosyphon high filling ratio.
- TPLT with high filling ratio has good heat performance.

FEM Projects: Tool : ANSA 24.1.0

FE Modelling of BIW Parts, *(Body side outer, Floor panel, Rocker beams, Shock tower, B- pillar and Closures)*

- Performed Geometry checks and geometry clean-up for received CAD model.
- Mid surface extracted properly and assigned respective property for the model.
- Created Washers at Hole region.
- Generated Mesh as per given Mesh parameters and Quality parameters.
- Maintained good mesh flow and cleared quality failure elements.

FE Modelling of Plastic parts, *(Door trim, Pillar trim, front door trim, dep box, Rear door trim, blaster front door)*

- Performed Geometry checks and geometry clean-up for received CAD model.
- Mid surface extracted properly.
- Generated Mesh as per given Mesh parameters and Quality parameters.
- Maintained good mesh flow and cleared quality failure elements.
- Assigned Proper thickness as per the CAD model.

Awards & Honours

- Erasmus Mundus fellow, for exchange researcher. (2015) - Indo-Europe
- Research fellow, under UGC major research project, Ministry of Human Resource Development, Government of India (UGC.Ltr.No.F.No.40-23/2011-2012). (2012) - UGC

Education

Post-doctoral Fellow *Mälardalen University, Sweden* **Västerås, Sweden** *2020*

"Fluid flow and Heat transfer simulations for industrial applications".

Doctoral Researcher *Mälardalen University, Sweden* **Västerås, Sweden** *2017*

Thesis: **"Mathematical Analysis of Forced Convective Flow Due to Stretching Sheet and Instabilities of Natural Convective Flow"**

Master's in Applied Mathematics/Fluid Mechanics *Gulbarga University* **Gulbarga, India** *2011*

Thesis: **"Numerical investigation concerned to boundary layer flow and heat transfer in a nano-liquid film over an unsteady stretching surface"**

Skills

- **ANSYS SPACECLAIM**
- **ANSYS FLUENT**
- **CFX-POST**
- **STAR CCM+**
- **BETA META EPYLYSIS: 24.1.0**
- **MATLAB and C**

Languages

- **English** [Native]
- **Kannada** [Native]
- **Hindi** [Native]
- **Marathi** [Mid-Range]
- **Swedish** [Beginner]