Samereh Falahatkar

Age: 40 years old (1982/03/21)
Marital status: Married/ Two children
Spoken Language: Persian, English
Born in: Lahijan (Iran)

Education:

PhD., Natural Resources and Marine Science Faculty, Tarbiat Modares University, 2009-2014.

Thesis: Modeling of Temporal and Spatial Soil Organic Carbon Change in Related to Land Use and Land Cover in Future Four decades in Deylaman Region(Supervisor: Dr Seyed Mohsen Hosseini, Dr Abdolrasoul Salman Mahini, Co-supervisor: Dr. Shamsollah Ayoubi)

MSc., Natural Resources Faculty, Isfahan university of technology, 2006- 2008.

Thesis: Isfahan Land cover change detection using remote sensing and GIS. (Supervisor: Dr Ali Reza Soffianian, Dr Seyed Jamaledin Khajedin, Co-supervisor: Mr. Hamid Reza Ziaee)

BSc., Natural Resources Faculty, Tehran university, 2001-2005.

Research Interests:

Monitoring of Greenhouse gases by Satellite Data

Climate Change

Application of remote sensing data for environmental management

Environmental Modelling

Publication:

- Safaeian, S., ***Falahatkar, S.***, Tourian, M.J., 2023. Satellite observation of atmospheric CO2 and water storage change over Iran. *Scientific Reports*. 13: 3036-3051. https://doi.org/10.1038/s41598-023-28961-x
- Sangi, S., ***Falahatkar, S.***, Gholamalifard, M., 2022. Spatiotemporal Variation of Nitrogen Dioxide and Nighttime Light Dataset of Iranian Metropolises in the COVID-19 Outbreak. *Journal of Environmental Informatics*, doi:10/3808/jei.202300488.

- Shojaei Baghini. N., **Falahatkar, S**., Hassanvand, M.S., 2022. Time series analysis and spatial distribution map of aggregate risk index due to tropospheric NO_2 and O_3 based on satellite observation. Journal of Environmental Management, 304, 1142020.

- Mousavi, S.M., **Falahatkar**, S., 2020. Spatiotemporal distribution patterns of atmospheric methane using GOSAT data in Iran, *Environment, development and sustainability*, 24: 4191-4207. https://doi.org/10.1007/s10668-019-00378-5.

- **Falahatkar**, S., Rezaei, F., 2020. Towards low carbon cities: Spatio-temporal dynamics of urban form and carbon dioxide emissions, *Remote Sensing Applications: Society and Environment*, 18:100317. https://doi.org/10.1016/j.rsase.2020.100317.

- Mirchooli, F., Kiani-Harchegani, M., Khaledi Darvishan, A., **Falahatkar**, S., Sadeghi, S. H., 2020. Spatial distribution dependency of soil organic carbon content to important environmental variables, *Ecological Indicators*, 116: 106473.

- Chezgi, J., Vafakhah, M., **Falahatkar**, S., 2019. Spatial Resolution Effect of Remotely Sensed Data on Flood Hydrograph Simulation, *Journal of the Indian Society of Remote Sensing*, https://doi.org/10.1007/s12524-019-01060-z.)

- Siabi, Z., **Falahatkar**, S., Alavi, S.J., 2019. Spatial distribution of XCO2 using OCO-2 data in growing seasons, *Journal of environmental management*, vol 244, 110-118, https://doi.org/10.1016/j.jenvman.2019.05.049.

- Mousavi, S.M., **Falahatkar, S.,** 2019. Spatiotemporal distribution patterns of atmospheric methane using GOSAT data in Iran. *Environment, Development and Sustainability*, Accepted, https://doi.org/10.1007/s10668-019-00378-5

- Mousavi, S.M., **Falahatkar, S.,** Farajzadeh, M., 2017. Assessment of seasonal variations of carbon dioxide concentration in Iran using GOSAT data, Natural resources forum, vol 41, No. 2, 83-91, DOI: 10.1111/1477-8947.12121.

- **Falahatkar, S.,** Mousavi, S.M., Farajzadeh, M., 2017, Spatial and Temporal Distribution of Carbon Dioxide Gas using GOSAT Data over IRAN, *Environmental monitoring and assessment*, 189:627, doi.org/10.1007/s10661-017-6285-8.

- **Falahatkar, S.,** Hosseini, S.M., Ayoubi, S., Salman Mahiny, A.R., 2016, Predicting Soil Organic Carbon Density using Auxiliary Environmental Variables in Northern Iran, *Archive of Agronomy and Soil Science*, 62, p: 375-394. [**DOI**]: 10.1080/03650340.2015.1051472

- **Falahatkar, S.,** Hosseini S. M., Salman Mahiny, A.R., Ayoubi, S., Wang. S., 2014. Soil Organic Carbon Stock as Affected by Land Use Changes in the Humid Region of Northern Iran, *Journal of Mountain science*, Vol 11 (2), p: 507-518. **[DOI]** 10.1007/s11629-013-2645-1.

- **Falahatkar, S.,** Soffianian, A. R. Khajeddin, S. J., Ziaee, H.R., Ahmadi Nadoushan, M., 2011, Integration of Remote sensing Data and GIS for Prediction of Land Cover Maps. *International journal of geomatics and geosciences*, vol 1(4): 847-864.

- **Falahatkar, S**., Hosseini, S. M., Soffianian, A.R., 2011, Retrieval Land surface temperature using TM and ETM+ thermal Bands (case study: Isfahan city, Iran), *Indian journal of science and technology*, vol4 (2): 19-25.

- Soffianian, A. R., Ahmadi Nadoushan, M., Yaghmaei, L. **Falahatkar, S**., 2010, Mapping and analyzing urban expansion using remotely sensed imagery, Iran, *World Applied Sciences Journal*.9 (12). 1370-1378.

Seminars

- **Falahatkar, S** & Soffianian, A. R. 2008***. Land Cover Change Detection Using Post-Classification Comparison: the case study of Isfahan, Iran***. International congress of environmental research. Goa. India, 18-20 December.

- **Falahatkar, S**., Hosseini, S. M., Salman Mahiny, A.R., 2012, ***The Relationship of Primary Terrain Attributes on Soil Organic Carbon in Agriculture (Case study: Deylaman Region, Iran)***, 8th International Soil Science Congress" Land degradation and Challenges in soil management", Ege University, Turkey, 15-17 May.

- **Falahatkar, S.,** Hosseini, S. M., Salman Mahiny, A.R., Ayoubi, S, 2013, ***Artificial Neural Network as an Effective Tool for Predicting Soil Organic Carbon Density in Different Land Uses in Northern Iran,*** International Conference on Applied Life Sciences (ICALS), UAE, 15-17 September.

- **Falahatkar, S.,** Hosseini, S. M., Salman Mahiny, A.R., Ayoubi, S, 2013, ***PREDICTION OF LAND COVER CHANGES BY THE INTEGRATION MLP AND CA-MARKOV MODEL.*** 2th international conference of Sensors and Model in Photogrametry and Remote Sensing., Tehran University, Iran. 6-8 October.

- **Falahatkar, S.**, 2015. Linear Spectral unmixing: ***A soft Classifier for producing land cover map***. 3th international conference of Sensors and Model in Photogrametry and Remote Sensing, Kish. 23-25 November.

- Mousavi, S.M., **Falahatkar, S.,** Farajzadeh, M., 2017, ***Investigation of the Relationship between Satellite Retrieval CO_2 Concentration and NDVI over IRAN***, International conference on Climate Change, Sri Lanka, 16-17 February.

- Siabi, z., **Falahatkar, S.,** Alavi, S.J., 2017, ***Modeling of the atmospheric CO_2 concentration using Random Forest Model*****,** 32th International conference on Remote sensing, India, 23-27 October.

- Siabi, z., **Falahatkar, S.**, Alavi, S.J., 2018, ***Spatial Distribution of XCO2 using the OCO-2 Data and Environmental Variables over Iran,*** Seventh International Conference on Remote Sensing and Geoinformation of the Environment, 18-21 March, Paphos, Cyprus.

Projects:

- Executor: Quantification of air pollutants changes due to COVID-19 outbreak over Iran, 2022, Supported by Iran National Science Foundation (grant number: 99012652).
- Executor: Spatial distribution Modeling of CO_2 in related to land cover components by remote sensing, 2019, Supported by Iran National Science Foundation (grant number: 96001126).
- Executor: Spatial and temporal distribution monitoring of CO_2 and CH_4 in related to land cover using GOSAT data, 2016, Supported by Iran National Science Foundation (grant number: 94009935).
- Executor: Investigation of atmospheric CO_2 Variations on total water storage over Iran. 2018, Supported by Iran National Science Foundation (grant number: 98020586).