

Ali Keivan Zeraatkar

Curriculum Vitae
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Personal Information:

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Educations:

- 2009-2011, M.Sc., Structural Geology & Tectonics, Ferdowsi University Of Mashhad, Iran
Thesis: Structural Analysis of Sangbast-Shandiz Fault Zone. [**Grade:** 19.75/20]
Supervisor: Dr. Behnam Rahimi, Associate Professor of Structural Geology & Tectonics
- 2005-2009, B.Sc., Geology, Ferdowsi University Of Mashhad, Iran
Field Geology: Kopeh-Dagh and Binalud Geology. [**Grade:** 18.75/20]
Supervisor: Dr. Farzin Ghaemi, Associate Professor of Structural Geology & Tectonics

Research Interests:

- Fracture and shear zone sources and development in the Earth's crust;
- Structural and Geomorphic analysis of the fault damage zones;
- Survey of the underground structures by remote sensing, geological fieldworks, geophysical methods, and GIS utilities;
- Structural geology, tectonics and geomorphic analysis, by geophysical and geochemical methods to analogue/numerical modeling of Earth's system evolution and environmental protection;
- Analysis of the microstructures and petro-fabric changes in the fault zone rocks;
- Fractures effect on the groundwater sources and environmental hazards;
- Quantitative understanding of the Earth's crust deformation processes by remote sensing methods (InSAR, and LiDAR surveys), and paleostress analysis in the fault zones and locked earthquake areas, for hazards assessments;
- Application of the geological techniques to find the geothermal and clear-energy sources.

Honors and Awards:

- 2011, Outstanding M.Sc. student of Geology-Tectonics at Ferdowsi University Of Mashhad

GPA 17.73 / 20

- 2011, Invention license by Mental Ownership Management of the FUM, NO. 46168
- 2009-2011, Full-scholarship (Illustrious-Genius Students Scholarship) for M.Sc. degree in Geology program by Ministry of Sciences, Researches, and Technology of Iran
- 2009, Outstanding B.Sc. student of Geology at Ferdowsi University Of Mashhad

GPA 16.08 / 20

Inventions:

- Rake Clinometer, (2011). Inventions Registration Office, Iran, 72758. [An instrument for fault rake-angle measurements in fieldworks]
- Solar Crush Helmet, (2005). Inventions Registration Office, Iran, 33481. [A cooling system by solar energy for safety helmets]

Field, Laboratory, and Computer Skills:

- Survey of geological structures and fracture analysis in the Earth crust
- Rock mechanics and dip stability analysis in rock slopes
- Aggregate and Concrete Quality Control
- Preparing thin section samples and micro-tectonics studies (e.g. Fedorov Universal Stage)
- Surveying by GPS, Total station, Theodolite, Alidade, Nivo
- Setup Diffusion Sampler (for gas sampling) and Temperature Logger in springs
- Measuring water field parameters (Eh, pH, EC, DO, and TDS)
- Rock mechanics and Paleostress analysis softwares (Win-Tensor, Dips, Stereo net, Data Analyst, etc.)
- ArcGIS softwares (Arc view, Arc Map, Arc Catalog, Arc tools)
- Remote Sensing softwares (ENVI, Global Mapper, Map Source, Google Earth, ER Mapper, and Oasis Montage (for aeromagnetic data analysis))
- Surfer, AutoCAD, GMT, Log plot, and Win-Karst (for 3D design of cave and structures)
- Programing (MATLAB, PASCAL, and Elementary C++)
- SPSS (PASW Statistics), Microsoft Office (Word, Excel, PowerPoint) and EndNote

Books:

- Coe, A.L. (ed.). (2016). *Geological Field Techniques*. (F. Ghaemi, B. Rahimi & **A. Keivan Zeraatkar**, Trans.). Ferdowsi University Of Mashhad, (Original work published 2010).

- Mohammadzadeh, H., & **Keivan Zeraatkar, A.** (2013). *Guide to Writing and Presenting Thesis: Science & Engineering*. Iran: Authors. [In Persian]

Publications:

Journal papers:

- **Keivan Zeraatkar, A.,** & Rahimi, B. (Under Revision). Structural analysis of the Sangbast-Shandiz fault zone, Binalud Mountains, NE Iran.
- **Keivan Zeraatkar, A.,** & Mohammadzadeh, H. (Under Revision). Structural model of the fault system development in Ayüb-Peighambar Hot Spring area, Kopeh-Dagh Mountains, NE Iran.
- **Keivan Zeraatkar, A.,** & Rahimi, B. (2013). Survey of Sangbast-Shandiz fault zone growth and geomorphological results. *Journal of Geography and Regional Development*, 19, 195-214.

Conference papers:

- Mohammadzadeh, H., & **Keivan Zeraatkar, A.** (2013). The Geochemistry and Isotopic Composition of the Ayüb-Peighambar Hot Spring, Bojnurd, NE of Iran. *10th Applied Isotope Geochemistry Conference (AIG10)*. Hungary: Budapest, 246-247.
- **Keivan Zeraatkar, A.,** & Rahimi, B. (2011). Survey of Sangbast-Shandiz fault's magnetic feature: *2nd National Conference of Earth Science*. Iran: Ashtian, 1-7.
- **Keivan Zeraatkar, A.,** & Rahimi, B. (2011). Survey of Sangbast-Shandiz fault's tip damage zone: *1st National Conference of Iran Geology*. Iran: Shiraz, 1-9.

Work Experience:

- 2016 October -present, Mines Expert of The Industry, Mine and Trade Organization of North Khorasan.
- 2016-October, Quality Control Manager of Ghorbanian Sand and Concrete Co.
- 2016-October, Mining Engineer of Ghorbanian Sand and Concrete Co.
- 2015-2016, Exploration Engineer of Khorasha Quarry.
- 2014 December-Present, Advisor in "Investigating the effect of geological structures on groundwater resources in Quri-Meidan plain of Ashkhane" Project by Dr. H. Mohammadzadeh, Ferdowsi University Of Mashhad.

- 2015 March, Structural Geologist in “*Survey of Structural Geology and Fracture Patterns in Tirgan Formation’s Limestone, Kuh-e-Aghcheshme*” project for Hosseinzadeh Quarry, Bojnurd, Iran.
- 2015 February-March, Structural Geologist in “*Survey of Structural Geology and Fracture Patterns in Tirgan Formation’s Limestone, Kuh-e-Aghcheshme*” project for Maasumi Quarry, Bojnurd, Iran.
- 2014 October-2015 March, Member of executive in “*5th election of management members of the Iranian Mining Engineering Organization in Northern Khorasan*”.
- 2014 June-2015 March, Head of Technical Office & Exploration Team in Aghdarband Coal Mine; Managed “*Structural analysis and survey of Coal layers in folds*” project for Khavar Mines Company.
- 2013 February-2014 May, Researcher in Groundwater Research Center (GRC), Ferdowsi University Of Mashhad; Managed Structural Geology and Tectonics studies in the “*Source and Water Quality Investigation of Ayüb-Peighambar Hot Spring by Hydrogeochemistry, Environmental Stable Isotopes, and Structural Geology Studies*” project for North Khorasan Regional Water Company (NKRWC) by Dr. H. Mohammadzadeh supervising.
- 2013 August-September, Structural Geologist in “*Survey of Structural Geology and Fracture Patterns in Lar Formation’s Limestone at Kuh-e-Kaftarak*” project for Morvarid Company, Mashhad, Iran.
- 2011 October-2012 March, Member of executive in “*4th election of management members of the Iranian Mining Engineering Organization in Northern Khorasan*”.
- 2010-2011, Exploration Engineer in “*Final exploration report, with topography and geology maps (1:5000 and 1:1000 scales respectively) of Shoghan quarry, NE Iran*” project for Industries and Mines Organization of Northern Khorasan.

Teaching:

- 2014, Geology course, University Of Applied Science and Technology, Code 9210000119954
- 2010, GIS course, Educational and Research Institute, Ministry of Industries and Mines.

Activities:

- 2009 - Present, Engineer in the Iranian Mining Engineering Organization (IMEO)
- 2011 - 2013, Member of the Iranian Geophysics Society (IGS)
- 2009 - 2011, Member of the International Medical Geology Association (IMGA)
- 2004 - 2008, Member of the Young Researchers Club (YRC/BPJ)

Language Skills:

- Reading, writing, and speaking fluently in English
- TOEFL (iBT), 2014
- GRE, 2011, 2014

References Persons:

- **Behnam Rahimi**, *Associate Professor of Structural Geology and Tectonics*,
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- **Farzin Ghaemi**, *Associate Professor of Structural Geology and Tectonics*,
Ferdowsi University Of Mashhad. Tel: (+98) 513-78797022, Email: fghaemi@um.ac.ir
- **Hossein Mohammadzadeh**, *Associate Professor of Hydrogeology Geology*,
Head Of Groundwater Research Center (GRC), Ferdowsi University Of Mashhad.
Tel: (+98) 513-78797275, Email: mohammadzadeh@um.ac.ir