Nasrin Tavakolizadeh

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Computer Skills

- Python
- MATLAB
- Adobe Illustrator
- MS-Word
- MS-Powerpoint
- MS-Excel
- LaTeX
- Linux
- Windows

Education

2022–Ongoing	PhD Comptuter Science	University of Beira Interior, Portugal
2017–2020	M.Sc. Seismology	Institute of Geophysics, University of Tehran, Iran
2009–2013	B.Sc. Applied Geology	Kharazmi University, Tehran, Iran

IELTS

2022 Overall: 7.5
L:8.5/R:8.0/W:6.5/S:7.5

Publications

2023 To be submitted to: Computers and Geosciences, Tavakolizadeh, N., Mohammadigheymasi, H., Visini, F., Bruno P., Corresponding author: Tavakolizadeh, N., FiSH-SCC: An open-source MATLAB package for faults seismic activity rate calculation.

2023 Under review: IEEE transactions on geoscience and remote sensing, Mohammadigheymasi, H., Shi, P., Tavakolizadeh, N., Zhuowei, X., Mousavi, S. M., Matias, L., Mousavirad, S,.J., Pourvahab, M., Fernandes, R., Corresponding author: Mohammadigheymasi, Hamzeh, IPIML: A deep-scan earthquake detection and location workflow Integrating Pair-Input deep learning model and Migration Location method.

2023 Mohammadigheymasi, H., Tavakolizadeh, N., Matias, L., Mousavi, M., Silveria, G., Custodio, S., Application of deep learning method for seismicity analysis in southern Ghana. Geosystems and Geoenvironment (2023). https://doi.org/10.1016/j.geogeo.2022.100152

2023 Mohammadigheymasi, H., Tavakolizadeh, N., Matias, L., Mousavi, M., Moradichaloshtori, Y., Mousavirad, SJ., Fernandes, R., A data set of earthquake bulletin and seismic waveforms for Ghana obtained by deep learning. Data in Brief (2023). https://doi.org/10.1016/j.dib.2023.108969.

2022 Mendeley Data, Mohammadigheymasi, H., Tavakolizadeh, N., Matias, L., Mousavi, M., Moradichaloshtori, Y., Mousavirad, S. J., Fernandes, R., Seismicity dataset of Ghana obtained by Deep Learning., http://doi.org/10.17632/zz9txhw89w.1.

2021 Tavakolizadeh, N., Bagheri, M., Multi-attribute Selection for Salt Dome Detection Based on SVM and MLP Machine Learning Techniques. Natural Resources Research (2021), https://doi.org/10.1007/s11053-021-09973-8.

Presentations

International Conferences

2023 Mohammadigheymasi H., Tavakolizadeh N., Shi P., Xiao Z., Mousavi, S. M., Fernandes R., An automated earthquake detection algorithm by combining pair-input deep learning and migration location methods, EGU General Assembly, https://doi.org/10.5194/egusphere-egu23-15180.

2023 Nunes S., Mohammadigheymasi H., Tavakolizadeh N., Garcia N., A synthetic ambient-noise data set for time-lapsed monitoring EGU General Assembly, https://doi.org/10.5194/egusphere-egu23-1678.

2023 Carvalho, L., Mohammadigheymasi, H., Crocker P., Tavakolizadeh, N., Moradichaleshtori Y., Rui Fernandes, R., A synthetic ambient-noise data set for time-lapsed monitoring EGU General Assembly, https://doi.org/10.5194/egusphere-egu23-16438.

2022 Tavakolizadeh, N., Mohammadigheymasi, H., Matias, L., Silveira, G., Fernandes, R., and Dolatabadi, N., To what extent do slip rates contribute to the seismic activity of faults? EGU General Assembly, https://doi.org/10.5194/egusphere-egu22-12893.

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Softwares

QGIS

ArcGIS

OpenQuake

GitHub

ObsPy

Surfer

VELEST

SEISAN

Zmap

Crisis

OpendTect

Petrel

RES2DINV, RES3DINV

2022 Mohammadigheymasi, H., Tavakolizadeh, N., Mousavi, S. M., Silveira, G., and Fernandes, R., Seismicity analysis in southern Ghana- I: Detecting local earthquakes by Deep Learning, EGU General Assembly, https://doi.org/10.5194/egusphere-egu22-5860.

2022 Custódio, S., Mohammadigheymasi, H., Tavakolizadeh, N., Matias, L., and Silveira, G., Seismicity analysis of Southern Ghana II: Updated crustal velocity model and hypocentral parameters, EGU General Assembly, https://doi.org/10.5194/egusphere-egu22-5570.

2021 Dolatabadi, N., Tavakolizadeh, N., Mohammadigheymasi, H., and Valentini, A., A combined fault- and catalog-based hazard assessment for Central Zagros, Iran., EGU General Assembly. https://doi.org/10.5194/egusphere-egu21-14411.

2019 Tavakolizadeh, N., and Sadidkhouy, A., Probabilistic Seismic hazard assessment and focal mechanism mapping of Minab fault zone and the Strait of Hormoz, 3rd Trigger International Conference.

National Conferences

2020 Tavakolizadeh, N., and Bagheri, M., Presenting selected seismic attributes in salt dome delineation, 19th Geophysics Conference of Iran (GSI).

2020 Tavakolizadeh, N., and Bagheri, M., Application of a feature-based multi-layer perceptron neural network in salt detection, 19th GSI.

2016 Tavakolizadeh, N., Rahimi, B., Ghaemi. F., Review of asperities and distribution of stress within the epicenter of the 2014 earthquake with 6.2 MN in NW Zagros Mountains, The 34th national and 2nd International Geosciences Congress.

2016 Tavakolizadeh, N., Rahimi, B., Ghaemi. F., The study of seismotectonic and asperities in Zagros through the b-value parameter, The 34th national and 2nd International Geosciences Congress.

Research Interests

Numerical modeling and inversion, Passive seismic methods, Developing and applying machine learning and deep learning methods, Seismic Data Processing and interpretation, Fault modeling, PSHA, and Geophysical instruments.

Teaching experiences

2019 Teaching Assistance, Structural geology, Prerequisite course for Master of Earthquake Seismology.

Institution Geophysics Institute, Tehran University

Tasks Teaching structural geology lab, grading and preparing exercises.

References

Dr. Hamzeh Mohammadigheymasi
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