Personal Data

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Professional Experiences
Since 2015
Assistant Prof. Tarbiat Modares University, Tehran, Iran (Department of water resource management).

Education / Qualification
08.2011-11.2014
PhD in GIScience, Institute of Geography, Heidelberg University, Germany
Thesis: Exploring and Simulating Spatial Patterns of Urban Growth Using Data-driven and Knowledge-based Approaches.

10. 2006 - 10. 2008
M.Sc in Remote Sensing and GIS, Department of Remote Sensing and GIS, Tarbiat Modares University, Tehran, Iran
Thesis: Feasibility Study in Boosting MODIS Assessment Ability of Snow Cover Area and NDSI Using Simultaneous ASTER Images

10. 2001 - 05.2005
B.Sc in Geography, Department of Geography, Shahid Chamran University, Ahvaz, Iran

Honors and Awards
Honor student in Remote Sensing and GIS, 2008 (M.Sc).
Member of talented community at Shahid Chamran University, Ahvaz, 2003.

Projects
- Land productivity, carbon stock variation, and land cover change in Iran (PI) (2019)
- Land degradation in Iran (PI) (2017-2018)
- Mapping and monitoring land cover change (vegetation) over Iran (PI) (2016-2017)
- Environmental impact assessment of gas and oil pipe lines (PI) (Scetiran Co, 2009).
- Spatial planning for Ilam and Kermanshah provinces, Iran (PI) (Tarbiat Modares University, Tehran 2006-2008).

ISI journals (Published)

1- **Shafizadeh-Moghadam, H.** (**2019**). Improving spatial accuracy of urban growth simulation models using ensemble forecasting approaches. *Computers, Environment and Urban Systems*, *76*, 91-100.

2- Hamzehpour, N., **Shafizadeh-Moghadam, H,**[*] & Valavi, R. (**2019**). Exploring the driving forces and digital mapping of soil organic carbon using remote sensing and soil texture. *CATENA*, 182, 104141.

3- Feng, Y., Wang, J., Tong, X., **Shafizadeh-Moghadam, H.,** Cai, Z., Chen, S. & Gao, C. (**2019**). Urban expansion simulation and scenario prediction using cellular automata: comparison between individual and multiple influencing factors. *Environmental monitoring and assessment*, *191*(5), 291.

4- Feng, Y., Wang, R., Tong, X., **Shafizadeh-Moghadam, H.** (**2019**). How much can temporally stationary factors explain cellular automata-based simulations of past and future urban growth? *Computers, Environment and Urban Systems*, *76*, 150-162.

5- **Shafizadeh-Moghadam, H.,** Minaei, M., Feng, Y., Pontius, JR., (**2019**) GlobeLand30 maps show four times larger gross than net land change from 2000 to 2010 in Asia. International Journal of Applied Earth Observations and Geoinformation. 78, 240-248.

6- Shastri, H., Ghosh, S., Paul, S., **Shafizadeh-Moghadam, H.,** Helbich, M., & Karmakar, S. (**2019**). Future urban rainfall projections considering the impacts of climate change and urbanization with statistical–dynamical integrated approach. Climate Dynamics, 52(9-10), 6033-6051.

7- Valavi, R., **Shafizadeh-Moghadam, H.,**[*] Matkan, A., Shakiba, A., Mirbagheri, B., & Matkan, A. (**2019**). Modelling climate change effects on Zagros forests in Iran using individual and ensemble forecasting approaches. *Theoretical and Applied Climatology*, 137:1015–1025.

8- **Shafizadeh-Moghadam, H.,**[*] Minaei, M., Shahabi, H., & Hagenauer, J. (**2019**). Big data in Geohazard; pattern mining and large scale analysis of landslides in Iran. *Earth Science Informatics*, 12(1), 1-17.

9- Minaei, M., **Shafizadeh-Moghadam, H.,**[*] Tayyebi, A. (**2018**) Spatiotemporal nexus between the pattern of Land degradation and land cover dynamics in Iran. Land Degradation & Development. 29(9), 2854-2863.

10- **Shafizadeh-Moghadam, H.,**[*] Valavi, R., Shahabi, H., Chapi, K., & Shirzadi, A. (**2018**). Novel forecasting approaches using combination of machine learning and statistical models for flood susceptibility mapping. **Journal of environmental management**, 217, 1-11.

11- Chakraborti, S., Das, D. N., Mondal, B., **Shafizadeh-Moghadam, H.,** & Feng, Y. (**2018**). A neural network and landscape metrics to propose a flexible urban growth boundary: A case study. Ecological indicators, 93, 952-965.

12- Tayyebi, A., **Shafizadeh-Moghadam, H.,** & Tayyebi, A. H. (**2018**). Analyzing long-term spatio-temporal patterns of land surface temperature in response to rapid urbanization in the mega-city of Tehran. *Land Use Policy*, 71, 459-469.

13- **Shafizadeh-Moghadam, H.,**[*] Tayyebi, A., Ahmadlou, M., Delavar, M. R., & Hasanlou, M. (**2017**). Integration of genetic algorithm and multiple kernel support vector regression for modeling urban growth. *Computers, Environment and Urban Systems*, 65, 28-40.

14- **Shafizadeh-Moghadam, H.,**[*] Asghari, A., Tayyebi, A., & Taleai, M. (**2017**). Coupling machine learning, tree-based and statistical models with cellular automata to simulate urban growth. *Computers, Environment and Urban Systems*, *64*, 297-308.

15- Saeedimoghaddam, M., Keyanpour-Rad, M., **Shafizadeh-Moghadam, H.,** Valavi, R., Mirbagheri, B., Shakiba, A., & Matkan, A. (**2017**). A probabilistic space-time prism to explore changes in white Stork habitat use in Iran. *Ecological Indicators*, *78*, 156-166.

16- **Shafizadeh-Moghadam, H.,**[*] Tayyebi, A., & Helbich, M. (**2017**). Transition index maps for urban growth simulation: application of artificial neural networks, weight of evidence and fuzzy multi-criteria evaluation. *Environmental Monitoring and Assessment*, *189*(6), 300.

17- **Shafizadeh-Moghadam, H.,**[*] Asghari, A., Taleai, M., Helbich, M., & Tayyebi, A. (**2017**). Sensitivity analysis and accuracy assessment of the land transformation model using cellular automata. *GIScience & Remote Sensing*, 1-18.

18- Tayyebi, A., Tayyebi, A. H., Arsanjani, J. J., **Shafizadeh-Moghadam, H.,** & Omrani, H. (2016). FSAUA: A framework for sensitivity analysis and uncertainty assessment in historical and forecasted land use maps. *Environmental Modelling & Software*, *84*, 70-84.

19- Tayyebi, A., Arsanjani, J. J., Tayyebi, A. H., Omrani, H., & **Shafizadeh-Moghadam, H.,** (**2016**). Group-based crop change planning: Application of SmartScape™ spatial decision support system for resolving conflicts. *Ecological Modelling*, *333*, 92-100.

20- **Shafizadeh-Moghadam, H.,** [*] Hagenauer, J., Farajzadeh, M., & Helbich, M. (**2015**). Performance analysis of radial basis function networks and multi-layer perceptron networks in modeling urban change: a case study. *International Journal of Geographical Information Science*, *29*(4), 606-623.

21- **Shafizadeh-Moghadam, H.,** [*] & Helbich, M. (**2015**). Spatiotemporal variability of urban growth factors: A global and local perspective on the megacity of Mumbai. *International Journal of Applied Earth Observation and Geoinformation*, *35*, 187-198.

22- **Shafizadeh-Moghadam, H.,** [*] & Helbich, M. (**2013**). Spatiotemporal urbanization processes in the megacity of Mumbai, India: A Markov chains-cellular automata urban growth model. *Applied Geography*, *40*, 140-149.

23- Mobasheri, M.R., **Shafizadeh-Moghadam, H.,** & Shayan, S. (**2010**). An introduction to MODISI and SCMOD methods for correction of the MODIS snow assessment algorithm. *Journal of the Indian Society of Remote Sensing*, *38*(4), 674-685.

Conference papers and other publications

1- Ahmadlou, M., Delavar, M. R., **Shafizadeh-Moghadam, H.,** & Tayyebi, A. (**2016**). Modeling Urban Dynamics Using Random Forest: Implementing Roc and Toc for Model Evaluation. *ISPRS-International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 285-290.

2- Ahmadlou, M., Delavar, M.R., Tayyebi, A., & **Shafizadeh-Moghadam, H.** (**2015**). *Using Multivariate Adaptive Regression Spline and Artificial Neural Network to Simulate Urbanization in Mumbai, India*. The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, 40(1), 31.

Teaching

- GIS in rural studies (2018-2019)
- Advanced remote sensing in irrigation (2018-2019)
- Advanced statistics (2018-2019)
- Advanced remote sensing in soil sciences (2017-2018)
- Advanced statistics (2016-2017)
- Advanced remote sensing in water resource management (2016-2017)
- Modelling physical geographical process with R (Geostatistics). Department of Geography, chair of GIScience, Heidelberg University (2014-2015)

Reviewer Responsibilities (Selected)

-Environmental Modelling and Software
- Computers, Environment and Urban systems
- Journal of Earth Science Informatics
- Applied Geography
- Journal of Environmental Informatics
- Journal of environmental planning and management
- Sustainability
- GIScience & Remote Sensing
- Geocarto International
- Landscape and Urban Planning
- Arabian Journal of Geoscience
- Environment and Planning B: Urban Analytics and City Science
- Science of the total environment
- Journal of Agricultural Science and Technology (JAST)

Research Interests and Expertise

- Data mining and machine learning
- Spatial analysis, spatial statistics and spatial modeling
- Land use/land cover change and food security
- Human-environment interaction
- Climate change and environment change
- Digital soil mapping
- Land degradation
- Applied Remote Sensing

Skills

- ArcGIS, SNAP, IDRISI Selva and ENVI.
- Programming in R

Workshop and Training Courses

-Modelling Spatial Heterogeneity with Geographically Weighted Models, April, **2013**. National University of Ireland Maynooth, Ireland (Participant).
-4th Advanced Training Course in Land Remote Sensing, 01-05 July, **2013**. Harokopio University, Athens, Greece (Participants).
-Remote Sensing and GIS in R. Tarbiat Modares University. January 30, 2016 (Instructor).

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