

Curriculum Vitae



Sadegh Ghavami

Name: Sadegh

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Assistant Professor

Geotechnical Engineering

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Sahand University of Technology (since Jan. 2023)

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Date and Place of Birth: 1988, Tehran, Iran

ACADEMIC BACKGROUND

Ph.D.: Civil Engineering, Geotechnical Engineering, Iran University of Science and Technology (2015-2020).

M.S.: Civil Engineering, Geotechnical Engineering, Sharif University of Technology, (2011-2013).

B.S.: Civil Engineering, Sharif University of Technology, (2007-2011).

RESEARCH INTERESTS

- Soil Stabilization
- Geotechnical Earthquake Engineering
- Physical Modelling (Centrifuge Modelling)
- Numerical Analysis (Finite Element Method)
- Construction Materials

PUBLICATIONS

[Link to Google Scholar](#)

Journal Papers:

- **Ghavami, S.,** Tahmasebi, S., & Delnavaz, N. 2027. Investigating the Effect of Silica Fume on the Engineering Behavior and Microstructure of Clay Liners. Civil Engineering and Applied Solutions, 3(2), 16-25.
- Ahadi, A., **Ghavami, S.,** & Khadem, P. 2026. Investigation of Monitoring Techniques Used in Soil-Nailed Excavations. Journal of Transportation Research, 23(3), 459-470.
- **Ghavami, S.,** & Karimi, H. 2026. Investigation of the Mechanical and Microstructural Properties of Manhole Covers Produced Using Ultra-High-Performance Concrete (UHPC) Containing Fibers and Nanosilica. Journal of Transportation Infrastructure Engineering, 12(1).
- **Ghavami, S.,** & Naseri, H. 2026. Advanced Machine Learning Techniques for Predicting Compaction and Strength Characteristics of Cement Kiln Dust-Stabilized Soils. Transportation Infrastructure Geotechnology, 13(4), 84.
- **Ghavami, S.,** Naseri, H., & Safi Jahanshahi, F. 2026. Advanced Machine Learning Techniques for Predicting the California Bearing Ratio of Soils Stabilized with Cement Kiln Dust. International Journal of Pavement Research and Technology.
- **Ghavami, S.,** & Hallaji, A. 2026. Influence of Underground Tunnels on Normal Fault–Foundation Interaction. Transportation Infrastructure Geotechnology, 13(2), 30.
- **Ghavami, S.,** 2026. The effect of cement kiln dust as a sustainable cement-free stabilizer on the geotechnical properties of clay soils: A review. Road, 34(126), 245-260.

- **Ghavami, S., & Naseri, H.** 2025. Prediction of Compressive Strength in Fine-Grained Soils Stabilized with a Combination of Various Stabilization Agents and Nano-SiO₂ Using Machine Learning Algorithms. *Mathematical and Computational Applications*, 30(6), 137.
- **Ghavami, S., Naseri, H., & Safi Jahanshahi, F.** 2025. Enhanced Prediction and Uncertainty Modeling of Pavement Roughness Using Machine Learning and Conformal Prediction. *Infrastructures*, 10(7), 166.
- Aghamolaei, M., **Ghavami, S., & Saeedi Azizkandi, A.** 2025. Centrifuge and 3D FEM Modeling of the Effect of Tunneling in Fault Zone in Reverse Fault-Foundation Interaction. *Geotechnical and Geological Engineering*, 43, 222.
- **Ghavami, S., Emami Tabrizi, M., & Najafi, E.** 2025. Investigating the Effects of Thickness, Depth and Number of Weak Soil Layers on Seismic Site Response. *Journal of Transportation Infrastructure Engineering*, 11(1), 97-107.
- **Ghavami, S., Hallaji, A., & Sandooghsaz, Y.** 2025. Assessment of the Effect of Fly Ash and Nanosilica on the Geotechnical Properties of Forest Road Subgrade. *Civil and Project*, 7(5), 73-88.
- **Ghavami, S.** 2024. A Comparative Study on the Effect of Cement Kiln Dust, Fly Ash, and Ground Granulated Blast Furnace Slag on Compaction Characteristics and California Bearing Ratio of Clay Soils. *Journal of Transportation Infrastructure Engineering*, 10(2), 57-70.
- **Ghavami, S., Alipour, Z., Naseri, H., Jahanbakhsh, H., & Karimi, M.M.** 2023. A New Ensemble Prediction Method for Reclaimed Asphalt Pavement (RAP) Mixtures Containing Different Constituents. *Buildings*, 13(7), 1787.
- **Ghavami, S., & Hosseini Fani, M.** 2023. Compaction, Hydraulic, and Consolidation Characteristics of Reinforced Clays with Carpet Waste. *Journal of Transportation Infrastructure Engineering*, 9(1), 107-118.
- **Ghavami, S., Gholami, H., Rajabi, M., & Mobini, M.H.** 2022. Effect of the Construction of Mamloo Dam on Land Subsidence in Varamin Plain. *Human & Environment*, 20(2), 171-185.
- **Ghavami, S., Naseri, H., Jahanbakhsh, H., & Nejad, F. M.** 2021. The impacts of nano-SiO₂ and silica fume on cement kiln dust treated soil as a sustainable cement-free stabilizer. *Construction and Building Materials*, 285, 122918.
- Saeedi Azizkandi, A., Baziar, M.H., **Ghavami, S., & Hasanaklou, S.H.** 2021. Use of Vertical and Inclined Walls to Mitigate the Interaction of Reverse Faulting and Shallow Foundations: Centrifuge Tests and Numerical Simulation. *Journal of Geotechnical and Geoenvironmental Engineering*, 147(2), 04020155.
- Aghamolaei, M., Saeedi Azizkandi, A., Baziar, M.H., & **Ghavami, S.** 2021. Performance-based analysis of cantilever retaining walls subjected to near-fault ground shakings. *Computers and Geotechnics*, 130, 103924.

- **Ghavami, S.**, Jahanbakhsh H, Saeedi Azizkandi A, Moghadas Nejad F. 2021. Influence of sodium chloride on cement kiln dust-treated clayey soil: strength properties, cost analysis, and environmental impact. *Environment, Development and Sustainability*. 23, 683–702.
- **Ghavami, S.**, Jahanbakhsh, H., Moghadas Nejad, F. 2020. Laboratory study on stabilization of kaolinite clay with cement and cement kiln dust. *Amirkabir Journal of Civil Engineering*, 52(4), 935-948.
- **Ghavami, S.**, Saeedi Azizkandi, A., Baziar, M.H., Jahanbakhsh, H. 2019. Numerical study on interaction of normal fault with underground tunnels. *Journal of Transportation Infrastructure Engineering*, 5(4), 1-12.
- Saeedi Azizkandi, A., **Ghavami, S.**, Baziar, M.H., Heidari Hasanaklou, S. 2019. Assessment of damages in fault rupture–shallow foundation interaction due to the existence of underground structures. *Tunnelling and Underground Space Technology*, 89: 222–237.
- **Ghavami, S.**, Farahani, B., Jahanbakhsh, H., Moghadas Nejad, F. 2018. Effects of Silica Fume and Nano-silica on the Engineering Properties of Kaolinite Clay. *AUT Journal of Civil Engineering*, 2(2), 135-142.

Conference Papers:

- Shirkhanloo, S., **Ghavami, S.**, Najafi, M., & Aminifard, P. 2025. Evaluation of Decision-Making Prediction Models for Sewer Pipes Asset Management. 14th International Congress on Civil Engineering, Tehran, Iran.
- Ahadi, A., **Ghavami, S.**, & Mahboubi Ardakani, A. 2024. Investigation of load sharing mechanism of Piled Raft Foundations in sandy soils. 14th National Congress on Civil Engineering, Zanzan, Iran.
- **Ghavami, S.**, Saeedi Azizkandi, A., Baziar, M.H., & Rajabi, M. 2019. Interaction of underground tunnel and existing shallow foundations affected by normal faults. 8th International Conference on Seismology and Earthquake Engineering, Tehran, Iran.
- **Ghavami, S.**, Nematpour H, Rajabi M, & Mobini, M.H. 2019. Evaluation of the strength characteristics of clayey soils stabilized with rice husk ash and cement. The 4th Iranian Conference on Geotechnical Engineering, Tehran, Iran.
- Hosseini, P., Booshehrian, A., Delkash, M., **Ghavami, S.**, & Zanjani, M.M.K. 2010. Improvement Interfacial Transition Zone of Green Concrete by utilization of nano-SiO₂ particles, *Proc. of 3rd International Conference on Engineering for Waste and Biomass Valorisation*, Beijing, China.
- Hosseini, P., Booshehrian, A., Delkash, M., **Ghavami, S.**, & Zanjani, M.M.K. 2009. Use of nano-SiO₂ to improve microstructure and compressive strength of recycled aggregate concretes, *Nanotechnology in Construction 3: Proceedings of the NICOM3*, ISBN 978-3-642-00979-2, Edited by Z. Bittnar, P.J.M. Bartos, J. Nemecek, V. Smilauer, J. Zeman, pp. 215-221, Springer-Verlag Berlin Heidelberg.

Books:

- **Ghavami, S.,** Ahadi, A., & Rajabi, M. 2022. Strength of Materials Laboratory. Publisher: Miaad-Andisheh, ISBN: 978-622-328-015-3.
- **Ghavami, S.,** Jahanbakhsh, H., & Nuri, H. 2019. The Effect of Additives on the Soil Properties. Publisher: Ayandeh-Danesh, ISBN: 978-600-8231-21-9.
- **Ghavami, S.** 2017. Soil Mechanics Laboratory. Publisher: Asre Kankash, ISBN: 978-600-8315-53-7.

TEACHING EXPERIENCES

Teaching

- Soil Dynamics, M.Sc., Sahand University of Technology.
- Finite Element Method, M.Sc., Sahand University of Technology.
- Ground Improvement, M.Sc., Sahand University of Technology.
- Foundation Engineering, B.Sc., Sahand University of Technology.
- Advanced Foundation Engineering, M.Sc., Allaodole Semnani Institute of Higher Education (ASIHE), 2016-2020.
- Soil Dynamics, M.Sc., Allaodole Semnani Institute of Higher Education (ASIHE), 2016-2020.
- Geotechnical Earthquake Engineering, M.Sc., Allaodole Semnani Institute of Higher Education (ASIHE), 2016-2020.
- Foundation Engineering, B.Sc., Allaodole Semnani Institute of Higher Education (ASIHE), 2016-2020.
- Soil Mechanics, B.Sc., Allaodole Semnani Institute of Higher Education (ASIHE), 2016-2020.
- Soil Mechanics, B.Sc., University of Science and Culture, 2018.

Teaching Assistant

- Continuum Mechanics, Dr. V. Broujerdian., Iran University of Science and Technology, 2016.
- Soil Mechanics Laboratory, Prof. M.M. Ahmadi., Sharif University of Technology, 2012-2013 (Two semesters).

AWARDS AND HONORS

- Recognized as a Top Researcher within the first three years of employment at Sahand University of Technology (2025)
- Honored and awarded as the best student of the year, School of Civil Engineering, Iran University of Science and Technology (2016)

REVIEWER

[Link to Web of Science](#)

- Acta Mechanica et Automatica
- Applied Sciences
- Buildings
- CivilEng
- Construction and Building Materials
- Earthquake Engineering and Engineering Vibration
- Emergent Materials
- Energies
- Environmental Earth Sciences
- Environmental Science and Pollution Research
- Geomechanics and Engineering, An International Journal
- Journal of Engineering Geology (Iran)
- Journal of Marine Science and Engineering
- Journal of Transportation Infrastructure Engineering (Iran)
- Machines
- Proceedings of the Institution of Civil Engineers: Ground Improvement
- Processes
- Scientific Reports
- Soil Dynamics and Earthquake Engineering
- Soils and Rocks
- Sustainability