

Jayagowri Tharanitharan

Associate Engineer (CFD)

✉ jaya8tharan@gmail.com
☎ 9710735736 / 7204376387
📍 Chennai

About Me

Motivated and detail-oriented CFD engineer with 4+ years of experience. Skilled in using a variety of CFD software, including ANSYS Fluent, CFX, CFD++ and ICEM CFD. Proven track record of individually handling and successfully delivering projects. Enthusiastic about learning new techniques and leverage my skills to contribute efficiently.

Education Background

- **DIAT, Pune**
MTech, Aerospace, 2019
- **Jeppiaar Engineering College, Chennai**
B.E., Aeronautics, 2016

Technical Skills

- CFD software: ANSYS Fluent, ANSYS CFX, CFD++
- CAD software: Space claim, CATIA
- Meshing software: ICEM CFD, FLUENT
- Post-processor: CFD Post, Tecplot
- Programming languages: C++, MATLAB
- Operating systems: Windows, Linux (HPC)

Areas of Experience

- Aerodynamics
- Flight Mechanics
- Computational Fluid Dynamics
- Fluid Flow
- Conjugate Heat Transfer
- Multiphase/ Multispecies Flow Modeling
- Rotating Component Modeling

Courses

- CFD Foundation Course, 2022
- CFD and design of turbomachines, 2022

Professional Experience

Newell Brands | Associate Engineer

Jun' 2021 – Present

Key responsibilities:

- Responsible for carrying out CFD simulations in research and NPD projects
- Multiphase Modeling, Heat Transfer studies
- Collaborated with cross-functional teams to ensure the accuracy and feasibility of CFD results
- Mentored junior CFD engineer on the team

3D Engineering | Simulation Engineer

Apr' 2021 – Jun' 2021

Key responsibilities:

- Technical Support to ANSYS Clients on ANSYS Fluent
- Assisted in Problem solving

Aeronautical Development Agency | Project Assistant

Nov' 2018 – Apr' 2021

- Key responsibilities:
- 3D aircraft unstructured and structured (Blocking) meshing
- CFD computation of aerodynamic loads of stores on aircraft
- Compute trajectory using 6DOF code
- Multi species modeling, External Aerodynamics CFD, Compressible flow dynamics
- Developed codes for processing CFD results for trajectory computation (MATLAB)

Achievements

- Gold Medal in Masters
- University 3rd Rank in Bachelors
- Awarded for facilitating NDA between Newell and IIT Madras
- Cleared GATE 2016 with a score of 481 and GATE 2018 with a score of 553
- Best Designer Award in "Modeling and fabrication of RC Aircraft" workshop held in JEC, 2014

Key Projects

- **Eulerian Multiphase modeling** of porous medium to simulate capillary imbibition
- **Conjugate heat transfer** study of consumer appliances like CROCKPOT, Thermos mugs
- Design comparison and optimization study of **blade profiles of blender fan** for better CFM
- Tank flushing using **Multiphase VOF model** (workshop)
- **Missile plume** characteristics simulation to study the impact on aircraft components
- **Aerodynamic loads** prediction of stores for trajectory prediction through 3D external flow simulation over aircraft
- Development of **MATLAB code** to post-process CFD results and predict trajectory by transforming loads and moments to the body axes of missile
- CFD study of **labyrinth seals** in micro gas turbines to mitigate leakage flow rate