

JAVAD FATTAHI

MSc. Geotechnical Engineer

PERSONAL ATTRIBUTES

Nationality: Iranian

Date of birth: 17-01-1990

Marital status: Single

Type of Visa Student (Schengen visa)

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OVERVIEW

I am a goal-oriented civil engineer with over three years of experience in consulting engineer companies.

I was involved in designing and analyzing large scale infrastructure projects.

Additionally, I am experienced in designing and analyzing with commercial software (Python, Matlab, DeepSoil and Abaqus).

I am an enthusiastic person, and creation is my zest of life.

EXPERIENCES

RESEARCH ENGINEER

Reykjavík, Iceland

DEC 2021 - CURRENT

Employer: University of Iceland

Project: Seismic site characterization

- Advanced field and laboratory testing of soils
- Site-specific ground motion modelling and development of a procedure for seismic site classification

RESEARCH ENGINEER

Brussels, Belgium

JULY 2020 – JUNE 2021

Employer: OWI-Lab

Project: Fleet-based model updating for design optimization and structural health monitoring

- Dealing with different developed custom packages in Python
- Preparing progress reports regularly
- Conducting finite element model updating schemes to reduce the disparity between measured and numerical data
- Working with different optimization methods and meta-database of measured data

SITE ENGINEER

Tehran, Iran

SEP 2017 – MARCH 2019**Employer:** LAR Consulting Engineers Company

Project: Analyzing an underground flying junction seismically; Tehran metro line No. 7 and main west sewage line

- Assessing site conditions and collecting measurements to make accurate project design determinations
- Developing and verifying the FE model through ABAQUS

Project: Collaborating on the design of the main pipelines to transmit water among western cities with 48 kilometres long (Nowsud tunnel, National Project)

- Collaborating with international companies such as WBI
- Gathering both executed study approaches and designing analytical methods based on the British Tunnelling Society's guide
- Writing comprehensive technical reports through collecting data from involvement companies, which was eventually reported to the Ministry of Energy

RESEARCH ENGINEER

Tehran, Iran

AUG 2017 – OCT 2018**Employer:** International Institute of Earthquake Engineering and Seismology (IIEES)

Project: Advanced earthquake engineering laboratory assistant

- Doing a probabilistic analysis for evaluating the dynamic strain demands, as system responses, in the time domain
- Studying the transfer functions of underground structures subjected to shear wavefield with different incident angles
- Conducting a parametric study on the box-shaped and 2D structures utilizing the FEM
- Extracting a simple formula to get an initial estimation of the dynamic strain demands in the linear analysis of various tunnels, whether time or frequency domain
- Undertaking large-scale laboratory testing on steel frames with a 12-member team, which was funded directly by IIEES
- Developing an Advanced Software Package to simulate the linear seismic behaviour of underground structures with any arbitrary shape using MATLAB and ABAQUS

SITE ENGINEER

Tehran, Iran

SEP 2015 – MAR 2016**Employer:** Ros-Khak Contractor Company

Project: Restoration of Tehran international exhibition centre

- Monitoring personnel and construction activities for compliance with health and safety requirements
- Gathering and classifying information about materials and machinery

EDUCATION

- **PhD Researcher – University of Iceland** - Civil and Environmental Engineering
Reykjavík, Iceland
University of Iceland Current
- **R&D Researcher – OWI-Lab**
Brussels, Belgium
Vrije Universiteit Brussel 2021
- **Master of Science – Geotechnical Engineering** - Civil Engineering
Tehran, Iran
International Institute of Earthquake Engineering and Seismology 2017
- **Bachelor of Science – Civil Engineering** - Civil Engineering
Kerman, Iran
Shahid Bahonar University of Kerman 2014

MAIN SKILLS

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|--|---|--|---|
| ● MATLAB / Python |  | ● Creating Excel macros |  |
| ● Linking software, ability to learn quickly and adapt to new software |  | ● Seismic analysis and geotechnical design |  |
| ● AutoCAD / DeepSoil / STRATA |  | ● Abaqus |  |

LANGUAGES

Persian	Native	Turkish	Good understanding skill
English	Academic IELTS with 6.5 band - 2020	Dutch	Beginner

PROJECTS

- **Erasmus Plus Mobility Grants Outside Europe** 2022
 - This application comes with a long-term agreement for both the University of Iceland and the University of Colorado Boulder under the two objectives of the European Commission, namely, learning mobility of individuals, and cooperation for innovation and the exchange of good practices.
- **Iran's National Elites Foundation** 2017
 - Developing two Software Packages for fast evaluation of seismic demands of the elliptical and circular-shaped tunnels using FEM.

TRAINING and CERTIFICATES

- Constitutive modelling of geomaterials – Polytechnic University of Milan 2022
- Introduction to Python – Datacamp 2021
- Intermediate Python – Datacamp 2021
- Python Data Science Toolbox 1 & 2 – Datacamp 2021

- Object-Oriented Programming – Datacamp 2021
- Industrial Electronics Engineering diploma - State Technical & Vocational Training Organization 2008
- Mathematics and physics diploma - National Organization for Development of Exceptional Talents 2008

PUBLICATIONS

- Liquefaction Assessment of a Loose Silty Sand Site in the 2008 M_w 6.3 Ölfus Earthquake, **3rd European Conference on Earthquake Engineering & Seismology Bucharest, Romania**, Submitted 2022
- Fleetwide sensitivity analysis of offshore monopile wind turbines under conditions of scour and marine growth, **European Academy of Wind Energy**, Accepted 2021
- Building an updatable integrated model of an offshore wind turbine with a reduced soil-model using the open-source FEM software OpenSees, **European Academy of Wind Energy (impending proceeding publication)**, Accepted 2020
- Upper bound frequency-dependent strains imposed on deep underground box-shaped structures under shear wave field of motion with different incident angles, **Tunnelling and Underground Space Technology incorporating Trenchless Technology Research**, Accepted 2020
- Predicting strain demand histories imposed on box-shaped underground structures in seismic events, **8TH International Conferences on Seismology and Earthquake Engineering (See8)**, Accepted 2019
- An Investigation on the Effect of Shear Wave Field of Motion on Seismic Demands of Underground Structures: the Case of 2D Rectangular-Cross-Section Structures, **master of science thesis** 2017