University of Tabriz
Soil Science Department, Faculty of Agriculture, University of Tabriz, 5166616471, Tabriz, Iran

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Curriculum Vitae

Prof. Farzin Shahbazi
Soil Genesis, Classification and Land Evaluation - Digital Soil Mapping
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1- Educational background:

1-1-PhD (Soil Genesis, Classification and Land Evaluation), received in 2008. University of Tabriz, Iran.

Title of dissertation: Assessing MicroLEIS DSS application as a new method in land suitability evaluation (case study: south part of Ahar region).

1-2-M.Sc. (Soil Genesis, Classification and Land Evaluation), received in 2002. University of Tabriz, Iran.

Title of thesis: Qualitative evaluation of land suitability in Khusheh-Mehr region of Bonab for wheat, barley, alfalfa, onion, sugar beet and maize.

1-3-B.Sc. (Soil Science), received in 1996. University of Tabriz, Iran.

2- Sabbatical leave:

2-1-School of Life and Environmental Science, the University of Sydney, Australia. 2017-2018: **Digital Soil Mapping**, under supervision of **Prof. Alex McBratney**. Working group with **Prof. Budiman Minasny** and **Dr. Brendan Malone**.

2-2-IRNASE, CSIC, Seville, Spain, 2007-2008. Learning and application of **MicroLEIS DSS**, under supervision of **Prof. Diego de la Rosa**. Working group with **Dr. Maria Anaya Romero**.

3- Teaching experiences:

3-1- General soil science
3-2- Soil surveying and mapping
3-3- Land evaluation
3-4- Advanced soil genesis and classification
3-5- Aerial photo interpretation
3-6- Applied GIS in soil science
3-7- Digital Soil Mapping **(preferably with R programming)**

4- Master of Science and Doctorate Students Advisees/Supervisees:

> 70 students so far.

5- Research activities:

5-1- Urmia Lake restoration program. Granted by the organization of Urmia Lake restoration. University of Sharif, Tehran. **2014-2016**.

5-2- Detailed soil surveying and introducing the suitable medicinal plants in Sarab Medicinal and Industrial Plants Seed Production Station. Granted by the East Azerbaijan Natural Resources Organization. **2011-2013**.

5-3- Applying ArcGIS Geostatistical Analyst for zoning of some soil biological indices in Naghadeh region, Iran. Granted by University of Tabriz, **2010-2012**.

5-4- Erosion and contamination impacts on Land vulnerability evaluation in Souma area, using MicroLEIS DSS. Granted by University of Tabriz, **2009-2010**.

5-5- Optimum land use planning in Souma area (Iran), using MicroLEIS DSS. Granted by University of Tabriz, **2008-2009**.

6- Selected publications/ Book or Book chapter:

6-1-Mousavi, S.B. and **Shahbazi, F.** 2016. Translated Book in Persian: Guidelines for Surveying Soil and Land Resources. CSIRO Publications, Published by the University of Maragheh, Iran.

6-2-Shahbazi, F., Anaya-Romero, M., Braimoh, A.K., and de la Rosa, D., 2014. Sustainable land use planning in west Asia using MicroLEIS Decision Support Systems. In: Braimoh, A.K. and Huang, H.Q. (Eds.), Vulnerability of Land Systems in Asia. John Wiley and Sons, New York, pp. 179-194.

6-3-Shahbazi, F. and Malekian, A. 2013. Soil Genesis and Classification. University of Payame Noor Publication (in Persian).

6-4-Shahbazi, F., Jafarzadeh, A.A. de la Rosa, D. and Anaya-Romero, M. 2013. Soil erosion assessment and scenario analysis by using ImpelERO model in east Azerbaijan province, Iran. In: Academy Publish editing, USA, pp. 51-63.

6-5-Shahbazi, F. and de la Rosa, D. 2010. Towards a new agriculture for the climate change era in west Asia, Iran. In: Simard, S.W. and Austin, M.E. (Eds.), Climate Change and Variability. SCIYO Publishing, Croatia, pp. 337-364.

7- Some selected publications/National and International Journals:

Rahbar Alam Shirazi, F., **Shahbazi, F.,** Rezaei, H., Biswas, A., 2024. Multi-property digital soil mapping at 30-m spatial resolution down to 1 m using extreme gradient boosting tree model and environmental covariates. **Remote Sensing Applications: Society and Environment 33, e101123.** https://doi.org/10.1016/j.rsase.2023.101123

Shahbazi, F., Weber, T.K.D., Oustan, S., Alvyar, A., Jeon, S., Minasny, B., 2023. Uncovering the effects of Urmia Lake desiccation on soil chemical ripening using advanced mapping techniques. **Catena 232, e107440.** https://doi.org/10.1016/j.catena.2023.107440

Gozukara, G., Dengiz, O., **Shahbazi, F.,** Senol, H., Ozlu, E., Silva, S.H.G., Babur, E., 2023. Rapid assessment of elemental concentrations using pXRF and remote sensing on a dried lakebed. **Journal of Arid Environments 219, e105087.** https://doi.org/10.1016/j.jaridenv.2023.105087

Rahbar Alam Shirazi, F., **Shahbazi, F.,** Rezaei, H., Biswas, A., 2023. Digital assessments of soil organic carbon

storage using digital maps provided by static and dynamic environmental covariates. **Soil Use and Management 39, 948-974.** https://doi.org/10.1111/sum.12900

Alvyar, Z., **Shahbazi, F.**, Oustan, S., Dengiz, O., Minasny, B., 2022. Digital mapping of potentially toxic elements enrichment in soils of Urmia Lake due to water level decline. **Science of the Total Environment 808, e152086.** https://dx.doi.org/10.1016/j.scitotenv.2021.152086

Siami, A., Aliasgharzad, N., Aghebati Maleki, L., Najafi, N., **Shahbazi, F.,** Biswas, A., 2022. Recalcitrant C source mapping utilizing solely terrain-related attributes and data mining techniques. **Agronomy 12, e1653**. https://doi.org/10.3390/agronomy12071653

Chakherlou, S., Jafarzadeh, A.A., Ahmadi, A., Feizizadeh, B., **Shahbazi, F.,** Darvishi Boloorani, A., Mirzaei, S., 2022. **Arid Land Research and Management**, https://doi.org/10.1080/15324982.2022.2087570

Velázquez, F.J.B., Shahabi, M., Rezaei, H., González-Peñaloza, F., **Shahbazi, F.,** Anaya-Romero, M., 2022. The possibility of spatial mapping of soil organic carbon content at three depths using easy-to-obtain ancillary data in a Mediterranean area. **Open Research Europe 2, 110**. https://doi.org/10.12688/openreseurope.14716.1

Omrani, M., **Shahbazi, F.**, Feizizadeh, B., Oustan, S., Najafi, N., 2021. Application of remote sensing indices to digital soil salt composition and ionic strength mapping in the east shore of Urmia Lake, Iran. **Remote Sensing Applications: Society and Environment 22, e100498**. https://doi.org/10.1016/j.rsase.2021.100498

Esmaeili, E., **Shahbazi, F.**, Sarmadian, F., Jafarzadeh, A.A., Hayati, B., 2021. Land capability evaluation using NRCS agricultural land evaluation and site assessment (LESA) system in a semi-arid region of Iran. **Environmental Earth Sciences 80: 163**. https://doi.org/10.1007/s12665-021-09468-y

Ebrahimi, M., Sarikhani, M.R., Shiri, J., **Shahbazi, F.**, 2021. Modeling soil enzyme activity using easily measured variables: Heuristic alternatives. **Applied Soil Ecology 157, e103753**. https://doi.org/10.1016/j.apsoil.2020.103753

Mousavi, A, **Shahabzi, F.,** Oustan, S., Jafarzadeh, A.A., and Minasny, B., 2020. Spatial distribution of iron forms and features in the dried lake bed of Urmia Lake of Iran. **Geoderma Regional,** https://doi.org/10.1016/j.geodrs.2020.e00275

Pouladi, N., Jafarzadeh, A.A., Shahbazi, F., Ghorbani, M.A., Greve, M.H., 2020. Assessing the soil quality index as afected by two land use scenarios in Miandoab region. **SN Applied Sciences 2: 1875**. https://doi.org/10.1007/s42452-020-03651-9

Shahbazi, F., McBratney, A.B., Malone, B.P., Oustan, S., Minasny, B., 2019. Retrospective monitoring of the spatial variability of crystalline iron in soils of the east shore of Urmia Lake, Iran using remotely sensed data and digital maps. **Geoderma** 337, 1196-1207. https://doi.org/10.1016/j.geoderma.2018.11.024

Shahbazi, F., Hughes, P., McBratney, A.B., Minasny, B., Malone, B.P., 2019. Evaluating the spatial and vertical distribution of agriculturally importantnutrients — nitrogen, phosphorous and boron — in North West Iran. **Catena 173, 71-82**. https://doi.org/10.1016/j.catena.2018.10.005

Pouladi, P., Jafarzadeh, A.A., **Shahbazi, F.**, Ghorbani, M.A., 2019. Design and implementation of ahybrid MLP-FFA model for soil salinity prediction. **Environmental Earth Sciences 78: 159**. https://doi.org/10.1007/s12665-019-8159-6

Ghebleh Goydaragh, M., Jafarzadeh, A.A., **Shahbazi, F.**, Oustan, S., Taghizadeh-Mehrjardi, R., Lado, M., 2019. Estimation of elemental composition of agricultural soils from West Azerbaijan, Iran, using mid-infrared spectral models. **Revista Brasileira de Engenharia Agrícola e Ambiental 33, 460- 466**. https://doi.org/10.1590/1807-1929/agriambi.v23n6p460-466

Sheidai Karkaj, E., Sepehry, A., Barani, H., Motamedi, J., **Shahbazi, F.**, 2019. Establishing a suitable soil quality index for semi-arid rangeland ecosystems in northwest of Iran. **Journal of Soil Science and Plant**

Nutrition 19, 648-658. https://doi.org/10.1007/s42729-019-00065-4

Shahbazi, F., Huang. J., McBratney, A.B., Hughes, P., 2018. Allocating soil profile descriptions to a novel comprehensive soil classification system. **Geoderma 329, 54-60**. https://doi.org/10.1016/j.geoderma.2018.05.017

Seyedmohammadi, J., Sarmadian, F., Jafarzadeh, A.A., Ghorbani, M.A., **Shahbazi, F.**, 2018. Application of SAW, TOPSIS and fuzzy TOPSIS models in cultivation priority planning for maize, rapeseed and soybean crops. **Geoderma 310, 178-190**.

https://doi.org/10.1016/j.geoderma.2017.09.012

Niknam, P., **Shahabzi, F.**, Oustan, S., Sokouti, R., 2018. Using MicroLEIS DSS to assess the impact of climate change on land capability in the Miandoab plain, Iran. **Carpathian Journal of Earth and Environmental Sciences 13, 225-234**. https://doi.org/10.26471/cjees/2018/013/020

Further previously published articles, please visit in Google Scholar via the following address:

https://scholar.google.com/citations?user=JQNZmbUAAAAJ&hl=en

8- Some presentations/International Congress:

Shahbazi, F., Rahbar Alam Shirazi, F., Rezaei, H., Biswas, A., 2023. Assessing the vertical and lateral distribution of some key soil properties in an agricultural area of Iran using digital maps. 5th International Conference on Sustainable Natural Resource Management under Global Climate Change, New Delhi, **India**. (**Award for the best oral presentation**)

Shahabzi, F. and McBratney, A.B., 2019. Key Concepts of Soil Physics: Development, Current Applications and Future Prospects. Lomonosov Moscow State University, Moscow, **Russia**.

Pouladi, P., Jafarzadeh, A.A., **Shahbazi, F.,** Ghorbani, M.A., and Greve, M.H., 2019.Assessing the soil quality index as affected by two land use scenarios in Miandoab region. Izmir, **Turkey**.

Jafarzadeh, A.A., Montakhabi Kalajahi, V., Oustan, S., **Shahbazi, F.,** and Arab Belaghi, R., 2019. Taxonomic distance as a tool for finding correlation between soil taxonomy and world reference base classification system in calcareous, gypsiferous and saline soils. Almaty, **Kazakhstan**.

Ghebleh Goydaragh, M., **Shahbazi, F.,** Neyshabouri, M.R., Jafarzadeh, A.A., and Lado,M., 2018. Can bilinear functions be used to estimate soil plasticity index? VIIICongress of sustainable use and management the soils. Valencia, **Spain**.

Jafarzadeh, A.A., Rezaei, H., **Shahbazi., F.,** and Alijanpour, A., 2017. The role of forest type on soile volution and revitalization in Arasbaran region. 9th International Congress of Environmental Research, Gwalior, **India**.

Khamseh, A., **Shahbazi, F.,** Oustan, S., Najafi, N. and Davatgar, N. 2016. Impactof tailings dam failure on spatial features of copper contamination (Mazraeh mine area, Iran). International Conference on Integrated Environmental Management for Sustainable Development, Sousse, **Tunisia**.

Shahbazi, F., Sahabnaghdi, I., Neyshabouri, M.R., and Oustan, S., 2015. Assessing leaching of saline-sodic soils affected by Kaveh-Soda factory effluent using georefrenced maps in Maragheh-Bonab plain. SAFE, Ho Chi Minh, **Vietnam**.

Shahbazi, F., Aliasgharzad, N., Ebrahimzad, S.A., and Najafi, N., 2011. Applying ArcGIS Geostatistical Analyst for zoning of some soil biological properties affected by different land uses. Montpellier, **France**.

Shahbazi, F., and Jafarzadeh, A.A., 2010. Land management planning concerning to workability timing of soil in Souma area, using Aljarafe model. 19th World Congress of Soil Science, Brisbane, **Australia**.

Shahbazi, F., Jafarzadeh, A.A., De la Rosa, D., and Anaya-Romero, M., 2010. Soil erosion assessment and

monitoring by using ImpelERO model in east Azerbaijan province, Iran. 19th World Congress of Soil Science, Brisbane, **Australia**.

Shahbazi, F., Jafarzadeh, A.A., and Shahbazi, M.R., 2009. Agro-ecological field vulnerability evaluation and climate change impacts in Souma area (Iran), using MicroLEIS DSS. Biohydrology, Bratislava, **Slovakia**.

Jafarzadeh, A.A., **Shahbazi, F.,** and Shahbazi, M.R., 2009. Suitability evaluation of some specific crops in Souma area (Iran), using Cervatana and Almagra models. Biohydrology, Bratislava, **Slovakia**.

Shahbazi, F., and De la Rosa, D., 2009. Evaluating soil contamination risk impact on land vulnerability and climate change in east Azerbaijan, Iran. EGU, **Austria**.

Shahbazi, F., Jafarzadeh, A.A., and Shahbazi, M.R., 2009. Assessing sustainable agriculture development using the MicroLEIS DSS in Souma area, Iran. Egmondaan Zee, **the Netherlands**.

Shahbazi, F., Jafarzadeh, A.A., Sarmadian, F., Neyshabouri, M.R., Oustan, S., Anaya-Romero, M., Lojo, M., and De la Rosa, D., 2008. Land capability evaluation and climate change impacts in semi-arid and Mediterranean areas using Microleis DSS. Huelva, **Spain**.

Shahbazi, F., Jafarzadeh, A.A., Sarmadian,F., Neyshabouri, M.R., and Oustan, S., 2007. Parent material and land use effects on population frequency distribution parameters of selected soil variables in south part of Ahar region. Pedometrics, Tubingen, **Germany**.

>70 papers were presented at National Congress so far.

Associate Prof. Dr. Farzin Shahbazi
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