Ali Mozhdehi Fard

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EDUCATION

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

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

  Selected Courses*: 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**

  Selected Courses*: 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*", Journal of Fluids and Structures (under review)

RESEARCH INTERESTS

- Finite element and meshless Modeling Methods
- Computational Fluid Dynamics
- Machine Learning
- Mathematical optimization

PROFESSIONAL EXPERIENCES

Working Experiences

- Python developer and scrum master, Mashhad, Iran
  Duties: I am a numerical developer and responsible for agile coaching and supporting the team.
- Member of Project manager team at Axon Tower project, Mashhad, Iran
  Duties: Measuring and documenting the construction process.
- Site manager in a residential construction project, Mashhad, Iran
  Duties: Monitoring building costs and project progress and conducting quality and safety inspections.

Selected Academic Experiences

- Solving burgers' equations using Finite difference method.
- Modeling Euler-Bernoulli and Timoshenko beam behavior using finite element method.
- Estimating of the water level in a specific river during different floods using HEC-RAS.

Teaching Experiences

- Teacher's Assistant, Hydraulic Engineering, NIT, Babol, Iran **2018-2020**
  Duties: Managing a lecture for hydraulic engineering students.
  Documenting student progress and helping them to improve.

- FORTRAN Workshop, NIT, Babol, Iran **2019-2020**
  Duties: Manager and teacher of the workshop whit the goal to help students develop programs with FORTRAN to solve finite element method problems.

- English Teacher, Mashhad, Iran **2020-2022**
  Duties: Teach English skills to IELTS candidates and interested students.

SOFTWARE AND SKILLS

- FORTRAN (Advance)
- Python (Advance)
- MATLAB (Intermediate)
- 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. **2017**
- Ranked 3^{rd} among all master graduate students in the department of civil engineering. **2020**

LANGUAGE

- **Persian** (native)
- **English** (Professional working proficiency)
  Test Score: IELTS total score: 7.0 (Listening:8 /Reading:7 /Speaking:6.5 /Writing:6)
  (taken on 4th December)

VOLUNTEERING ACTIVITIES

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

REFERENCES

- Dr. Ali Rahmani Firoozjaee, Associate professor, Faculty of Civil Engineering, Babol Noshirvani University of Technology, Email: rahmani@nit.ac.ir **(M.Sc. thesis supervisor)**