

Ali Akhtarpour, PhD

PhD in Geotechnical Engineering

Associate Professor of Civil Engineering at Ferdowsi University of Mashhad,
Mashhad, Iran

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Education

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|---|---------------------------------|-----------|
| Amirkabir University of Technology, Tehran, Iran PhD, Civil-Geotechnical and Environmental Engineering | Overall GPA 18 /20 (%90) | 2005-2011 |
| ▪ Thesis: Seismic behavior of Asphaltic concrete core rockfill dams | | |
| Amirkabir University of Technology, Tehran, Iran Master of Science (MSc), Civil- Geotechnical and Environmental Engineering | Overall GPA 17/20 (%85) | 2001-2003 |
| ▪ Thesis: Study of Pore pressure development and dissipation in the core of Masjed-e-Soleyman high rockfill dam | | |
| Amirkabir University of Technology, Tehran, Iran Bachelor of Science (BSc), Civil Engineering | Overall GPA 16.7/20 (%84) | 1997-2001 |

Selected Journal Papers [[Statistics to Google Scholar](#)]

M Naeini, **A Akhtarpour**, " [Numerical analysis of seismic stability of a high centerline tailings dam](#)", *Soil Dynamics and Earthquake Engineering*, 2018.

Narges Soleimanian ·Jafar Bolouri Bazaz ·**Ali Akhtarpour** ·Sadegh Garivani , " [Effects of constitutive soil models on the seismic response of an offshore jacket platform in clay by considering pile-soil-structure interaction](#)", *Soil Dynamics and Earthquake Engineering*, 2023.

A Akhtarpour, A Khodaii, " [Experimental study of asphaltic concrete dynamic properties as an impervious core in embankment dams](#)", *Construction and building materials*, 2013.

N Yeganeh, JB Bazaz, **A Akhtarpour**, " [Seismic analysis of the soil–structure interaction for a high rise building adjacent to deep excavation](#)", *Soil Dynamics and Earthquake Engineering*, 2015.

Amir Nadi ·**A Akhtarpour** ·Mustafa Abdalhusein ·Mohammad Saleh Baradaran, " [Experimental Investigation of the Volume Change of a Swelling Clay and Its Improvement](#)", *Transportation Infrastructure Geotechnology*, 2023.

HRB Bazaz, **A Akhtarpour**, S Kharaghani, " [A study on the efficiency of a capped hardening elasto-plastic model for soft clays](#)", *Soils and Foundations*, 2019.

A Akhtarpour, M Mortezaee, " [Dynamic response of a tall building next to deep excavation considering soil–structure interaction](#)", *Asian Journal of Civil Engineering*, 2019.

HRB Bazaz, **A Akhtarpour**, A Karamodin, " [A study on the effects of piled-raft foundations on the seismic response of a high rise building resting on clayey soil](#)", *Soil Dynamics and Earthquake Engineering*, 2021.

HRB Bazaz, **A Akhtarpour**, A Karamodin, " [The influence of nailing on the seismic response of a superstructure with underground stories](#)", *Modern Applications of Geotechnical Engineering and Construction*, 2021.

R Almahmodi, MM Abdalhusein, **A Akhtarpour**, MS Mahmood, " [Characterization of collapsible gypsum sand soil with the presence of matric suction using a modified odometer apparatus](#)", *The International Journal of Advanced Manufacturing Technology*, 2022.

MM Abdalhusein, **A Akhtarpour**, R Almahmodi, MS Mahmood, " [Investigation of Shear Strength Parameters for Gypseous Soils Using a Modified Apparatus of Triaxial Test](#)", *Current Trends in Geotechnical Engineering and Construction*, 2022.

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A Raeesosadat, **A Akhtarpour**, M Nazari, "Filter Performance of Embankment Dams by No Erosion Filter Test (Case study: Bar and Bidvaz Dam)", *Journal of Water and Sustainable Development*, 2022.

S Golafshani, **A Akhtarpour**, H Ghaemi Rad, S Khosravi, "A study on the near and far-field earthquake response of a low and mid-rise building resting on soft soil considering soil-structure interaction (SSI)", *Asian Journal of Civil Engineering*, 2023.

MA Mohammadyar, **A Akhtarpour**, "A study on the seismic soil- structure interaction of a concrete shear wall- steel frame building system with underground stories", *Asian Journal of Civil Engineering*, 2023.

H Fata, **A Akhtarpour**, M Kazemi, S Rahmatkhan, "Numerical investigation of liquefaction-induced settlement and instability on earth dams", *Dams and Reservoirs*, 2023.

Masoud Mehmandoost Kotlar, **A Akhtarpour**, M.Khorrami "A Modified Strain Softening-Hardening Constitutive Model for Plastic Concrete Cut-off Wall", *Geotechnical and Geological Engineering*, 2023.

A Akhtarpour, M.Salari "The Deformation Mechanism of a High Rockfill Dam during the Construction and First Impounding", *Scientia Iranica*, 2018.

Research Interests

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- Pile-Soil-Structure Interaction
 - Earthquake Geotechnical Engineering
 - Tailings
 - Offshore jacket structures
 - Unsaturated Soil Mechanics
 - Plasticity and Constitutive Modelling
 - Embankment Dams

Professional Experience

Academic Roles:

- Associate Professor of Civil Engineering at Ferdowsi University of Mashhad, Mashhad, Iran 2013-Present
 - **Selected BSc Courses:** Principles of Soil Mechanics, Soil Mechanic Laboratory, Principles of Earth Dams Engineering, Principles of Foundation Engineering, Geological Engineering, Material Construction, Construction Issues in Foundation Engineering and Excavations
 - **Selected MSc Courses:** Soil Dynamic, Tunnel Engineering, Principles of Earth Dams Engineering, Unsaturated Soil Mechanics, Plasticity and Elasticity Theory in Geotechnical Engineering.
 - **Selected PhD Courses:** Unsaturated Soil Mechanics.
 - **Supervisor, Advisor and Referee of MSc and PhD Theses:**

<http://prof.um.ac.ir/akhtarpour>

Membership in Professional Societies:

- Iranian National Committee on Large Dams IRCOLD.
- Iranian Geotechnical Engineering Society.
- Building and Housing Research Center.
- Organization for engineering order of building.

Selected Industrial Projects:

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| <ul style="list-style-type: none">• Designing the body of the Daroongar reservoir dam (first phase)<ul style="list-style-type: none">- Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, Razavi Khorasan Province, Iran. | 2000-2001 |
| <ul style="list-style-type: none">• Study of Borrow material of the Daroongar reservoir dam (second phase)• Official supervision of the geotechnical drilling operation of Daronaqar reservoir dam | 2000-2001 |

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|---|-----------|
| <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, Razavi Khorasan Province, Iran. | |
| <ul style="list-style-type: none"> • Evaluation of the replacement of rockfill materials with river materials in the body of Doosti Dam • Signing of protocol between Turkmen Institute and the Toossab Consulting Engineers Company for Doosti dam • Superior monitoring of the body of the Doosti Dam • Structural plans of the spillway and analysis of the measurement results of the Doosti dam <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, Razavi Khorasan Province, Iran. | 2000-2004 |
| <ul style="list-style-type: none"> • Study of Borrow material of the Kassilian storage dam (first phase) <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, Mazandaran Province, Iran. | 2001-2005 |
| <ul style="list-style-type: none"> • Controlling the stability of Bidvaz Dam with FLAC3D software and evaluating the effects of arching • Superior monitoring of the body of the Bidvaz dam body • Analysis of the measurement results of the Bidvaz dam <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, North Khorasan Province, Iran. | 2002-2004 |
| <ul style="list-style-type: none"> • Shirin Darre dam body Expert • Analysis of the measurement results of the Shirin Darre dam <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, North Khorasan Province, Iran. | 2003-2005 |
| <ul style="list-style-type: none"> • Evaluation of the hydraulic conductivity of the support on the left abutment of Komayestan Reservoir dam <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, Razavi Khorasan Province, Iran. | 2003-2004 |
| <ul style="list-style-type: none"> • Study of Borrow material of the Shourijeh Earth Dam (first & second phases) <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, Razavi Khorasan Province, Iran. | 2008-2011 |
| <ul style="list-style-type: none"> • Study of Borrow material of the Jovrag Storage Dam (first phase) • Body design of the Jovrag Storage Dam (first phase) <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, Fars Province, Iran. | 2010-2012 |
| <ul style="list-style-type: none"> • Body design of the Pirtaghi Dam and Power Plant (first phase) <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, Ardabil Province, Iran. | 2013-2016 |
| <ul style="list-style-type: none"> • Body and foundation design of the Garmab dam <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, North Khorasan Province, Iran. | 2007-2008 |
| <ul style="list-style-type: none"> • Body and foundation design of the Amand dam <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Toossab Consulting Engineering Company, North Khorasan Province, Iran. | 2007-2008 |
| <ul style="list-style-type: none"> • Study of Borrow material of the Darband Dam (first & second phases) • Body design of the Darband Dam (first & second phases) <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Maharab Soil Research Company, North Khorasan Province, Iran. | 2009-2010 |
| <ul style="list-style-type: none"> • Study of Borrow material of the Siahoo dam (first & second phases) • Body design of the Siahoo dam (first & second phases) <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Maharab Soil Research Company, South Khorasan Province, Iran. | 2008-2011 |
| <ul style="list-style-type: none"> • Studying the design of Arefi water transfer tunnel <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Maharab Soil Research Company, Razavi Khorasan Province, Iran. | 2008-2009 |
| <ul style="list-style-type: none"> • Study of Borrow material of the Soombar dam (first & second phases) • Body design of the Soombar dam (first & second phases) <ul style="list-style-type: none"> - Working as a Geotechnical Engineering Expert in Maharab Soil Research Company, North Khorasan Province, Iran. | 2009-2011 |
| <ul style="list-style-type: none"> • Study of Borrow material of the Chandir dam (second phase) | 2009-2011 |

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| <ul style="list-style-type: none"> • <i>Body design of the Chandir dam (second phase)</i> - <i>Working as a Geotechnical Engineering Expert in Maharab Soil Research Company, North Khorasan Province, Iran.</i> | |
| <ul style="list-style-type: none"> • <i>Study of Borrow material of the Abbas abad Storage Dam</i> • <i>Body design of the Abbas abad Storage Dam</i> - <i>Working as a Geotechnical Engineering Expert in Maharab Soil Research Company, Razavi Khorasan Province, Iran.</i> | 2011-2012 |
| <ul style="list-style-type: none"> • <i>Study of Borrow material of the Zakin Dam (first & second phases)</i> • <i>Body design of the Zakin Dam (first & second phases)</i> - <i>Working as a Project Manager in Abrahsaz Shargh Company, Hormozgan Province, Iran.</i> | 2006-2007 |
| <ul style="list-style-type: none"> • <i>Structural designer of Gahre underground dam</i> - <i>Working as a Project Manager and structural designer in Abrahsaz Shargh Company, Hormozgan Province, Iran.</i> | 2006-2007 |
| <ul style="list-style-type: none"> • <i>Body design of the Sarab Dam (second phase)</i> - <i>Working as a Geotechnical Engineering Expert in Abrahsaz Shargh Company, Razavi Khorasan Province, Iran.</i> | 2006-2007 |
| <ul style="list-style-type: none"> • <i>Body design of the Faryab dam (second phase)</i> - <i>Working as a Geotechnical Engineering Expert in Abrahsaz Shargh Company, Qeshm Island, Hormozgan Province, Iran.</i> | 2007-2008 |
| <ul style="list-style-type: none"> • <i>Earthquake studies and geological engineering of Sarab Dam (second phase)</i> - <i>Working as a Geotechnical Engineering Expert in Abrahsaz Shargh Company, Razavi Khorasan Province, Iran.</i> | 2008-2009 |
| <ul style="list-style-type: none"> • <i>Studies on the hydraulic design, structure and body of the Golman-darre dam (second phase)</i> - <i>Working as a design team leader in Kavoshpey mashhad Company, North Khorasan Province, Iran.</i> | 2009-2011 |
| <ul style="list-style-type: none"> • <i>Assessing the stability of small dams in Khorasan Province- Iran</i> - <i>Working as a Geotechnical Engineering Expert in Kavoshpey mashhad Company, Khorasan Province, Iran.</i> | 2003-2004 |
| <ul style="list-style-type: none"> • <i>Participation in the design of the body of dams</i> - <i>Working as a Geotechnical Engineering Expert in Kavoshpey mashhad Company, South Khorasan Province, Iran.</i> | 2009-2010 |
| <ul style="list-style-type: none"> • <i>Hydraulic studies, structure and body design of Speke Dam (second phase)</i> - <i>Working as a Design Team Leader in Sazab Shargh Company, Sistan and Baluchestan Province, Iran.</i> | 2007-2008 |
| <ul style="list-style-type: none"> • <i>Monitoring and analysis studies of Masjed-E-Soleyman dam body (from the end of construction to 2015)</i> - <i>Working as a Technical Manager in ABPOOY Consulting Engineering Company, Khuzestan Province, Iran.</i> | 2013-2017 |
| <ul style="list-style-type: none"> • <i>Choman dam design studies (second phase)</i> - <i>Working as a Geotechnical Engineering Expert in ABPOOY Consulting Engineering Company, Kurdistan Province, Iran.</i> | 2016-2019 |
| <ul style="list-style-type: none"> • <i>Studies on the hydraulic design, structure and dam body of Dahaneh Dara dam (A 64 meters earth dam)</i> - <i>Working as a Design Team Leader in MPTA J.V, Faryab Province, Afghanistan.</i> | 2017-2020 |

Professional Service

Reviewer of technical papers in:

- *Soil Dynamics and earthquake engineering*
- *Construction and building materials*

2019- Present

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Certification

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| Engineering Business License issued by Ministry of Housing and Urban Development | 2019 |
| 2 nd grade Designing and Calculating of building structures | |
| 1 st grade Supervision of building structures construction | |

Awards

- *Receiving an appreciation plaque from the instructors of the basic promotion courses by the Khorasan Razavi Engineering Organization.* 2013
- *Receiving an appreciation plaque for pursuing international relations by the Faculty of Engineering, Ferdowsi University of Mashhad.* 2016
- *Receiving an appreciation plaque as the distinguished professor of technology by the Research and Technology Deputy of the Faculty of Engineering, Ferdowsi University of Mashhad.* 2018
- *Receiving an appreciation plaque as the distinguished teaching professor by the Academic Affairs Deputy of the Faculty of Engineering, Ferdowsi University of Mashhad.* 2019
- *Receiving an appreciation plaque as the distinguished university professor in the social impact index by the Dean's Office of the Faculty of Engineering, Ferdowsi University of Mashhad.* 2020
- *Receiving an appreciation plaque as a top 5% teaching excellence award from the Academic Affairs Deputy of Ferdowsi University of Mashhad.* 2020
- *Receiving an appreciation plaque as the distinguished teaching professor of the department by the Dean's Office of the Faculty of Engineering, Ferdowsi University of Mashhad.* 2021
- *Receiving an appreciation plaque as the distinguished research professor of the department by the Research Deputy of the Faculty of Engineering, Ferdowsi University of Mashhad.* 2021
- *Receiving an appreciation plaque as a top 5% teaching excellence award from the Academic Affairs Deputy of Ferdowsi University of Mashhad.* 2023

Extracurricular research projects

- *Conducting studies and designing power substations and Energy tunnel project in Mashhad.*
- *Detailed design and preparation of construction documents for the hydropower plant and irrigation network associated with the Dahaneh Dara dam in Afghanistan.*
- *Conducting the second phase study and detailed design of the Dahaneh Dara Dam in Afghanistan and its associated structures.*
- *Conducting a review study of the identification phase and performing studies for the first phase of the hydropower dam and irrigation network of the Dahaneh Dara Dam in Afghanistan.*
- *Performing triaxial pressure tests on the hydropower plant and Dahaneh Dara Dam in the Farah province of Afghanistan.*
- *The project of designing and constructing the Dahaneh Dara Dam, irrigation network, and hydropower plant in the Farah province of Afghanistan.*
- *Performance evaluation of erosion control filter at the downstream of the Golman-darre Dam in North Khorasan, Iran.*
- *Investigation, comparison, and conducting large-scale consolidation (oedometer) tests on granular materials of the Choman Dam shell.*
- *Investigation, comparison, and conducting large-scale consolidation (oedometer) tests on granular materials of the Masjed-E-Soleyman Dam shell.*

IT Skills

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| Programming | MATLAB (Advanced) |
| Finite Element Software | Geostudio (Advanced), PLAXIS (Advanced), FLAC-3D (Advanced), 3DEC (Advanced) |
| Building Modelling and Designing | SAP2000, ETABS, SAFE (Advanced) |
| Earthquake Engineering Software | SeismoSignal (Advanced) |
| Other Software Packages | Microsoft Office (Advanced), AutoCAD |

Languages

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| Persian | Native |
| English | Upper-Intermediate |

Reference

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|---|---------------------------|
| Professor Abbas Soroush | Supervisor of MSc Thesis, |
| Professor Ali Khodaii | Supervisor of PhD Thesis, |
| <i>**Amirkabir University (Polytechnic Tehran), Tehran, Iran</i> | |
| Email: akhodaii@aut.ac.ir , Soroush@aut.ac.ir | |
| Phone: | |

Additional references are available upon request