ISSMGE FOUNDATION
REPORT ON CONFERENCE ATTENDANCE

Your Name: Rhiannon Reardon	***Your Organization:*** Beca Ltd/NZGS	***Date of report:*** 31/07/2026
Conference Title: 21st ICSMGE	***Location of Conference:*** Vienna, Austria	***Dates of Conference:*** 14-19 June

What you learned:

One of the most valuable aspects of the conference was learning more about the life, work, and enduring influence of Karl Terzaghi, whose teachings remain highly relevant to modern geotechnical engineering.

A memorable story shared during the conference highlighted Terzaghi's commitment to continuous learning. While serving as an expert witness in the late 1950s, an opposing lawyer quoted passages from Terzaghi's 1943 book *Theoretical Soil Mechanics* and pointed out that his courtroom testimony appeared to contradict his earlier writings. Terzaghi calmly responded:

"Sir, do you think I am such a vegetable that I have not learned anything new since then?"

This story reinforced the importance of maintaining an open and evolving professional mindset throughout one's career.

Another lesson that resonated strongly with me was Terzaghi's philosophy that:

"Engineering is a noble sport which calls for good sportsmanship. Occasional blundering is part of the game."

He encouraged engineers to acknowledge mistakes openly, learn from them, and approach challenges with humility and professionalism.

Additional key takeaways from Terzaghi's teachings included:

- Taking ownership of mistakes early and learning from them.
- Recognising the importance of geological input. Terzaghi strongly advocated understanding the geological history of a site and using this knowledge to inform investigation and design.
- Providing clients with clear, practical, and actionable recommendations. He emphasised explaining the distinction between success and failure, and between safety and risk, in a way that clients can readily understand and apply.
- Championing the observational method, including the collection of site measurements before, during, and after construction to better understand actual performance and refine future designs.

A comment which also interested me from Sergei Terzaghi was that using investigation methods broadly similar to those employed during Terzaghi's era, engineers often accepted settlements of around 450mm, whereas today engineers are commonly expected design for settlements in the order of 5mm.

People you met:

A sample of some of the many people I met and engaged with:

- Dr Marwan Alzayliae, Dubai Development Authority, United Arab Emirates
- Amjad Alashqar, Seequent, United Arab Emirates
- Gregory McDonald, SRK Consulting (South Africa) (Pty) Ltd. South Africa
- Ri Hong Kee, A O'Sullivan & Associates Ltd, Australia
- Pawan Sethi, Beca, Australia
- Tomasz Szczepański, University of Warsaw, Poland
- Jan Kalicki, MDR-projekt, Poland
- Professor Dietmar Adam, TU Wien, Austria
- Sukumar Pathmanandavel, ISSMGE Heritage Time Capsule Committee, Australia
- Dr Sven Knutsson, Lulea University of Technology, Sweden
- Professor Dario Peduto, University of Salerno, Italy

Main features of conference:

- Strong emphasis on Karl Terzaghi's legacy and teachings, including the Terzaghi Exhibition hosted by NGI.
- Presentations covering the history of ISSMGE and the contributions of its founding members.
- The prestigious Ishihara Lecture.
- Dedicated sessions focused on reducing the construction industry's CO_2 footprint and addressing climate change challenges.
- Presentations on Vienna's public transport system and urban planning approach. As the city has been ranked the world's most liveable city for three consecutive years, discussions explored lessons that can be applied elsewhere, particularly the value of:
    - High-quality public transport networks
    - Creating space for public life and community interaction

  A quote from this presentation that particularly resonated with me: "A developed country is not a place where the poor have cars. It's where the rich use public transportation."
- Specialist workshops on the observational method, focusing on comparing design assumptions with actual construction performance and using back-analysis to improve future projects.
- The Young Engineers Evening, which provided an excellent opportunity to connect with geotechnical professionals from around the world, discuss career experiences, and build international professional networks.

Your comments on the conference:

Attending the conference was a genuine privilege and an invaluable professional development opportunity. The scale of the event was unlike any conference I had previously attended in New Zealand, with an exceptional breadth of technical presentations, workshops, exhibitions, and networking opportunities.

A particular highlight for me was learning more about Karl Terzaghi and his enduring legacy within our profession. Visiting the Terzaghi Archive and participating in a guided tour of the historic laboratory provided a unique connection to the origins of geotechnical engineering and a deeper appreciation of the foundations upon which modern practice is built.

The location itself also contributed significantly to the overall experience. Hosting the conference in Vienna allowed delegates to immerse themselves in the city's rich history, culture, and engineering heritage, making the event both professionally and personally rewarding.

Another standout experience was attending the Young Geotechnical Professionals networking event. It provided an excellent opportunity to meet early-career geotechnical engineers from across the world, learn about their experiences and perspectives, and establish connections that I hope to maintain throughout my career.

Overall, the conference was an inspiring and enriching experience that broadened my technical knowledge, expanded my professional network, and reinforced the global nature of the geotechnical engineering community.

Please attach short report (maximum 400 words) suitable for publication in the ISSMGE Bulletin:

In 1925, Karl Terzaghi, widely known as the father of soil mechanics, published his famous book “Introduction to soil Mechanics” in Vienna, a work many consider as marking the birth of modern soil mechanic (the geotechnical bible). Terzaghi also established the first soil mechanics laboratory at the Vienna Technische Universität Wien (TU Wien) around the same time.

The 21st International Conference of Soil Mechanics and Geotechnical Engineering (ICSMGE) celebrated 100 years since this milestone, in the city itself where the works were released.

To coincide with the conference, the Terzaghi Archive was opened to the public for the very first time. Located within the basement rooms of the original Soil Mechanics Laboratory at TU Wien, the archive features faithfully restored laboratory rooms, historical documents, and restored experimental equipment, including early oedometers and shear apparatus.

Much of this equipment had spent decades in storage, and required extensive restoration to return it to its original state.

As an attendee of the 21st ICSMGE, I had the opportunity to join a tour of the newly opened archive, led by Professor Dietmar Adam, who played a key role in bringing the archive together. Seeing these pieces of geotechnical history preserved so carefully was an incredible experience. It was a fascinating insight into the origins of our profession, and a reminder of how much modern geotechnical engineering continues to build on Terzaghi’s legacy, with most of the apparatus in the archive still commonly being used for geotechnical design to this day!

A couple of photos from my tour:

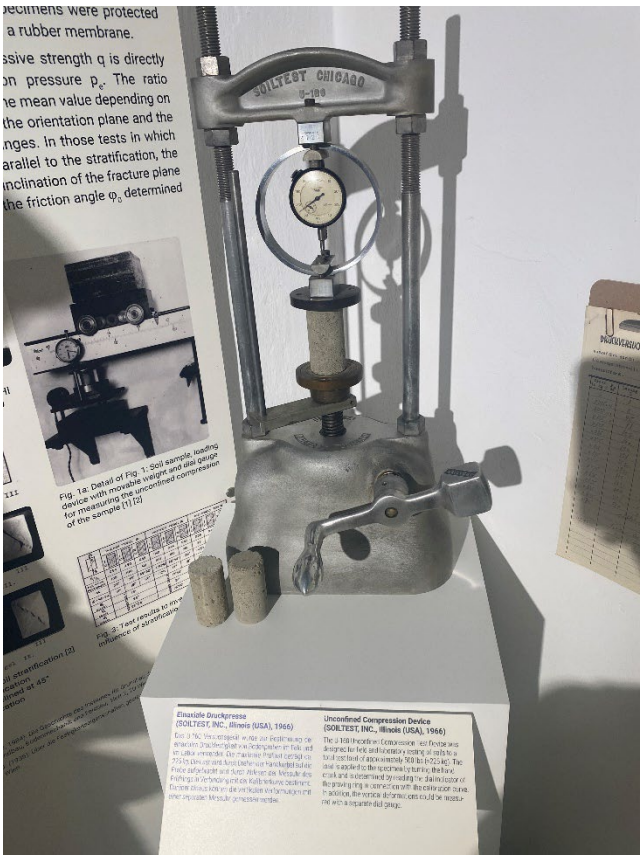


Figure 1. Original Unconfined Compressive Strength (UCS) Test. The test was hand cranked and applied a load of 225kg.



Figure 2. Oedometer test, invented by Terzaghi in 1929. The dead weight applied to the sample is balanced by the cable deflection guided over old bicycle wheels! In the top right you can see there is even a water tank to measure permeability. In the picture I am printing to an original testing sheet which was signed by Casagrande himself!



Figure 3. One of the earliest forms of the triaxial test. Leo Rendulic produced the first basic model for the triaxial test, however to develop the test further, Rendulic worked closely under Terzaghi in Vienna to formulate stress paths and pore pressure



Figure 2. A photo of me with a best my personal hero, Karl Teraghi! The bust was donated to Vienna University by Casagrande.

Photographs from Conference: Insert here or attach to email
More pictures attached to email.