

Curriculum Vitae

Mohammad Tahsin Karimi Nezhad

Research fellow

Department of Forest Ecology, The Silva Tarouca Research Institute for Landscape and Ornamental Gardening (RILOG/VÚKOZ vvi), Brno, Czech Republic

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[Google Scholar](#)

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Biodata

First name: Mohammad Tahsin

Surname: Karimi Nezhad

Rank

Ph.D. in Soil Science

Professional Membership

Soil Science Society of America (contact #:730726)

Career History/Professional Experience

- Sep 2003 - Feb 2004, Adjunct lecturer, Department of Agronomy and Plant Products, Mahabad Branch, Azad University, Mahabad, Iran.
- Feb 2004 - May 2006, Adjunct lecturer, Department of Agronomy and Plant Breeding, Sanandaj Branch, Azad University, Sanandaj, Iran.
- May 2006 - May 2011, Tenured lecturer, Department of Agronomy and Plant Breeding, Sanandaj Branch, Azad University, Sanandaj, Iran.
- May 2011 – June 2022, Tenured Assistant Professor, Department of Agronomy and Plant Breeding, Sanandaj Branch, Azad University, Sanandaj, Iran.

International Work Experience

- Research fellow (current position), Department of Forest Ecology, The Silva Tarouca Research Institute for Landscape and Ornamental Gardening (RILOG/VÚKOZ vvi), Brno, Czech Republic, June 2022 – present.
- Research fellow (current position), Department of Botany and Zoology, Faculty of Science, Masaryk University, Brno, Czech Republic, June 2022 – present.
- Postdoctoral Fellow (2021), Czech Academy of Sciences, Biology Center, České Budějovice, Czech Republic.
- Visiting Reseracher (2016), Department of Plant and Environmental Sciences, University of Copenhagen, Copenhagen, Denmark.

Education

- Ph.D., Soil Chemistry, Science and Research Branch, Azad University, Tehran, Iran
- M.Sc. Soil Science, Shahid Chamran (Jondi Shapour) University, Ahvaz, Iran
- B.Sc., Soil Science, Urmia University (University of Rezaeiyeh), Urmia, Iran

• Awards & Honors

- Ranked 4th Among Approximately 300 Nationwide Participants in the University Entrance Exam for PhD. degree in Agriculture and Natural Resources- Soil Chemistry, March 2006.
- Ranked 31th Among Approximately 1000 Nationwide Participants in the University Entrance Exam for M.Sc. degree in Soil Chemistry, Sep 2000.
- Winning Full Scholarship for PhD program in the SRB-IAU from Sanandaj Branch-IAU, October 2006.
- Winning Full Scholarship in the National University Entrance Exam for B.Sc. Among Approximately 800000 Applicants, Sep 1996.
- Winning Full Scholarship in the National University Entrance Exam for M.Sc., 2000.

Selected Research Roles and Responsibilities

- **Research fellow**, Department of Forest Ecology, (RILOG/VÚKOZ vvi Institute) and Department of Botany and Zoology, Faculty of Science, Masaryk University Brno, Czech Republic (current position)
 - ❖ Collaborative Research Project: “Isotope biogeochemistry and reconstruction of paleoenvironmental conditions in species rich forest-steppe ecosystems, Central Europe”
- **Postdoc researcher**, Soil and Water Research Infrastructure, Biology Center, České Budějovice, Czech Republic
 - ❖ “Soil organic carbon (SOC) and nitrogen (N) cycling in Hyrcanian forest soils: role of tree species and soil bedrock lithology”
 - ❖ Contribution of above- and below-ground organic inputs in SOM formation in different tree species-lithological units.
- **Visiting researcher**, Department of Plant and Environmental Sciences, University of Copenhagen, Copenhagen, Denmark.
 - ❖ “Storage, drivers and depth profiles of SOC and N as well as their stable isotopic evolution in grassland soils across a lithosequence” (Mentors: Professor, Dr. Lars Stoumann Jensen , Professor, Dr. Jakob Magid and Professor Dr. Sander Bruun)
- **Research Project:** Geochemical assessment and modeling of metals/metalloids (As, Cd and Hg) and soil physicochemical variables across a soil lithosequence, W Iran.
- **Research Project:** Nutrients (P, Zn, Cu) and heavy metals (Cd, Mn, Ni) uptake by white clover inoculated by VAM mycorrhizal fungi (*Glomus Intraradices*) from a heavy metal-contaminated soil.

Research Interests

- Nutrient cycling
- Isotope biogeochemistry
- Organic geochemistry (lipid biomarkers)

Skills

- Skilled in density and size fractionation of SOM pools.
- Experience with quantitative analysis of soil biogeochemical data.
- Skilled in bulk and compound-specific stable isotope analyses (CSIA) and interpretation.
- Skilled in sample preparation for radiocarbon analysis, calibration, and age-depth modeling.
- Teaching experience and supervision of postgraduate students (+10 years).
- Scientific research methods, quantitative analysis, and comprehensive scholarly writing for federal grant proposals.
- GIS and surveying software: ESRI ArcGIS Desktop, ArcGIS Pro, QGIS, ERDAS Imagine, Google Earth.
- Geospatial data conversion, geospatial data input and editing, digitization, geo-referencing, geostatistical and spatial analysis, GPS processing.
- Other Software: Microsoft Office Suite, GS+, WRPLOT, Variowin, SPSS, SAS, Minitab, R (intermediate experience level).
- Driver license (Type B).

Supervision of Ph.D. Students

1. **Hamid, E.** Seasonal changes in level of nutrients (C, N and P) and their ecological stoichiometry in the coastal soils of Shadegan wetland, Khuzestan province, S Iran (Nov 2018- Jan 2020).

Supervision of M.Sc. Students


1. **Irani, M.** Shoreline change monitoring of Chabahar Bay using DSAS technique and Landsat time series data (1976-2020) (Duration: Feb 2020- Nov 2020)
2. **Manoochehri, M.** The impact of biochar application on soil enzyme activity, soil N and P availability and maize yield (Duration: Apr 2015- Sep 2017).
3. **Shariati, A.** Assessing the spatial and temporal variations of groundwater hydrochemical parameters and vulnerability to contamination based on **DRASTIC** model, Eastern Kurdistan province, Iran (Duration: Sep 2015- Jan 2016).
4. **Ale Mohammad, N.** Remediation of petroleum contaminated soils by joint action of *Prosopis Spicigera* and *Pseudomonas aeruginosa* (Duration: Mar 2013- Mar 2015).
5. **Nikbakht, S.** Phytoremediation of oil-contaminated soils using *Albizia lebbbeck* (Duration: Apr 2013 – Mar 2015).
6. **Shadbahr, Z.** Groundwater quality assessment in the Shoush city suburbs, Khouzestan province, Iran (Duration: Sep 2012- Nov 2013).
7. **Moridi, A.** Comparing soil physico-chemical parameters among different long-term land uses: case study of Southern Omidiyeh, Khouzestan province, Iran (Duration: Oct 2011 - Sep 2012).
8. **Tabatabaai, M.** Heavy metal contamination of soils around the Iran National Steel Company: Assessment of levels and contamination sources (Duration: Aug 2011 - Sep 2012).
9. **Alizadeh, P.** Accumulation of heavy metals in soil and vegetations sampled from the surroundings of Khouzestan Steel Company (Duration: Sep 2011 – Sep 2012).

Selected Publications list (Articles in Refereed Journals)

1. Ali, S, Baloch, S. B., Bernas, J, Konvalina, P., Festus, Onyebuchi., E. F., Naveed, M., Jamali, Z, H., **Karimi Nezhad, M. T.**, Mustafa, A. 2023. Phytotoxicity of radionuclides: A review of sources, impacts and remediation strategies. Environmental Research. <https://doi.org/10.1016/j.envres.2023.117479>.
2. Mustafa, A., Xu, H., Nan, S., Liu, K., Huang, Q., **Karimi Nezhad, M. T.**, Minggang, X. 2023. Long-Term Fertilization Alters the Storage and Stability of Soil Organic Carbon in Chinese Paddy Soil. Agronomy. <https://doi.org/10.3390/agronomy13061463>.
3. Mustafa, A., Saeed, Q., **Karimi Nezhad, M. T.**, Nan, S., Hongjun, G., Ping, Z., Naveed, M., Minggang, X., nez-Delgado, A. N. 2022. Physically separated soil organic matter pools as indicators of carbon and nitrogen change under long-term fertilization in a Chinese Mollisol. Environmental Research. <https://doi.org/10.1016/j.envres.2022.114626>.
4. Woś, B., **Karimi Nezhad, M. T.**, Mustafa, A., Petrzykowski, M., Frouz, J. 2022. Soil carbon storage in unreclaimed post mining sites estimated by chronosequence approach and comparison with historical data. Catena. <https://doi.org/10.1016/j.catena.2022.106664>.
5. Hamid, E., Payandeh, KH., **Karimi Nezhad, M. T.**, Saadati, N. 2022. Potential ecological risk assessment of heavy metals (trace elements) in coastal soils of southwest Iran. Frontiers in Public Health. <https://doi.org/10.3389/fpubh.2022.889130>.
6. Mustafa, A., Bartuška, M., Fryčová, **Karimi Nezhad, M. T.**, Frouz, J. 2022. Comparison of zimmerman and six fractionation methods aimed at distinguishing between active, slow and passive pools of soil organic matter. Journal of Soil Science and Plant Nutrition. <https://doi.org/10.1007/s42729-022-00871-3>.
7. **Karimi Nezhad, M. T.**, Bruun, S., Magid, J. 2022. Depth profiles of soil organic carbon isotopes across a lithosequence: Implications for drivers of soil $\delta^{13}\text{C}$ vertical changes Isotopes in Environmental and Health Studies. DOI: <https://doi.org/10.1080/10256016.2022.2044806>.
8. Wali, F., Shahid, M., Naveed, M., Asif, M., **Karimi Nezhad, M. T.**, Shehzad Baig, Kh, Bashir, M., Mustafa, A. 2022. Effect of Consecutive Application of Phosphorus Enriched Biochar and Split Dose of P on Growth Performance of Maize for Two Successive Growing Seasons. Sustainability. 14 (4). DOI: <https://doi.org/10.3390/su14041987>.
9. Hamid, E., Payandeh, KH., **Karimi Nezhad, M. T.**, Saadati, N. 2020. Investigation of protease and alkaline phosphatase activities, organic carbon, nitrogen and phosphorus of Shadegan coastal soils. Journal of Soil Biology. 9(1): 41-59 (In Persian). DOI: [10.22092/SBJ.2020.351284.201](https://doi.org/10.22092/SBJ.2020.351284.201).
10. **Karimi Nezhad, M. T.**, 2019. Storage and drivers of soil organic carbon and nitrogen in a rangeland ecosystem across a lithosequence in western Iran. Catena. 176: 245-263. DOI: <https://doi.org/10.1016/J.CATENA.2019.01.018>.
11. **Karimi Nezhad, M. T.**, Tabatabaie, M., Gholami, A., 2015. Geochemical assessment of steel smelter-impacted urban soils, Ahvaz, Iran. Journal of Geochemical Exploration. 152: 91-109. DOI: <http://dx.doi.org/10.1016/j.gexplo.2015.02.005>.
12. **Karimi Nezhad, M. T.**, Mohammadi, K., Gholami, A., Hani, A., Shariati, M. S., 2014. Cadmium and mercury in topsoils of Babagorgor watershed, western Iran: Distribution, relationship with soil characteristics and multivariate analysis of contamination sources. Geoderma. 219- 220: 177- 185. DOI: <http://dx.doi.org/10.1016/j.geoderma.2013.12.021>.

13. Mohammadi, K., Sohrabi, Y., Mokhtasi, A., **Karimi Nezhad, M. T.**, 2014. Crop sequences and fertilization affect soil vital enzymes activities and microbial biomass. Archives of Agronomy and Soil Science. 60(6): 793- 798. DOI: <http://dx.doi.org/10.1080/03650340.2013.831976>.
14. Mohammadi, K., Rokhzadi, A., Saber Ali, F., Bayzidi, M., **Karimi Nezhad, M. T.**, 2013. Tillage effects on soil properties and wheat cultivars traits. Archives of Agronomy and Soil Science. 59(12): 1625- 1641. DOI: <http://dx.doi.org/10.1080/03650340.2012.750031>.
15. Mohammadi, K., Heidari, G., Javaheri, M., Rokhzadi, A., **Karimi Nezhad, M. T.**, Sohrabi, Y., Talebi, R., 2013. Fertilization affects the agronomic traits of high oleic sunflower hybrid in different tillage systems. Industrial Crops and Products. 44: 446- 451. DOI: <http://dx.doi.org/10.1016/j.indcrop.2012.09.028>.
16. Mohammadi, K., Heidari, G., Javaheri, M., **Karimi Nezhad, M. T.**, 2013. Soil microbial response to tillage systems and fertilization in a sunflower rhizosphere. Archives of Agronomy and Soil Science. 59(7): 899- 910. DOI: <http://dx.doi.org/10.1080/03650340.2012.688197>.
17. Mohammadi, K., Heidari, G., **Karimi Nezhad, M. T.**, Ghamari, S., Sohrabi, Y., 2012. Contrasting soil microbial responses to fertilization and tillage systems in canola rhizosphere. Saudi Journal of Biological Sciences. 19(3): 377- 383. DOI: <http://dx.doi.org/10.1016/j.sjbs.2012.05.001>.
18. **Karimi Nezhad, M. T.**, Ghohroudi, M., Hashemi Mahmoudi, M., Pazira, E., 2011. Assessment of As and Cd contamination in topsoils of Northern Ghorveh (Western Iran): role of parent material, land use and soil properties. Environmental Earth Sciences. 64: 1203-1213. DOI: <http://dx.doi.org/10.1007/s12665-011-0935-x>.

Submitted/In-preparation manuscripts

1. **Karimi Nezhad, M. T.**, Šamonil, P., Danek, P., Jaroš, J., Hájek, M., Hájková, P., Meador, T. B., Roleček, J. 2023. Paleovegetation reconstruction of extremely species-rich forest-steppe ecosystems, White Carpathians: evidence from lipid biomarkers (under review - Quaternary Science Reviews).
2. **Karimi Nezhad, M. T.**, Mustafa, A., Kukla, J, Frouz, J. 2023. Tree species and bedrock lithology effects on C and N dynamics: Evidence from isotopic composition ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) in the soil-plant system of the Hyrcanian forests (under review - Soil Biology and Biochemistry).
3. **Karimi Nezhad, M. T.**,  Bartuska, M., Frouz, J. 2023. Lipid biomarkers (cutin and suberin) as tracers of root- and shoot-derived organic matter within soils under different tree species (In preparation).
4. Mustafa, A., Xu, M. Sun, N., Cai, A., Cai, Z., **Karimi Nezhad, M. T.** 2023. Divergent responses of carbon management index as a measure to assess soil quality change under long term fertilization: Results from soil profiles of four croplands in China (submitted to Catena).
5. Mustafa, A., Saeed, Q., Abrar, M., **Karimi Nezhad, M. T.**, Shahbaz, M., Naveed., M. 2023. Analytical Techniques for Soil Organic Matter Characterization: Review of Advantages, Limitations and Optimal Combination. (In Preparation).

Link for complete publication list:

https://www.researchgate.net/profile/Mohammad_Tahsin_Karimi_Nezhad/publications

Conference Proceedings (Full-Length Papers)

1. **Karimi Nezhad, M. T.**, 7-8 March, 2018. Stable isotopes uses in environmental studies: a short review. The 4th National Congress of Energy, Environment, Agriculture and sustainable Architecture, Sanandaj, Iran (In Persian).
2. Ale Mohammad, N., **Karimi Nezhad, M. T.**, 8-9 March 2017. Remediation of petroleum contaminated soils by joint action of *Prosopis Spicigera* and *Pseudomonas aeruginosa*. The 3rd National Congress of Energy, Environment, Agriculture and sustainable development, Sanandaj, Iran (In Persian).
3. **Karimi Nezhad, M. T.**, Shadbahr, Z., Gholami, A., 21-22 May, 2015. Groundwater quality monitoring in the Shoush suburbs, Khouzestan province, Iran. ICEET 2015: International Conference on Agricultural Science, Technology and Engineering, Istanbul, Turkey.
4. **Karimi Nezhad, M. T.**, Mir Ahmadi, F., Balideh, M., 14-15 May, 2014. Temporal changes in the Lake Zribar hydrochemistry: emphasis on trophic state index. The 4th International Conference on Environmental Challenges & Dendrochronology, Sari, Iran.
5. Tabatabaai, M., **Karimi Nezhad, M. T.**, Gholami, A., 21 February, 2013. Spatial distribution and enrichment factor assessment of Mn and Ni in topsoils around the Iran National Steel Company Smelter, Ahvaz, Iran. The 1st National Congress of Environmental Protection and Planning, Esfahan, Iran (In Persian).
6. Tabatabaai, M., **Karimi Nezhad, M. T.**, Gholami, A., 21 February, 2013. Assessment of level and geographic variation of Zn, Fe and Cr in soil profiles around the Iran National Steel Company Smelter, Ahvaz, Iran. The 1st National Congress of Environmental Protection and Planning, Esfahan, Iran (In Persian).
7. **Karimi Nezhad, M. T.**, 7-8 January, 2012. Cadmium in rural soils with various types of land use in western Iran. Planetary Scientific Research Center. Dubai, United Arab Emirates.
8. **Karimi Nezhad, M. T.**, Ahmadi, S., 13-15 July, 2011. Spatial variability of arsenic in topsoils of Babagorgor watershed, Western Iran: Role of land use and soil properties. World Academy of Science, Engineering and Technology, 78: 1220 -1235. Amsterdam, Netherland.
9. **Karimi Nezhad, M. T.**, 28 -30 July, 2010. Spatial distribution of soil organic carbon in croplands of the Northern Ghorveh, Kurdistan province, Iran. World Academy of Science, Engineering and Technology, 68: 1404 -1408. Paris, France.

Reviewer for scientific Journals

Environmental Earth Sciences,
Journal of Hazardous Materials,
Environmental Monitoring and Assessment.