

Reza Koohizad

Contact

Residence:

Tehran, Iran

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Technical Skills

- Microsoft Office
- Ansys Fluent, Meshing
- MATLAB, C++
- CATIA, AutoCAD, Autodesk Inventor
- Revit MEP
- Abaqus
- PDMS

Languages

Persian: Native

English: Fluent

Profile

Mechanical engineer and Researcher in the field of Experimental and Computational Fluid Dynamics. Substantial background in Industrial projects and Experimental research challenges. Well-versed in Simulation and Analysis with Ansys Fluent and Coding with MATLAB. So passionate about exploring new aspects of knowledge in engineering.

Education

- **M. Sc. In Mechanical Engineering** | 2019 - 2022

[University of Tehran](#) – Tehran, Iran (Full scholarship)

Thesis: The Effect of Polymer Additives on Hydraulic Radial Forces of a Centrifugal Pump Working in Direct and Reverse Mode: Experimental Study

Supervisor: Dr. Alireza Riasi

GPA: 3.42 out of 4

- **B. Sc. In Mechanical Engineering** | 2015 - 2019

[Iran University of Science and Technology](#), Tehran, Iran

Thesis: Design and Feasibility of a CO₂ Laser Cutting and Engraving Machine

Supervisor: Dr. Mohammad Sedighi

GPA: 3.83 out of 4

Industrial Experiences

- **Consulting Engineer** | 2022

Company: Yazd Regional Water Authority, Mojmar company

Description: Feasibility and Design of a small hydropower plant on the water transmission pipeline of Yazd city.

- **Surveyor Engineer** | 2022

Company: Rubesh Rahbord Energy

Description: 3D laser scanning and as-built modeling of process units, cargo ships, etc.

- **Supervisor Engineer** | 2020 - 2021

Company: Mordad Tahviah

Description: Supervision of accomplishment of piping, plumbing and HVAC facilities installation and setup.

- **Internship** | 2018

Company: Hydroazma company

Description: undergraduate internship in repair and maintenance of hydraulic pumps and other equipment.

Research Interests

- Fluid Mechanics and Heat Transfer
- Experimental and Computational Fluid Dynamics (CFD)
- Turbomachinery design and optimization
- Renewable Energy
- Multi-phase flow
- HVAC and Refrigeration

Hobbies

Playing Tennis
Watching movies
Studying astronomy and history
Exploring other cultures

References

Alireza Riasi

Associate Professor - School of Mechanical Engineering,
University of Tehran

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Profile:

<https://profile.ut.ac.ir/en/~ariasi>

Mohammad Sedighi

Professor - School of Mechanical Engineering, Iran University of Science and Technology

Email: sedighi@iust.ac.ir

Profile:

Academic Projects

- **Simulation of flow and heat transfer in a cavity by method of stream function-vorticity** | 2022

Supervisor: Dr. Mehrdad Raisee Dehkordi

Description: Research project in the course of computational fluid dynamics (CFD). A MATLAB code was developed to solve coupled rewritten continuity, Navier-Stokes and heat transfer equations by the method of stream function-vorticity.

- **Design and Simulation of an A-shaped Evaporator** | 2020

Supervisor: Marine Industries Organization of Iran

Description: An A-shaped evaporator for the purpose of air conditioning on a warship was designed and simulated by commercial software Ansys Fluent.

- **Design and Feasibility of a Road Power Generator** | 2018

Supervisor: Dr. Hadi Khoramishad

Description: Research project in the course of design of machine components. A power road system with crank-shaft mechanism was completely designed and evaluated.

Research Experiences

- **Research Assistant** | 2020 - 2022

University of Tehran

[Marine and Hydrokinetic Energy Laboratory](#) (MHK lab)

Supervisor: Dr. Alireza Riasi

Description: Design and procurement of experimental apparatuses. Guiding undergraduate students

Publications

Bayatloo, M., **Koohizadhikoei, R.**, Ghorani, MM., Riasi, A.

“An Experimental Study on the Effects of Viscoelastic Fluids on the Performance of a Pump Running in Direct and Reverse Mode”.
Renewable Energy (under review)

Koohizadhikoei, R., Bayatloo, M., Ghorani, MM., Riasi, A.

“The Effect of Polymer Additives on Hydraulic Radial Forces of a Centrifugal Pump Working in Direct and Reverse Mode: Experimental Study”. (in preparation)