Ali Mozhdehi Fard

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EDUCATION

- **Master of Science**, **Civil Engineering**, NIT, Babol, Iran   **2017-2020**

  <u>Thesis title</u>: *Viscoelastic Support Effects on Fluid-Structure Interaction in water Hammer using Discrete least squares meshless method*

  <u>Selected Courses</u>: *Finite elements: 16/20*   (Top Mark)
  Computational Hydraulics: 17/20   (Top Mark)
  Advance finite elements: 18.5/20   (Top Mark)
  Seminar and Research Methods: 20/20   (Top Mark)

- **Bachelor of Science**, **Civil Engineering**, Sajjad University of Technology, Mashhad, Iran **2012-2016**

  <u>Selected Courses</u>: *Hydrology:20/20*   (Top Mark)
  Hydrulic Engineering:16.25/20
  Water and Wastewater Engineering:18/20

PUBLICATION

Conference paper and presentation:

Ali Mozhdehi fard, Ali Rahmani Firoozjaee, 2020, 18th National Hydraulic Conference of Iran, "*The effect of numerical parameters in discrete least-squares Meshless method in the analysis of water hammer phenomenon*", Tehran, Iran, 3-5 Februrary,(in Persian).

Journal Publication:

Ali Mozhdehi fard, Ali Rahmani Firoozjaee, 2022 "*Modeling of water hammer with fluid-structure interaction in elastic pipelines using discrete least squares method*", International Journal of Pressure Vessels and Piping (under review)

RESEARCH INTERESTS

- Numerical methods: Finite Element, Finite Difference, and Meshless Methods
- Computational Fluid Dynamics
- Machine Learning and optimization techniques

PROFESSIONAL EXPERIENCES

Engineering Experiences

Scrum master and Python developer, Mashhad, Iran

As a Scrum master, I learned to lead a team and used agile coaching techniques to improve teamwork performance and manage the project in the best possible way.

Member of Project manager team at Axon Tower project, Mashhad, Iran

Achieving experience in measuring and documenting the construction process and quantity surveying and estimating.

Site manager in a residential construction project, Mashhad, Iran

I learned how to monitor building costs and project progress and I understood a lot about conducting quality and safety inspections.

Teaching Experiences

Teacher's Assistant, Hydraulic Engineering, NIT, Babol, Iran **2018-2020**

I got a lot of experience and skills as a lecturer and mentor for hydraulic Engineering students, such as communication, teaching, and documenting skills.

FORTRAN Workshop, NIT, Babol, Iran **2019-2020**

Manager and teacher of the workshop whit the goal to help students develop programs with FORTRAN to solve finite element method and CFD problems.

English Teacher, Mashhad, Iran **2020-Present**

Teaching English to students and IELTS candidates not only satisfy my passion for teaching but also help me sharpen my language skills.

Math and English Teacher, Iran 2**021-Present**

I am holding free online courses for underprivileged high school students. It satisy my

Selected Academic Experiences

Developing supervised and unsupervised machine learning algorithms.

learning Finite difference method and solving partial differential equations.

Improving my skills in finite element method and developing program by FORTRAN and MATLAB.

I worked with HEC-RAS, FLOW-3D, and ANSYS for modeling different hydraulic problems.

Structural design of concrete and steel structures using ETABS.

SOFTWARE AND SKILLS

- FORTRAN (Advance)
- Python (Advance)
- MATLAB (Advance)
- hydraulic modelling softwares like: Flow3D, HEC-RAS, Open Foam, Ansys (Intermediate)
- Microsoft Office (Word, Excel, PowerPoint) (Advance)
- Computational methods such as: Finite Elemen, Finite difference, Meshless methods (Advance)
- Independent Research, Analytical Mind, Fast Learner

HONORS AND AWARDS

- Accepted directly for graduate study at babol noshiravani university which is one of the best universities among Iranian engineering universities.
- Ranked 3rd among all master graduate students in the department of civil engineering.

LANGUAGE

- **Persian** (native)
- **English** (Professional working proficiency)
  Test Score: IELTS total score: 7.0 (Listening:8 /Reading:7 /Speaking:6.5 /Writing:6)

VOLUNTEERING ACTIVITIES

- Collaboration as a cartoonist in a university journal called "Roozegar-e-no". Mashhad, Iran **2013-2015**
- Member of Noshirvani Charity Association, NIT, Babol, Iran **2017-2018**
- Member of Dast Mehr Charity Association, Babol, Iran **2021-Present**