Saeed Parvar

Computational Scientist

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Highlights

Soft Skills
-Excellent management and leadership skills.
-Encourage and value collaboration and input from all team members.
-Team-oriented and problem-solving personality
-Excellent communication skills

CFD Package:
OpenFoam, RheoFoam, Ansys, Fluent, Gambit, COMSOL, AutoCAD.

Software Skills
Programming: Fortran, MATLAB, C++, Python, Anaconda, Visual Studio, HTML, and Git.

Summary

A professional computational scientist that has considerable experience in mathematical, statistical, and machine-learning methods to solve complex problems in various engineering fields, more than ten years of experience in code developing and using CFD packages, data analysis and visualization, and over five years of experience as sales manager, business strategy, and training new employees and work as Mechanical Inspector with (grade 3).

Education

FEUP, University of Porto, Portugal.
Ph.D.: Mechanical Engineering,
Thesis: LES model for inhomogeneous wall-free turbulent flows

Tarbiat Modares University, Iran.
M.Sc: Aerospace Engineering
Thesis: Numerical Simulation of Reactive flows

Work History

Senior CFD Engineer, KTH, Stockholm, Sweden (2021-Present)
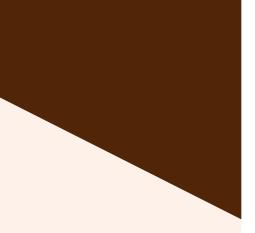**Project titles**

1. The numerical simulation of ElastoViscoPlastic fluid flows past a porous medium with random geometry. (Collaboration with Strathclyde University, UK)
2. Heat transfer of the ElastoViscoPlastic fluid in a cavity problem. (Collaboration with Concordia University, Canada).
3. Utilizing machine learning methods, POD and DMD to reduce the complexity of the model to analyze flow structure and features. (In collaboration with the Technical University of Madrid, Spain).
4. Direct Numerical Simulation of the non-Newtonian fluids flow past a circular cylinder (Collaboration with Luca Brandt Group, KTH).
5. Investigating the ElastoViscoPlastic fluids flow past a confined cylinder (elastic turbulence) (Collaboration with the University of Porto, Portugal).

CFD Engineer, INEGI, Porto, Portugal (2020-2021)
Project title:

1- The numerical and analytical study of boundary (and heat transfer) and mixing layers, and jet flow of FENE-P fluid by RheoFoam toolbox of Openfoam (Collaboration with the Instituto Superior Técnico, Portugal).

FCT fellow at FEUP, Porto, Portugal (2017-2020).
Project title:
1- Developing a Large eddy simulation model for inhomogeneous wall-free turbulent viscoelastic fluid flows (Collaboration with the Instituto Superior Técnico, Portugal).

Left column

- Proficiency in Troubleshooting and debugging,
- Performance and scalability optimization,
- Shell scripting

Machine learning
R, SQL, Power Bi

HPC:
PBS and Slurm, MPI, OpenMP, OpenACC.

Other software packages:
Tecplot,
Paraview,
Maple.

Language:
English   Fluent
Portuguese Medium
German   Basic
Persian   Native
Turkish   Medium

Hobbies:
Tennis
Cycling
Hiking
Running
Travelling Cooking
Reading
Podcast

Right column

2- Renewable energy systems
   a. Wind Energy in Urban Environment: concepts, technology, and potential.
   b. High-temperature thermal energy storage for thermoelectric solar power plants
   c. Energy storage for thermoelectric solar power plants
   d. The production and trade of wood pellets
   e. Importance of solid oxide fuel cells
   f. The Energy Return of Investment of Anaerobic Digestion
   g. The Production of Bioethanol; Pros and Cons

These projects aimed to comprehensively study the concepts and technology of various renewable energy sources and assess their potential for energy generation.

Visiting Engineer at Coppe, (UFRJ), Brazil, (2018)
Project title:

1- Direct numerical simulation of turbulent non-Newtonian flow in a rod-roughened channel.

Area Sales Manager, Hirkan, Guilan Iran (2012-2017)

1- Assisted in managing all department operations, employee performance reviews, and health standards maintenance.
2- Perform monthly financial management and manage the product supply chain and stock orders to reduce costs and maximize profit margins.
3- Assigning tasks to sales representatives and maintaining office supplies and mentoring new employees: led their-field training and developed analytical and sales acumen as well as corporate experience.
4- Handle b2b and inside sales with corporate companies and build relationships with existing as well as some new customers to improve sale productivity.
5- Proposing strategic planning and roadmap to achieve profitability targets, client satisfaction, and employee welfare over five years.

Mechanical Inspector, Guilan Construction Engineering organization, Iran (2012-2017)

As a mechanical inspector, my main duty was to ensure the safety of people, property, and public welfare by overseeing the design, construction, installation, and maintenance of piping systems for water, wastewater, and natural gas. I was responsible for examining the quality of materials, location, and operation of these systems. After inspecting and verifying their compliance with safety regulations, I reported my findings to the construction engineering organization, which issued the building certificate. (Certificate: Building Mechanical Installations Engineering (Grade 3) – Design, Supervision)

Accomplishment

1- Awarded the Euro HPC Regular Access Grant (20.000.000 core hours on MeluXina CPU)
2- Published 6 papers during Ph.D. in the Q1 ISI journal and graduated with GPA (A).
3- Full fund visiting grant from COPPE, UFRJ (2018).
4- Full fund FCT scholarship for Ph.D. (2017).
5- Best paper award, ISME 2015 (Iran).
6- Nominated thesis by Iranian Combustion Institute (ICI).