

Curriculum Vitae

Salman Mirzaee, PhD

Researcher in Department of Agronomy, Horticulture and Plant Science,
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Date of birth: 14 Apr 1986

Gender: Male

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Education

20 Sep 2012 – 9 Feb 2016 **Soil Science**
PhD Shahrekord University, Shahrekord, Iran

20 Sep 2009 – 20 Sep 2011 **Soil Science**
Master's Degree University of Tehran, Tehran, Iran

20 Sep 2005 – 20 Sep 2009 **Soil Science**
Bachelor's Degree Urmia University, Urmia, Iran

Professional Experience

19 Mar 2016 – 20 Sep 2017 **Researcher**
Researcher at R&D Unit of Gyah Company, Tehran, Iran

20 Sep 2017 – 22 Aug 2023 **Technical Expert**
Researcher at R&D Unit of PARS Agro Industry Company,
Ardabil, Iran

Areas of Expertise, Research Interest

- I) Precision Plant Nutrition: Optimizing Fertilizer formulation and Application Techniques
 - II) Precision Agriculture: Developing Nutrient Management Zone and Prescription Maps
 - III) Enhance Environmental Quality and Improve Soil Health
 - IV) Aspatial and Spatial Estimator Models
 - V) Remote Sensing and GIS
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Publications

Peer-Reviewed Articles

1. **Mirzaee S.**, Nafchi AM., Ostovari Y, Seifid M, Ghorbani-Dashtakie S, Khodaverdiloo H, Chakherlou S, Taghizadeh-Mehrjardi R, Raei B. 2024. Monitoring and Assessment of Spatiotemporal Soil Salinization in the Lake Urmia Region. *Environmental Monitoring and Assessment Journal*. 196, 958.
 2. **Mirzaee S.** and Nafchi A.M. 2023. Monitoring Spatiotemporal Vegetation Response to Drought Using Remote Sensing Data. *Sensors* 23, 2134.
 3. **Mirzaee S.**, MH. Rasouli-Sadaghiani, N. Miran. 2023. Evaluating the Nutritional Status of Lisbon Lemon and Perl Tangerine gardens in Dezful Using DRIS and DOP Methods. *Water and Soil Science* 33 (4), 185-200. (In Persian)
 4. AA Zolfaghari, AAS Toularoud, F Baghi, **Mirzaee S.** 2022. Spatial Prediction of Soil Particle Size Distribution in Arid Agricultural Lands in Central Iran. *Arabian Journal of Geosciences* 15 (19), 1574.
 5. **Mirzaee S.**, S. Ghorbani-Dashtaki. 2021. Calibrating the WEPP Model to Predict Soil Loss for Some Calcareous Soils. *Arabian Journal of Geosciences* 14, 2198.
 6. N Miran, MH Rasouli Sadaghiani, V Feiziasl, E Sepehr, M Rahmati, **Mirzaee S.** 2021. Predicting Soil Nutrient Contents Using Landsat OLI Satellite Images in Rain-fed Agricultural Lands, Northwest of Iran. *Environmental Monitoring and Assessment* 193 (9), 607.
 7. Poppiel, R.R., Demattê, J.A.M., Rosin, N.A., Campos, L.R., Tayebi, M., Bonfatti, B.R., Ayoubi, S., Tajik, S., Afshar, F.A., Jafari, A., Hamzhepour, N., Taghizadeh- Mehrjardi, R., Ostovari, Y. **Mirzaee, S.**, Shahriari, A., Ghorbani, M., Rahmati, M., 2021. High Resolution Middle Eastern Soil Attributes Mapping via Open Data and Cloud Computing. *Geoderma* 385, 114890.
 8. **Mirzaee S.**, S. Ghorbani-Dashtaki, Kerry, R. 2020. Comparison of Aspatial, Spatial and Hybrid Methods for Predicting Inter-Rill and Rill Soil Sensitivity to Erosion at the Field Scale. *Catena* 188, 104439.
 9. S. Kalbali, Sh. Ghorbani Dashtaki, M. Naderi, **Mirzaee S.** 2020. Investigating the Effect of Surface Gravel Cover on Runoff and Soil Erosion with Simulating Runoff. *Iranian Journal of Watershed Management Science and Engineering* 14 (48), 52-58. (In Persian)
 10. N. Miran, H. Sadaghiani, V. Feiziasl, E. Sepehr, M. Rahmati, **Mirzaee S.** 2019. Evaluation of Canopy Nitrogen in Dryland Wheat using ETM+ Satellite Images in South of West Azerbaijan Province. *Journal of Water and Soil* 33(5), 739-749. (In Persian)
 11. **Mirzaee S.**, S. Ghorbani-Dashtaki. 2018. Deriving and Evaluating Hydraulics and Detachment Models of Rill Erosion for Some Calcareous Soils. *Catena* 164, 107-115.
 12. **Mirzaee S.**, S. Ghorbani-Dashtaki, J. Mohammadi, F. Asadzadeh, R. Kerry. 2017. Modeling WEPP Erodibility Parameters in Calcareous Soils in Northwest Iran. *Ecological Indicator* 74, 302-310.
 13. Asadzadeh, **Mirzaee S.**, H. Nazarnejad. 2017. Application of Dem to Compute Topographic Factors of RUSLE Model Using Geostatistical Technique. *Journal of Watershed Management Research*. 7(14), 245-254. (In Persian)
 14. **Mirzaee S.**, F. Asadzadeh, A.A. Zolphaghari. 2017. Comparison of Some Geostatistical Methods and Incorporation of Them with Pedotransfer Functions for Mapping Cation Exchange Capacity. *Applied Soil Research*. 4(2), 1-13. (In Persian)
 15. **Mirzaee S.**, MH. Rasouli-Sadaghiani, N. Miran. 2017. Determining the Optimum Level of the Nutrient Elements and Evaluating the Nutritional Status of Lisbon Lemon and Perl
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- Tangerine in Dezful using DRIS Method. *Journal of Water and Soil* 31(2), 570-580. (In Persian)
16. S. Kalbali, Sh. Ghorbani Dashtaki, M. Naderi, **Mirzaee S.** 2017. Effect of Rock Fragment Cover on Hydraulics Properties of Surface Flows and Rill Initiation with Simulating Runoff under Natural Conditions. *Journal of water and soil* 31(1), 75-85. (In Persian)
 17. **Mirzaee S.**, F. Asadzadeh, H. Nazarnejad. 2017. Predicting Manning and Darcy-Weisbach Roushness Coefficients in a Loess Soil Surface under Different Rock Fragment Covers. *Journal of Watershed Management Research* 8(15), 73-81. (In Persian)
 18. **Mirzaee S.**, S. Ghorbani-Dashtaki, J. Mohammadi, H. Asadi, F. Asadzadeh. 2016. Spatial Variability of Soil Organic Matter Using Remote Sensing Data. *Catena* 145, 118-127.
 19. **Mirzaee S.**, Sh. Ghorbani Dashtaki, J. Mohammadi, H. Asadi and F. Asadzadeh. 2016. Trend Surface Analysis and its Effects on Variogram Modeling and Mapping of Some Soil Properties. *Journal of Water and Soil Conservation* 23(1), 137-153 (In Persian)
 20. **Mirzaee S.**, S. Ghorbani-Dashtaki, J. Mohammadi, H. Asadi, F. Asadzadeh. 2016. Estimation of Soil Organic Matter and Clay Using Digital Elevation Model. *Journal of soil research* 30(1), 61-70 (In Persian)
 21. **Mirzaee S.**, S. Ghorbani-Dashtaki, J. Mohammadi, H. Asadi, F. Asadzadeh. 2016. Suitable Interpolation Methods for Zoning of Interrill Erodibility of WEPP Model and Some Soil Properties Using Geostatistics and Remote Sensing Data. *Journal of Watershed Engineering and Management* 8(1), 42-54 (In Persian)
 22. F. Asadzadeh, **Mirzaee S.**, H. Nazarnejad. 2016. Application of DEM to Compute Topographic Factors of RUSLE Model Using Geostatistical Technique. *Journal of Watershed Management Research*. 7(14), 245-254. (In Persian)
 23. **Mirzaee S.**, S. Ghorbani Dashtaki, H. Khodaverdiloo. 2015. Comparing the Goodness of Different Statistical Criteria for Evaluating the Soil Water Infiltration Models. *Journal of Water and Soil* 29 (1), 164-175 (In Persian)
 24. **Mirzaee S.**, M. Gorji and A. Jafari Ardakani. 2015. Risk Assessment of Soil Erosion Using Geographical Information System (Case Study of Tehran Province). *Iran-Watershed Management Science and Engineering* 9(29), 75-79 (In Persian)
 25. **Mirzaee S.** and Sh. Ghorbani Dashtaki. 2015. Investigation and Comparison of the Evaluation Indicators Efficiency of Soil Water Retention Curve Models. *Iranian Journal of Irrigation and Drainage* 2(9), 274-282. (In Persian)
 26. F. Asadzadeh, M. Gorji, A. Vaezi, **Mirzaee S.** 2015. Variability of Measured Runoff and Soil Loss from Field Plots. *Journal of Water and Soil* 29(3), 638-647. (In Persian)
 27. Asadzadeh F, **Mirzaee S.**, Tayebi M. 2014. A Determination of the most Suitable Cell Size of the Digital Elevation Model to compute the Topographic Factor in RUSLE. *Iranian Journal Soil and Water Research* 45(3), 325-332 (In Persian)
 28. **Mirzaee S.**, A.A. Zolfaghari, M. Gorji, M. Dyck and S. Ghorbani Dashtaki. 2014. Evaluation of Infiltration Models with Different Numbers of Fitting Parameters in Different Soil Texture Classes. *Archives of Agronomy and Soil Science* 60(5), 681-693.
 29. Asadzadeh F, **Mirzaee S.**, Gorji M and Jafari-Ardakani A. 2014. Laboratory Investigation of Surface Rock Fragment Cover Effects on Roughness Coefficient, Shear Stress and Soil Loss. *Applied Soil Research* 2 (1), 15-25. (In Persian)
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Updated August 2024

30. Asadzadeh, M Gorji, A Vaezi, R Sokouti and **Mirzaee S.** 2013. Effect of Plot Size on Measured Runoff and Sediment Yield from Natural Rain-Storms. *Journal of water and soil resources conservation* 2(4), 69-81. (In Persian)
 31. A.A Zolfaghari, **Mirzaee S.**, M Gorji. 2012. Comparison of Different Models for Estimating Cumulative Infiltration. *International journal of soil science* 7(3), 108-115.
 32. **Mirzaee S.**, M. Gorji and A. Jafari Ardakani. 2012. Effect of Surface Rock Fragment Cover on Soil Erosion and Sediment Using Simulated Runoff. *Journal of Soil Management and Sustainable* 2(1), 141-154. (In Persian)
 33. **Mirzaee S.**, Gorji M, Jafari A. 2012. Effect of Rock Fragment Cover on Distance of Rill Erosion Initiation and Overland Flow Hydraulic. *International journal of soil science* 7(3), 100-107.
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Conference Oral Presentations

1. **Mirzaee S.** and Nafchi AM. 2024. Pros and Cons of Yield Goal-Based Variable Rate Nitrogen Prescription Maps. *Innovations in Precision Agriculture Session, ASABE Annual International Meeting.*
2. **Mirzaee S.** and Nafchi AM. 2024. Enhancing Nitrogen Use Efficiency and Crop Yields Integrating Biosensors-rich Spots and Remote Sensing. *Latest Developments in Precision Crop Protection and Fertilizer Applications Session, ASABE Annual International Meeting.*
3. **Mirzaee S.** and Ghorbani Dashtaki Sh. 2014. Monitoring Changes Land Uses in Kaleyber, East-Azerbaijan Province. *Soil and Environmental National conference.* Urmia, Iran.
4. **Mirzaee S.** and Ghorbani Dashtaki Sh. 2014. Comparison of Time Efficiency Some Water to Soil Infiltration Models. *Soil and Environmental National conference.* Urmia, Iran.

Conference Published Posters

1. **Mirzaee S.**, Zolfaghari AA., Gorji M. 2012. Models for Estimating Cumulative Infiltration. *8th international soil science congress on land degradation and challenges in sustainable soil management.* Turkey.
 2. **Mirzaee S.**, M. Gorji, A. Jafari Ardakani. 2012. Evaluating the Effect of Rock Fragments and Flow Discharge on Distance of Rill Erosion Initiation. *8th international soil science congress on land degradation and challenges in sustainable soil management.* Turkey
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Extension Fact Sheets

1. Nafchi AM., Clark J., **Mirzaee S.** 2023. Monitoring Corn Nutrient Deficiencies: The Traditional and Precision Ag Approach. SDSU Extension Factsheet.
 2. Nafchi AM., Askarzadeh Y., **Mirzaee S.** 2024. Cover Crops in Modern Agriculture. SDSU Extension Factsheet.
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Workshops/Trainings

1. Principle of Recommendation and Application of Herbicides. 2021.
 2. Principles of practical nutrition in greenhouse crops. 2021.
 3. Management of Seed Corn Fields. 2018.
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Guest Lecture

1. Principles of Plant Nutrition and Interpretation of Soil Analysis. 2021. University of Tehran.
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Reviewer for Journals

- Environmental Modeling & Assessment
 - Ecological Indicators
 - Land Degradation & Development
 - Groundwater for Sustainable Development
 - Frontiers in Environmental Science
 - European Journal of Soil Science
 - Infrared Physics & Technology
 - International Soil and Water Conservation Research
 - Remote Sensing Applications: Society and Environment.
 - Earth Science Informatics
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Skills and Abilities

Fluent in English; Native in Turkish and Persian.

Software such as ArcGIS, ArcGIS Pro, SMSTM Precision Farming Software.

Programming in R, Excel, STATISTICA, Sigma Plot.

Develop presentations and literature for both a scientific and non-scientific audience.

Interact with farmers, agronomists, and industry representatives.

Set-up both on-farm strip trials and small plot experiments.

Honors and Awards

Honors List, Undergraduate Student, Urmia University, 2009

Ranked 1st, Graduate Student, Tehran University, 2011
