INTERNATIONAL SYMPOSIUM
PRESERVATION OF MONUMENTS & HISTORIC SITES
ATHENS TC301
SEPTEMBER 2026 | ATHENS, GREECE

ΕΛΛΗΝΙΚΗ ΕΠΙΣΤΗΜΟΝΙΚΗ ΕΤΑΙΡΕΙΑ ΕΔΑΦΟΜΗΧΑΝΙΚΗΣ & ΓΕΩΤΕΧΝΙΚΗΣ ΜΗΧΑΝΙΚΗΣ

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Αρ. 188 –ΙΟΥΝΙΟΣ 2024

INTERNATIONAL WOMEN In ENGINEERING DAY
23 June

SIMSG ISSMGE

ISRM

ISSN: 2732-7248: N A

ΑΡΘΡΑ

Future of Artificial Intelligence in Geotechnics

Kok-Kwang Phoon, Mona Badr El-Din Anwar

Research in data-centric geotechnics is accelerating as a result of tremendous advances in machine learning and artificial intelligence (AI) in conjunction with automation and connectivity. It is prudent for geotechnical engineers to understand and to explore the power and the impact of emerging digital technologies, particularly their value propositions to practice (benefits) and the responsible use of AI (risks). The European Union's AI Act (https://digitalstrategy.ec.europa.eu/en/policies/regulatory-framework-ai) defines 4 levels of risk for AI systems (unacceptable risk, high risk, limited risk, minimal risk). AI systems for geotechnics is classified as "high risk" because they would be deployed in "critical infrastructures (e.g. transport), that could put the life and health of citizens at risk". In light of this risk level, the authors argue that it is more prudent to overreact than to underreact to this disruptive change that is still unfolding rapidly.

The International Symposium on Machine Learning and Big Data in Geoscience was initiated by the ISSMGE Technical Committee of Machine Learning & Big Data (TC309). The first event was held at the Norwegian Geotechnical Institute, Oslo, Norway, 21-22 Oct 2018 and the most recent event (fourth) was held at University College Cork, Ireland, 29 Aug - 1 Sep 2023. A discussion panel was held before the second event (Tongji University, Shanghai, China, 28-30 Jul 2019) [ISSMGE Bulletin 13(4), 2019, 8-14]. This discussion has evolved to a series of Machine Learning in Geotechnics Dialogue (MLIGD) – the fourth was held at the Okayama Convention Center, Okayama, Japan on 5 Dec 2023 (Leung et al. 2024).

An attempt to explore the future of machine learning in geotechnics (MLIG) was made in a foresight review paper (Phoon and Zhang 2023), but many research papers have been published since then as an indicator of the rate of progress. Phoon and Zhang (2023) proposed a simple classification scheme for machine learning (ML) based on its value to practice: (1) Type 1 (incremental value) involving available data and existing conventional applications, (2) Type 2a (potentially high value) involving available data and new applications, (3) Type 2b (high value) involving new data and existing applications, and (4) Type 3 (disruptive value) involving new data and completely novel applications (e.g., precision construction, autonomous construction control). No Type 3 ML/AI has emerged thus far. This reflects the nascent state of adoption of artificial intelligence in practice. The purpose of this article is to introduce the recent volume of work and to point to major breakthroughs occurring elsewhere that can result in emergence of Type 3 applications in geotechnical engineering practice.

Data-centric geotechnics

Research in ML/AI should be framed under a more holistic "data first practice central" agenda called data-centric geotechnics. This term was first coined in Phoon et al. (2022a). Two companion special issues in Georisk have been published in issue 17, volume 1 (Machine learning and AI in geotechnics, 12 papers) (Phoon et al. 2023) and issue 18, volume 1 (Data-centric geotechnics for practice, 16 papers) (Phoon et al. 2024a). In addition, one special issue in Underground Space (Machine learning and AI for underground metaverse, 11 papers, https://www.sciencedirect.com/special-issue/10HDT8RD87H) (Phoon et al. 2024b) and in Computers and Geotechnics (Recent advancements in data-centric geotechnics, 24 papers, https://www.sciencedirect.com/special-issue/107KB6917M5) (Phoon et al. 2024c) have been published online. One special issue in Soils and Foundations (Machine Learning in Geotechnics, 11 papers, https://www.sciencedirect.com/special-issue/106JZ159T84) is under preparation. In this Soils and Foundations special issue, Wu et al. (2024) drew insightful lessons from the development of materials informatics to propose a pathway for data-driven geotechnics (which constitutes only the computation part of data-centric geotechnics). The total number of papers appearing in these 5 special issues is 74 over a period of 2 years. This is indicative of rapidly expanding interest in the research community. The first workshop on the Future of Machine Learning in Geotechnics (FOMLIG) was successfully held on 5–6 Dec 2023, Okayama, Japan (Phoon and Shuku 2024). Significant gaps in research were identified such as privacy-enhancing technologies (PETs) and trustworthy AI. The second workshop (2FOMLIG) would be held in Chengdu, 11-13 Oct 2024 (www.fomlig2024.com). The impact of large language models such as ChatGPT would be explored in 2FOMLIG. Although research in data-centric geotechnics is in its infancy, its value to practice has been demonstrated in the current body of work. The value of machine learning to practice was the focus of the Fourth Machine Learning in Geotechnics Dialogue (4MLIGD) (Leung et al. 2024).

Data

Data is now considered to be an asset that is as valuable as our physical infrastructure (Phoon 2020a). This advantage is not well appreciated by most engineers, although it is pivotal to digital transformation. Machine learning and AI universally depend on data for training and validation. ISSMGE TC304 has initiated a database sharing project in called 304dB (http://140.112.12.21/issmge/tc304.htm) in 2017. The largest collection of geotechnical databases would be published in 2024: www.routledge.com/9781032578958 (Phoon and Tang 204) and www.routledge.com/9781032579108 (Tang and Phoon 2024) (Fig. 1). Two new journals have been launched in 2024: Geodata and Artificial Intelligence (GEOAI), Elsevier and Machine Learning and Data Science in Geotechnics (MLaG), ICE Publishing. GEOAI covers all geo-related disciplines that need to address the unique challenges in our datasets and hence the unique opportunities to cross-fertilize and develop novel methods, processes, and systems to transform our research and practice. Building geodata estate is a major focus of GEOAI.

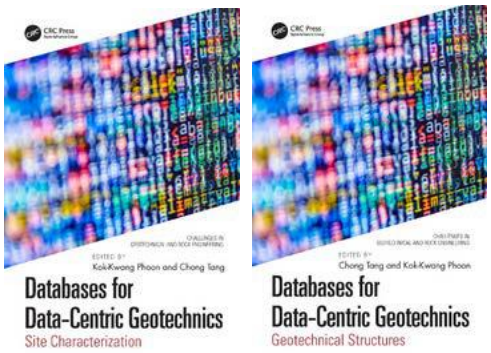

Fig. 1 Databases containing site characterization data and performance data of geotechnical structures.

MLaG covers the application of machine learning, artificial intelligence, big data analysis, and statistical approaches to geotechnical challenges. Phoon (2020b) posed the challenge of drawing insights from large heterogeneous data from many sites (data rich) for decision making at one target site (data poor). He called this the "Goldilocks dilemma". Engineers have primarily addressed this challenge using engineering judgment, but an algorithmic solution has remained out of reach until recently.

Notwithstanding the importance of engineering judgment, it may not be applicable to sites that are outside the experience base of an engineer. Surprisingly, a number of ML solutions produced in response to this extremely difficult challenge (called the "site recognition challenge" in Phoon et al. 2022b) has surfaced in the literature recently.

Type 3 applications?

Type 3 applications are those that disrupt the state-of-the-practice. The authors hypothesize that significant investments in other industries are likely to produce breakthroughs that would in turn inspire the adoption of Type 3 in geotechnics:

1.The capability of generative AIs such as ChatGPT to act as an intelligent companion to an engineer in decision making is exciting. One expects large scale adoption of generative AIs in the workplace with the introduction of Microsoft Copilot.

2.Mercedes and BYD are among the first to secure approval to deploy a level three "hands free" driving system. Competition is stiff among the automakers and further breakthroughs with ramifications to automation in the construction industry are conceivable in the near future. Phoon and Shuku (2024) hypothesized that machine learning guided observation method (MLOM) can lead to autonomous construction.

3.It is important to point out developments in vision-language-action (VLA) models such as Robotic Transformer 2 (RT-2) by Deepmind that learns from both web and robotics data, and translates this knowledge into instructions for robotic control. AI is now capable of learning from data produced by interaction with the real world. Nvidia founder and chief executive Jensen Huang opined that "physical AI" is the next evolution that is already actively being pursued by Foxconn and TSMC (Cao 2024). In the meantime, Agility Robotics and Fourier Intelligence are racing to be the first to mass produce humanoid robots called Digit and GR-1, respectively.

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ISSMGE | VOL.18 - ISSUE 2 | June 2024, pp. 61-64, https://www.issmge.org/filemanager/article/1283/bulletin-182.pdf

5 of the longest tunnels in the world and how they were built

Tunnels are an amazing feat of modern engineering. Since the invention of the tunnel boring machine in 1853, engineers have used advanced technology to drill, blast, and bore into the earth. From carving through mountains at 10,000 feet above sea level to creating underwater railways that connect continents, tunnels are built to make travel more seamless — whether you're journeying from China to Tibet or hopping on a train from northern to southern Europe. Here's a peek into the construction of five of the world's longest tunnels for railways and cars.

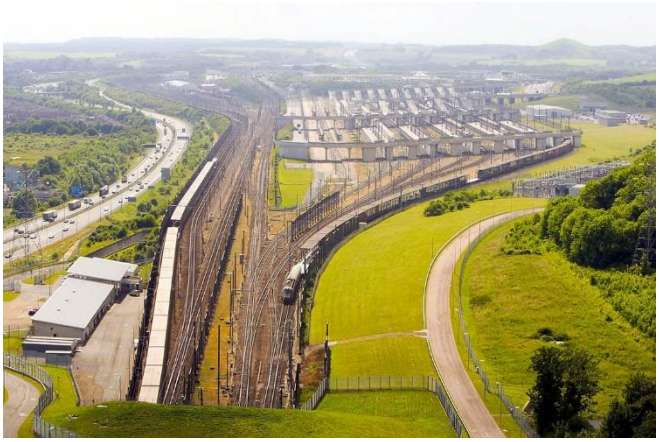
China's New Guanjiao Tunnel, 20.3 miles

The New Guanjiao Tunnel sits at 10,800 feet above sea level and comprises part of the highest-altitude railway in the world, the Qinghai-Tibet Railway. It's also one of the longest tunnels in China, with Dongguan's Songshan Lake Tunnel beating it by a mere 3.97 feet. As a part of the 1,125-mile railway system connecting China and Tibet, New Guanjiao is one of three high altitude tunnels on the track. Since the railway runs at such a high altitude, the train carries supplemental oxygen for any passengers suffering from altitude sickness. The New Guanjiao Tunnel, which replaced an older tunnel that was only 2.5 miles long, took seven years and a dual boring system to finish. It runs directly through a Tibetan plateau, reducing travel time within the tunnel from 2 hours to a mere 20 minutes.

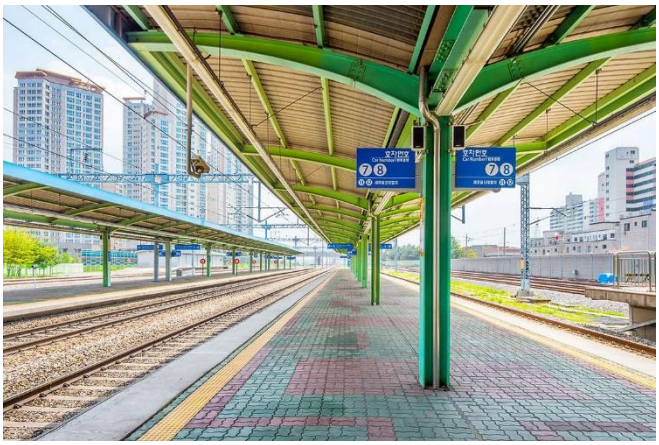
England-France channel tunnel, 31.3 miles

Also called the Chunnel or Eurotunnel, the Channel Tunnel connects Folkestone, England, and Sangatte, France, and actually consists of three parallel tunnels — two for railways and one for security cars and emergency services. Named for the body of water that the tunnel bisects, this underwater passageway is considered a feat of engineering and has been named one of the "Seven Wonders of The Modern World."

Eleven tunnel boring machines were used to dig the tunnel on either side of the channel. On the British side, the debris was carried out of the tunnel using a railway conveyor belt system; on the French side, it was combined with water and transported through a pipeline.

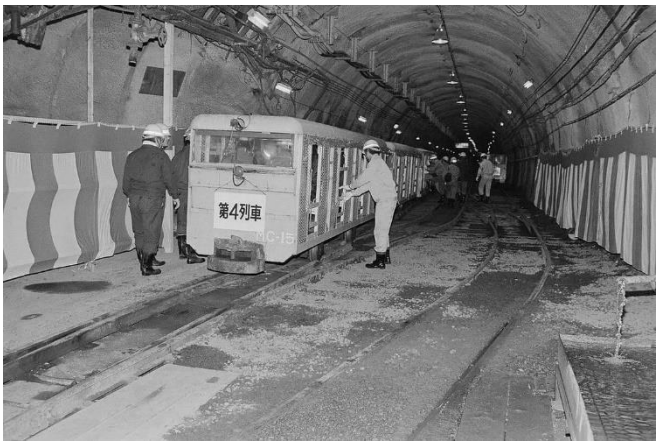


South Korea Yulhyeon Tunnels, 31.3 miles



Tied with the Channel Tunnel for the world's third-longest railway tunnel, South Korea's Yulhyeon Tunnel is a single-tube, double-track tunnel that is part of the Suseo High Speed Railway, connecting Seoul and Pyeongtaek. The tunnel was primarily built using the New Austrian Tunnel Method (NATM), a construction method that is best employed with variable rock and soil conditions. Although it is the same length as the Channel Tunnel, Yulhyeon took much less time to complete — three years and five months — since it is not underwater, and much of the blasting occurred in a landscape with low mountains and without aboveground urban development to impede progress.

Japan's Seikan Tunnel, 33.5 miles



Until recently, the Seikan Tunnel held the record for the world's longest tunnel. The tunnel travels below the Tsugaru Strait, connecting Honshu Island and Hokkaido Island in Japan. Servicing both passenger bullet trains and freight trains, nearly 15 miles of the man-made tunnel are located underwater. To make this subaquatic section, engineers blasted 2,900 tons of explosives in an area prone to dangerous earthquakes. The land section was created by conventional boring methods. It took 17 years to complete the tunnel, during which time 34 lives were lost due to accidents on the job, including cave-ins and floodings. Still, the underwater train has proved a much safer form of travel than the former inter--island ferry system that was often subject to dangerous weather conditions.

Switzerland's Gotthard Base Tunnel, 35.4 miles

In 2016, the Gotthard Base Tunnel overtook Seikan for the longest tunnel in the world. To top that, it's also the deepest tunnel in the world, extending to 8,000 feet underground. The tunnel, which took 17 years to complete, runs a high-speed rail beneath the Swiss Alps, connecting northern and southern Europe. To build the tunnel, engineers faced an immense challenge with the rock's unpredictability. Some rock was too soft, making it difficult to excavate and slowing down the work. When the conditions were right, however, the workers used a 30-foot tunnel boring machine that was able to dig a record-breaking 131 feet in a single day.

CLASSIC CITY NEWS, 20 June 2024,
https://www.classiccitynews.com/post/5-of-the-longest-tunnels-in-the-world-and-how-they-were-built

A brief tribute to Sir Alec Skempton

Professors Sir Alec Skempton (left) and Ralph B. Peck (right) (image from peck.geoengineer.org)

Professor Sir Alec Westley Skempton, one of the founding fathers of soil mechanics, was born exactly 110 years ago, on June 4, 1914, and we will try to draw a brief description of his vast legacy.

Sir Alec Skempton was born in Northampton, where he attended the Waynflete House Preparatory School, and starting in 1928, the Northampton Grammar School.

In 1932 he went on to study civil engineering at Imperial College London, where he graduated in 1935 with First Class honors.

After graduating, Skempton remained at Imperial College London as a researcher on the topic of reinforced concrete but went on to continue his research at the Building Research Station (BRS) in 1936, after being offered a reimbursed post.

BRS inaugurated its soil physics section in 1933 and renamed it to Soil Mechanics section in 1935. It was there that Sir Alec Skempton decided to abandon his reinforced concrete studies and join the Soil Mechanics section in January 1937.

In 1947, at the invitation of Sutton Pippard, Skempton returned to Imperial College London as a Reader in Soil Mechanics, and in 1949 he received a higher doctorate of DSc from the University of London, despite not having completed his PhD research.

In 1950, Sir Alec Westley Skemptor introduced the first postgraduate course in soil mechanics at Imperial College.

After a couple of years, in 1955, he was elevated to Professor of Soil Mechanics and in 1957 he became Head of the Department of Civil Engineering, holding both titles until his retirement in 1981.

It is worth noting that even after his retirement, he stayed at Imperial College as Emeritus Professor and Senior Research Fellow, working at the Civil Engineering Department there on an almost daily basis, until just a couple of months before his passing in 2001.

Sir Skempton contributed to numerous societies, publications, lectures, and consulting projects, so we are going to try and focus on just the major ones in the following lines.

However, a more detailed list of his achievements can be found in Géotechnique's Volume 51 Issue 10, December 2001, pp. 829-834, while it would be nice to add at this point that Sir Skempton was also associated with the creation of the Journal in 1948, and it was his wife that designed the front cover.

In 1957, he was elected second President of the International Society of Soil Mechanics and Foundation Engineering, succeeding Karl Terzaghi, and in 1981 he also received the Karl Terzaghi Award of the American Society of Civil Engineers.

Sir Skempton also received the Gold Metal of the Institution of Structural Engineers in 1981, while prior to that he had also been awarded the Ewing Gold Medal of the Institution of Civil Engineers in 1968, the Lyell Medal of the Geological Society of London in 1972 and the Dickinson medal of the Newcomen Society in 1974.

Sir Alec Skempton gave the 4th Ranking Lecture in 1964, which was named "Long-term stability of clay slopes".

Some of his most notable contributions to Soil Mechanics include the A and B pore water pressure parameters, his pioneering work on the behavior and residual strength of clays, as well as his work on the subject of slope stability, among others.

As for his role in consulting, Sir Skempton had been involved in numerous projects, involving the first implementation of sand drains for consolidation acceleration in the UK, as well as working on the foundations of the Waterloo Bridge and St Paul's Cathedral in London, Italy's Tower of Pisa, and the Salisbury Cathedral. He was also very active in landslide and slope stability consulting.

Finally, Sir Alec Westley Skempton was knighted in 2000 for his services to engineering.

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(Geoengineer.org, Jun, 04, 2024, https://www.geoengineer.org/news/a-brief-tribute-to-sir-alec-skempton)

ΝΕΑ ΑΠΟ ΤΙΣ ΕΛΛΗΝΙΚΕΣ ΚΑΙ ΔΙΕΘΝΕΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΝΩΣΕΙΣ

International Society for Soil Mechanics and Geotechnical Engineering

ISSMGE News
www.issmge.org/news

1st International TC202 Workshop on "Laboratory Elementary Testing for Soil under Climatic Changes

ISSMGE Secretariat / TC202 / 03-06-2024

TC202's Task Force No. 6 (Climatic Effects on Geomaterial Behaviour) invites you to attend the 1st International Workshop on "Laboratory elementary testing for soil under climatic changes." The workshop will be held online on Wednesday, 05 June 2024, from 6:00-8:00am UTC.

Presenters include Dr. Chao Zhou, Dr. Ana Heitor, Prof. Jiankun Liu, Prof. Yu-Jun Cui, and Prof. Tatsuya Ishikawa. Everyone is welcome to participate.

Online link: https://teams.microsoft.com/l/meetup-join/19%3ad08fde111a864a6eaf30fffc9b40c1fc%40thread.tacv2/1717155761115?context=%7b%22Tid%22%3a%22cbc292d3-d274-4204-9169-16847b678004%22%2c%22Oid%22%3a%226813bf98-d7da-40d5-a68b-5293122cfee8%22%7d

A special session of TC219 was held in Geoshanghai2024 conference

ISSMGE Secretariat / TC219 / 05-06-2024

A special session of TC219 was held in Geoshanghai2024 conference

Host Member Society: System Performance (TC219)

Webpage: *http://www.geo-shanghai.org*

Special session

TC219 System Performance-Based Design of Geotechnical and Underground Engineering Structures

Session Chair: Gang Zheng; Dongmei Zhang

Invited keynote

"System Safety Performance and Resilience of Deep Excavation and Underground Engineering", Xuesong Cheng, Gang Zheng, Tianqi Zhang, Tianjin University
Click here and use Code ***g9rt*** to download the report.

Invited keynote

"Seismic resilience assessment of shield tunnels in soft soils", Zhongkai Huang, Tongji University
Click here and use Code ***t2tk*** to download the report.

Paper presentation

"Comparative evaluations of building impact assessment due to adjacent tunneling", Nattanai Ekaksorn, King Mongkut's U. of Tech. Thonburi
Click here and use Code ***ghbd*** to download the paper.

Paper presentation

"Asymmetric Instability Damage Patterns of Curved Shield Tunnels Based on Transparent Soil Visualisation Model Tests", Mengxi Zhang, Shanghai University
Click here and use Code ***gebq*** to download the paper.

Paper presentation

"Rigid Inclusions Performance as Ground Improvement for Lacustrine Clays", Gabriel Colorado, Metro Linea 1
Click here and use Code ***jg4k*** to download the paper.

Paper presentation

"Research paradigm of resilience of underground space systems in megacities: current situation and prospects", Kai-Hang Han, Shenzhen University

Launch of the HTC website at GeoShanghai 2024

ISSMGE IT Administrator / Time Capsule Project / 10-06-2024

On behalf of the ISSMGE President, Dr Marc Ballouz and the ISSMGE Board, Professor Keh-Jian (Albert) Shou, Vice President Asia of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), officially launched a dedicated website for the Heritage Time Capsule (HTC) project at the GeoShanghai 2024 conference, Shanghai, China.

The web address is **https://htc.issmge.org/**

Albert Shou (ISSMGE VP Asia) officially launching the HTC website

The HTC website features an engaging home page design and an impressive number of contributions to date. These include video recordings, narrated slide presentations, text documents, and articles from ISSMGE Past Presidents or their

champions, Member Societies, Technical Committees, Corporate Associates, key persons, Regional Vice Presidents, and Members of ISSMGE Board Level Committees.

The HTC website also contains a small number of early discoverer reports. Individual members of the ISSMGE are eligible and encouraged to become discoverers, and details of this can be found on **https://htc.issmge.org/discovery**. The ISSMGE Young Members Presidential Group (YMPG) liaisons with Member Societies are helping to create a number of discoverer reports for hosting on the HTC website. The creation and promotion of many discoverer reports will greatly increase the visibility of the HTC Website, the geotechnical profession, and its contribution to the wellbeing and security of society.

Associate Professor Mingliang (Carter) Zhou from Tongji University, China, and lead for HTC Asia, was the Master of Ceremonies at the HTC session. He also moderated the panel discussion that followed the presentation on collaboration between Member Societies.

Associate Prof Carter Zhou moderating the session

Representatives from the ISSMGE Australasia region guided the attendees through the HTC website content and features and presenting on successful collaboration examples between the Australian and New Zealand Member Societies in Geo education and other areas. Presentations were given by Ashe Cooper, Bridget Lokoe and Judy Eid from the ISSMGE Young Members Presidential Group (YMPG) with the main focus on the discovery phase of HTC. Further details of the GeoShanghai 2024 HTC session will be presented in the forthcoming June 2024 edition of the ISSMGE bulletin.

HTC GeoShanghai 2024 session presenters (left - right): Carter Zhou (YMPG), Eleni Gkeli (New Zealand), Liam Wotherspoon (New Zealand), Hugo Acosta-Martinez (Australia), Judy Eid (YMPG), Bridget Lokoe (YMPG), Ashe Cooper (YMPG) and Albert Shou (ISSMGE VP Asia).

The HTC team warmly welcomes you to visit the exciting HTC website.

Comments or suggestions to the HTC team can be provided via the contact tab on the HTC website, **https://htc.issmge.org/contact**.

We would also like to take this opportunity to thank everyone who has contributed to the development and submission of material to the HTC website. We are very grateful to the local organising committee for hosting the HTC session at the GeoShanghai 2024 conference, the Chinese Institution of Soil Mechanics and Geotechnical Engineering (CISMGE - CCES), the Australian Geomechanics Society (AGS) and the New Zealand Geotechnical Society (NZGS) who sponsored the HTC session.

Call for proposal of hosting the 2028 ISL

ISSMGE Secretariat / JTC1 / 17-06-2024

The International Symposium on Landslides (ISL) is one of the main activities of JTC1 of FedIGS. It has a long-standing tradition, and typically held every four years irrespective of two exceptions: Christchurch in 1993 (five years after the ISL in Lausanne) and Cartagena in 2021 (five years after the ISL in Naples, due to the pandemic).

The venue for the ISLs is usually determined well in advance by the JTC1 committee, which selects from proposals submitted by national committees. To date, ISL has been held five times in Europe (1988 in Lausanne, 1996 in Trondheim, 2000 in Cardiff, 2016 in Naples, and 2024 in Chambéry), four times in the Americas (1984 in Toronto, 2004 in Rio de Janeiro, 2012 in Banff, and 2021 in Cartagena), three times in Asia (1976 in Kyoto, 1980 in New Delhi, and 2008 in Xian), and once in Australasia (1993 in Christchurch).

We kindly invite you, on behalf of your natitional society within any of the four international societies of FedIGS, to submit your proposal for hosting the 2028 ISL by the end of September 2024. You can send your proposal to Prof. Gonghui Wang (Chair of JTC1) by email (email address: wang.gonghui.3r@kyoto-u.ac.jp).

We look forward to the opportunity to welcome landslide researchers from around the world to your beautiful country.

ISSMGE Interactive Technical Talk Episode 18: Geo-engineering Education (TC306)

ISSMGE IT Administrator / TC306 / 19-06-2024

The eighteenth episode of International Interactive Technical Talk has just been launched and is supported by TC306. Marina Pantazidou, Charles John MacRobert, Emil Mejlhede Kinslev and Ezra Y. S. Tjung are discussing with Marc Ballouz about "Geo-engineering Education".

Watch ISSMGE Interactive Technical Talks

Mr. Duncan Nicholson, United Kingdom - Chair "Second Term"

ISSMGE Secretariat / TC206 / 20-06-2024

Congratulations !!

Mr. Duncan Nicholson, from United Kingdom (UK) for being

re-elected as Chair of TC206 for the second term, Calendar years "2023-2026"

From the entire team of TC206 and on behalf of members of ISSMGE.

Save the date! 3rd International Conference on Energy Geotechnics (ICEGT - 2025)

ISSMGE Secretariat / TC308 / 21-06-2024

We are delighted to invite you to 3rd International Conference on Energy Geotechnics, taking place from **17 to 20 June 2025** at Ecole des Ponts ParisTech, Paris, France.

Please keep tuned as the local organasing commitee chaired by Prof. Jean-Michel Pereira will soon open the conference website for registration and further information on the venue and the call for contributions.

The organisers look forward to sharing fruitful and pleasant moments with you in Paris during this important event for the Technical Commitee 308 Energy Geotechnics' community.

ISRM International Society for Rock Mechanics and Rock Engineering

News
https://www.isrm.net

Next ISRM Young Members' Seminar Series on 17th June 2024-06-06

The next Young Members' Seminar will take place on 17th June with presentations on CO2 storage in reservoir rocks, in situ stress and induced seismicity:

- Partially depleted oil and gas reservoir rock as a possible CO2 storage: experimental study - Cecilia Belén Laskowski (Universidad Nacional de la Patagonia San Juan Bosco (Argentina) and the Universidad Politécnica de Madrid (Spain))
- Characterization of the variability and uncertainty in *in situ* stress using Bayesian statistics - M. Amir Javaid (University of Toronto)
- Geomechanics of injection-induced seismicity in Illinois Basin - Nikita Bondarenko (University of Illinois Urbana-Champaign)

Follow the link to register at the ISRM Young Members Seminar series page.

The 46th ISRM Online Lecture will broadcast on the 20th June 2024-06-12

The 46th ISRM Online Lecture "Scaled power law failure criterion for rock" by Prof. Carlos Carranza-Torres from University of Minnesota will be broadcast on the 20th June.

The 46th ISRM Online Lecture is now online 2024-06-20

The 46th ISRM Online Lecture "Scaled power law failure criterion for rock" by Prof. Carlos Carranza-Torres from University of Minnesota is now online. Watch it and ask questions to the speaker in the next five days.

ASSOCIATION INTERNATIONALE DES TUNNELS ET DE L'ESPACE SOUTERRAIN
AITES | ITA
INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION

News
https://about.ita-aites.org/news

Check out our new 'ITA 50TH ANNIVERSARY' tab on our website! 10 June 2024

We are delighted to announce the creation of a new tab on our website to celebrate our 50th anniversary.

You can now watch the video of our 50th anniversary celebration, which took place at the WTC 2024 in Shenzhen, China, as well as our video on the 50 emblematic tunnel and underground space construction projects over the last five decades.

We also invite you to take a look at the two books we have published to mark the occasion.

To find out more, visit our dedicated page: ITA 50th Anniversary (ita-aites.org)

In Memoriam - Ir. Dr. Ooi Teik Aun 12 June 2024

With profound sorrow, ITA here share news of the passing this morning of our esteemed colleague, Dr. Ooi Teik Aun, who passed away unexpectadly and peacefully in Malaysia.

Dr. Ooi was a leader in the realm of tunneling, not just within Malaysia but across the globe.

His legacy extends beyond his remarkable contributions to engineering and geotechnics; he was a paragon of integrity and ethical fortitude.

Among his professional accolades:

- Honorary Fellowship at IEM
- Chartered Engineer
- Respected arbitrator in technical disputes
- Holder of Bachelor's and Master's degrees in Engineering from Auckland
- PhD from Sheffield, UK

Dr. Ooi epitomized integrity in all his endeavours, advocating steadfastly against corruption and championing ethical conduct. He exemplified the spirit of volunteerism, dedicating himself to trade associations and non-governmental organizations, underlining the indispensable fusion of qualifications with ethics.

Dr. Ooi's founding of the Tunnelling & Underground Space Technical Division (TUSTD) of the Institution of Engineers of Malaysia in 1999, culminating in Malaysia's endorsement as the 50th Member Nation by ITA through IEM in May 2000, stands as a testament to his visionary leadership.

Farewell, Dr. Ooi. Your absence leaves a void not only in the realm of engineering but in the hearts of all decent souls who knew you.

Dr. Ooi Teik Aun 14 December 1941 - 12 June 2024

Scooped by ITA-AITES #119, 11 June 2024

LTA awards $530m contract for Cross Island Line's Turf City station; work to start in Q3 2024 | Singapore

Yunchaojian River Tunnel along Beijing-Tangshan Intercity Railway to be completed | China

Central Interceptor microtunnelling milestone | New Zealand

Dohuk's "Gali Zawita" tunnel project set to alleviate traffic congestion | KRI, Republic of Iraq

Digging done as second massive machine wraps up tunnel work on Mississauga LRT line | Canada

The world's largest underground carpark is in Doha | Qatar

Tunnel boring machines for Polihali transfer tunnel inspected before delivery to Lesotho

Grand Paris Express - Final TBM of Line 18 is ready for launch | France

Mumbai: Rs 7,765 Crore Orange Gate-Marine Drive Tunnel Project Receives Crucial Land Clearance | India

Drilling machine 'Jane' begins Bolton pollution project | UK

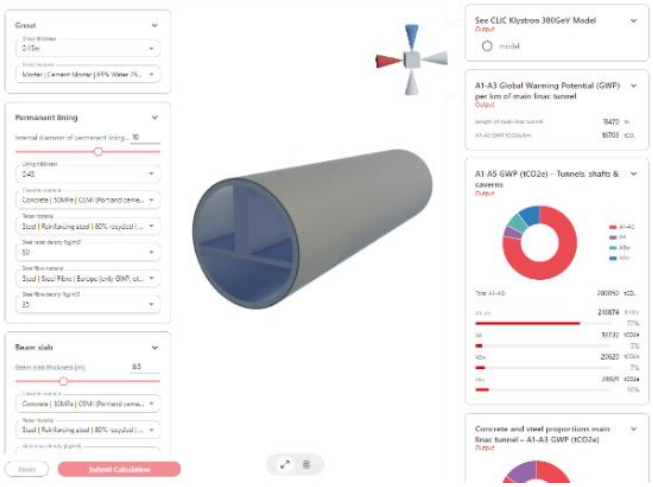
BRITISH TUNNELLING SOCIETY YOUNG MEMBERS

BTSYM June Lecture

Life Cycle Assessment of linear colliders

Speaker: Suzanne Evans
Civil and Sustainability Engineer at Arup

Thursday, 13 June 2024, Institution of Civil Engineers, One Great George Street, Westminster, London SW1P 3AA
Link to be provided on BTS and ICE websites



Event Information:

CERN and KEK are leading the Science community to deliver new collider systems, contributing to advances in healthcare, aviation, as well as particle physics. They are committed to reducing their carbon footprint to a minimum. Arup worked with CERN/KEK to evaluate and understand the environmental and embodied carbon impact of the three linear collider options at concept design, the Compact Linear Collider (CLIC) Drive Beam and Klystron, and the International Linear Collider (ILC).

Suzanne will present the results of the Life Cycle Assessment and the embodied carbon reduction opportunities identified. She will also highlight next steps including a Whole Life Cycle Assessment for CLIC and ILC machine componentry, and further opportunities for carbon reduction and carbon management using PAS2080:2023.

INTERNATIONAL GEOSYNTHETICS SOCIETY

www.geosyntheticssociety.org

News

Road Collapse Fix With Geosynthetics Wins Regional IGS Corporate Case Study Contest June 12, 2024

A major roadway repair project completed in just two weeks using geosynthetics has won the IGS Corporate Case Study competition for the IGS Americas region.

Critical work was needed after an elevated section of Interstate 95 near northeast Philadelphia in the United States collapsed on June 11, last year, after a fuel tanker crashed onto the road below, killing its driver. The crash weakened the steel beams supporting the bridge, causing it to collapse.

Photo credit: Aero Aggregates

Aggregates made from recycled glass and polymeric geosynthetic reinforcements were used to repair the affected section, including HUESKER North America's Fortrac T high tenacity polyester geogrid. HUESKER's Vona Ojaruega presented the case study, '*I-95 bridge collapse emergency repair in Philadelphia: geogrid reinforced recycled glass aggregate wall constructed in 12 days*', at the regional finals held at the recent GeoAmericas 2024 event in Toronto, Canada.

Also competing were:

- Solmax, presented by Drew Loizeaux, on '*Utilizing multiple geosynthetic solutions to provide long-term, cost-effective channel stabilization in British Colombia*'.
- Maccaferri, presented by Petrucio Santos, on '*Closure of the ash landfill at the Punta Catalina thermoelectric power plant, Dominican Republic*'.

The session was chaired by IGS Corporate Committee chair Francesco Fontana, with judges IGS Treasurer Jie Han, General Secretary of IGS Brazil Natalia de Souza Correia, and senior mining environment engineer with AtkinsRéalis in Quebec, Canada, Sandra Pouliot.

HUESKER's winning case study will join other regional winners in the grand final at the 13th International Conference on Geosynthetics in Montreal, Canada, in 2026.

Snap Up A Prize In IGS Young Members Photo Contest June 17, 2024

Images from geosynthetics projects in South America and Chinese Taipei won the last IGS Young Members Photo Contest. Can you do better this year?

Have you captured prize-worthy images of geosynthetics in action while at work or on location? Send us your images of projects and applications that deserve a wider audience and you could be in with a chance of winning a top prize of $200.

There are also second and third prizes of $100 and $50, respectively, and a special prize for student entrants of $50.

As before, there will be a People's Choice award of $100 given to the winner of a public vote on social media based on the number of 'likes' on X, LinkedIn and Instagram.

The Student and People's Choice categories are also open to the general public to enter, and they do not have to be IGS members, but they must be aged 36 and younger on August 31, 2024.

If you would like to become an IGS member before entering the competition, click here. Student membership is free.

Deadline for entries is **August 31**. Entries received after this date will not be considered. Only original pictures taken by the entrant since September 2022 are valid and should not have been submitted to any other IGS photo competition.

For full rules and to enter, click here. Winners will be announced at the end of September.

For more information or queries, email youngmembers@geosyntheticssociety.org.

Check out the work of previous winners here.

Raising The Bar On Diversity In Geosynthetics June 19, 2024

Breaking down barriers to attract and retain diverse talent in the geosynthetics industry is key to its future health.

That's according to inclusion and diversity thought-leader Dr. Imogen R. Coe who shared ideas and approaches to leverage diverse talent, at the recent GeoAmericas 2024 conference in Toronto, Canada.

Dr. Coe, founding Dean of the Faculty of Science at Ryerson University (now known as Toronto Metropolitan University), was the guest speaker at the IGS Diversity Task Force Lunch held on day two of the event.

She acknowledged there were challenges in improving working practices but the consequences of these barriers meant talent – and ultimately innovation – was being curtailed. Having diverse perspectives would lead to better outcomes, she said.

"It's about being a better scientist, leader, running a more engaged organization and who wouldn't want to do that? Get more ideas [and] have a competitive advantage over your competition," she said.

Getting there involved goal-setting, using data and evidence to inform actions, reviewing performance and then pivoting "like we do in the field" if a different approach was needed. She advocated for transparency and leadership – particularly from the over-represented demographic in an organization or business.

During Dr. Coe's talk, titled '*Embracing diversity to drive innovation and leverage talent*', she highlighted the work of the IGS Diversity Task Force and its aims, which included rebalancing the current 83% male and 17% female IGS membership and addressing representation on the IGS Council, which is currently 59% white.

Dr. Coe said: "No more manels [male-only panels]… we want to make sure we're hearing from a diverse range of perspectives."

However, she said diversity was about more than visible identities such as gender, age and ethnicity, but also included considering invisible identities such as religion and disability, and the impact of privilege.

Dr. Coe cited a *Proceedings of the National Academy of Sciences* journal paper that suggested gender-diverse teams produced more novel and higher-impact scientific ideas. The research went on to say nonetheless, gender-diverse teams remained under-represented in science.

She said an organization that fully integrated diversity, equity and inclusion would create a sense of belonging, which would engage the full potential of its individual employees allowing innovation to grow, improve problem-solving, and ultimately create a more thriving industry.

Dr. Coe's talk was followed by a panel discussion with guests Kristin Sample-Lord, a Diversity TF member and President-Elect of IGS North America, Dawie Marx, chair of the IGS Young Members Committee, and Francisco Pizarro, chair of the IGS Pan-American Regional Activities Committee.

Mr Pizarro said: "We need to do more. As leaders, with great power comes great responsibility. We [should] put these topics round the table and push things forward. There are many things to do, especially in mining and engineering where it is a common career associated with men and tough and rough things."

Ms Sample-Lord posed: "How do we get younger folks excited about pursuing career paths in geosynthetics? We have IGS Educate the Educators but at that point the number of women in engineering has already gone way down. We need to equip our members to reach out."

Mr Marx also suggested an approach was not to call it 'Diversity, Equity and Inclusion' but focus instead on what the organization wanted to achieve. "[Connect] on principles rather than terminology," he said.

Dr. Coe said it was okay not to know everything, but people can learn. She also said to think about 'sponsorship' rather than 'mentorship'; putting people forward for positions, and asking who's not here, who's not in the room?

She also said the industry had to be talking to young men in engineering and suggested there was a toxic culture which put off young women. Dr. Coe also highlighted that research culture could be quite combative, which might conflict with certain cultural backgrounds.

"[There is a] culture around science and engineering that doesn't necessarily work for [all] so create an environment where people can speak up and ask questions," she said.

Dr. Coe said small changes could make big impacts so it was important to start somewhere, approaching it by:

- Being an inclusive leader (regardless of identity)
- Learning the skills
- Developing core competencies
- Practice, practice, practice

The IGS Diversity Task Force leads the IGS mission to ensure the voices of all its membership are heard, from students, field workers and engineers to designers, contractors and installers, and more.

*** Watch the latest interview in the IGS 'Two for a Few 'interview series when Kristin Sample-Lord chats with IGS Diversity lead Laura Carbone on the IGS's plans to improve diversity and inclusion.

https://www.youtube.com/watch?v=tJT3UOyfWpE

*** Take a look at what our members think about diversity in the geosynthetics industry.

https://www.youtube.com/watch?v=j3CLCx3TROs

Meet Your New IGS Council Members June 25, 2024

Six IGS members have been elected or re-elected to serve the new IGS Council term.

Seventeen candidates ran for the six available seats for the term September 2024 to September 2028. Voting ran from February 16 to April 12, supported by independent election management company UK Engage. Turnout was 23.88%.

Elected to the 21st IGS Council were:

- Giulia Lugli (Italy) – a new addition to the IGS Council, Giulia is head of the Geosynthetics Business Development team and leads the Vertical Walls division of the Maccaferri Corporate GSY unit.

- Huabei Liu (China) – before becoming an elected member he was a co-opted Council member. He is an engineering professor at Huazhong University of Science and Technology.

- Kasia Ria Zamara (UK) – previously a co-opted member for the Council between 2020-2022 before becoming an elected member. She is a founding member of the IGS Diversity Task Force.

- Jabulile Msiza (South Africa) – re-elected for a second term

- Timothy D. Stark (USA)- re-elected for a second term

- Yoshihisa Miyata (Japan) – re-elected for a second term

Read their full bios here.

The IGS Council elects around half of its elected seats every two years which allows membership to be refreshed while retaining experience. The next call for candidates will be in 2026.

*** The IGS Membership also voted on a change in the IGS Bylaws allowing for the creation of different levels of Corporate membership. The vote was passed with 75% in favor of creating Regular, Premium and Associate Corporate membership levels.

You can read more about exciting new plans for Corporate membership here.

News
https://www.britishgeotech.org/news

BGA Medal – Rule Change 01.06.2024

Since 2008 the British Geotechnical Association (BGA) has awarded the BGA Medal (and certificate) annually (calendar year) to the best paper submitted for consideration that is authored/co-authored by member(s) of the BGA and published in an international journal during the appropriate calendar year.

Until now only one medal has been presented and it has been for the authors to decide who will receive it. In the future the BGA will make medals available to all BGA members that co-author a medal winning paper.

The BGA will also make medals available to all previous BGA members that co-authored a winning paper since 2008, but in doing so the authors will be required to pay the cost (£90 each, inclusive of postage and VAT) of striking their medal.

This is a limited time and once only offer. To take advantage of it, please contact the BGA Secretariat (bga@ice.org.uk) before midnight on 30th June 2024. Requests received after that date will not be considered.

Celebrating the BGA's 75th Anniversary 01.06.2024

This year is 75 years since the origins of the British Geotechnical Association. In 1948 the Council of the Institution of Civil Engineers (ICE) decided to form a British National Society of the International Society of Soil Mechanics and Foundation Engineering (ISSMFE) and the first official meeting of the society was held on 19th October 1949. In 1998 the ICE approached the then British Geotechnical Society (BGS) with a proposal to merge it with their Ground Board and the name was changed to the British Geotechnical Association (BGA) to make it clear that the newly formed body was different.

On 15th October 2024, the BGA will officially celebrate its 75th Anniversary at One Great George Street in London with a special event (details via this LINK) that will include the 55th Cooling Prize, a lecture by Professor Lord Robert Mair titled "Unusual tunnel collapses – the role of geotechnics" and concluding with the 2nd BGA Annual Dinner in the Great Hall.

BGA Fund Award - Testimonial from Recipient 01.06.2024

Testimonial – BGA Fund Award

The BGA Fund Award (link HERE) allows the BGA to provide financial assistance to individual BGA members for further study or advancement of their career in technical subjects.

Applicants are invited to apply for funds of up to £1,000 for studies which will support or advance their geotechnical career.

Testimonial by Shengjie Ma

The generous BGA fund award helped me attend the 8th International Conference on Earthquake Geotechnical Engineering (8ICEGE) that took place in Osaka, Japan, on 7-10 May, 2024. The 8ICEGE offered an outstanding technical program on a range of earthquake geotechnical engineering topics. I presented my recent research titled "*Layered System Response Effects of Liquefiable Deposits*" at this conference. I received useful and critical feedback on my work during the subsequent discussion and was able to interact with other world-leading research groups, both in academia and industry around the world. This helped me develop my research communication skills and build my professional network internationally. Additionally, at this conference, I also learnt a lot of liquefaction assessment methods to estimate the severity of surficial manifestations caused by earthquake, which is one of the most controversial, complex, and difficult topics in the field of geotechnical earthquake engineering.

I am very grateful to the BGA for recognising my work and for the valuable opportunity to attend the international conference 8ICEGE. The assistance the BGA provided was vital in helping me attend this conference and present my current research work.

Call for Sponsors: Celebrate the BGA's 75th Anniversary Conference and Dinner 01.06.2024

The British Geotechnical Association (BGA) is delighted to announce its 75th Anniversary Conference and Dinner, set to take place at the prestigious Institution of Civil Engineers on 15th October 2024. This landmark event (details via this LINK), marking a significant milestone in the BGA's history, promises to be a memorable celebration, and we invite you to be a part of it as a sponsor.

1949 - 2024
75th Anniversary

To ensure the success of this event and keep the conference free for attendees, we are seeking sponsorships from esteemed organisations. We have a range of sponsorship packages designed to suit different levels of support:

Headline Sponsorship (£3000) – 1 Company …

Gold Sponsorship (£2500) – 3 Companies …

Supporter Sponsorship (£500) – Open to All Companies …

We invite you to join us in making this 75th-anniversary celebration an event to remember. By securing your sponsorship, you will not only gain significant exposure within the geotechnical community but also support the ongoing success of the BGA.

For more details about the conference, please visit our event page HERE

To enquire about sponsorship, please contact: bga@ice.org.uk

Papers for the 2024 BGA AGM are available on line 08.06.2024

Papersfor the BGA AGM to be held on 12 June 2024 are available on line via the Members Area

The Members Area can be accessed via this LINK

The AGM papers are in the folder AGM Papers/2024 AGM Papers

Details of the BGA Annual Conference (which includes the AGM) can be found HERE.

The July 2024 issue of Ground Engineering is available on line 11.06.2024

The July 2024 issue of Ground Engineering is available on line. Online access to Ground Engineering (GE) is included in BGA subscriptions

The July 2024 issue of Ground Engineering features a report on offshore engineering at Hinkley Point C, and a round table on the future opportunities of subsurface data.

The issue also includes an interview with ACE's Abdelwahab Tahsin Mohsen on knowledge sharing, and the first part of a technical paper on a tool for the capacity curve of embedded retaining systems.

In addition, it includes an Engineering Insight Q&A with Costain senior engineer Chris Hewett, as well as the latest news and opinion.

Use this link to view the latest digital issue.

To view the digital editions, along with the rest of GE's online news, opinions, features and technical papers, you need to be signed in. Use the email address you used for your BGA membership to sign in and use the reset password link if you have not yet set a password or have forgotten your password.

If you are having trouble with the signing in process, please contact GE's customer services team using the details listed here: https://www.geplus.co.uk/contact-us/

Result of 2024 Elections to the BGA Executive Committee 12.06.2024

Following the call for nominations, the British Geotechnical Association (BGA) held an election for the three places available on the BGA Executive Committee from June 2024. The election process was managed on behalf of the BGA by Civica Election Services (CES) (formerly known as Electoral Reform Services (ERS)).

Candidates

Eight candidates stood for election:

- James Codd
- Adam Hood of AECOM
- Peter Jones of Senceive
- Christina Kantartzi of Mott MacDonald
- Kostos Leontaridis of Wentworth House Partnership
- Alan Phear of Arup
- Emily Riley of WJ Groundwater
- Natalie Wride of Mott MacDonald

Election results

The BGA announces that the following three candidates have been elected to serve a three-year term on the BGA Executive Committee from June 2024 to June 2027.

- Alan Phear
- Emily Riley
- Natalie Wride

The BGA congratulates the successful candidates and thanks all the candidates for standing.

Awards Presented at BGA Annual General Meeting June 2024 13.06.2024

The BGA presented awards at its Annual General Meeting during its Annual Conference on 12 June 2024.

BGA Medal

The paper authors received the 2023 BGA Medal from BGA Vice Chair Dr Andrew Ridley. The 2023 BGA Medal has been awarded to the paper "Particle-scale simulations of the compression and shearing of kaolin clay" by John de Bono and Glenn McDowell published in Géotechnique. Further details HERE.

BGA Case Histories Award

The paper authors received the 2024 BGA Case Histories Award from BGA Vice Chair Dr Andrew Ridley. The 2024 BGA Case Histories Award has been awarded to authors Peter Hensman, Zhandos Orazalin and Brian Sheil for their paper "Monitoring the construction of a deep energy-from-waste bunker in soft clay and peat" in Géotechnique, published 2023. Further details HERE.

BGA Masters Prize

The winner received the 2023 BGA Masters Prize from BGA Vice Chair Dr Andrew Ridley. Thirimadura Supun Surendra Mendis of Imperial College London is the winner of the 2023 BGA Masters prize for his entry "Advanced 3D Numerical Modelling of Deep Basement and Tunnel Interaction in London", Further details HERE.

Το podcast των Πολιτικών Μηχανικών

02: Ιωάννης Φίκιρης | Σήραγγες και Υπόγεια Έργα

Σε αυτό το επεισόδιο του Civils' Cast, καλεσμένος ήταν ο Ιωάννης Φίκιρης, ειδικός και έμπειρος πολιτικός μηχανικός που ασχολείται με την μελέτη σηράγγων και υπογείων έργων.

Διατηρεί την θέση Vice-President της διεθνούς επιτροπής σηράγγων και υπογείων έργων, μοιράζοντας τις γνώσεις και τις εμπειρίες του, προσφέροντας πολύτιμες πληροφορίες για τον τομέα των γεωτεχνικών έργων.

https://open.spotify.com/episode/67BbZSqY83OKgsq0hutK4c

03: Δημήτρης Πιτιλάκης | Risk Schools – Αντισεισμική Καινοτομία

Ο Δημήτρης Πιτιλάκης είναι πολιτικός μηχανικός και καθηγητής του τμήματος πολιτικών μηχανικών του Αριστοτελείου Πανεπιστημίου Θεσσαλονίκης.

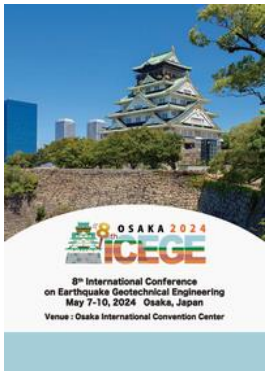
Μαζί με την ομάδα του ανέπτυξαν ένα λογισμικό που επιτυγχάνει ταχύ προσεισμικό έλεγχο και εκτίμηση της σεισμικής τρωτότητας σε σχολικές μονάδες.

Ειδικότερα, ανέλυσε την συσχέτιση της τρωτότητας και επικινδυνότητας, την μεθοδολογία πίσω από το risk schools και εξήγησε την καινοτομία και το πως μπορεί κανείς να κάνει χρήση αυτού του λογισμικού.

https://open.spotify.com/episode/4uhSj1Abb2HW9Ut5ErTSHW

Πρακτικά 8th International Conference on Earthquake Geotechnical Engineering

Η Japanese Geotechnical Society παρουσίασε τα πρακτικά του 8th International Conference on Earthquake Geotechnical Engineering σε Ειδική Έκδοση του περιοδικού της, η οποία είναι ελεύθερα προσβάσιμη μέσω των ακόλουθων συνδέσμων



Preface, Preface, https://www.jstage.jst.go.jp/browse/jgssp/10/20/_contents/-char/en,
Ishihara Lecture, https://www.jstage.jst.go.jp/browse/jgssp/10/1/_contents/-char/en,
Young Researcher Award Lectures, https://www.jstage.jst.go.jp/browse/jgssp/10/2/_contents/-char/en,
Keynote Lectures 1, https://www.jstage.jst.go.jp/browse/jgssp/10/3/_contents/-char/en,
Keynote Lectures 2, https://www.jstage.jst.go.jp/browse/jgssp/10/4/_contents/-char/en,
Keynote Lectures 2, https://www.jstage.jst.go.jp/browse/jgssp/10/5/_contents/-char/en,
Keynote Lectures 3, https://www.jstage.jst.go.jp/browse/jgssp/10/6/_contents/-char/en,
Liquefaction Experiments and Analysis Projects - Lessons Learned, https://www.jstage.jst.go.jp/browse/jgssp/10/7/_contents/-char/en,
30th anniversary of the Kobe Earthquake, https://www.jstage.jst.go.jp/browse/jgssp/10/8/_contents/-char/en,

Ground truthing multidimensional site response: What spatial area influences site response? https://www.jstage.jst.go.jp/browse/jgssp/10/9/_contents/-char/en,
60th anniversary of the Niigata Earthquake, https://www.jstage.jst.go.jp/browse/jgssp/10/10/_contents/-char/en,
Seismological and geotechnical data collection and lessons learned following Feb 6, 2023 Turkiye Earthquakes, https://www.jstage.jst.go.jp/browse/jgssp/10/11/_contents/-char/en,
Liquefaction assessment 1, https://www.jstage.jst.go.jp/browse/jgssp/10/12/_contents/-char/en,
Slope, embankment, dams and landfills 1, https://www.jstage.jst.go.jp/browse/jgssp/10/13/_contents/-char/en,
Numerical and constitutive models for dynamic analysis 1, https://www.jstage.jst.go.jp/browse/jgssp/10/14/_contents/-char/en,
Retaining and waterfront structure, https://www.jstage.jst.go.jp/browse/jgssp/10/15/_contents/-char/en,
Liquefaction and lateral spreading 1, https://www.jstage.jst.go.jp/browse/jgssp/10/16/_contents/-char/en,
Liquefaction assessment 2, https://www.jstage.jst.go.jp/browse/jgssp/10/17/_contents/-char/en,
Slope, embankment, dams and landfills 2, https://www.jstage.jst.go.jp/browse/jgssp/10/18/_contents/-char/en,
Numerical and constitutive models for dynamic analysis 2, https://www.jstage.jst.go.jp/browse/jgssp/10/19/_contents/-char/en,
Tunnels, https://www.jstage.jst.go.jp/browse/jgssp/10/20/_contents/-char/en,
Liquefaction and lateral spreading 2, https://www.jstage.jst.go.jp/browse/jgssp/10/21/_contents/-char/en,
Liquefaction impact on buildings and infrastructure 1, https://www.jstage.jst.go.jp/browse/jgssp/10/22/_contents/-char/en,
Liquefaction assessment 3, https://www.jstage.jst.go.jp/browse/jgssp/10/23/_contents/-char/en,
Seismic site characterization and dynamic soil modeling 1, https://www.jstage.jst.go.jp/browse/jgssp/10/24/_contents/-char/en,
Ground improvement, reinforced soil structure and geosynthetics 1, https://www.jstage.jst.go.jp/browse/jgssp/10/25/_contents/-char/en,
Seismic hazard assessment, https://www.jstage.jst.go.jp/browse/jgssp/10/26/_contents/-char/en,
Field and laboratory testing 1, https://www.jstage.jst.go.jp/browse/jgssp/10/27/_contents/-char/en,
Site effects and micro-zonation 1, https://www.jstage.jst.go.jp/browse/jgssp/10/28/_contents/-char/en,
Performance-based design and codes, https://www.jstage.jst.go.jp/browse/jgssp/10/29/_contents/-char/en,
Liquefaction modeling 1, https://www.jstage.jst.go.jp/browse/jgssp/10/30/_contents/-char/en,
Ground motion 1, https://www.jstage.jst.go.jp/browse/jgssp/10/31/_contents/-char/en,
Liquefaction assessment 4, https://www.jstage.jst.go.jp/browse/jgssp/10/32/_contents/-char/en,
Slope, embankment, dams and landfills 3, https://www.jstage.jst.go.jp/browse/jgssp/10/33/_contents/-char/en,
Liquefaction impact on buildings and infrastructure 2, https://www.jstage.jst.go.jp/browse/jgssp/10/34/_contents/-char/en,
Numerical and constitutive models for dynamic analysis 3, https://www.jstage.jst.go.jp/browse/jgssp/10/35/_contents/-char/en,
Soil-structure interaction 1, https://www.jstage.jst.go.jp/browse/jgssp/10/36/_contents/-char/en,
Liquefaction assessment 5, https://www.jstage.jst.go.jp/browse/jgssp/10/37/_contents/-char/en,
Slope, embankment, dams and landfills 4, https://www.jstage.jst.go.jp/browse/jgssp/10/38/_contents/-char/en,
Liquefaction impact on buildings and infrastructure 3, https://www.jstage.jst.go.jp/browse/jgssp/10/39/_contents/-char/en,
Numerical and constitutive models for dynamic analysis 4, https://www.jstage.jst.go.jp/browse/jgssp/10/40/_contents/-char/en,
Ground improvement, reinforced soil structure and geosynthetics 2, https://www.jstage.jst.go.jp/browse/jgssp/10/41/_contents/-char/en,
Soil-structure interaction 2, https://www.jstage.jst.go.jp/browse/jgssp/10/42/_contents/-char/en,
Field and laboratory testing 2, https://www.jstage.jst.go.jp/browse/jgssp/10/43/_contents/-char/en,
Case histories, observation and lessons from recent/past earthquakes, https://www.jstage.jst.go.jp/browse/jgssp/10/44/_contents/-char/en,
Liquefaction mitigation 1, https://www.jstage.jst.go.jp/browse/jgssp/10/45/_contents/-char/en,
Liquefaction modeling 2, https://www.jstage.jst.go.jp/browse/jgssp/10/46/_contents/-char/en,
Ground motion 2, https://www.jstage.jst.go.jp/browse/jgssp/10/47/_contents/-char/en,
Shallow and deep foundations 1, https://www.jstage.jst.go.jp/browse/jgssp/10/48/_contents/-char/en,
Soil-structure interaction 3, https://www.jstage.jst.go.jp/browse/jgssp/10/49/_contents/-char/en,
Risk assessment, https://www.jstage.jst.go.jp/browse/jgssp/10/50/_contents/-char/en,
Liquefaction mitigation 2, https://www.jstage.jst.go.jp/browse/jgssp/10/51/_contents/-char/en,
Seismic site characterization and dynamic soil modeling 2, https://www.jstage.jst.go.jp/browse/jgssp/10/52/_contents/-char/en,
Ground motion 3, https://www.jstage.jst.go.jp/browse/jgssp/10/53/_contents/-char/en,
Shallow and deep foundations 2, https://www.jstage.jst.go.jp/browse/jgssp/10/54/_contents/-char/en,
Soil-structure interaction 4, https://www.jstage.jst.go.jp/browse/jgssp/10/55/_contents/-char/en,
Liquefaction element test, https://www.jstage.jst.go.jp/browse/jgssp/10/56/_contents/-char/en,
Modelling for liquefaction mitigation, https://www.jstage.jst.go.jp/browse/jgssp/10/57/_contents/-char/en,
Site effects and micro-zonation 2, https://www.jstage.jst.go.jp/browse/jgssp/10/58/_contents/-char/en,
Poster Session 1, https://www.jstage.jst.go.jp/browse/jgssp/10/59/_contents/-char/en,
Poster Session 2, https://www.jstage.jst.go.jp/browse/jgssp/10/60/_contents/-char/en

(2024 Volume 10 Issues 1-60, Pages i-xciii, 1-2509)

ΔΙΑΚΡΙΣΕΙΣ ΕΛΛΗΝΩΝ ΓΕΩΤΕΧΝΙΚΩΝ ΜΗΧΑΝΙΚΩΝ

The 2024 Buchanan Lecturer is Dr. Adda Athanasopoulos Zekkos

The 2024 Buchanan Lecturer is Dr. Adda Athanasopoulos Zekkos who is an Associate Professor of Civil and Environ-mental Engineering (CEE) at the University of California, Berkeley, since January 2020. Prior to this appointment, she was a faculty member in the CEE department at the University of Michigan (2008-2019). Dr. Athanasopoulos-Zekkos's Buchanan lecture is entitled "From miles to inches: Big data frameworks for levee health assessment".

Also on the agenda is Dr. Paul Mayne, who will be presenting his 2023 Terzaghi Lecture entitled "Contributions Towards Geoparameter Evaluation Using the Cone Penetration Test". Dr. Mayne is a Professor Emeritus at Georgia Tech, an international consultant on geotechnical site characterization, and the author of a multitude of publications.

The lectures will take place in person only at the Hilton Hotel and Conference Center in College Station, TX, and will begin at 2:00 pm US Central Time on November 1st, 2024. Please relay to colleagues and students. A video will be posted here (https://briaud.engr.tamu.edu/buchananlecture/) afterwards. I hope to see many of you at the lecture which will be followed by a photo session and a reception at our house for all attendees.

For all inquiries, contact Dr. Jean-Louis Briaud at briaud@tamu.edu

ΠΡΟΣΕΧΕΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΚΔΗΛΩΣΕΙΣ

Για τις παλαιότερες καταχωρήσεις περισσότερες πληροφορίες μπορούν να αναζητηθούν στα προηγούμενα τεύχη του «περιοδικού» και στις παρατιθέμενες ιστοσελίδες.

WCEE2024 18th World Conference on Earthquake Engineering, June 30 - July 5, 2024, Milan, Italy, www.wcee2024.it

WCEE2024 18th World Conference on Earthquake Engineering, June 30 - July 5, 2024, Milan, Italy, www.wcee2024.it / Session SHR-7: When science meets industry: advances in engineering seismology stemming from engineering practice, olga.ktenidou@gmail.com

3rd ICPE 2024 Third International Conference on Press-in Engineering, 3-5 July 2024, Singapore, https://2024.icpe-ipa.org

EGRWSE-2024 5th International Conference on Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering, July 4-6th, Warsaw, Poland, https://iil.sggw.edu.pl/egrwse-2024

ICEC2024 SECOND INTERNATIONAL CONFERENCE ON EARTHEN CONSTRUCTION, 8-10 July 2024, Edinburgh, United Kingdom, https://icec2024.eng.ed.ac.uk, https://icec2024.sciencesconf.org

IS Landslides 2024 International Symposium on Landslides "Landslides across the scales: from the fundamentals to engineering applications" & IS Rock Slope Stability 2024, July 8-12th, 2024, Chambéry, France, www.isl2024.com

EUROCK 2024 ISRM European Rock Mechanics Symposium New challenges in rock mechanics and rock engineering July 15-19, 2024, Alicante, Spain, www.eurock2024.com

5th ICITG 5th International Conference on Information Technology in Geo-Engineering, August 5-8, 2024, Golden, Colorado, USA, https://learn.mines.edu/ICITG

S3: Slopes, Support and Stabilization, August 6-8, 2024, Aurora, Colorado, USA, https://s3.amazonaws.com/xcd-shared/dfi/Media/S324/2024-S3-CFA-20230807.pdf

ECSMGE 24 XVIII European Conference on Soil Mechanics and Geotechnical Engineering, 26-30 August 2024, Lisbon, Portugal, www.ecsmge-2024.com

4ο Συνέδριο Φραγμάτων και Ταμιευτήρων, 10 και 11 Σεπτεμβρίου 2024, Αθήνα, www.gcold-conference.gr

ISIC 2024 4th International Conference of International Society for Intelligent Construction, 10 – 12 September 2024, Orlando, United States, www.is-ic.org/conferences/2024-isic-international-conference

International Symposium on Dams and Earthquakes, 7th Meeting of the EWG, 12 -13 September 2024, Athens, Greece, link.

GROUND ENGINEERING SUSTAINABILITY, 18 September 2024, London, United Kingdom, https://sustainability.geplus.co.uk/sustainability2024/en/page/home

NGM 2024 19th Nordic Geotechnical Meeting, 18th - 20th of September 2024, Göteborg, Sweden, www.ngm2024.se

ISRM International Symposium 2024 and 13th Asian Rock Mechanics Symposium (ARMS13), 22 to 27 September 2024, New Delhi, India, https://arms2024.org

IS-Grenoble 2024 Geomechanics from Micro to Macro, September 23-27, 2024, Grenoble, France, https://is-grenoble2024.sciencesconf.org

International Symposium on Dams and Earthquakes, 7th Meeting of EWG, September 25-27, 2024, Athens, www.eemf.gr

92nd ICOLD Annual Meeting & International Symposium on Dams for People, Water, Environment and Development, 29th September – 3rd October, 2024, New Delhi, India, www.icold2024.org

The 4th International Symposium on Risk Assessment and Sustainable Stability Design of Slopes (ISRASSDS-Toronto 2024)
September 29–October 4, 2024, Toronto, Canada
http://www.icgdr.com/Home/Detail/87

Rapid climate change and increasingly extreme weather events, have caused a surge in catastrophic geological disasters worldwide in both subaerial and submarine environments, which result in undesirable economic and social consequences. It is thus crucial for engineering geology communities to enhance risk assessment and sustainability through fully exchanging expertise.

This international biennial conference aims to bring together academic scientists, leading engineers, and students to exchange and share their experiences and latest research findings. It began in 2018 at Shanghai, China. Since then, the conference has evolved into a series of global activities conducted at Edinburgh, UK (2020) and Sendai, Japan (2022).

Conference Themes

- Geological disasters in high altitude and intensity areas;
- Rock-ice/snow avalanches in extreme environments;
- Marine geological environment and disasters;
- Urban engineering geology and disaster resilience;
- Novel risk assessment, mitigation, and adaptation.

Contact Information

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Email: israssds@torontomu.ca

5th European Conference on Physical Modelling In Geotechnics, 02 to 04 October 2024, Delft, Netherlands, https://tc104-issmge.com/ecpmg-2024

XVIII African Regional Conference on Soil Mechanics and Geotechnical Engineering, 06 ÷ 09 October 2024, Algiers, Algeria, https://algeos-dz.com/18ARC.html

Beyond a Tunnel Vision, October 16th, 2024, Antwerp, Belgium, https://beyondatunnelvision.eu

RMCC2023 1st International Rock Mass Classification Conference "Rock Mass Classification meets the Challenges of the 21st Century", 30-31 October 2024, Oslo, Norway, www.rmcc2024.com

CEES2024

1st International Conference on Civil and Environmental Engineering for Resilient, Smart and Sustainable Solutions
3 - 5 November 2024, AL-Khobar, Saudi Arabia
https://cees2024.org/

PMU takes initiative to organize the first international conference on civil and environmental engineering for resilient, smart, and sustainable solutions (CEES 2024) to be held at the PMU complex in Al Khobar, Saudi Arabia on November 3-5. The conference aims to exchange scientific information and knowledge in the development of recent and future infrastructures that are resilient, smart, and sustainable. The conference provides an excellent environment for government policy makers, practicing professional engineers, researchers, university professors, students, and general public to extend their interests and expertise in addressing and solving the infrastructure issues faced by societies. Refining strategic plan for infrastructure municipalities, research collaboration among academicians, project initiations are just few examples of potential outcomes expected during and after this conference. The conference platform is based on traditional and contemporary topics in civil engineering including structure, geotechnical, environmental, water resources, transportation, and construction management.

CONFERENCE GENERAL THEME

We are having a glimpse of the new Civil and Environmental Engineering age, which demands a better knowledge of problems and solutions and imposes a more proficient management of natural resources. In order to develop a renewed commitment with the civil and environmental engineering core values in this time of rapid and defying changes, the theme of this conference is resilient, smart and sustainable solutions in Civil and Environmental Engineering. Topics of interest for submission include, but are not limited to:

CONFERENCE TOPICS

Track #1: Structural Engineering

1 Development smart materials in structural engineering applications
2 Long-term performance and durability of materials and structures
3 Structural health monitoring for buildings and structures
4 Structural health monitoring for buildings and structures
5 AI and machine learning applications in structural engineering
6 Ultra-lightweight materials for structural engineering applications
7 Timber and bio-based materials for structural engineering applications
8 Structural repair and rehabilitation of historic buildings and structures
9 Reliability and risk analysis and assessment of structures
10 Design of materials and structuresfor space, moon and Mars inhabitant
11 Bridge engineering and construction
12 Earthquake and wind resistant structures
13 Large-scale structural experimentations
14 Non-conventional buildings and structures for futuristic cities
15 High performance modular construction for buildings and structures
16 Innovative design of offshore oil platform structures

Track #2: Geotechnical Engineering & Construction Materials

1 Site investigations, laboratory and in-situ testing and monitoring
2 Soil and rock mechanics and characterization
3 Constitutive modelling for saturated and unsaturated soils
4 Soil dynamics and geotechnical earthquakes engineering
5 Excavations and retaining structures
6 Shallow, anchors and deep foundations
7 Slope stability and landslides
8 Ground improvement and soil stabilization
9 Tunnel and mining applications
10 Offshore Geotechnics
11 Sustainable Materials and technologies in concrete
12 Advances in Concrete and Construction technology
13 Recycled and secondary materials
14 Composite Materials
15 High performance materials
16 Smart and innovative materials for civil engineering

Track #3: Environmental Engineering & Water Resources Management

1 Emerging Pollutants in air, water and soil media
2 Artificial Intelligence for water and wastewater treatment
3 Advanced seawater treatment
4 Oil produced or petroleum wastewater
5 Recycling, reuse and resource recovery for green infrastructure
6 Energy extraction from environmental processes
7 Carbon or GHG Emission, Capture and Climate change
8 Zero-Waste Management
9 Renewable and nonrenewable energy for Resource recovery
10 Circular Economy for Sustainable Environment
11 Water sustainable policy and security
12 Eco-hydrology
13 Water and Artificial Intelligence
14 Life cycle assessment for different environmental systems
15 Risk assessment on water disasters
16 Water Reclamation, Reuse, Supply and Management

Track #4: Transportation Engineering

1 Sustainable pavement materials: Innovations and applications
2 Resilient design and construction practices for long-lasting pavements
3 Life-cycle assessment of pavement materials and systems
4 Recycled materials in pavement construction: Performance and sustainability
5 Resilient pavement design for extreme weather conditions
6 Smart technologies for real-time performance monitoring of pavements
7 Sustainable strategies for pavement preservation and rehabilitation
8 Resilience of pavements to heavy traffic loads and climate change effects
9 Smart sensors and data analytics for intelligent pavement management
10 Green and eco-friendly approaches to pavement engineering
11 Resilient infrastructure design for transportation systems
12 Smart technologies for traffic management and control
13 Smart transportation systems for reducing congestion and improving mobility
14 Intelligent transportation systems for enhancing safety and efficiency
15 Resilience of transportation networks to natural disasters and extreme events
16 Sustainable urban transportation planning and design

Track #5: Construction Management Engineering

1 Organization and management of construction
2 Sustainability and resilient in construction
3 Engineering project management
4 Quality control and management technology
5 Construction engineering and materials
6 Urban planning and management
7 Built environment management
8 Project management, strategy and competitiveness
9 Digitalization and industrialization in construction
10 Urban construction and application
11 Environmental management systems
12 City Management Enforcement
13 Disaster management (modeling and simulation)
14 Cost and Project Management
15 Logistics and supply chain management
16 Smart cities and prospects for urban upgrading and transformation

Information

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Email secretarycees2024@pmu.edu.sa

PANAMGEO CHILE 2024 17th Pan-American Conference on Soil Mechanics and Geotechnical Engineering, 12-17 November 2024, La Serena, Chile, https://panamge-ochile2024.cl

CouFrac 2024 The 4th International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, November 13-15, 2024, Kyoto, Japan, https://www.ec-convention.com/coufrac2024/

3ο Διεθνές Συνέδριο Αρχαίας Ελληνικής και Βυζαντινής Τεχνολογία, 19-20-21 Νοεμβρίου 2024, Αθήνα, www.edabyt.gr

ICTG 2024 5th International Conference on Transportation Geotechnics 2024 "Sustainable and Evolving Technologies for Urban Transport Infrastructure", 20 – 22 November 2024, Sydney, Australia www.ictg2024.com.au

ICOMOS TheoPhilos ISC Conference Authenticity from a European Perspective: 30 Years of the Nara Document on Authenticity November 28-29, 2024, Thessaloniki, Greece, https://theophilos.icomos.org

Geotechnics for Sustainable Infrastructure, 28-29 November 2024, Kathmandu, Nepal, https://geomandu.ngeotechs.org

4th Asia-Pacific Conference on Physical Modelling in Geotechnics ACPMG 2024
11 – 13 December 2024, Abu Dhabi, United Arab Emirates
https://tc104-issmge.com/acpmg-2024

The conference aims to provide an up-to-date overview of the latest developments in multi-scale physical modelling within the following themes:

- New facilities, new equipment, and measuring techniques
- Resilient Geotechnical Infrastructure
- Sustainability in Geotechnical Systems
- Energy geo-structures and foundation systems
- Application of Machine Learning/Artificial Intelligence in Geotechnical Engineering

Please contact the organisation committee here
Prof. Tarek Abdoun & Dr. Waleed El-Sekelly
acpmg24@nyu.edu

ROCSCIENCE INTERNATIONAL CONFERENCE 2025, April 6-, 2025, Sydney, Australia, www.rocscience.com/events/rocscience-international-conference-2025

Pan Mediterranean Geotechnical Engineering Conference 2025
April 28 – 30, 2025, Phoenicia Beirut IHG, Lebanon
https://pmgec-leb.com/

The Lebanese Geotechnical Engineering Society (**LGES**) is excited to announce the **Inaugural Pan Mediterranean Geotechnical Engineering Conference (PMGEC)** in **Beirut, Lebanon April 2-30, 2025.** This new series of conferences was initiated by Dr. Marc Ballouz, current president of ISSMGE, engulfing the countries around the Mediterranean. There will be a conference every 4 years in this region, starting with this one in Beirut next year. The conference will feature esteemed keynote speakers, advanced technical sessions, and engaging panel discussions highlighting the region's rich geotechnical engineering heritage. Hosted at the historic InterContinental Phoenician Beirut, attendees will enjoy the venue's prime location overlooking the Sea, close to Beirut's Downtown district, Zaitouna Bay promenade, and various cultural and recreational attractions. The pleasant April weather is perfect for exploring the city's archaeological sites and vibrant nightlife, making it an ideal event for both professional enrichment and family enjoyment.

contact@pmgec-leb.com

(σημείωση εκδότη: Η πρόταση για την διοργάνωση του Mediterranean Conferences on Geomechanics and Geoengineering" (MCGG) έγινε στις 17 Ιουνίου 2013 από τον εκδότη, τότε Πρόεδρο της ΕΕΕΕΓΜ με σχετική επιστολή της ΕΕΕΕΓΜ στις Geotechnical Societies members of ISSMGE and ISRM and the Chambers of Engineers of the countries around and close to the Mediterranean Sea. Έπρεπε να περάσουν 10 χρόνια και να εκλεγεί Πρόεδρος της ISSMGE συνάδελφος με καταγωγή από τον Λίβανο για να υλοποιηθεί, χωρίς όμως την συμμετοχή της ISRM! – δείτε ΤΑ ΝΕΑ ΤΗΣ ΕΕΕΕΓΜ – Αρ. 187 – ΑΥΓΟΥΣΤΟΣ 2023)

GEOTECHNICS REIMAGINED, May 21-23, 2025, Bruges, Belgium, https://dfi-events.org/dfi-effc25

ISFOF 2025 5th International Symposium on Frontiers in Offshore Geotechnics, June 9-13, 2025, Nantes, France, https://isfog2025.univ-gustave-eiffel.fr

World Tunnel Congress 2025 "Tunnelling into a sustainable future – methods and technologies", 9-15 May 2025, Stockholm, Sweden, www.wtc2025.se

EGRWSE-2025

6th International Conference on Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering
June 11-14, 2025, Vigo, Spain
https://egrwse2025.webs.uvigo.es/

Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering (EGRWSE) is a recurring conference organized since 2018 at renowned research centers such as NIT at Jalandhar (India) in 2018 and 2023; UIC, Chicago, USA in 2019, Dokuz Eylul University, Turkey, in 2022; and Warsaw University of Life Sciences, Poland, in 2024. These conferences were highly successful events covering cutting-edge research in environmental geotechnics, sustainable engineering, using recycled materials in infrastructure, or presenting modern technologies implemented for sustainable development in construction, renewable energy, and environmental engineering. All engineering fields should incorporate sustainability into their practice for an improved quality of life. The necessity for environment-friendly technologies in the future will require the expertise of engineers. Therefore, the UNESCO Engineering Initiative (UEI) is working with partners to develop engineering curricula incorporating sustainability as an overarching theme. EGRWSE-2025 will be the 6th edition of the global conference, which will refer to the current problems of civilization related to climate change and will focus on sustainable engineering that implements the Sustainable Development Goals. The conference will also discuss research on using recycled materials in construction following the demands of a circular economy.

Conference Themes

- Solid waste and circular economy
- Geoenvironmental pollution control
- Sustainable geo-infrastructure
- Geotechnics for renewable energy
- Environmental geotechnics for climate change
- Sustainable and resilient practices

Contact Information

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Email: claudio@uvigo.es

EUROCK 2025 - ISRM European Rock Mechanics Symposium Expanding the underground space - future development of the subsurface - an ISRM Regional Symposium, 16-20 June 2025, Trondheim, Norway, https://eurock2025.com

17-19 June 2025, Paris, France

We are delighted to invite you to 3rd International Conference on Energy Geotechnics, taking place from **17 to 20 June 2025** at Ecole des Ponts ParisTech, Paris, France.

Please keep tuned as the local organsing commitee chaired by Prof. Jean-Michel Pereira will soon open the conference website for registration and further information on the venue and the call for contributions.

The organisers look forward to sharing fruitful and pleasant moments with you in Paris during this important event for the Technical Commitee 308 Energy Geotechnics' community.

6th International Conference
GEE2025: Charting the path toward the future
Geotechnical Engineering Education
July 2-4 2025, Nancy, France
https://gee2025.sciencesconf.org/

The Conference Geotechnical Engineering Education 2025 (GEE2025) is organized by the Technical Committee TC306 for Geo-Engineering Education of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), under the auspices of the Ecole Nationale Supérieure de Géologie ENSG of the Université de Lorraine – France.

The International Conferences on Geotechnical Engineering Education are now well established since TC306 took over their organization under the auspices of ISSMGE. The conference in Nancy will be the sixth, after Sinaia, Romania (2000), Constantza, Romania (2008), Galway, Ireland (2012), Belo Horizonte, Brazil (2016) and Athens, Greece (2020). The proceedings of the 2008, 2012, 2016 and 2020 conferences are available through the Online Library of ISSMGE.

The Conference GEE2025 has two priority themes:

- Theme 1 – Teaching of Unsaturated soils
- Theme 2 – Use of numerical modelling to support teaching

The design and the publicity of the conference aim to make it attractive to a critical mass of participants contributing papers and of active attendees, coming from both industry and education and training.

Invited presentations and panel discussions will be videotaped, edited and made available online. These features, together with publishing the proceedings online immediately after the conference, will maximize its impact and make it available to as many Geotechnical Engineers as possible.

Conference themes

Themes for paper submission

• Theme 1 – Curricula: Undergraduate, (Post)Graduate, Doctoral

The description of specific geotechnical modules, courses, programs at any level is in essence a case study in education.

• Theme 2 – Coursework: Laboratory, Field, Project-based, Numerical Methods

The description of how we organize any type of coursework is also a case study in education.

• Theme 3 – Open Resource Educational Material

This theme deals with Transferable Educational Material or Reusable Objects (these two terms are used as synonyms) that are developed to be sharable.

• Theme 4 – Applications of ICT Tools

Applications of Information and Communication Technologies (ICT) to geotechnical engineering instruction: for papers with significant emphasis on the technology that do not qualify for Theme 3.

• Theme 5 – Links to Research on Learning and on Engineering Education

Evidence-based instructional interventions, Scholarship of Teaching and Learning (action-based research, where professors investigate the learning in their own classrooms in a scholarly fashion), applications of learning theories to the teaching of geotechnical engineering concepts.

Topical themes for paper submission and potential dedicated session

• Priority Theme 1 – Teaching of Unsaturated soils

GEE 2025 invites papers targeting non-specialist soil mechanics instructors who would be interested in presenting in their introductory geotechnical courses some elements of unsaturated soil mechanics, provided they are aware of the main issues and they understand them well. Papers on teaching unsaturated soils as specialty undergraduate courses are also of interest.

• Priority Theme 2 – Use of numerical modelling to support teaching

GEE 2025 invites papers showing with examples what numerical modeling can offer to geotechnical engineering education and in particular for the production of educational materials suitable for introductory soils courses. Papers on teaching numerical methods for geotechnical courses as specialty undergraduate courses are also of interest.

ISGSR2025

9th International Symposium for Geotechnical Safety and Risk
24th – 27th August 2025, Oslo, Norway
www.isgsr2025.com

NGI will organise the 9th **International Symposium for Geotechnical Safety and Risk (ISGSR)**, a successful biennial series of international conferences supported by the Geotechnical Safety Network (GEOSNet), ISSMGE Technical Committees TC304, TC205 and TC309, and ASCE Geo Institute's Technical Committee on Risk Assessment and Management. The symposium will be held as a face-to-face event in Oslo, Norway on 24th – 27th August 2025.

The theme of ISGSR 2025 is "**Geotechnical Risk Frontiers**" and will feature the latest research developments and innovations in engineering practice with a focus on the use of probabilistic and risk methodologies in geotechnical engineering. ISGSR 2025 will consist of keynote lectures, technical sessions, and forums covering but not limited to the following topics:

- Geohazards such as landslides, dams and levees, tsunami, snow avalanches, earthquakes, and geoenvironmental hazards including those caused by human activity
- Digital soil and rock databases and their use in geotechnical research and practice
- Probabilistic site characterization
- Modelling of spatial variability and effects on geotechnical design
- Reliability- and risk-based code developments
- Uncertainty quantification for geotechnical properties, models and testing methods
- Bayesian statistical methods and their applications in geotechnical engineering
- Machine Learning algorithms and their applications in geotechnical engineering
- Best practices of hazard and risk assessment in offshore projects
- Risk management and mitigation measures in all fields of geoengineering
- Structural health monitoring and digital twinning
- Practical applications and case studies

We would like to cordially invite you to be actively involved in the ISGSR 2025.

XXI TECHNICAL DAM CONTROL INTERNATIONAL CONFERENCE
TKZ2025

09-12 September 2025, Chorzów, Poland
https://tkz.is.pw.edu.pl/en/

Dear Colleagues,

We invite all interested people to participate in the 21th edition of the Technical Dam Control International Conference TKZ'2025, near Cracow in Poland!

Conference topics

I. Dam safety
II. Geotechnical aspects of water engineering structures
III. Exploitation, maintenance and renovation of hydraulic structures
IV. Modern technologies and methods of designing and monitoring water engineering facilities
V. Hydraulic transport and wet waste disposal
VI. Hydroelectricity
VII. Role of hydraulic structures in shaping waterways
VIII. Sustainable development and impact of hydraulic structures on environment
IX. Water retention in urban areas

More details soon…

GEOTECH ASIA 2025
7-10 OCT | GOA

GEOVADIS:
The Future of Geotechnical Engineering
October 7th to 10th, 2025, Goa, India
https://www.geotechasia.org

We are pleased to invite you to the 1st Geotech Asia International Conference (Geotech Asia), taking place in Goa from October 7th to 10th, 2025.

The Asian Regional Geotechnical Engineering Conferences (ARCs) have been held every four years. Recently, it was decided to increase the frequency to every two years. This change aims to provide more opportunities for researchers, practitioners, academicians, students, and professionals to share developments, collaborate and exchange ideas, encouraging broader participation across Asia.

To support this, the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE), in consultation with Asian Member Societies, introduced a new series of regional conferences called Geotech Asia. These will be held every four years between the ARCs. The Indian Geotechnical Society (IGS), which hosted the first ARC in 1960, is proud to host the inaugural Geotech Asia in 2025 at the Taj Cidade de Goa Horizon, Goa, with IIT Bombay and IGS Mumbai Chapter as collaborators.

Geotech Asia promises an exceptional technical program covering a wide range of geotechnical engineering topics through published proceedings, oral presentations and poster ses-

sions. This conference is an excellent opportunity for engineers, consulting professionals, contractors, authorities, academicians, and students to exchange ideas and showcase their recent work.

We hope Geotech Asia will be professionally rewarding, scientifically stimulating and personally enjoyable. We also hope you enjoy your stay in Goa, renowned for its stunning beaches, vibrant culture, rich history, bustling night markets, diverse cuisine, lush forests, serene rivers, and scenic waterfalls.

We look forward to your participation and contributions, which will make this event a significant milestone.

Conference Theme and Objective

The overarching theme of our conference is aptly coined GEOVADIS - THE FUTURE OF GEOTECHNICAL ENGINEERING. It aims to showcase future vistas in the computational and practices of Geotechnical engineering. In line with this theme, sub-themes are listed below:

- Computational Geotechnics
- Data and Software for Geotechnical Engineering
- Deep Foundations
- Earth Retaining Structures
- Education
- Embankments, Dams, and Slopes
- Earthquake Engineering and Soil Dynamics
- Engineering Geology and Site Characterization
- Geoenvironmental Engineering
- Geophysical Engineering
- Geosynthetics
- Geotechnics of Soil Erosion
- Pavements
- Risk Assessment and Management
- Rock Mechanics
- Shallow Foundations
- Soil Improvement
- Soil Properties and Modelling
- Sustainability in Geotechnical Engineering
- Underground Engineering & Construction
- Unsaturated Soils
- Marine & coastal geotechnical engineering

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21st International Conference on Soil Mechanics and Geotechnical Engineering Geotechnical Challenges in a Changing Environment
14 – 19 June 2026, Vienna, Austria
www.icsmge2026.org/en

1925 Karl Terzaghi published the book „Erdbaumechanik auf bodenphysikalischer Grundlage" in Vienna which is widely regarded as the birth of modern soil mechanics. The **Austrian Geotechnical Society** and the **Austrian Society for Geomechanics** are proud to jointly celebrate the 100th anniversary of this milestone in geotechnical engineering. 1929 the first Institute and Laboratory for Soil Mechanics was established at the TU Wien. „Where it all began" is therefore the slogan of the 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE) to be held in Vienna in June 2026. It will be an in-person event because I strongly believe that personal communication and networking is a key component of an international conference. Leading experts in the field have agreed to deliver state-of-the art lectures and for the first time in this series of conferences a plenary session will be organized by the European Federation of Foundation Contractors (EFFC), providing the industry with the opportunity to present their efforts in battling climate change and reducing CO_2-footprint of construction industry. I can assure that the organising committee will do everything to make this conference a memorable event, in both, scientific and social aspects and I invite you to come to the beautiful city of Vienna, in the heart of Europe.

ÖGG Austrian Society for Geomechanics
Innsbrucker Bundesstraße 67
5020 Salzburg, Austria
Tel.: +43 662 875519
office@icsmge2026.org

AGS Austrian Geotechnical Society
c/o Österreichischer Ingenieur- und Architektenverein
Eschenbachgasse 9
A-1010 Vienna
Austria

ISFMG 2026 12th International Symposium on Field Monitoring in Geomechanics, 06 -10 August 2026, Indian Institute of Technology Indore, India, https://sites.google.com/view/isfmg2026/home

Eurock 2026

Risk Management in Rock Engineering - an ISRM Regional Symposium
14-19 June 2026, Skopje, Republic North Macedonia

Contact Person Name

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INTERNATIONAL SYMPOSIUM
PRESERVATION OF MONUMENTS & HISTORIC SITES
ATHENS 2026 TC301

16 – 18 September 2026, Athens, Greece
https://tc301-athens.com

It is my absolute pleasure to invite you to the 4th International Symposium on the Preservation of Monuments and Historic Sites (the 4th TC301 International Symposium) to be held in Athens, Greece from **Wednesday 16 to Friday 18 September 2026**, following the previous successful events at Napoli, Italy, in 1996, 2013 and 2022, respectively. This time, it is the Hellenic Society for Soil Mechanics and Geotechnical Engineering who is hosting the Conference in Greece.

The legacy of the previous Symposia reminds us of the immense responsibility we bear in preserving the heritage and history encapsulated in the world's monuments. These structures are not merely physical entities; they are the custodyans of our cultural identity and historical continuity.

Today, the challenge is still on and increasing. Climate change is affecting the structural stability and appearance of monuments and may even threaten them with extinction when these are in the path of rising seas. At the other end of the scale, new technologies and AI are building momentum in engineering practice, advocating increasing capacities in solving complex problems from which preservation science can benefit.

The upcoming TC301 International Symposium broadens its scope to discuss the latest advancements in emerging topics, while maintaining the core focuses of the previous conferences.

The Symposium's themes underscore the critical intersection of engineering expertise and cultural stewardship. The Symposium will provide a forum for exchange and discussion between engineers, architects, archaeologists, scientists and researchers in the field of protection of monuments. Among the objectives of the Symposium is that our discussions traverse the latest advancements in geotechnical engineering, focusing on sustainable and effective methods to protect and restore monuments threatened by natural and human-induced challenges.

As we delve into these critical topics, let us remember that our work transcends technical challenges. It is a testament to our commitment to preserving the legacy of human achievement and ensuring that these monuments continue to inspire and educate for centuries to come.

On behalf of the Organising Committee, I look forward to welcoming you to the iconic city of Athens for the 4th TC301 – IS Athens.

Warm regards,
Christos Tsatsanifos
Chairman, 4th TC301 – IS Athens

Themes & Topics

1. Conservation Principles
2. Historical Geotechnical Engineering
3. Diagnosis: Understanding and Investigating Monuments
4. Analysis, Modeling, and Risk Assessment of Monuments and Heritage Sites
5. Geotechnical Aspects of Monumental Restoration / Preservation
6. Climate Change and Protection of Monuments from Natural Hazards
7. Urban Development Impact on Monuments
8. Case Histories: Examples & Lessons Learned
9. Special Session on the Acropolis of Athens

ARMS14

14th Asian Rock Mechanics Symposium - ARMS14, an ISRM Regional Symposium
22-26 November 2026, Fukuoka, Japan

Contact Person Name

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16th International Congress on Rock Mechanics
Rock Mechanics and Rock Engineering Across the Borders
17-23 October 2027, Seoul, Korea

Scope

The scope of the Congress will cover both conventional and emerging topics in broadly-defined rock mechanics and rock engineering. The themes of the Congress include but not be limited to the following areas:

- Fundamental rock mechanics
- Laboratory and field testing and physical modeling of rock mass
- Analytical and numerical methods in rock mechanics and rock engineering

- Underground excavations in civil and mining engineering
- Slope stability for rock engineering
- Rock mechanics for environmental impact
- Sustainable development for energy and mineral resources
- Petroleum geomechanics
- Rock dynamics
- Coupled processes in rock mass
- Underground storage for petroleum, gas, CO2 and radioactive waste
- Rock mechanics for renewable energy resources
- Geomechanics for sustainable development of energy and mineral resources
- New frontiers & innovations of rock mechanics
- Artificial Intelligence, IoT, Big data and Mobile (AICBM) applications in rock mechanics
- Smart Mining and Digital Oil field for rock mechanics
- Rock Engineering as an appropriate technology
- Geomechanics and Rock Engineering for Official Development Assistance (ODA) program
- Rock mechanics as an interdisciplinary science and engineering
- Future of rock mechanics and geomechanics

Our motto for the congress is "Rock Mechanics and Rock Engineering Across the Borders". This logo embodies the interdisciplinary nature of rock mechanics and challenges of ISRM across all countries and generations.

ΕΝΔΙΑΦΕΡΟΝΤΑ ΓΕΩΤΕΧΝΙΚΑ ΝΕΑ

Landslide Warning Area Delineation through Seismic Signals and Landslide Characteristics: Insights from the Silabaku Landslide in Southern Taiwan

Jui-Ming Chang; Yu-Ting Kuo; Wei-An Chao; Che-Min Lin; Hao-Wei Lan; Che-Ming Yang; Hongey Chen

Abstract

Publishing timely warnings of areas potentially affected by landslides and subsequent events remains challenging in hazard assessment. Recently, seismic monitoring has emerged as a promising technique for landslide detection and location determination. However, the effectiveness of this approach is limited by location errors. To overcome this problem, we propose a hybrid method (a three-step process) through seismic analysis and consideration of prior geomorphological characteristics of areas and aspects in a landslide inventory to constrain the potential landslide locations. The first analysis entails a grid-based single-force inversion of 0.02–0.05 Hz seismic signals by spatial grid spacings of 0.2° and 0.05° to retrieve the single-force direction, the estimated landslide area, and a wide search range for a given source. The second analysis involves two location methods for high-frequency seismic signals (>1 Hz) with a finer spatial grid spacing of 0.01°, gradually reducing the landslide search region. By integrating seismology-determined information with a landslide inventory, potential landslide locations and warning areas could be identified effectively. Then we apply the proposed the three-step analysis method to the 2021 Silabaku landslide in southern Taiwan. The results showed that the seismic techniques we used progressively condensed the initial search range from 1831 to 770 km^2, converging to a small area of 99 km^2. The estimated landslide area was 0.80 ± 0.04 km^2, and the force direction was 154.09° ± 6.76°. Subsequently, according to the earlier information, we identified three possible landslide source locations from the 2020 landslide inventory. These findings have implications for warning for two road sections, one of which was subsequently damaged by debris flow after the Silabaku landslide. This study highlights the effectiveness of the hybrid three-step algorithm in constraining areas potentially affected by landslides, facilitating timely assessments for warnings in southern Taiwan.

Seismological Research Letters, May 28, 2024,
https://doi.org/10.1785/0220230396

https://pubs.geoscienceworld.org/ssa/srl/article-abstract/doi/10.1785/0220230396/644404/Landslide-Warning-Area-Delineation-through-Seismic

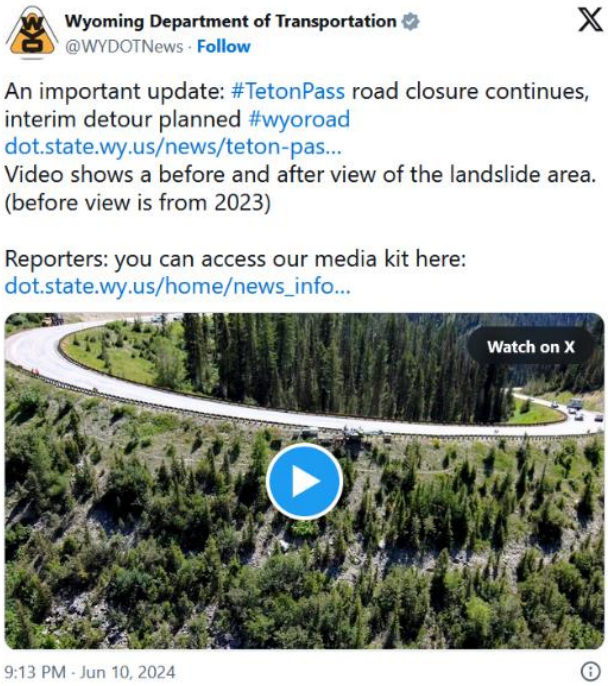
The 6-8 June 2024 landslide at Teton Pass in Wyoming, USA

A large failure on a fill embankment over a two day period has led to the closure of an important road.

Between 6 and 8 June 2024, a landslide destroyed a section of State Highway 22 along the Teton Pass in Wyoming. No lives were lost in this major landslide, although a motorcyclist may have been injured in a crash associated with road damage, and the road has now been completely destroyed.

The Wyoming Department of Transport has been admirably transparent about this landslide, with an excellent set of resources and images, and a timeline of the sequence of events, on a dedicated webpage.

The landslide is spectacular – the tweet below includes a video that superimposes before and after the failure:-



The drama started the previous day when large cracks started to form across the road. New Civil Engineer has an account of the events of the site as maintenance crews attempted to patch the road. However, over the course of two days the slope failed completely, leaving a large section of the road destroyed.

It is noteworthy that another landslide occurred in the area, a few miles up the road, over the same period.

The Associated Press footage in the tweet below shows the failure in more detail:

The location of the landslide on Teton Pass is [43.50365, -100.97556]. The Google Earth view below shows the site – I have selected an image from 2013 as it provides the best clarity:-

Google Earth image of the site of the 6 to 8 June 2024 landslide on Teton Pass in Wyoming, USA.

The site appears to be a large fill embankment built on natural terrain. The footage suggests that the landslide is a large-scale slump, with the lower portions of the landslide forming a more mobile flow (which is normal in this situation). Note the displaced sections of road in this Wyoming Department of Transport image of the site:-

Wyoming Department of Transport image of the site of the 6 to 8 June 2024 landslide on Teton Pass in Wyoming, USA.

The images before the failure are quite intriguing. This is a screenshot from the before failure drone footage from Wyoming Department of Transport:-

Screenshot from Wyoming Department of Transport footage of the site of the 6 to 8 June 2024 landslide on Teton Pass in Wyoming, USA.

Does this footage suggest a smaller failure was forming in the embankment at this time, directly below the structures in the middle of the image? I am unsure.

It will be interesting to understand the causes of this landslide, which could be failure of the natural terrain below the embankment or perhaps a drainage issue in the embankment itself, which then failed in a progressive manner.

Reconstruction of the road will be a major project given the need to find a strong foundation for the reconstructed section of highway. In the meantime, a detour is being constructed through the inside of the bend that should allow the road to reopen quite quickly.

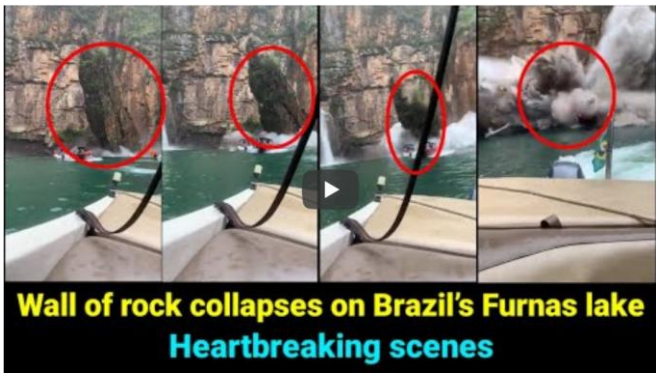
(Dave Petley / THE LANDSLIDE BLOG, 11 June 2024, https://eos.org/thelandslideblog/teton-pass-landslide-1)

The causes of the 8 January 2022 fatal rock topple at Furnas Reservoir in Brazil

A new paper in the journal Landslides (Sun et al. 2024) highlights basal erosion as the key factor in the failure that killed 10 people.

On 8 January 2022, a large rock topple occurred on the banks of the Furnas Reservoir in Brazil.

This event, which I wrote about at the time, was captured on a series of videos taken by people on boats on the reservoir, such as this one:-



The topple killed 10 people and injured a further 32 individuals.

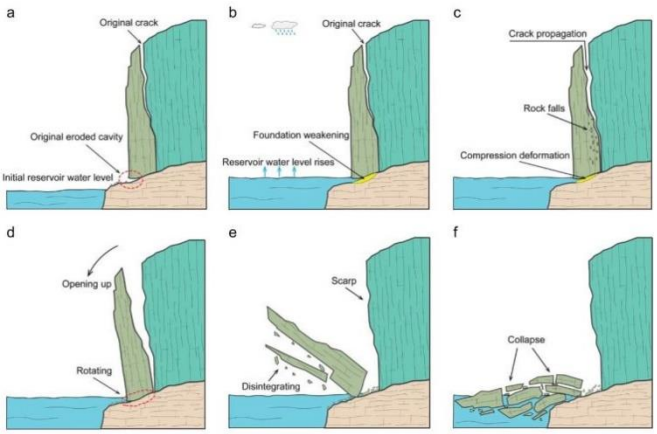
A new paper in the journal *Landslides* (Sun *et al.* 2024) provides a very detailed and insightful review of this dreadful event. The work has included field investigations and numerical analyses, which provides insight into the processes of the failure. The paper provides this invaluable diagram, which summarises the main sequence of events:-

There are a number of things that are interesting about this failure. First, the volume is surprisingly small – just 332 m^3.

Second, the key factor in the failure was erosion of the foundation of the rock column by the water in the reservoir, and compression of the unfailed mass at the base, allowed failure to develop.

And third, the final failure was triggered by heavy rainfall at a time when the column was a in critical state when the reservoir level was high.

The authors note that the rock column showed considerable precursory rockfall activity – and indeed the latter phases of this was caught in some of the videos.



The conceptual model of the toppling mechanism at Furnas Reservoir in Brazil, from Sun et al. (2024). Credit: Sun et al. 2024 / Published in Landslides.

Usefully, the authors point out some measures that could be taken to reduce the risk of such situations:-

"…it is emphasized that the existed cavities induced by the foundation erosion played a vital role in the formation of the toppling. Therefore, dealing with the eroded cavities could be an effective way in the prevention of cliff toppling in the Furnas Reservoir. For example, eroded cavities can be backfilled with masonry rubble and/or grouted to improve the support of the foundation for the overlying block… [C]ontrolled blasting can be used to remove the upper portion of the block so that the remaining portion would not be liable to undergo further toppling."

Given the unacceptable rate of failures associated with landslides at large dams and reservoirs (Petley 2013), this is an extremely useful paper that provide genuine insight into the causes of one type of dangerous failure on reservoir banks.

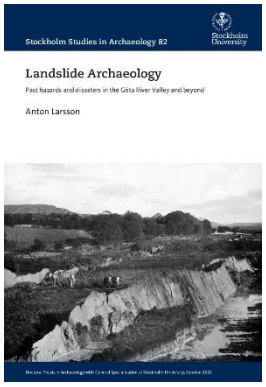
References

Sun, S.W., Wen, Q., do Carmo Reis Cavalcanti, M. *et al.* 2024. Numerical and laboratory experiments on the toppling behavior of a massive single block: a case study of the Furnas Reservoir, Brazil. *Landslides* (2024). https://doi.org/10.1007/s10346-024-02288-8

Petley, D.N. 2013. Global losses from landslides associated with dams and reservoirs. In: Genevois, R. and Prestininzi, A. (eds) *International Conference on Vajont – 1963-2013. Thoughts and analyses after 50 since the catastrophic landslide*. Italian Journal of Engineering and Environment – Book Series N. 6, pp 63-72.

(Dave Petley / THE LANDSLIDE BLOG, 13 June 2024, https://eos.org/thelandslideblog/furnas-1)

ΝΕΕΣ ΕΚΔΟΣΕΙΣ ΣΤΙΣ ΓΕΩΤΕΧΝΙΚΕΣ ΕΠΙΣΤΗΜΕΣ



Landslide Archaeology: Past hazards and disasters in the Göta River Valley and beyond

Larsson, Anton

Exploring the impact of landslides on past human communities, their landscapes, and their material remains, this thesis focuses on the most landslide-prone region of Sweden: the Göta River Valley (Sw. *Göta älvdalen*). It is argued that through a multi-source methodology and by employing ideas concerning geoculturality and disasterscapes, we can begin to approach the lived experiences of both distant and recent history. The thesis further outlines the risk posed by landslides to cultural heritage and archaeological sites, a threat significantly exacerbated by ongoing processes of anthropogenic climate change. This compilation thesis contributes to the study of past hazards and disasters with relevance on both regional, national, and international levels. The comprehensive summary of the thesis provides both an overview of the field and an in-depth study of how landslides have been perceived and interacted with throughout time. Additionally, five research papers, each dealing with different aspects of landslide archaeology within Western Sweden from prehistory into the present day, address separate aspects of landslide archaeology.

The first paper presents new dating evidence for the Late Iron Age trading site of Köpingen and, in turn, uses these results to provide a minimum age for a prehistoric landslide on the same site. The second paper outlines the research history of the great medieval landslide at Jordfallet, employing archival studies and legacy data to reassess its traditional dating. Most likely, the event occurred in the year 1249 AD, a conclusion with relevance for Scandinavian geopolitics in the Middle Ages. The third and fourth papers are historical-archaeological studies of two Early Modern disasters, the 1648 Intagan and 1703 Skrehall landslides, respectively, providing new understandings of these events. In the case of the former landslide, it is found to have left few easily identifiable archaeological traces behind, while newly discovered remains are described at the latter site. The fifth and final paper examines major landslides across Western Sweden in the 20th and 21st centuries, showing that several of these have destroyed archaeological sites, while others have prompted archaeologists to conduct emergency fieldwork. This illustrates the risks posed by landsliding in the region and emphasizes the need for cohesive contingency planning within the cultural heritage management sector.

Doctoral thesis, Stockholm: Department of Archaeology and Classical Studies, Stockholm University, 2023, p. 205

Open Access in DiVA

Landslide Archaeology(27060 kB)

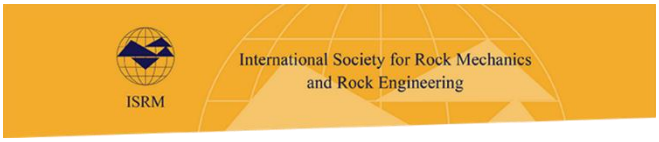
ΗΛΕΚΤΡΟΝΙΚΑ ΠΕΡΙΟΔΙΚΑ

International Society for Soil Mechanics and Geotechnical Engineering

ISSMGE BULLETIN Vol. 1, Issue 2, June 2024
www.issmge.org/filemanager/article/1283/bulletin-182.pdf

Κυκλοφόρησε το ISSMGE BULLETIN Vol. 1, Issue 2, June 2024 της International Society for Soil Mechanics and Geotechnical Engineering με τα ακόλουθα περιεχόμενα:

- Message from the Editor
- From the President`s desk
  - Report #2 by the President
- Vice President Report
  - Warm Beats from the Heart of Africa
  - The European National Assembly: A Showcase of Collaboration and Progress
  - The 2024 April 3. 2024 Taiwan Hualien Earthquake
- From the Board
  - The ISSMGE Foundation
  - The Geo-Engineers without Borders Committee (GeoWB)
  - ISSMGE HERITAGE TIME CAPSULE | HTC WEBSITE LAUNCH AND GEOSHANGHAI SESSION
- ISSMGE Highlights
  - ISSMGE New Video on Members and National Geotechnical Engineering Societies Released
- Global News from Member Societies
  - Activities of the Austrian Geotechnical Community in the first half year of 2024
  - Fourth International Conference on Geotechnical Engineering-Iraq & Warith First International Conference of Engineering Sciences
  - News from Indian Geotechnical Society
  - Prof. Askar Zhussupbekov President of KGS was Honoured by the Japanese Geotechnical Society
  - The 4th U.S.-Japan Geoenvironmental Engineering Workshop
  - U.S. National Society Holds Annual Congress: GeoCongress 2024
  - GeoShanghai 2024 International Conference
  - The International Conference on Geotechnical Engineering (ICGE'24), 25-27th April 2024, Hammamet, Tunisia
- Young Member' s Arena
  - Young Members Presidential Group Activities
- Corporate Associates Corner
  - Peter Day Bids Farewell to the CAPG
- Technical Commiittees Activities
  - (TC 305) Geotechnical Infrastructure for Megacities and New Capitals - First International Mini Symposium of TC 305 of ISSMGE at WHUT
  - Engineering Practice of Risk Assessment and Management - Charng Hsein Juang to deliver Suzanne Lecture at ISGSR 2025
  - (TC202) Transportation Geotechnics - Distinguished Professor Buddhima Indraratna from Australia awarded one of the highest international accolades in Civil Engineering
- Education and Innovation
  - Interactive Technical Talk
  - Future of Artificial Intelligence in Geotechnics
- In Memory
  - Victor F. B. de Mello
  - Professor Dr. Za-Chieh Moh
- Upcoming Events



Κυκλοφόρησε το Newsletter No. 66 - Summer 2024 της International Society for Rock Mechanics and Rock Engineering με τα ακόλουθα περιεχόμενα:

- Message from the President
- ISRM International Symposium 2024 and ARMS13, New Delhi, September 2024
- 46th ISRM Online Lecture by Professor Carlos Carranza-Torres
- Eurock2024, Alicante, Spain, 15-19 July 2024
- ISRM International Symposium 2024 and Eurock2025, Trondheim, Norway, June 2025
- Morocco has joined the ISRM
- 14th International Symposium on Landslides (ISL Landslides 2024), Chambéry, France, July 2024

- 5th ICITG - International Conference on Information Technology in Geo-engineering, Boulder, Colorado, August 2024
- CouFrac2024 - Kyoto, Japan, November 2024
- News from the National Group of North Macedonia
- ISRM Sponsored Conferences

INTERNATIONAL GEOSYNTHETICS SOCIETY

Geosynthetics International
Volume 31, Issue 3, June, 2024
www.icevirtuallibrary.com/toc/jgein/31/3

Κυκλοφόρησε το Τεύχος 3 του Τόμου 31 (Ιουνίου 2024) του Geosynthetics International της International Geosynthetics Society με τα ακόλουθα περιεχόμενα:

Research Articles

Freeze-thaw behavior of geocell-reinforced bases considering different fines contents, M. Huang, C. Lin, S. K. Pokharel, 31(3), pp. 221–238

Performance of landfill low-permeability liners for minimizing groundwater contamination, W. Hu, Y. Yu, R. K. Rowe, 31(3), pp. 239–254

Compressive and shear response of fibre-reinforced backfill: impact of field temperature, X. Tian, M. Fall, 31(3), pp. 255–268

Investigation of rubber content and size on dynamic properties of expansive soil–rubber, Z. N. Yang, Z. C. Lu, W. Shi, C. Wang, X. Z. Ling, J. Li, D. Guan, 31(3), pp. 269–282

Image-aided physical and compression characterisation of expanded polystyrene geofoam, P. G. Sreekantan, P. Vangla, G. V. Ramana, 31(3), pp. 283–295

Numerical simulation of the performance of GRS walls considering freeze-thaw cycles, L.-Q. Ding, F.-L. Cui, C.-Z. Xiao, 31(3), pp. 296–313

Effect of a soluble subgrade on leakage through a geomembrane defect, J. Fan, R. K. Rowe, 31(3), pp. 314–326

Induced trench installation of the high-density polyethylene pipe using geofoam inclusion, E. Akınay, H. Kılıç, 31(3), pp. 327–344

Particle shape effect on interfacial properties between granular materials and geotextile, C. Kayadelen, G. Altay, Y. Önal, M. Öztürk, 31(3), pp. 345–357

Contribution of geosynthetic to the shear strength of geosynthetic encased stone columns, M. Ji, J. Wang, J.-J. Zheng, Y. Zheng, 31(3), pp. 358–371

Geotextiles and Geomembranes
Volume 52, Issue 3, Pages 241-342 (June 2024
https://www.sciencedirect.com/journal/geotextiles-and-geomembranes/vol/52/issue/3

Κυκλοφόρησε το Τεύχος 3 του Τόμου 52 (Ιουνίου 2024) του Geotextiles and Geomembranes της International Geosynthetics Society με τα ακόλουθα περιεχόμενα:

Editorial Board, Page ii

Axisymmetric finite strain consolidation model for soft soil consolidation with vertical drains under combined loading considering creep and non-Darcy flow, Peng-Lin Li, Zhen-Yu Yin, Ding-Bao Song, Jian-Hua Yin, Yu Pan, Pages 241-259

Novel technique to mitigate the earthquake-induced damage of rubble mound breakwater, P.K. Akarsh, Babloo Chaudhary, Manu K Sajan, Babita Sah, Subodh Kumar, Pages 260-285

Liquefaction and post-liquefaction behaviors of unreinforced and geogrid reinforced calcareous sand, Lin Zhou, Jian-Feng Chen, Yan Zhu, Ting Yao, Pages 286-303

Long-term durability of two HDPE geomembranes formulated with polyethylene of raised temperature resistance (PE-RT), Matthew Clinton, R. Kerry Rowe, Pages 304-318

New geocell utilisation as a pipe uplifting countermeasure and its validation using model experiments, Taishi Nagatani, Yutaka Sawada, Yusuke Inoue, Shuji Ito, ... Toshinori Kawabata, Pages 319-331

Laboratory investigation and theoretical analysis of lateral pressure exerted by expansive soils on retaining walls with expanded polystyrene geofoam block upon water infiltration, Kewei Fan, Weilie Zou, Pan Zhang, Xiequn Wang, Yang Shen, Pages 332-341

ΕΚΤΕΛΕΣΤΙΚΗ ΕΠΙΤΡΟΠΗ ΕΕΕΕΓΜ (2023 – 2026)

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