

Reihaneh Toutouni, Ph.D.

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[rtoutouni.github.io](https://github.com/rtoutouni)

Summary

- Ph.D. in Petroleum Engineering, MSc in Electrical Engineering, with 9 years of research experience, and 7 journal publications.
- Expertise in computational chemistry, molecular dynamics simulations, and machine learning for precise model development, resulting in 3 publications.
- Exceptional communication and documentation skills, proficient in presenting data and writing comprehensive reports.

Skills

Python	Matplotlib	Presentation Skills
C++	GROMACS	Data Analysis
R	CHARMM	Method Development
MATLAB	CFD	Collaboration
SQL	COMSOL	Technical Writing
Git	AutoCAD	Project Management
PyTorch	Spice	People Management
Pandas	LaTeX	Problem-Solving
Scikit-learn		Critical Thinking

Work Experience

Research Assistant, 2017-2022

Center of Innovation for Flow Through Porous Media, University of Wyoming

- Versatile researcher; developed surface tension prediction models for CO₂ and alkane mixtures using advanced ML and programming techniques, achieving 97% performance rate.
- Ability to manage projects; investigated hydrocarbon mixtures liquid-vapor interfacial properties using experimental technique and molecular dynamics simulations, leading to 5 publications.

Research Assistant, 2013-2016

MEMS and NEMS Lab and TCAD Lab, University of Tehran

- Experienced in collaborating with cross-functional teams; designed, simulated, and fabricated a microfluidic device, resulting in 3x higher CTCs separation efficiency. Presented findings at 2 conferences and published 2 journal papers.
- An expert innovator and fast-learner with an ability to self-teach; built large-area UV lithography system for precise fabrication of microstructures, achieving 1-micron minimum feature size.

Education

Ph.D. in Petroleum Engineering, University of Wyoming

M.Sc. in Electrical Engineering, University of Tehran

B.Sc. in Engineering Science, University of Tehran (First Rank)

Publications

<https://scholar.google.com/citations?user=Jj35q7AAAAAJ&hl=en>

Scholarships and Awards

- Full scholarship and stipend, University of Wyoming, 2017-2022.
- President of the Persian Student Association, University of Wyoming, 2017-2018.
- Full scholarship, University of Tehran, 2009-2016.
- First place in Engineering Science class of 2013, University of Tehran, 2013.