

Curriculum Vitae

Gholamreza Mortezaejad

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Contact

Email: g.mortezaejad@du.ac.ir, morteza.nejad@gmail.com

Education

- 2012-2019 **Ph.D. (Geophysics-Seismology)**
Institute of Geophysics of the University of Tehran (IGUT,
<https://geophysics.ut.ac.ir/en/home>), Tehran, Iran.
Thesis: “Lateral variations of thermal structure of crust and upper mantle
in NW of Iran using surface waves analysis”
Supervisor: Dr. Habib Rahimi.
Advisor: Dr. Fabio Romanelli
- Oct. 2015-Apr. 2016 **Visiting researcher at the Department of Mathematics and
Geosciences of the University of Trieste (<https://dmg.units.it/>),
Trieste, Italy.**
Supervisor: Prof. Guliano Francesco Panza and Dr. Fabio Romanelli
- Mar. 2010-Apr. 2010 **Visiting researcher at the Department of Earth Sciences of University
of Cambridge (<https://www.esc.cam.ac.uk/>), Cambridge, United
Kingdom**
Supervisor: Prof. Keith Priestly
- 2005-2008 **M. Sc. (Geophysics)**

Department of Earth Sciences, Institute for Advanced Studies in Basic Sciences. (IASBS, <https://iasbs.ac.ir/departments/earth>), Zanjan, Iran.

Thesis: “Crustal structure in northwestern Iran from analysis of P receiver functions”

Supervisor: Dr. Farhad Sobouti

2000-2005

B. Sc. (Physics)

Department of Physics, Damghan University (<http://en.du.ac.ir/school-of-physics>), Damghan, Iran.

Publications

۱. Maheri-Peyrov, M., Ghods, A., Donner, S., Akbarzadeh Aghdam, M., Sobouti, F., Motaghi, K., Hassanzadeh, M.A., **Mortezanejad, G.**, Talebian, M., Chen, L., “Upper crustal structure of NW Iran revealed by regional 3D Pg velocity tomography”, *Geophysical Journal International*, 2020, <https://doi.org/10.1093/gji/ggaa236>.
۲. **Mortezanejad, G.**, Rahimi, H., Romanelli, F., Panza G. F., “Lateral variation of crust and upper mantle structures in NW Iran derived from surface wave analysis”, *Journal of Seismology* 23-77, 2019, <https://doi.org/10.1007/s10950-018-9794-1>.
۳. **Mortezanejad, G.**, Rahimi, H., “Crustal structure of NW Iran investigated by Love waves dispersion curve tomography”, *Iranian Journal of Geophysics*, 53-69, 2018 (3).
۴. Bavali, K., Motaghi, K., Sobouti, F., Ghods, A., Abbasi, M., Priestley, K., **Mortezanejad, G.**, Rezaeian, M. ”Lithospheric Structure beneath NW Iran Using Regional and Teleseismic Travel-time Tomography”, *Physics of the Earth and Planetary Interiors*, 253, 97-107, 2016.
۵. Ghods, A., Shabaniyan, E., Bergman, E., Faridi, M., Donner, S., Mortezanejad, G., Aziz Zanjany, A., "The Varzaghan–Ahar, Iran, Earthquake Doublet (Mw 6.4, 6.2): implications for the geodynamics of northwest Iran “, *Geophysical Journal International*, 203: (1), 522-540, 2015.
۶. **Mortezanejad, G.**, Aziz Zanjani, A., Ghods, A., Sobouti, F., ”Study the crustal structure and seismotectonic of South Caspian Basin and Talesh Mountains using local and teleseismic events”, *Geosciences Scientific Quarterly Journal, Geological Survey of Iran*, No. 2.88, PP. 38-47, 2013.

- ٧. Zanjani, A. A., Ghods, A., Sobouti, F., Bergman, E., **Mortezanejad, G.** Priestley, K., Madanipour, S. and Rezaeian, M., “Seismicity in the western coast of the South Caspian Basin and the Talesh Mountains”, *Geophysical Journal International*, 195 (2). pp. 799-814, 2013.
- ٨. Ghods, A., Rezapour, M., Bergman, E., **Mortezanejad, G.** and Talebian, M., “Relocation of the 2006 Mw 6.1 Silakhour, Iran, Earthquake Sequence: Details of Fault Segmentation on the Main Recent Fault” *Bulletin of the Seismological Society of America*, Vol. 102, No. 1, 398-416, DOI: 10.1785/0120110009, 2012.
- ٩. Bali Lashak, A., Zare, M., **Mortezanejad, G.** and Pour Beyranvand, Sh., "Moment Tensor Inversion of Nine Events in Iran Using INSN Data", *J Seismol*, 14, pp. 751-760, 2010.

National and International Conferences

- ١. **Mortezanejad, G.**, Rahimi, H., The 3D temperature structure of the upper mantle in NW Iran, **Oral Presentation (Speaker)**, 19th Geophysics Conference of Iran, Tehran, 4-5 November 2020.
- ٢. **Mortezanejad, G.**, “A review on magnetic exploration theory and applications” **Invited Speaker**, 12th symposium of Iranian Society of Economic geology, Bu-Ali Sina University, Hamedan, 2-3 September 2020.
- ٣. **Mortezanejad, G.**, Rahimi, H., Shear velocity structure of NW Iran and the surrounding area, **Oral Presentation (Speaker)**, 18th Geophysics Conference of Iran, Tehran, 8-10 May 2018.
- ٤. **Mortezanejad, G.**, Rahimi, H., Shear velocity structure of Crust and upper Mantle in NW of Iran using surface waves analysis, **Oral Presentation (Speaker)**, 17th Geophysics Conference of Iran, Tehran, 10-12 May 2016.
- ٥. Eskandari, Z., Sobouti, F., **Mortezanejad, G.**, Ghods, A., Shabaniyan, E., Sadidkhouy, A., The study of crustal seismic anisotropy in NW Iran by shear wave splitting of crustal phases, **Oral Presentation**, 7th International Conference of Seismology and Earthquake Engineering (SEE7), Tehran, 18-27 May 2015.
- ٦. Sobouti, F., **Mortezanejad, G.**, Ghods, A., Motaghi, K., Aziz Zanjani, A., Priestley, K., Crustal structure of the southern margin of Caspian sea and western

- Alborz, **Oral Presentation**, 16th Geophysics Conference of Iran, Tehran, May 2014.
٧. Arvin, Sh., Sobouti, F., **Mortezanejad, G.**, Priestley, K., Study of Seismic Anisotropy in NW Iran, **Oral Presentation**, 16th Geophysics Conference of Iran, Tehran, May 2014.
 ٨. Sobouti, F., **Mortezanejad, G.**, Ghods, A., Seismic Structure of Crust in Northwest Iran, **Oral Presentation**, 15th Geophysics Conference of Iran, Tehran, May 2012.
 ٩. Hejazi Nooghabi, A., Sobouti, F., Tatar M., **Mortezanejad, G.**, Ghods, A., Measurement of Rayleigh group dispersion curves in NW Iran using ambient seismic noise, **Oral Presentation**, 15th Geophysics Conference of Iran, Tehran, May 2012.
 ١٠. Aziz Zanjani, A., Ghods, A., **Mortezanejad, G.**, Rupture directivity of the causative fault of the 1997 Golestan-Ardebil earthquake, **Oral Presentation**, 15th Geophysics Conference of Iran, Tehran, May 2012.
 ١١. Aziz Zanjani, A., Ghods, A., **Mortezanejad, G.**, Insights into the seismotectonics of the South Caspian Basin using HDC algorithm for relocating earthquakes, **Oral Presentation**, 15th Geophysics Conference of Iran, Tehran, May 2012.
 ١٢. **Mortezanejad, G.**, Sobouti, F., Ghods, A., Preliminary results of P receiver function analysis using a temporary seismic network in NW Iran, **Oral Presentation (Speaker)**, 29th National Geosciences Congress, Tehran, February 2011.
 ١٣. Aziz Zanjani, A., **Mortezanejad, G.**, Ghods, A., Sobouti, F., Rezaeian, M., Seismicity of Talesh region using a temporary seismic network of IASBS, **Poster**, 29th National Geosciences Congress, Tehran, February 2011.
 ١٤. Ghods, A., Rezapour, Mehdi, Bergman, E., **Mortezanejad, G.**, Talebian M., Fault segmentation and stress triggering in the 2006/03/31 Silakhour earthquake, **Poster**, Tectonic Crossroads: Evolving Orogens of Eurasia-Africa-Arabia, Ankara, 4-8 October 2010.
 ١٥. Sobouti, F., **Mortezanejad, G.**, Ghods, A., Priestley, K., Crustal structure in northwest Iran from receiver function studies, **Poster**, Tectonic Crossroads: Evolving Orogens of Eurasia-Africa-Arabia, Ankara, 4-8 October 2010.

Work experiences

١. Assistant Professor, Damghan University (<http://en.du.ac.ir/school-of-earth-sciences>), Damghan, Iran [Oct. 2020-Present].
٢. Lecturer, Damghan University, Damghan, Iran [Sep. 2016-Sep. 2020].
٣. Lecturer, Department of Earth Sciences, Institute for Advanced Studies in Basic Sciences. (IASBS, <https://iasbs.ac.ir/departments/earth>) Zanzan, Iran [Oct. 2008 – April. 2012].
٤. Research assistant, Department of Earth Sciences, Institute for Advanced Studies in Basic Sciences. Zanzan, Iran [April. 2008 – Oct. 2008].
٥. Research assistant, Department of Earth Sciences, Institute for Advanced Studies in Basic Sciences. Zanzan, Iran [April 2012-Sep. 2012].
٦. Field seismology [April 2008 – Present].

Experience in field seismology including site selection, installing of more than 150 seismometers, and collecting and managing the data based on involving in the following two projects:

- Temporary networks of seismic stations of IASBS in north, northwest, and southeast of Iran, including more than 75 seismic stations, April 2008-Present.
 - An international seismological joint project between the Institute of Geology and Geophysics, Chinese Academy of Sciences (IGGCAS), Geological Survey of Iran (GSI), and IASBS in the west, central, and north of Iran, including more than 65 seismic stations, Sep. 2013-Dec. 2014.
٧. **Exploration geophysics [April 2008 - Present].**

Exploration geophysics by magnetic, gravity, electric and GPR methods in the following fields:

- Orebody or mineral exploration, more than 100 projects.
- Near surface utility locating using GPR, 2 project
- Tunnel and cavity locating, 1 project
- Underground water exploration, more than 20 projects

Teaching experiences

- Seismology (B.Sc.)

- Geophysics (B.Sc.)
- Computer Basics (B.Sc.)
- Principles of Exploration Geophysics (M.Sc.)
- The Earth in the Space (B.Sc.)

Computer & software skills

Operating System	Linux, Windows, and MAC
Programming	FORTRAN, Python, Scripting in Linux based operating systems
Software	Matlab, Seisan, GMT, Seismic Handler, SAC, FTAN, Geosoft, RES2DINV, RES3DINV, IPI2win, Surfer, MapSource, GlobalMapper, ArcGIS

Interest topics

Actually, I am interested in probing the earth interior by processing and interpreting geophysical and especially seismological data. I am very interested in processing data using innovative ideas and combining them with other independent data. I either use existing techniques or develop a technique for processing data to perform my researches. Here I have listed the main topic of my interests.

1. Application of seismological techniques (for example, arrival time, surface wave, full waveform tomography, receiver function, seismic event location and ambient noise analysis and etc.) to seismic data and combining with the other independent data sets in order to probe the earth interior.
3. Full waveform data processing to extract source and moment tensor parameters in time and frequency domain by inversion techniques.
2. Extracting other physical characteristics of the earth interior (for example temperature, density, melt fraction) from the result of seismological studies (for example shear velocity) using existing or developing conversion techniques.
4. Field work in geophysics and especially seismology.
5. Exploration geophysics.