PRELIMINARY PROGRAM



GEO-RISK 2023 Arlington, Virginia | July 23-26, 2023

Advances in Theory and Innovation in Practice



www.geo-risk.org

Schedule at a Glance (Subject to change)

7:00 a.m. – 11:00 a.m.	Registration Open
8:00 a.m. – 5:00 p.m.	Short Courses
11:00 a.m. – 12:00 p.m.	Registration Closed for Lunch
12:00 p.m. – 5:30 p.m.	Registration Open
1:00 p.m. – 5:00 p.m	Exhibitor Move-In
5:00 p.m. – 6:30 p.m.	Exhibits Open
5:00 p.m. – 6:30 p.m.	Welcome Reception
Monday, July 24, 2023	
7:00 a.m. – 12:00 p.m.	Registration Open
9:30 a.m. – 3:30 p.m.	Exhibits Open
8:30 a.m. – 10:30 a.m.	Plenary Session
10:30 a.m. – 11:00 a.m.	Morning Break in Exhibit Hall
11:00 a.m. – 12:45 p.m.	Concurrent Technical Sessions
12:00 p.m. – 1:00 p.m.	Registration Closed for Lunch
12:45 p.m. – 2:00 p.m.	Lunch in Exhibit Hall
1:00 p.m 4:00 p.m.	Registration Open
2:00 p.m. – 3:45 p.m.	Concurrent Technical Sessions
3:45 p.m. – 4:15 p.m.	Afternoon Break in Exhibit Hall
4:15 p.m. – 5:30 p.m.	Concurrent Technical Sessions
uesday, July 25, 2023	
7:00 a.m. – 12:00 p.m.	Registration Open
9:30 a.m. – 3:30 p.m.	Exhibits Open
8:30 a.m. – 10:30 a.m.	Plenary Session
10:30 a.m. – 11:00 a.m.	Morning Break in Exhibit Hall
11:00 a.m. – 12:45 p.m.	Concurrent Technical Sessions
12:00 p.m. – 1:00 p.m.	Registration Closed for Lunch
12:45 p.m. – 2:00 p.m.	Lunch in Exhibit Hall
1:00 p.m. – 4:00 p.m.	Registration Open
2:00 p.m. – 3:45 p.m.	Concurrent Technical Sessions
3:45 p.m. – 4:15 p.m.	Afternoon Break in Exhibit Hall
4:15 p.m. – 5:30 p.m.	Concurrent Technical Sessions
Wednesday, July 26, 2023	
7:30 a.m. – 12:00 p.m.	Registration Open
8:30 a.m. – 10:30 a.m.	Plenary Session
10:30 a.m. – 1:30 p.m.	Exhibits Open
10:30 a.m. – 11:00 a.m.	Morning Break in Exhibit Hall
11:00 a.m. – 12:45 p.m.	Concurrent Technical Sessions
12:00 p.m. – 1:00 p.m.	Registration Closed for Lunch
12:45 p.m. – 2:00 p.m.	Lunch in Exhibit Hall
2:00 p.m. – 3:45 p.m.	Concurrent Technical Sessions
2:00 p.m. – 5:00 p.m.	Exhibitor Moveout
3:45 p.m. – 5:30 p.m.	Closing Plenary

Join Us in Virginia!

Invitation from the Conference Chair

Geo-Risk 2023 — Advances in Theory and Innovation in Practice

Risk and probabilistic methods in geotechnical engineering are among the fastest growing areas in the profession. In the new era of digitalization and artificial intelligence, risk-based methods have become essential to inform site investigation, design, construction, and monitoring of geo-engineering systems.

On behalf of the Program Committee, you are cordially invited to participate in the 3rd version of Geo-Risk, a specialty conference organized by the ASCE Geo-Institute's Risk Assessment and Management Committee.

In addition to the regular variety of presentations on challenging projects, Geo-Risk 2023 will feature multiple invited speakers on selected topics that will showcase the giant strides made in the past decade by geotechnical practitioners and researchers in the fields of digitalization, data science, climate change, infrastructure resilience, and machine learning. The conference will include a wide range of knowledgeenhancing technical and panel sessions. Join us in Arlington to celebrate with colleagues the future of our profession!



Conference Co-Chairs Shadi Najjar, Ph.D., M.ASCE, American University of Beirut

Limin Zhang, Ph.D., F.ASCE, Hong Kong University of Science and Technology

Robert Gilbert, Ph.D., P.E., D.GE, M.ASCE., NAE, University of Texas at Austin

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Limin Zhang, Ph.D., F.ASCE, Hong Kong University of Science and Technology Robert Gilbert, Ph.D., P.E., D.GE, M.ASCE., NAE, University of Texas at Austin

Technical Program Co-Chairs:

Jianye Ching, Ph.D., C.Eng, M.ASCE, National Taiwan University

Zenon Medina Cetina, Ph.D., M.ASCE, Texas A&M University

Lei Wang, Ph.D., P.E., M.ASCE, University of the District of Columbia

Technical Program Committee:

Jie Zhang, Ph.D., M.ASCE, Tongji University Sara Khoshnevisan, Ph.D., M.ASCE, University of Cincinnati

Program Committee:

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Adrian Rodriguez-Marek, Ph.D., M. ASCE, Virginia Tech

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Kimberly Martin, Ph.D., P.E., M.ASCE, Keller Timo Schweckendiek, Ph.D., Deltares/TU Delft Iason Papaioannou, Ph.D., TU München Andy Leung, Ph.D., P.E., M. ASCE, Hong Kong Polytechnic University

Technical Publications Co-Editors:

Zenon Medina Cetina, Ph.D., M.ASCE, Texas A&M University

Lei Wang, Ph.D., P.E., M.ASCE, University of the District of Columbia

Geo-Institute Staff

Bradley Keelor, Director **Lucy King,** Senior Manager, Geo-Institute & COPRI Conferences

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Tatiana Vlasova, Digital Content and Program Manager

Barbara Curtis, Senior Manager, Media and Event Sales



Geo-Risk 2023: Advances in Theory and Innovation in Practice will showcase

the latest interdisciplinary research and innovation in risk assessment and management to cater for the disruption in geotechnical practice and engage attendees on the broader vision and societal importance of geotechnical engineering in addressing risk and resilience issues of civil infrastructure.

Risk and probabilistic methods in geotechnical engineering are among the fastest growing areas in the profession. Geo-Risk 2023 will be the third specialty conference offered by the Risk Assessment and Management Committee of the ASCE Geo-Institute. Geo-Risk 2011, held in Atlanta, covered risk assessment and management in all fields of geoengineering while Geo-Risk 2017, held in Denver, featured "Geotechnical Risk: From Theory to Practice".

Target Audience

This conference will bring together the diverse professionals who work, teach, and learn in all branches of geotechnical engineering, including:

- Professional engineers and other geo-professionals from consulting and industry in the geotechnical, geology, geophysics, construction, and structural disciplines
- University educators and researchers
- Federal and state agencies, including state geological surveys
- Specialty contractors in the fields of ground improvement, deep foundations, and tunneling
- Facility owners from state, federal, and municipal government, military, and private industry
- Regulators

Top Reasons to Attend

- Experience interdisciplinary research and practice on geotechnical risk assessment and management to inform site investigation, design, construction, and monitoring of geoengineering systems
- Witness the giant strides made in the past decade by geotechnical practitioners and researchers in digitalization, data science, infrastructure resilience, and artificial intelligence
- Learn from top leaders in the industry through special plenary sessions, short courses, panels, and technical sessions
- Network with colleagues within the geo-community from around the block—and around the world
- Earn Professional Development Hours (PDHs) to maintain your professional licensure while gaining relevant focused knowledge
- Visit exhibitors to find the latest tools, techniques, e-programs, etc.
- Last but not least, experience Arlington and the capital city of Washington D.C.

Join the Conversation

Follow G-I on Twitter, Facebook, LinkedIn, or Instagram and join the conversation with #GeoRisk2023.

