

ALI BOZORGZADEH

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EDUCATION

2018 – 2022

M.Sc. in Mechanical Engineering, BABOL NOSHIRVANI UNI. OF TECH.

- Thesis Topic: Investigation of the Effect of Flow Pulsation and Increased Discharged Voltage on Desalination and Energy Usage of Capacitive Deionization. ([source code](#))
- GPA: 3.65/4

2013 – 2018

B.Sc. in Mechanical Engineering, BABOL NOSHIRVANI UNI. OF TECH.

EXPERIENCE

2025 – present

Independent Open Source Development & Contribution

- [solids4foam/fluid-benchmarks](#): Contributed benchmark cases, verification studies, documentation and code development.
- [solids4foam/solids4foam](#), [OpenFOAM](#), [preCICE \(CalculiX adaptor\)](#): documentation, minor bug report and bugfix contribution

2022 – 2023

Research Assitant, BABOL NOSHIRVANI UNI. OF TECH.

- Particle separation using dielectrophoresis and a gradient in momentum due to a wall-mounted obstacle. ([paper](#), [source code](#))

2022

Teaching Assitant, BABOL NOSHIRVANI UNI. OF TECH.

- Prepared a series of [video tutorials](#) on developing custom OpenFOAM code.

PUBLICATIONS

2023

[1] Reza Derakhshan, **Ali Bozorgzadeh**, and Abas Ramiar. Numerical Investigation of Ternary Particle Separation in a Microchannel with a Wall-Mounted Obstacle Using Dielectrophoresis. *Journal of Chromatography A* (2023) DOI: [10.1016/j.chroma.2023.464079](https://doi.org/10.1016/j.chroma.2023.464079)

2020

[2] Masoud Outokesh, Seyed S. M. Ajarostaghi, **Ali Bozorgzadeh**, and Kurosh Sedighi. Numerical evaluation of the effect of utilizing twisted tape with curved profile as a turbulator on heat transfer enhancement in a pipe. *Journal of Thermal Analysis and Calorimetry* (2020) DOI: [10.1007/s10973-020-09336-0](https://doi.org/10.1007/s10973-020-09336-0)

COMPUTER SKILLS

<i>Programming Languages</i>	C, C++, Python, Bash, L ^A T _E X, familiar with: x64 Assembly , Fortran, Typst, Lua, Elisp, JavaScript, Java
<i>Libraries/Specifications</i> <i>CFD & CAD</i>	Matplotlib, Numpy, Sympy, familiar with: OpenGL , OpenMP, OpenMPI, OpenCL OpenFOAM, Paraview, FreeCAD, Inkscape, gnuplot familiar with: Ansys Fluent, Blender
<i>Other tools</i>	Linux, Git, Docker, SSH, Tmux

PERSONAL PROJECTS

la-cpp	C++ An Eigen-like linear algebra library. It's a header only template library that uses expression templates. (WIP)
ghexp	Bash A commandline interface to GitHub Search
oxpr	Bash A shell script that downloads pronunciations of a English words

CERTIFICATES

ML Specialization, [Cert.](#)

- Supervised Machine Learning: Regression and Classification, [Cert.](#)
- Advanced Learning Algorithms, [Cert.](#)
- Unsupervised Learning, Recommenders, Reinforcement Learning, [Cert.](#)

LANGUAGES

English

- IELTS: 7.0/9.0 (**L** 7.5, **R** 8.0, **W** 6.0, **S** 7.0) (2023)
- TOEFL: 5.5/6.0 (**L** 5.0, **R** 6.0, **W** 5.0, **S** 5.0) (Mock test, June, 2026)
- TOEFL: The official test, scheduled on July, 1, 2026

Persian

Native language

REFERENCES

Abas Ramiar	Supervisor, co-author (associate professor)
Kurosh Sedighi	Course instructor, co-author (associate professor)
Amirhosein Ghasemi	Thesis advisor (assistant professor)