

## Shahin Nozari, MSc (Ph. D. candidate)

**Address in USA:** Las Cruces, New Mexico. USA.

**Cellphone:** +1(575)-571-3673  
+420732799534

**Email:** [nozari@af.czu.cz](mailto:nozari@af.czu.cz)  
[shahin.nozari@yahoo.com](mailto:shahin.nozari@yahoo.com)

**Google Scholar:** <https://scholar.google.com/citations?user=YOUR-UNIQUE-ID&user=59xsLt8AAAAJ>

**LinkedIn:** <https://www.linkedin.com/in/nazanin-nz-50396a4b/>



### About me:

I am an accomplished scientist with an extensive background in soil science and over eleven years of theoretical and direct expertise and experience in soil science, soil erosion, digital soil mapping, agriculture engineering, and GIS. Having worked in international labs (Iran, Czech Republic, USA), I have a wide array of technical skills and proficiency with instrumentation, along with the ability to learn quickly, and easily adapt to change. I have a collaborative personality being able to liaise and collaborate efficiently with team members, and I am a critical thinker who enjoys troubleshooting, developing assays, and optimizing methods to answer specific questions. Despite obstacles and uncontrollable circumstances (e.g.: the COVID-19-associated lockdowns), I can complete projects successfully and on time, ensuring continuous, meaningful, and measurable outputs. Along with bringing my expertise to this role, I am eager and motivated to learn new skills as required.

### Academic education:

- **Doctor of Philosophy (Ph.D.) Candidate in Soil Science and Protection**

Czech University of Life Science, Czech Republic & New Mexico State University, USA  
Expected Graduation: (2018 – 2024)

Research Focus: Spatial Prediction of Soil Organic Carbon Using Digital Soil Mapping Approaches

Advisor: Professor Luboš Boruvka

Thesis: (The Assessment of the Influence of Land-Use and Topography on the Spatial Distribution of Soil Organic Carbon using Digital Soil Mapping).

Despite COVID-19-related challenges, maintained project continuity and delivered publications and conference presentations.

During my Ph.D. in the team of Professor Luboš Boruvka my research has provided new insights into digital soil mapping approaches. Despite the COVID-19-associated lockdowns and restrictions in the Czech Republic and the USA, I have had a successful Ph.D. and managed my project to ensure continuous and valuable outputs in terms of publications, and conference presentations at the "Czech University of Life Science" Prague.

- **Master of Science (M.Sc.) in Agricultural Engineering - Soil Physics**

University of Shahrekord & Shiraz University, Iran

Year of Graduation: 2009

Thesis: Simulation of Runoff and Erosion Using Different Models in a Case Study

During my masters, I worked on a very important dam in the MOLASADRA watershed in Iran to simulate the amount of erosion using ANSWERS and MPECIAC model and comparing the results to choose the best model.

- **Bachelor of Science (B.Sc.) in Agricultural Engineering - Soil Science**

University of Mazandaran, Iran

Year of Graduation: 2005

During my bachelor's, I worked on agriculture engineering and soil physics.

### **Research Interest Area:**

- Modeling Soil Erosion and Runoff
- Assessing Sediment Yield
- Digital Soil Mapping
- Environmental Soil Physics
- Machine Learning for Soil Organic Carbon Prediction
- GIS and Remote Sensing of Soil Properties and Processes

### **Academic Employment:**

#### **Research Scholar | New Mexico State University | New Mexico, USA | 2021-2022**

Collaborated on a research project analyzing data distribution in Jornada Basin LTER using digital soil mapping approaches.

#### **Soil Expert | Asmary Engineering Consultant and Rahavaran Sanjesh Tehran Consulting Engineer | 2009 - 2017**

- Predicted soil erosion and runoff using ANSWERS and MPSIAC models.
- Monitored soil physical and chemical properties, soil fertility, and conducted soil and vegetation mapping.
- Conducted site investigations for on-site sewage facilities.

#### **Research/teaching assistant: (University of Shahrekord & Shiraz University, Iran, 2006- 2009):**

- Assessed soil erosion and sediment yield using MPSIAC model, GIS, and Remote Sensing in the Khosroshirin watershed.
- Predicted soil erosion and runoff using ANSWERS and MPSIAC models.

- Collected field data, analyzed data using GIS and Remote Sensing, and used the MPSIAC model for soil erosion and sediment yield evaluation.

#### **Research/teaching assistant (2004- 2005):**

- Tutored undergraduate courses in dry farming and soil science.
- laboratory teaching

#### **Work Experience:**

- Research/teaching assistant (Czech University of Life Science, Czech Republic & New Mexico State University, USA, 2018- 2024):
- Conducted research in soil science and protection, specializing in digital soil mapping.
- Managed laboratories, conducted experiments, and collected field data in various locations. (Liberec & Domažlice districts in the Czech Republic, Jornada Basin LTER, Las Cruces, NM the United States)
- Utilized machine learning techniques for data analysis and prediction.
- Presented research findings at professional conferences and authored research papers.

#### **Publications and Conferences:**

1. **Nozari, Sh.**, Pahlavan-rad, M., Brungard, C., Heung, B., Borůvka, L. 2024. Investigation of digital soil mapping using random forest, cubist, and quantile random forest models to predict soil organic carbon in Liberec and Domažlice districts in the Czech Republic. The Czech Academy of Agricultural Sciences.
2. **Nozari, Sh.**, Borůvka, L. 2023. The effects of slope and altitude on soil organic carbon and clay content in different land-uses: A case study in the Czech Republic.
3. Borůvka, L., Vašát, R., Šrámek, V., Neudertová Hellebrandová, K., Fadrhonsová, V., Sáňka, M., Pavlů, L., Sáňka, O., Vacek, O., Němeček, K., **Nozari S.**, Oppong Sarkodie, V.Y. 2022. Predictors for digital mapping of forest soil organic carbon stocks in different types of landscape. Soil & Water Resources.
4. **Nozari, Sh.**, Pahlavan-rad, M., Brungard, C., Heung, B., Borůvka, L. 2021. Comparing digital soil organic carbon mapping using Random Forest and Cubist models in Liberec and Domažlice districts in the Czech Republic. EUROSOIL 2021. 23-27 August 2021.

5. **Nozari, Sh.**, Borůvka, L. 2021. The effect of relief slope on soil organic carbon and clay content: A case study from the Czech Republic. EUROSOIL 2021 Geneva Virtual Congress. 23 August 2021.
6. Thai, S., Pavlů, P., Tejnecký, V., Vokurková, P., **Nozari, Sh.** 2021. Comparison of soil Organic matter composition under different Land Uses by DRIFT Spectroscopy. Plant, Soil and Environment journal.
7. **Nozari, Sh.**, Borůvka, L. 2020. The effect of landscape slope on soil organic carbon: A case study from the Czech Republic. Advances in Crop Science and Technology, ISSN: 2329-8863.
8. **Nozari, Sh.**, Borůvka, L. 2020. The Effect of the Landscape on soil organic carbon in Liberec District in the Czech Republic. International Journal of Advanced Science and Technology. Vol. 29 No. 9s: Vol. 29 No. 9s (2020) Special Issue.
9. **Nozari, Sh.**, Borůvka, L. 2020. The effect of landscape slope on soil organic carbon in Domažlice district in the Czech Republic. Global Symposium on Soil Biodiversity, 10-12.
10. **Nozari, Sh.**, Borůvka, L. 2020. The effect of landscape slope on soil organic carbon: A case study from the Czech Republic. World Conference on Soil, Water, Energy, and Air (EUWCSWEA), 6-7 April, Glasgow, Scotland, United Kingdom.
11. **Nozari, Sh.**, Borůvka, L. 2019. The effect of landscape slope on soil organic carbon: A case study from the Czech Republic. 3rd Annual Congress on Soil, Plant and Water Sciences, 11-12 November, Madrid, Spain.
12. **Nozari, Sh.**, Borůvka, L. 2019. Relationship of slope and soil organic carbon distribution: A case study. Pedologické DNY 2019 Conference: second circular, 11-12 September, Srní, Czech Republic.
13. **Nozari, Sh.**, Amin, S. 2015. Soil erosion and sediment yield assessment using the MPSIAC model, GIS, and RS in Fars province. In Perspectives and Challenges towards Environmental Sustainability Conference, 11-13 December, Rajasthan Agriculture University, Bikaner, India.
14. **Nozari, Sh.**, Amin, S. 2015. Effect of soil erosion and sediment yield on environment and water resources in Khosroshirin watershed. 4th International Conference on Biodiversity, 15- 17 June, Las Vegas, USA.
15. **Nozari, Sh.**, Amin, S. 2012. Estimation of Runoff and Erosion Using ANSWERS model: A Case Study Khosroshirin Sub watershed, Fars Province, Iran. Iranian Water and Soil Research Journal, 27: 36-44.

16. **Nozari, Sh.,** Amin, S. 2009. Simulation of Runoff and Erosion Using ANSWERS and MPSIAC Models: Case Study Representative Sub Watershed of Mollasadra Dam Watershed, Fars Province. In 11th Iranian National Soil Science Congress, 12-15 July, Gorgan, Iran.

#### Software Proficiency:

- **Statistical and Research Programs:** Data analysis: STATISCA-software, R software, Excel Stat, SPSS.
- **Mapping and Spatial Analysis Programs:** ArcGIS, ArcView, QGIS, SAGA, ILWIS.

#### Awards and Honors:

- I won the scholarship competition for going to an internship program from the Czech University of Life Science and I got offers from NMSU (USA) and Dalhousie University (Canada) for the internship program (2020-2021).
- Student Association Travel Grant (Czech University of Life Science, 2021).
- I participated in the GSP Soil Biodiversity Photo and Video Contest to finalize a global assessment of the state of knowledge on soil biodiversity in 2020. They presented me with the top five in each category.
- I obtained a full scholarship at the University of Florida (USA), New Mexico State University (USA), University of Cranfield (UK), Bidhan Chandra Krishi (BCKV in India), and Czech University of Life Science (Czech Republic) (2016-2017)
- Silver Medal in Iran's volleyball tournaments "Northern Universities of Iran" (2002)
- Ranked in the top 5% in the National University Entrance Exam for M.Sc. (2006)
- Ranked in the top 1% in the National University Entrance Exam for B.Sc. (2001)
- Choosing as the best student in whole academic semesters in three years in high school and selected for a biology Olympiad (1998-2001).

#### Professional Activities and Certificate:

- Data carpentry for environmental scientists, Jornada Basin LTER & New Mexico State University, Workshop March 7-9, 2022.
- National Cooperative Soil Survey Conference (NCSS) in the USA hosted by Auburn University on June 8-10, 2021.
- I participated in the R work group, USDA-ARS Jornada Experimental Range during my internship program at NMSU.
- Participated in DSM Spring School 2019 ISRIC SRIC - World Soil Information, Wageningen, The Netherlands.
- Participated in GIS and Nanotechnology courses at the Agricultural Engineering Organization of Iran, Shiraz (2010).
- GRE and IELTS exams certificates (2014 - 2016).

#### Languages:

Persian, English

### Professional Memberships:

- Soil Science Society of Iran
- Agricultural Engineering Organization of Iran
- Soil Science Society of America
- American Society of Agronomy

### References:

- **Professor Luboš Borůvka**, The Czech University of Life Science, Head of the Department of Soil Science and Soil Protection.  
Email: [boruvka@af.czu.cz](mailto:boruvka@af.czu.cz) Phone: +420 224 382 751
- **Professor Josef Kozák**, The Czech University of life science, department of Soil Science and Soil Protection.  
Email: [kozak@af.czu.cz](mailto:kozak@af.czu.cz) Phone: +420 22438 4757
- **Professor Nicholas Comerford**, Retired and Emeritus Professor of the University of Hawaii (Dean and director of the College of Tropical Agriculture and Human Resources)  
Email: [nbc@ufl.edu](mailto:nbc@ufl.edu) Phone: +1 850 879-0846
- **Dr. Mohamad Reza Pahlavan Rad**, Soil and Water Research Department, Golestan Agricultural and Natural Resources Research and Education Center, Agricultural Research, Education and Extension Organization (AREEO), Iran.  
Email: [pahlavanrad@gmail.com](mailto:pahlavanrad@gmail.com) Phone: +98 9151446033
- **Dr. Brandon Heung**, Dalhousie University, Department of Plant, Food, and Environmental Sciences, Canada.  
Email: [brandon\\_heung@dal.ca](mailto:brandon_heung@dal.ca) Phone: +1 902-893-6630
- **Dr. Colby Brungard**, New Mexico State University, Plant and Environmental Science Department.  
Email: [cbrung@nmsu.edu](mailto:cbrung@nmsu.edu) Phone: +1 575 646-1907