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.**, & 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-SiO_2 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-SiO_2 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, Zanjan, 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-SiO_2 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