

Dr, Mohsin, Qureshi

Job Title: Assistant Professor

Faculty: Engineering

Department: Civil

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Research interests/expertise

1. Rock Weathering
 2. Slope Stability
 3. Bio-Geotechnology
 4. Reconnaissance after Natural Disaster
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Areas of teaching

1. Geotechnical Engineering
 2. Engineering Geology
 3. Soil Mechanics
 4. Project Management
 5. Introduction to Civil Engineering
 6. Engineering Mathematics
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Qualifications

1. Ph.D. Civil Engineering, University of Tokyo, Tokyo, Japan, 2011
 2. M.Eng. Civil Engineering, University of Tokyo, Tokyo, Japan, 2008
 3. B.Sc. (Honours). Civil Engineering, University of Engineering and Technology Taxila, Taxila, Pakistan, 2005
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Courses taught

1. CIVIL4810 Project Management
 2. CIVIL3220 Geotechnical Engineering
 3. CIVIL2210 Fundamentals of Engineering Geology and Soil Mechanics
 4. CIVIL2610 Introduction to Civil Engineering and Environmental Issues
 5. MATH1000 Mathematical Foundations
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Membership of professional associations, societies

1. International Society of Soil Mechanics and Geotechnical Engineering
 2. Pakistan Engineering Council
 3. American Society of Civil Engineers
 4. Japan Society of Civil Engineer
 5. International Association of Engineers
 6. Pakistan Geotechnical Engineering Society
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Professional licences and certificates

1. Member-International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)
 2. Member-International Association of Engineers (IAENG)
 3. Professional Engineer-Pakistan Engineering Council (PEC)
 4. Member-American Society of Civil Engineers (ASCE)
 5. Member-Japan Society of Civil Engineers (JSCE)
 6. Member-Pakistan Geotechnical Engineering Society (PGES)
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Awards/Scholarships

1. Sohar University Grant for Early Career Researchers, 2013, **Sohar University**
 2. Award of Excellence for best paper and presentation in the session of Rock and Foundation Engineering, 2011, by, **Japan Society of Civil Engineers**
 3. Award of Excellence for best presentation in GeoKanto2009, by **Japanese Geotechnical Society**
 4. **Japanese Government MEXT Scholarship** for graduate studies at the University of Tokyo for 5 years
 5. **Certificate of Excellence** for overall best performance in B.Sc. Civil Engineering, University of Eng. And Tech. Taxila, Pakistan.
 6. **Certificate of Excellence** for best performance in B.Sc. Civil Engineering, Final Exam, University of Eng. And Tech. Taxila, Pakistan.
 7. **Pakistan Government Scholarship** for undergraduate studies at the University of Eng. and Tech. Taxila for 4 years
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Conference attendance

1. 18th International Conference of Soil Mechanics and Geotechnical Engineering, September 2013, **Paris, France**
2. 5th International Young Geotechnical Engineers Conference, August-September 2013, **Paris, France**
3. The 7th International Young Geotechnical Engineers Conference, September 2012, **Tokushima, Japan**
4. Japan Society of Civil Engineers, 13th International Summer Symposium, August 2011, **Kyoto, Japan**
5. 46th Japan National Conference of Geotechnical Engineering, Kobe, Japan
6. EGU General Assembly, April 2011, **Vienna, Austria**
7. GeoKANTO-2010, October 2010, **Saitama, Japan**
8. Japan Society of Civil Engineers, 12th International Summer Symposium, 2010, **Funabashi, Japan**
9. 45th Japan National Conference of Geotechnical Engineering, 2010, **Matsuyama, Japan**
10. International Joint Symposium on Geodisaster Prevention and Geoenvironment in Asia (JS-Fukuoka 2009), November 2009, **Fukuoka, Japan**
11. GeoKANTO-2009, 2009, **Utsunomiya, Japan**

12. International Workshop on Mechanics of Natural Solids, September 2009, **Horto, Greece**
13. 44th Japan National Conference of Geotechnical Engineering, 2009, **Yokohama, Japan**
14. 2nd International Conference on New Developments in Soil Mechanics and Geotechnical Engineering, May 2009, **Nicosia, Turkish Republic of North Cyprus**
15. 3rd Taiwan-Japan Joint Workshop on Geotechnical Hazards from Large Earthquakes and Heavy Rainfall, October, 2008, **Keelung, Taiwan**
16. 43rd Japan National Conference of Geotechnical Engineering, 2008, **Hiroshima, Japan**
17. Japan Society of Civil Engineers, 10th International Summer Symposium, 2008, Tokyo, Japan
18. GeokANTO-2007, 2007. **Maebashi, Japan**
19. Japan Society of Civil Engineers, 9th International Summer Symposium, 2007, **Yokohama, Japan**

Other forms of public presentation

1. Lecture on "Advanced Ground Improvement Technologies" at the "Continuing Professional Development Course of Pakistan Engineering Council", March 2012, Wah Engineering College, Wah Cantt, Pakistan
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Consultancy work

The Wadi Dayqah dam and water supply scheme, Muscat, Sultanate of Oman (1.5y)

Wadi Dayqah Dam Joint Venture was a project joint venture between Black & Veatch (UK), Su Yapi Engineering and Consulting Inc (Turkey) and National Engineering Services Pakistan. The joint venture was formed to complete the detailed design of Wadi Dayqah dam and water supply scheme to Muscat and Quriyat, in Oman. The scheme comprised of a reservoir impounded by 75m high RCC main dam, with a 45m high impervious core rock fill saddle dam, together with the water conveyance and treatment facilities to use the water that will be stored. The reservoir will retain the flood flow from the occasional heavy rainfall that is currently lost to the sea, and will be the first major surface water supply scheme in Oman. I was appointed to support the multi-national design team mainly consisting of mature dam and water supply design engineers, in Muscat, capital of Oman. My support tasks to the visiting experts and senior designers involved the analysis of dams, the planning, supervision and reporting of site investigations, the practicality of access on steep rock slopes and protection of pipelines from rapid runoff from those slopes, the analysis of reinforced concrete frames for buildings, the evaluation of prequalification and tender documents, and the production of large scale tender documentation

Current research activities/projects

1. Shear strength of granular geomaterials causing slope instabilities
 2. Stabilization of Omani soils by using biopolymers
 3. Developing a relationship between rock discontinuities and permeability
 4. Following the reviewers comments on submission to journals
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Current research grants

1. Shear strength of granular geomaterials causing slope instabilities
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Role. Principal Investigator

Fund: SURGE (OMR:4000)

Ending March 2014.

Publications and outputs**Chapters in Books:**

1. **Qureshi M. U.**, Yamada S. & Towhata I. 2013, A simplified technique for slope stability assessment based on insitu S-wave velocity measurement, K. Ugai et al. (eds.), Earthquake-Induced Landslides, DOI: 10.1007/978-3-642-32238-9, © Springer-Verlag Berlin Heidelberg 2013, pp 871-881.

International Refereed Journals:

1. Aziz M., Towhata I., Yamada S., **Qureshi M. U.** & Kawano K. 2010. Water-induced granular decomposition and its effects on geotechnical properties of crushed soft rocks, Natural Hazards and Earth System Sciences, Vol. 10, No. 6, pp. 1229-1238.
2. Aziz M., **Qureshi M. U.**, Towhata I., Yamada S. & Saleem M. 2009. Geotechnical properties of weathered slopes in Muzaffarabad area after the 2005 Kashmir earthquake, Journal of Harbin Institute of Technology, Vol. 16(S1), pp. 6-11.
3. Hayat T., Khan I., Shah H., **Qureshi M. U.**, Karamat S. & Towhata I. 2010. Attabad Landslide - Dam disaster in Pakistan 2010, Bulletin of International Society of Soil Mechanics and Geotechnical Engineering, Vol. 4(3), pp. 21-31.

International Refereed Conferences

1. **Qureshi M. U.**, Al-Mawali, K & Khan K. M. 2013. Using RQD to estimate the in-situ permeability of discontinuous sedimentary rock, Proceedings of 5th International Young Geotechnical Engineers Conference (iYGEC2013), Paris, **France**, pp. 447-450.

2. **Qureshi M. U.**, 2012, Laboratory reproduction of freeze-thaw weathering of soft rocks, Proceedings of The Seventh Asian Young Geotechnical Engineers Conference (7AYGEC),Tokushima, **Japan**, pp. 38-44.
3. Khan K. M. & **Qureshi M. U.** 2012, Environmental impact assessment of Industrial Estate Islamabad, Proceedings of 2nd International Conference on Energy, Environment & Sustainable Development (EESD2012) MUET Jamshoro, **Pakistan**.
4. **Qureshi M. U.** & Towhata I. 2011, Negative ageing mechanisms of sedimentary soft rock during freeze-thaw weathering, Proceedings of JSCE's 13th International Summer Symposium, Kyoto, **Japan**. pp.199-202.
5. **Qureshi M. U.**, Towhata I. & Yamada S. 2011, The effects of confinement on mechanical behavior of sedimentary soft rock during freeze-thaw weathering, Proceedings of 46th Japan National Conference of Geotechnical Engineering, Kobe, **Japan**, pp. 459-460.
6. **Qureshi M. U.** & Towhata I. 2011. Reconnaissance in Chiba after "The 2011 off the Pacific coast of Tohoku Earthquake", poster presentation EGU General Assembly 2011, Vienna, **Austria**, Geophysical Research Abstracts, Vol.13, EGU2011-14249.
7. **Qureshi M. U.**, Towhata I., Yamada S. & Aziz M. 2010, The effects of weathering on strength and deformation characteristics of soft rocks, Proceedings of International Conference of Geotechnical Engineering (ICGE-2010), Lahore, **Pakistan**, pp. 1-8.
8. **Qureshi M. U.**, Towhata I., Yamada S. & Biagioni P. 2010 The effects of freeze-thaw and wet-dry cycles on the durability of soft rocks, Proceedings of GeoKANTO-2010, Saitama, **Japan**, pp. 88-91
9. Towhata I., Yamada S., Toyota H. & **Qureshi M. U.** 2010. Long term effects of strong earthquake shaking on slope instability; Lessons from recent seismic events, Proceedings of 14th European Conference on Earthquake Engineering (14ECEE-2010), Orhid, **Macedonia**.
10. **Qureshi M. U.**, Towhata I., Yamada S., Aziz M. & Kazmi A. Z. 2009. In-situ direct shear tests on weathered rock materials for slope failure risk assessment, Proceedings of the International Joint Symposium on Geodisaster Prevention and Geoenvironment in Asia (JS-Fukuoka 2009), Fukuoka, **Japan**, pp. 84-89.

11. Aziz M., Towhata I., Yamada S. & **Qureshi M. U.** 2009. Torsional shear tests on strength and deformation response of residual soils undergoing water-induced disintegration of grains, Proceedings of GeoKANTO-2009, Utsunomiya, **Japan**, pp. 141-146.
 12. **Qureshi M. U.**, Towhata I. & Yamada S. 2009. A simple direct shear test to evaluate the field shear strength, Proceedings of GeoKANTO-2009, Utsunomiya, **Japan**, pp. 137-140.
 13. **Qureshi M. U.**, Towhata I., Yamada S. and Kubo Y. 2009, Field investigations of highly weathered slopes for geotechnical risk assessment, Proceedings of 2th International Conference on New Developments in Soil Mechanics and Geotechnical Engineering, Nicosia, **Turkish Republic of North Cyprus**, pp. 222-229.
 14. **Qureshi M. U.**, Towhata I., Yamada S., Aziz M. & Aoyama S. 2009. Geotechnical risk assessment of highly weathered slopes using seismic refraction, Proceedings of the International Symposium on Prediction and Simulation Methods for Geohazard Mitigation (IS-KYOTO2009), Kyoto, **Japan**, pp. 513-518.
 15. Aziz M., Towhata I., Yamada S., **Qureshi M. U.** & Kawano K. 2009. Effects of negative ageing on deformation and strength response of geomaterials, EGU General Assembly, Vienna, **Austria**, Geophysical Research Abstracts, Vol. 11, EGU2009-7566-2.
 16. **Qureshi M. U.**, Towhata I. & Yamada S. 2008. Change in topography and mechanical properties of disturbed slopes due to weathering, Proceedings of 3rd Taiwan-Japan Joint Workshop on Geotechnical Hazards from Large Earthquakes and Heavy Rainfall, Keelung, **Taiwan**, pp. 199-206.
 17. **Qureshi M. U.** & Aziz M. 2007. Insitu permeability evaluation of weathered sedimentary deposits and counter-measures to minimize the leakage, Proceedings of GeoKANTO-2007, Maebashi, **Japan**, pp. 219-222.
 18. **Qureshi M. U.** & Khan K. M. 2007. Engineering geotechnical assessment of Wadi Dayqah dams and reservoir area, Proceedings of JSCE's 9th International Summer Symposium, Yokohama, **Japan**, pp. 175-178.
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