Ali **Bozorgzadeh**
Mechanical Engineer

@ alixbozorgzadeh@gmail.com https://abzrg.github.io
LinkedIn github.com/abzrg Google Scholar CFD-Online

Education

2022–present **Research Assistant**, Babol Noshirvani University of Technology

2018-2022 **M.Sc. in Mechanical Engineering,** Babol Noshirvani University of Technology,
- Thesis Topic : *Numerical Investigation of the Effect of Flow Pulsation and Increased Discharged Voltage on Desalination and Energy Usage of Capacitive Deionization*
- Supervisor : Dr. Abas Ramiar
- GPA : 3.4 / 4.0

Capacitive Deionization | Electrical Double Layer | Modified Donnan | OpenFOAM

2013–2018 **B.Sc. in Mechanical Engineering**, Babol Noshirvani University of Technology

Research Interests

CFD	Numerics, Programming, Machine Learning
Microfluidics	Particle Manipulation, Electrokinetic, Dielectrophoresis
Multiphase Flow	Lagrangian Particle Tracking
Other	Turbulence, Fluid-Structure/Solid Interaction

Publications

2023 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) : 464079.

2020 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 140, no. 3 (2020) : 1537-1553.

Test Scores

- **IELTS** : **7** { Speaking : **7**, Listening : **7.5**, Reading : **8**, Writing : **6** } – July 2023
- **GRE** : To be taken on June 3, 2024

Teaching Experiences

- A collection of screencasts (in Persian) demonstrating development of custom OpenFOAM codes within a Linux command-line environment.
  [*Sep 2022*, Babol Noshirvani University of Technology]
  - *Shell*
  - *OpenFOAM High Level Programming*

Certificates

- Supervised Machine Learning – Regression and Classification (*link*)
- Advanced Learning Algorithms (*link*)

</> Programming Languages

C	●●●●●
C++	●●●●○
Python	●●●●●
Assembly	●●●○○
POSIX shell	●●●●●
LaTeX	●●●●○

Tools

- **Version Control** : Git
- **Build, Test & Analyze** :
  - `make`, `CMake`
  - Google Test, Catch2
  - `gdb`, `lldb`, `valgrind`, clang sanitizers, `clangd`, `clang-tidy`, `clang-format`, `bear`, `ctags`
- **Coreutils** : `grep`, `find`, `sed`, `awk`, `xargs`, ...
- **Misc.** : `vim`, `tmux`, SSH, Docker

</> Libraries & Frameworks

- **Python** : NumPy, Matplotlib, Seaborn, Pandas, Pytest, Scikit-Learn, PyTorch
- **C++** : OpenFOAM, OpenGL, OpenMPI, OpenMP

Engineering Softwares

- FreeCAD, Ansys Design Modeler
- blockMesh, snappyHexMesh
- Paraview, Gnuplot, Inkscape

References

Dr. Abas Ramiar
Associate Professor, Babol Noshirvani University of Technology
@ aramiar@nit.ac.ir
Google Scholar

Dr. Kurosh Sedighi
Associate Professor, Babol Noshirvani University of Technology
@ ksedighi@nit.ac.ir
Google Scholar

Dr. Mohsen Sheikholeslami Kandelusi
Associate Professor, Babol Noshirvani University of Technology
@ mohsen.sheikholeslami@nit.ac.ir
Google Scholar