

NAHID VATANOPUR

ADJUNCT PROFESSOR

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Professional Experience

UNIVERSITY TEACHING AND MENTORING EXPERIENCE

09/2018 - Current ~ Adjunct Professor

Department Of Architecture Urban Planning Construction Engineering (AUIC), Polytechnic university of Milan, Italy. Course in:

- *Sustainable Architecture and Landscape Design, Master course in Architecture.*

09/ 2017- Current ~ Teaching Assistant /lecturer

Department Of Architecture Urban Planning Construction Engineering (AUIC), Polytechnic university of Milan, Italy. Course in:

- *Sustainable Architecture and Landscape Design, Master course in Architecture.*

Department Of Environmental And Civil Engineering (DICA), Polytechnic university of Milan, Italy. Course in:

- *Physical Geology and Geomorphology, Master course in Architecture.*

Gave a series of lectures within the framework of the course plan; regular supervision and assisting students while developing their projects and course assignments; evaluating the final projects.

RESEARCH EXPERIENCE

09/ 2017- Current ~ Post-Doctoral Research

Infrastructure and Geoscience unit, Department of environmental and civil engineering, Polytechnic university of Milan, Italy. The Project:

- *Evaluation of heavy metals contamination distribution in Po river basin and isolation of new bacterial species aiming for fabrication of bio-filtering approach.*

04/ 2016- 06/ 2016 ~ Visiting PhD Researcher

Applied Petrology Group, Department of Earth and Environmental Sciences, University of Alicante, Spain.

Developing my PhD research project under the supervision of Dr. Javier Martínez-Martínez and collaboration with petrophysic department.

09/ 2013- 07/ 2017 ~ Doctorate Thesis Research

Infrastructure and Geoscience unit, Department of environmental and civil engineering, Polytechnic university of Milan, Italy. Dissertation title:

- *Multi-scale physical and mechanical characterization of fault rocks with emphasis on non-destructive 3D image analysis.*

09/ 2012- 09/ 2013 ~ Pre-Doctoral Research

Infrastructure and Geoscience unit, Department of environmental and civil engineering, Polytechnic university of Milan, Italy. The project:

- *Land Slides and Environmental hazards near urban area.*

02/ 2011- 03/ 2012 ~ Master's Thesis Research

Engineering geology unit, Earth Science Department, Ferdowsi University of Mashhad, Mashhad, Iran. Dissertation title:

- *Geotechnical investigation and evaluation of soil behavior in the path of Rezaei-Abbaspour energy tunnel in Mashhad city.*

Academic Qualifications



09/ 2013- 07/ 2017 ~ PhD In Rock Mechanic And Geotechnic.

Infrastructure and Geoscience unit, Department of environmental and civil engineering (DICA), Polytechnic University of Milan, Italy. Dissertation title:

- *Multiscale physical and mechanical characterization of fault rocks with emphasis on non-destructive 3D image analysis.*

Short summary: Impact of faults on fluid flow patterns, alteration, and geomechanical properties remains a challenge and requires a multidisciplinary research effort of geologists and hydrogeologists. In this study, the experimental evaluation of hydraulic, physical and dynamic properties of fault rocks and relationship between the characteristics with respect to distance from the major fault core is evaluated using the advance technology facility of X-Ray micro tomography and three dimensional image analysis tools.

09/ 2009- 07/ 2012 ~ Master In Engineering Geology And Soil Mechanic

Engineering geology unit, Earth Science Department, Ferdowsi University of Mashhad, Mashhad, Iran. Dissertation title:

- *Geotechnical investigation and evaluation of soil behavior in the path of Rezaei-Abbaspour energy tunnel in Mashhad city.*

GP: 4.6 out of 5. **Rank:** 1st in the class and admitted for Ph.D. program without national postgraduate entrance examination.

09/ 2005- 07/ 2009 ~ Bachelor In Geology

Engineering geology unit, Earth Science Department, Ferdowsi University of Mashhad, Mashhad, Iran.

GP: 4.21 out of 5. **Rank:** 1st in the class and admitted for M.Sc. program without national entrance examination.

Work Experience



2012- Current ~ Senior consultant

“Sahand Dezh-e-Shargh Co. Ltd.” utility and construction company specified for urban wastewater management and tunnelling.

2010- 2012 ~ Vice administrative

“Sahand Dezh-e-Shargh Co. Ltd.” utility and construction company specified for urban wastewater management and tunnelling.

2009- 2010 ~ Researcher

“Peykavan shargh” advisor Company for geotechnical projects.

Skills



SCIENTIFIC

- Experience in several Soil analyses such as Natural moisture content, Mechanical Seive Analysis, Aturbeg’s limits assay, Hydrometric analysis, Standard penetration test (SPT), Direct shear test, Triaxial test, Compaction assay, Consolidation test.
- Experience in several Rock Mechanical analysis such as Degree fissuring, Schmidt hardness, Point load, Brazilian test, coring, uniaxial compressive test, triaxial test.
- Field study for investigation of Rock discontinuities.
- Slope stability analysis for evaluating the failure potential of the slope.
- Rock mass Classification (RMR, Q, and GSI).
- Experience on landslide determination and avoidance.
- Microscopic study for evaluating the structure of metamorphic rocks.
- The stability analysis of tunnel during the excavation based on numerical analysis.
- Experience on non-destructive test on rock and concrete material to evaluate the physical properties and post-failure behavior (compressive and shear wave velocity, X-Ray micro computed tomography).
- Three-dimensional image analysis to evaluate the pore network and demonstration of fractures and grains distribution.
- XRD and XRF analysis to evaluate the chemical characteristics of rocks.

- Field-work studies and geosurveys.

SOCIAL AND ORGANIZATIONAL

- Good interaction skills in social and technical events.
- Highly interested to meet and interact with people from multi-cultural and interdisciplinary backgrounds.
- Self-motivated and strong sense of taking responsibility in both individual and team work.
- Ability to respect to other beliefs, cultures and traditions.
- Expert mentor and coach.

LANGUAGES

- Persian ~ **Mother tongue**
- English ~ **Fluent (C2)**
- Italian ~ **Advance (C1)**
- Arabic ~ **Basic**

COMPUTER

- 7 skills of ICDL
- Engineering software such as AutoCAD, Dips, Swedge, Plaxis 3D tunnel, EZslide, MIDAS GTS, Rock Plane, Avizo, Surfer, and MathLab.
- Software to scientific graphing and data analysis like Origin, Spss.
- Touch type of English.

Publications

1- Reza Tayebee, Hamid R. Vatanpour, Nahid Vatanpour (2009), study of the chemistry of chromites around the ophiolite belts deposited at the north-east of Iran, 11th Iranian Inorganic Chemistry Conference IICC-11, Isfahan, Iran, Full-text proceeding.

2- N. Vatanpour, M. Ghafoori, G. Lashgaripour, H. Owsati. (2010) Application of modern technology on installation of urban utility webs and improving the safety factor pathways with reduction in old fashion excavations. 1st congress of citizenship and city governing, law and rules. Tehran, Iran. Full-text proceeding.

3- N. Vatanpour, M. Ghafoori, G. Lashgaripour, A. Bagherpour- Moghaddam., (2011) Evaluation of Soil dynamic parameters of Rezaei- Abbaspour energy tunnels in Mashhad city. 7th conference of environmental and engineering geology of Iran. Shahrood University of technology. Shahrood, Iran. Full-text proceeding.

- 4- H. Hedayati, M. Ghafoori, G. Lashgaripour, N. Vatanpour (2011) Assessing the stability of left abutment on Ghardanloo dam. 7th conference of environmental and engineering geology of Iran. Shahrood University of technology. Shahrood, Iran. Full-text proceeding
- 5- N. Vatanpour, M. Ghafoori, G. Lashgaripour, H. Hedayati, A. Bagherpour-Moghaddam (2011) Stability analysis of Negin residential complex trench on eastern south of Mashhad's heights. 8th conference of Mining Engineering of Iran. University of Tehran, Tehran, Iran. Full-text proceeding.
- 6- N. Vatanpour, M. Ghafoori, G. Lashgaripour (2012) Evaluation of Soil Mechanical and Physical parameters of Rezaei-Abbaspour energy tunnel in Mashhad city. 30th Iranian Geology Conference. Tehran, Iran. Full-text proceeding.
- 7- N. Vatanpour, M. Ghafoori, H. Hedayati, (2014) Probabilistic and sensitivity analyses of effective geotechnical parameters on rock slope stability: a case study of an urban area in northeast Iran, Natural hazards journal, volume 71, 1659-1678 pp.
- 8- Nahid Vatanpour, Laura Scesi, (2015), Landslide Hazard and Vulnerability Risk Assessment, An Overview, 5th Annual International Conference on Civil Engineering, Structural Engineering and Mechanics, Athens, Greece, full text proceeding, ISBN: 978-618-5065-96-6.
- 9- Vatanpour, N., Malvandi, A. M., Hedayati Talouki, H., Gattinoni, P. & Scesi, L. 2020. Impact of rapid urbanization on the surface water's quality: a long-term environmental and physicochemical investigation of Tajan river, Iran (2007-2017). Environ Sci Pollut Res Int, 27, 8439-8450.
- 10- Vatanpour, N., Feizy, J., Hedayati Talouki, H., Es'haghi, Z., Scesi, L. & Malvandi, A. M. 2020. The high levels of heavy metal accumulation in cultivated rice from the Tajan river basin: Health and ecological risk assessment. Chemosphere, 245, 125639.

Awards and Scholarships

- **2013- 2017:** Four-year student scholarship for Ph.D. degree, Politecnico di Milano.
- **05/2016-07/2016:** Two-month grant for visiting PhD/researcher in Spain.
- **2018:** Winner of 22,000 Euro grant for post-doctoral research project.

autorizzo il Politecnico di Milano a pubblicare il presente curriculum sul sito WEB di Ateneo, ai fini istituzionali e in ottemperanza al D. Lgs n. 33 del 14 marzo 2013 "Decreto trasparenza" come modificato dal D. Lgs. 97 del 2016