Maryam Torkashvand

Ph.D. student
216 Jessup Hall, Department of Geographical and Sustainability Sciences, University of Iowa, Iowa City, IA, 52242.
maryam-torkashvand@uiowa.edu
scholar.google.com/citations
researchgate.net/profile/Maryam-Torkashvand

RESEARCH INTERESTS	Geographic Information Science, Geo-Spatial Network Analysis, Geo-Social Networks, Historical Migration Structure, Human Geography, Numerical Modeling, Vulnerability and Risk assessment.

EDUCATION

2022-Present

Ph.D. in Geographic Information Science and Cartography
University of Iowa, Iowa City, IA, USA.
Advisor: Dr. Caglar Koylu

2017-2020

Master of Science in Remote Sensing and Geographic Information System- Satellite Meteorology
Science and Research Branch, Islamic Azad University, Tehran, Iran.
Thesis: A new framework for risk assessment of groundwater pollution
Advisor: Dr. Aminreza Neshat, Dr. Saman Javadi

2012-2014

Bachelor of Engineering in Surveying Engineering
Shahid Rajaee Teacher Training University, Tehran, Iran.
Thesis: Investigation on the concept of integration of Geographic information System (GIS) and Global Positioning System (GPS)
Advisor: Dr. Abbas Sheykh Mohammad Zadeh

PUBLICATIONS

Manuscripts in Submission

Koylu, C., **Torkashvand, M.**, Kasakoff, A. B. (in prep) Evaluation of the child ladder method for studying migration using family trees: A comparison with linked US census data, 1850 to 1920. Historical Methods Journal.

Torkashvand, M., Neshat, A., Javadi, S., Yousefi, H. (in prep) A comparative evaluation of groundwater vulnerability based on integrated DRASTIC model using various hybrid methods. Groundwater for Sustainable Development.

Peer-Reviewed Journal Articles

Torkashvand, M., Neshat, A., Javadi, S., Pradhan, B. New hybrid evolutionary algorithm for optimizing index-based groundwater vulnerability assessment method (2021) Journal of Hydrology, 598, 126446. https://doi.org/10.1016/j.jhydrol.2021.126446.

Torkashvand, M., Neshat, A., Javadi, S., Yousefi, H. DRASTIC framework improvement using Step-wise Weight Assessment Ratio Analysis (SWARA) and combination of Genetic Algorithm and Entropy (2020) Environmental Science and Pollution Research. https://doi.org/10.1007/s11356-020-11406-7.

Peer-Reviewed Conference Proceedings

Koylu, C., **Torkashvand, M.**, Kwon, H., Kasakoff, A. B. (2022) Mapping migration regions and their evolution from population-scale family trees: What can they tell us about cultural identities and regions today? In 6th ACM SIGSPATIAL Workshop on Geospatial Humanities (GeoHumanities'22), November 1, 2022, Seattle, WA, USA. https://doi.org/10.1145/3557919.3565814.

Torkashvand M., Neshat A., Javadi S., Yousefi H. (2021) Improvement of GIS-Based DRASTIC Model Using Step-Wise Weight Assessment Ratio Analysis (SWARA) and Two New Hybrid Frameworks (Iran). In: Ksibi M. et al. (eds) Recent Advances in Environmental Science from the Euro-Mediterranean and Surrounding Regions (2nd Edition). EMCEI 2019. Environmental Science and Engineering. Springer, Cham. https://doi.org/10.1007/978-3-030-51210-1_283.

EXPERIENCES	
2022-Present	**Teaching Assistant** Department of Geographical and Sustainability Sciences, University of Iowa
2015-2022	**Flight Attendant** Mahan Airlines, Tehran, Iran.
2014-2015	**GIS Expert** RassadIran Surveying Company, Tehran, Iran.

TEACHING	
Spring 2023	**Teaching Assistant, GEOG1050: Foundations of GIS, University of Iowa** • Instructing two practical laboratory classes for the entry-level GIS course, which was available to undergraduate and graduate students with diverse academic backgrounds. The classes utilized ArcGIS Pro.
Fall 2022	**Teaching Assistant, GIS Instructional Lab, University of Iowa** • Providing assistance and guides to students who were enrolled in various courses, such as Foundation of GIS, GIS for Environmental Studies, and Health and Environment, to address any difficulties related to GIS that the students encountered.

CONFERENCE PRESENTATIONS	
2022	Koylu, C., **Torkashvand, M**., Kwon, H. & Kasakoff, A.B. (November 2022) Mapping migration regions and their evolution from population-scale family trees: What can they tell us about cultural identities and regions today? 6th ACM SIGSPATIAL International Workshop on Geospatial Humanities, Seattle, WA.
2019	**Torkashvand, M**., Neshat, A., Javadi, S., Yousefi, H. (September 2019) An improved DRASTIC-based groundwater vulnerability assessment using particle swarm optimization (PSO) algorithm. Proceedings of IAH2019, the 46th Annual Congress of the International Association of Hydrogeologists, Málaga, Spain.

HONORS & AWARDS	
March 2023	Travel grant. Graduate College, the University of Iowa ($500)
November 2022	Travel grant. ACM SIGSPATIAL executive committee ($1000)
2017-2018	Ranked 1st among M.Cs. students in RS & GIS, Class of 2020, Science and Research Branch, Islamic Azad University.
2017	Ranked 6th, in Islamic Azad University Entrance Exam for Master studies.

SKILLS	
Programming & Software	Python, MATLAB, ArcGIS, QGIS, SPSS
Other Skills	Machine Learning, Statistical Modeling, Communication and Teamwork