Vahid Toufigh, Ph.D.
Associate Professor
Department of Civil Engineering
Graduate University of Advanced Technology
Kerman, Iran.

+98 (913) 198 7846
vahiddavis@gmail.com (common)
v.toufigh@kgut.ac.ir

EDUCATIONS

Doctor of Philosophy — May 2013
Civil Engineering (Geotechnical Engineering)
The University of Arizona, Tucson, AZ, USA
GPA

Master of Science — May 2009
Civil Engineering (Materials and Structure Engineering)
The University of Arizona, Tucson, AZ, USA
GPA

Bachelor of Science — May 2007
Civil Engineering
Kerman Azad University, Kerman Iran
GPA

EMPLOYMENT

Department of Civil Engineering, Graduate University of Advanced Technology, Kerman, Iran – Associate Professor April 18 – Present

Department of Civil Engineering, Graduate University of Advanced Technology, Kerman , Iran – Assistant Professor February 14 – April 18

Research Interests:

- Application of Green Construction Materials
- Testing of Soil Stabilization
- Testing and Modeling of Soil-Structure Interface
- Application of Fiber Reinforced Polymer (FRP) in Civil and Geotechnical Engineering
- Application of Polymer Matrial in Civil and Geotechnical Engineering
- Hygrothermal Analysis of Soil Elements
- Application of Foundation and Earth Retaining Structure
- Rehabilitation and Strengthening Techniques for Existing Structures
- Laboratory Testing of Structural Components
- Design and Fabrication of New and Innovative Test Devices in Civil Engineering
- Constitutive Laws with Design and Fabrication of Computer (Finite Element) Methods for Problems in Civil Engineering

CarbonWrap Solutions LLC, Tucson, Arizona – Project Manager, July 07 – June12

- Supervise structural retrofit projects which involved the use of fiber reinforced polymer to increase strength
- Managed and directed a work crew of construction personnel to timely complete construction projects
- Worked with local building codes and inspectors to obtain approvals for construction
- Check and monitor the quality of construction to ensure adequate installation
- Perform laboratory tests of various fiber reinforced polymer configurations to determine optimal composition

The University of Arizona, Tucson, Arizona – Teaching Assistant August 07-May 12

- Instructed a class in civil engineering materials
- Demonstrated proper testing techniques for concrete and steel
- Guided students in the preparation of technical laboratory reports

Rain Bird Corporation and Irrigation Seystem, Tucson, AZ – Engineer

August 10 – August 11

- Testing and evaluation of pipe line materials
- Designed of pipe composite materials and prepared for retrofitting projects

Supervisor of Society of Civil Engineers Students & Organizations, Department of Civil Engineering, Graduate University of Advanced Technology, Kerman, Iran.

January 2014 - January 2018

- Setting up a scientific and practical field trip for students to better learn of academic knowledge with industry and, relations.
- Publications of civil engineering students' activities in all research, educational and cultural activities

Supervisor and Manager of Geotechnical Laboratory, Department of Civil Engineering, Graduate University of Advanced Technology, Kerman, Iran.

July 2015 – Now

- Set laboratory devices
- Caliber of laboratory data

RELATED COURSES

- Soil Mechanics and Lab, Foundation Engineering, Design of Earth Structures,Geomechanics and Lab, Rock Mechanics, Rock Slope Design, Mechanics of Fracture in Soil, Rock and Concrete and Soil Dynamics.

- Finite Element Method, Advanced Mathematical Applications, Elasticity Theory and Application, Structural Dynamics, Probability in Civil Engr, Material Lab, Statics, Solid Mechanics, Computer Prog and Numerical Anl in Civil Engr. Infrastructure Rehabilitation, Design of Wood and Masonry, The Theory of Composite.

AWARDS

- Outstanding Investigator Award, Graduate University of Advanced Technology, 2018

TECHNICAL SKILLS

- Certificate in OSHA (Occupational Safety and Health Administration of the United)
- Member of American Society of Civil Engineers (ASCE)

PUBLICATIONS

- Barzegari Khanghah A, Toufigh MM, **Toufigh V**, (2025), Recycled lime waste–activated geopolymer grouts with RCP and nano-zeolite: novel insights into soil plasticity, capillary effects, thermal performance, and random forest modeling, *Geomechanics and Geoengineering An International Journal*, https://doi.org/10.1080/17486025.2025.2585982

- MH Shahnazi, **Toufigh V**, Ramezani SJ, Toufigh MM, (2025) Performance assessment of waste glass powder in sandy soil stabilization: Effect of alkaline activator on mechanical and microstructural properties, *Results in Engineering*, Volume 27, 106821, https://doi.org/10.1016/j.rineng.2025.106821.

- Barzegari Khanghah A, Toufigh MM, **Toufigh V**, (2025), Numerical and experimental analyses of factors affecting mechanical, hydraulic and microstructural properties in low- and high-plasticity clays stabilised by low-calcium geopolymer, European Journal of Environmental and Civil Engineering, https://doi.org/10.1080/19648189.2025.2542927

- Khanghah A B, Toufigh M M, **Toufigh V**, (2025) Long-term durability of low-plasticity and high-plasticity clays stabilised by geopolymers in acidic environments, *European Journal of Environmental and Civil Engineering*, https://doi.org/10.1080/19648189.2025.2496349

- Bagheri B, Toufigh MM, **Toufigh V**, (2024) Pullout Capacity of Long Granular Pile Anchors Using Numerical Analyses of Random Fields. *KSCE J Civ Eng*, 28, 4214–4229. https://doi.org/10.1007/s12205-024-0518-5

- Kianynejad M, Toufigh MM, **Toufigh V**, (2024) Mechanical Performance of Alkali-activated Stabilized Sandy Soil Reinforced with Glass Wool Residue Microfibers, *KSCE J Civ Eng*, vol 28, No 2, PP 581-595, doi: 10.1007/s12205-023-2206-2

- Ramezani SJ, Toufigh MM and **Toufigh V**, (2023) Utilization of Glass Powder and Silica Fume in Sugarcane Bagasse Ash-Based Geopolymer for Soil Stabilization, *Journal of Materials in Civil Engineering*, Vol 35, No 4, pp 04023042, 10.1061/(ASCE)MT.1943-5533.0004704

- **Toufigh V**, Baghban R, Sheikhhosseini I, Namjoo AM, Toufigh MM (2022) Mechanical Behavior's Enhancement of Sandy Soil by a Natural Pozzolan-Based Geopolymer and Nanomaterial, *Indian Geotechnical Journal*, 10.1007/s40098-022-00678-0

- Namjoo AM, Baniasadi M, Jafari K, Salam S, Toufigh MM, **Toufigh V**, (2022) Studying effects of interface surface roughness, mean particle size, and particle shape on the shear behavior of sand-coated CFRP interface, *Transportation Geotechnics*, Vol 37, pp 100841, 10.1016/j.trgeo.2022.10084

- Mohammadzadeh MA, Toufigh MM, **Toufigh V**, (2022), Durability and Strength of Geopolymer with Recycled Glass Powder Base for Clay Stabilization, *KSCE Journal of Civil Engineering*, 10.1007/s12205-022-0681-5

- Amirhosseini I, **Toufigh V**, Toufigh MM, Ghazavi E, (2022), Three-Dimensional Modeling of Geogrid Pullout Test Using Finite-Element Method, *International Journal of Geomechanics*, 22, 3, 10.1061/(ASCE)GM.1943-5622.0002218.

- Amiri A, Toufigh MM, **Toufigh V**, (2022) Stabilisation of organic soils with alkali-activated binders, *International Journal of Pavement Engineering*, 10.1080/10298436.2022.2104844

SELECTED CONFERENCES

- Toufigh, V., Toufigh, V., Rahmannejad, M., "Uniaxial and Impact Strength of Polymer Concrete and Polymer Concrete Reinforced by Steel and Glass Fibers.", 10th International Civil Congress, 2014, Tabriz, Iran . (In Persian)
- Toufigh, V., Toufigh, V., "Evaluating Friction Angle between FRP pile Bonded in Steel Tubes and Sand.", 1st National Conference on Soil Mechanics and Foundation Engineering, 2014, Tehran, Iran . (In Persian)
- Toufigh, V., Toufigh, V., "Analysis of Geogrid-Reinforced Slope.", 1st National Conference on Soil Mechanics and Foundation Engineering, 2014, Tehran, Iran. (In Persian)
- Toufigh, V., Toufigh, V., Rahmannejad, M., "Uniaxial and Impact Strength of Polymer Concrete.", 2nd International Congress on Structure, Architecture and Urban Development, 2014, Tabriz, Iran (In Persian)
- Toufigh, V., Saadatmanesh, H., Toufigh, V., "Finite Element Analysis of a Steel Plate With and Without a Crack." The 3rd National Conference of Earthquake and Structure, 2012, Kerman, Iran 2: 1279-1288.
- Toufigh, V., Saadatmanesh, H., Toufigh, V., "Mode I fracture toughness of unidirectional composites." The 3rd National Conference of Earthquake and Structure, 2012, Kerman, Iran 3: 1793-1801.
- Toufigh, V., Toufigh, V., Azadegan, O., "Strength Evaluation of Polymer Reinforced Concrete." First National Conference of Concrete Industry, 2012, Kerman, Iran, 173-178 (In Persian)

Selected Reviewed Articles

- Review Papers for: Geomechanics and Engineering Journal
- Review Papers for: International Journal of Geomechanics
- Review Papers for: Construction and Building Materials Journal
- Review Papers for: Testing and Evaluation
- Review Papers for: ACI Structural and Materials Journals
- Review Papers for: Iranian Journal of Science and Technology Transactions of Civil Engineering
- Review Paper for: International Journal of Pavement Engineering
- Review Papers for: Scientia Iranica
- Review of the Book, Title: "Advanced Geotechnical Engineering, Soil- Structure Interaction Using Computer and Material Models," Writer: Chandrakant S. Desai & Musharraf Zaman, Published by: CRC Press 2014.
- Review Papers for 10th national congress on civil engineering, Sharif University of Technology, April 19 and 20, 2017.

MSc Student Dissertation Advisor

A new approach to mixing design geopolymers in soil stabilization.
- Student: Zhra Zolfali
- Advisor: Vahid Toufigh
- Date: September, 2025

Soil stabilization with glass powder, potassium hydroxide solution, and rice husk ash.
- Student: Mojtabah Illaghi
- Advisor: Vahid Toufigh
- Date: Julay, 2025

Evaluation of the interaction of sand with different particle diameters with various steel surfaces.
- Student: Masoumeh Askari
- Advisor: Vahid Toufigh
- Date: September, 2024

Using a combination of glass powder and sand in stabilization.
- Student: Mohammad Hossein Shahnazi
- Advisor: Vahid Toufigh
- Date: September, 2024

Stabilization of sandy soil using copper slag and activating solution.
- Student: Saeed qadri
- Advisor: Vahid Toufigh
- Date: February, 2023

Interaction of soil and sand-coated carbon polymer fibers.
- Student: Majid Baniasadi
- Advisor: Vahid Toufigh
- Date: September, 2022

Modeling land subsidence due to groundwater depletion (case study of Kerman city).
- Student: Mahdeh Soltani
- Advisor: Vahid Toufigh
- Date: September, 2022

Evaluation of the interaction behavior of steel pile with sand under direct shear tests.
- Student: Farzaneh saifaldini
- Advisor: Vahid Toufigh
- Date: September, 2022

Numerical modeling of stone columns reinforced with geogrid.
- Student: Faezeh Ghafari
- Advisor: Vahid Toufigh
- Date: September, 2022

Laboratory investigation of the effect of using geopolymers on the permeability of tailings dam bed soil.
- Student: Sara Mobasher
- Advisor: Vahid Toufigh
- Date: September, 2022

Ph.D Student Dissertation Advisor

Laboratory study and evaluation of the geomechanical effect of soil in stabilizing clay soils with different plasticity.

- Student: Ali Reza Barzegari
- Co-Advisor: Vahid Toufigh
- Date: September, 2025

The effect of soil type and characteristics on its stabilization with cements activated by alkaline environment.

- Student: Amin Amiri
- Co-Advisor: Vahid Toufigh
- Date: September, 2023

Application of artificial neural networks and neuro-fuzzy systems in calculating and predicting the ultimate capacity of pile in soil

- Student: Hooman Harandizadeh
- Co-Advisor: Vahid Toufigh
- Date: December, 2018

Improvement of clay soils by using geopolymer based on recycled glass powder with attention to environmental issues and prediction of the modified soil behavior

- Student: Meysam Pourabbas Bilondi
- Co-Advisor: Vahid Toufigh
- Date: September, 2018

Disturbed state concept (DSC) Model in analysis of soil-pile interaction using natural element method (NEM)

- Student: Emad Ghazavi Baghini
- Co-Advisor: Vahid Toufigh
- Date: February, 2018

References

Faculty

Hamid Saadatmanesh
Professor, Department of Civil Engineering
The University of Arizona
Email: hamid@email.arizona.edu

Muniram Budhu
Professor, Department of Civil Engineering
The University of Arizona
Email: budhu@email.arizona.edu

Chandrakant S. Desai
Professor, Department of Civil Engineering
The University of Arizona
Email: csdesai@email.arizona.edu