

## PERSONAL INFORMATION:

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## EDUCATION:

**Ph.D (2011-2015): Environmental Sciences: Physical Geography and Environmental Change, University of Basel, Switzerland.**

**M.Sc (2004-2007): Natural Resources Engineering: Combating Desertification, University of Tehran, Iran.**

**B.Sc (1999-2004): Natural Resources Engineering: Range and Watershed Management, Gorgan University of Agricultural Sciences and Natural Resources, Iran.**

## RESEARCH INTEREST:

**Wind Erosion Modeling, Geomorphological Processes, Soil Erosion Modeling and Simulation, Dust Emission Modeling and Control**

## PUBLICATION:

Arab Ameri, F., Mohammadian Behbahani, A., Ownegh, M., Arami, S. H. Statistical Analysis of Spatio-Temporal Variations of Dust Occurrences in Golestan Province. *Desert Ecosystem Engineering*, 2024; 12(40): 59-72. doi: 10.22052/deej.2024.254036.1037

Boali, H., Asgari, H., Mohammadian Behbahani, A., Salmanmahiny, A., Naimi, B. Monitoring and investigation of wind erosion warning areas in the northwest of Golestan Province (Case study: Aq Qala and Gomishan Cities). *Water and Soil Management and Modelling*, 2024; 4(2): 343-356. doi: 10.22098/mmws.2023.13540.1348

Mohammadian Behbahani, A., Hoseinalizadeh, M., khermandar, K., Kalamati, A. R., Rezaei, H. Investigating the level of arsenic (As) and nickel (Ni) contamination caused by the emission of dust from bauxite crushers. *Journal of Soil Management and Sustainable Production*, 2024; 14(1): 95-113. doi: 10.22069/ejsms.2024.16584.1886

Farahi, M., Mohammadian Behbahani, A., Asgari, H. R., Dahmardeh Behrooz, R., Kaskaoutis, D. Investigating the correlation of heavy metals (Zn, Cr, Pb, Co, Cd) and PM10 suspended particles and assessing their health risk in Zabol city. *Journal of Natural Environmental Hazards*, 2024; (): 1-1. doi: 10.22111/jneh.2024.47416.2010

Matboo, A., Sheikh, V., Mohammadian Behbahani, A., Zare Garizi, A. Effects of biocrusts on the hydrological components and sediment production at experimental plot scale in arid environments. *Watershed Engineering and Management*, 2024; 16(1): 117-134. doi: 10.22092/ijwmse.2023.361926.2015

Boali, A., Asgari, H.R., Mohammadian Behbahani, A., Salmanmahiny, A., Naimi, B. Remotely sensed desertification modeling using ensemble of machine learning algorithms. *Remote Sensing Applications: Society and Environment*, 2024; 34. doi:10.1016/j.rsase.2024.101149

Gharemahmudli, S., Sadeghi, S.H.R., Najafinejad, A., Zarei Darki, B., Mohammadian Behbahani, A., Kheirfam, H. Controlling enhanced surface runoff components as a result of a freezing-thawing cycle by inoculating soil bacteria and cyanobacteria. *Soil and Tillage Research*, 2024; 237:1-9. doi: 10.1016/j.still.2023.105989

Farahi, M., Mohammadian Behbahani, A., Asgari, H. R., Dahmardeh Behrooz, R., G. Kaskaoutis, D. Investigating the concentration of heavy metals in dust and assessing the human health risk (case study: Birjand city, South Khorasan province). *Journal of Natural Environmental Hazards*, 2024; 13(39): 93-108. doi: 10.22111/jneh.2023.45720.1961

Khermandar, K., Hosseinalizadeh, M., Mahdavi, A., Mohammadian Behbahani, A., Yeganeh, H. Ecological Restoration of Polluted Soils in Arid Region (Case Study: Bauxite Crusher of Jajarm Alumina). *Desert Management*, 2023; 10(4): 55-80. doi: 10.22034/jdmal.2023.1972534.1401

Khermandar, K., Hosseinalizadeh, M., Mahdavi, A., Mohammadian Behbahani, A., Yeganeh, H. Investigating the Phytoremediation of *Seidlitzia Rosmarinus* and *Haloxylon aphyllum* Desert Plants: A Case Study of Bauxite Crusher of Jajarm Alumina Mine. *Desert Ecosystem Engineering*, 2023; 12(38): 45-58. doi: 10.22052/deej.2023.252496.1010

Gharemahmudli, S., Sadeghi, S.H.R., Najafinejad, A., Zarei Darki, B., Kheirfam, H., Mohammadian Behbahani, A. Changes in overall and inter-variability of runoff and soil loss for a loess soil resulted from a freezing-thawing cycle. *Environmental Monitoring and Assessment*, 2023; 195(7):860. doi: 10.1007/s10661-023-11446-9

Kayhanpanah, M., Najafinejad, A., Pourghasemi, H.R., Mohammadian Behbahani, A. Comparison and evaluation of spatial changes of sediment connectivity and sediment delivery ratio in Marcheshme watershed (Semnan province). *Iranian Journal of Soil and Water Research*, 2023; 53(11): 2655-2670. doi: 10.22059/ijswr.2022.345966.669322

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Mambeni, M., Asgari, H. R., Mohammadian Behbahani, A., Zare, S., Yousefi, H. Investigating the effect of Lignocellulose Mulch on Sand Shear Strength. *Desert Ecosystem Engineering*, 2021; 10(30): 17-30. doi: 10.22052/deej.2021.10.30.11

Boali, A., Asgari, H., Mohammadian Behbahani, A., Salmanmahiny, A., Naimi, B. Provide early desertification warning system based on climate and groundwater criteria (Study area: Aq Qala and Gomishan counties). *Geography and Development*, 2021; 19(63): 285-306. doi: 10.22111/j10.22111.2021.6204

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Boali, A., Asgari, H., Mohammadian Behbahani, A., Salmanmahiny, A., Naimi, B. Evaluation of desertification intensity based on quantitative and qualitative changes in groundwater and soil criteria using Madalus model and geostatistical methods. *Environmental Sciences*, 2021; 19(4): 85-106. doi: 10.52547/envs.2021.37277

Hosseinalizadeh, M., Alinejad, M., Mohammadian Behbahani, A., Khormali, F., Kariminejad, N., Pourghasemi, H.R. A Review on the Gully Erosion and Land Degradation in Iran. In: Shit, P., Pourghasemi, H., Bhunia, G. (eds) *Gully Erosion Studies from India and Surrounding Regions*. Advances in Science, Technology & Innovation. Springer, Cham, 2020; doi:10.1007/978-3-030-23243-6\_26

Sarbazi, M., Ownegh, M., Mohammadian Behbahani, A., Akbari, M. Evaluating and Modeling Temporal-Spatial Changes of Land Use in the Expansion of Desertification Intensity in the Arid Regions of Northeast Iran (Sarakhs). *Journal of Geography and Environmental Hazards*, 2020; 9(2): 1-18. doi: 10.22067/geo.v9i2.85890

Mombeni, M., Asgari, H. R., Mohammadian Behbahani, A., Zare, S., Yousefi, H. Investigation of Mechanical Behavior of Inflatable Sand Using Malass and Black Liqueur. *Journal of Range and Watershed Management*, 2020; 72(4): 1061-1073. doi: 10.22059/jrwm.2020.291883.1428

Gharemahmoodli, S., Najafinejad, A., Sadeghi, S. H., Zarei Darki, B., Mohammadian Behbahani, A., Kheirfam, H. Reducing Surface Runoff from Soils Subjected to a Freezing-Thawing Cycle using Soil Cyanobacteria. *Journal of Water and Soil Conservation*, 2020; 27(3): 163-180. doi: 10.22069/jwsc.2020.17693.3318

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Heidarizadi, Z., Mohammadian Behbahani, A. Performance comparison of Geomod and LCM models to predict land use changes (case study: Abughovair plain, Ilam province). *Iranian Journal of Range and Desert Research*, 2019; 26(3): 660-674. doi: 10.22092/ijrdr.2019.120012

Hosseinalizadeh, M., Kariminejad, N., Rahmati, O., Keesstra, S., Alinejad, M., Mohammadian Behbahani, A. How can statistical and artificial intelligence approaches predict piping erosion susceptibility? *Science of The Total Environment*, 2018; 646:1554-1566. doi: 10.1016/j.scitotenv.2018.07.396

Gheytasi, F., Mohammadian Behbahani, A., Hosseinalizadeh, M., Asgari, H. R. Comparative analysis of soil physico-chemical properties in erodibility of various desert crusts (Case study: hills around Aji-Gol lake, Golestan province, Iran). *Desert Ecosystem Engineering*, 2019; 7(21): 33-44. doi: 10.22052/deej.2018.7.21.25

Arami, S. A., Ownegh, M., Mohammadian Behbahani, A., Akbari, M., Zaravandi, A. Investigating the performance of BADI Index: An improved approach to detect dust storms using MODIS imagery in West of Middle East. *Journal of Natural Environmental Hazards*, 2019; 8(22): 75-94. doi: 10.22111/jneh.2018.25420.1414

Heidary, K., Najafinejad, A., Mohammadian Behbahani, A., Ownegh, M. Assessment of Soil Water Repellency Intensity and Its Temporal Variability after Prescribed Fire in Forest Areas of Toshen Watershed, Golestan Province. *Journal of Water and Soil Conservation*, 2018; 25(4): 27-47. doi: 10.22069/jwsc.2018.14663.2960

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Mohamadian Behbahani, A., Heidarizadi, Z. Monitoring and predicting the trend of sand zone changes using the CA-Markov model (case study: Abu Ghovair plain, Dehloran, Ilam province). *Environmental Sciences*, 2018; 16(4): 153-166.

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Arami, S. A., Ownegh, M., Mohammadian Behbahani, A., Akbari, M., Zaravandi, A. Statistical Analysis of Spatio-Temporal Pattern of Dust Storms in West and Southwest of Iran. *Journal of Water and Soil Conservation*, 2018; 25(1): 61-83. doi: 10.22069/jwsc.2018.14107.2883

Hosseinalizadeh, M., Kariminejad, N., Alinejad, M., Mohammadian Behbahani, A. The spatial association between Halocnemum strobliaceum and Nebkas in North of Golestan Province, Iran. *Desert Ecosystem Engineering Journal*, 2018; 1(2): 55-66. doi: 10.22052/jdee.2018.126753.1032

Faraji, M., Amirian Chakan, A., Jafarizadeh, M., Mohammadian Behbahani, A. Soil and nutrient losses due to root crops harvesting: a case study from southwestern Iran. *Archives of Agronomy and Soil Science*, 2017; 63(11), 1523–1534. doi:10.1080/03650340.2017.1296133

Mohammadian Behbahani, A., Feiznia, S., Ekhtesasi, M., Ahmadi, H. Investigating the Granulometry and Mineralogical Similarities of Geomorphological Facies with Aeolian Sediments Crossing Yazd-Meybod Road. *Desert Ecosystem Engineering*, 2017; 6(16): 71-80. doi: 10.22052/6.16.71

Alinezhad, M., Hosseinalizadeh, M., Ownegh, M., Mohammadian behbahani, A. Geomorpho-Pedological Analysis of Nebka Landscape in Sufikam Plain, Golestan Province. *Desert Ecosystem Engineering*, 2017; 6(16): 59-70. doi: 10.22052/6.16.59

Feiznia, S., Mohammadian Behbahani, A., Zakikhani, M. S. Erodibility of Quaternary Alluvial Terraces of Taleghan Drainage Basin, Iran, *Iranian Journal of Natural Resources*, 2009; 60(1): 453-471.

Faraji , M., Ahmadi, H., Mahdavi, M., Mohammadian Behbahani, A., Dadkhah, M. A Survey of Factors Affecting Erosion and Sedimentation in Baba-Ahmadi Watershed Basin, Using EPM and MPSIAC Models. *Iranian Journal of Natural Resources*, 2009; 59(4): 783-796.

## ACADEMIC TEACHING EXPERIENCE:

**Desert Geomorphology, Wind Erosion and Control, Quaternary Formations, Quantitative Geomorphology, Applied Sedimentology, Dust storms Dynamic**

## SERVICE AND PROFESSIONAL MEMBERSHIP:

**DesertNet International**

**Watershed Management Society of Iran**

**Iranian Scientific Association of Desert Management**

## LANGUAGES:

**Persian, English**