Saeed Parvar

Research and development Scientist

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Highlights

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

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

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

Machine learning
R, SQL, Power Bi

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

Summary

- Experienced research and development scientist with expertise in computational science, data analysis, visualization, and utilizing simulation, high-performance computing, and machine learning methods to solve complex problems in engineering. Skilled in Fluid dynamics (microfluidics), Heat Transfer, Combustion (chemical reaction), rheology, and Renewable energy. Proficient in algorithm development and using computational fluid dynamics packages.

- Additionally, accomplished sales manager with over five years of experience in business strategy, sales, and employee training. Demonstrated ability to drive sales growth, develop effective strategies, and mentor team members.

- Combining technical proficiency with strong leadership and communication skills, I am well-equipped to contribute to research and development projects and excel in sales management roles.

Work History

Senior Simulation Engineer, KTH, Stockholm, Sweden (2021-Present).

- The simulation of ElastoViscoPlastic fluid flows past a porous medium.
  (Collaboration with Strathclyde University, UK)
- Heat transfer of the ElastoViscoPlastic fluid in a cavity problem.
  (Collaboration with Concordia University, Canada).
- Utilizing machine learning methods, POD and HoDMD
  (Collaboration with the Technical University of Madrid, Spain).
- The Simulation of the non-Newtonian fluids flow past a circular cylinder
  (Collaboration with Luca Brandt Group, KTH).
- The simulation of ElastoViscoPlastic fluid flow past a confined cylinder (elastic turbulence)
  (Collaboration with the University of Porto, Portugal).

R&D Engineer, INEGI, Porto, Portugal (2020-2021).

- 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).

- Developing a Large eddy simulation model for inhomogeneous wall-free turbulent viscoelastic fluid flows (Collaboration with the Instituto Superior Técnico, Portugal).
- 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).

- The simulation of turbulent non-Newtonian flow in a rod-roughened channel.

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

- Assisted in managing all department operations, employee performance reviews, and health standards maintenance.
- Perform monthly financial management and manage the product supply chain and stock orders to reduce costs and maximize profit margins.
- Assigning tasks to sales representatives and maintaining office supplies and mentoring new employees: led their-field training and developed analytical and sales acumen.
- Handle b2b and inside sales with corporate companies and build relationships with existing as well as some new customers to improve sale productivity.
- 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).

- 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.
- Conduct thorough inspections to examine the quality of materials, location, and operation of these systems.
- Report inspection and verification results to the construction engineering organization for the issuance of building certificates.
- Hold a Building Mechanical Installations Engineering (Grade 3) certificate, demonstrating proficiency in system design and supervision.

Lecturer at Payam Nour University of Rasht, Iran (2012-2017).

- Teaching activities: Thermodynamics, Heat and mass transfer, Industrial drawing and AutoCAD.

Education

- **Ph.D.: Mechanical Engineering (2021).**
  FEUP, University of Porto, Portugal.
  Thesis: LES model for inhomogeneous wall-free turbulent flows

- **M.Sc: Aerospace Engineering (2010).**
  Tarbiat Modares University, Iran.
  Thesis: Numerical Simulation of Reactive flows

- **B.Sc: Mechanical Engineering**
  Guilan University, Iran (2007).
  Thesis: Tidal Power systems.

Accomplishment

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