ISSMGE FOUNDATION
REPORT ON CONFERENCE ATTENDANCE

Your Name: Philippus Schoeman	***Your Organization:*** University of Pretoria	***Date of report:*** 2026/01/20
Conference Title: TMW'25 - Tailings and Mine Waste 2025	***Location of Conference:*** Banff, Canada	***Dates of Conference:*** 2-5 November 2025

What you learned:

Technical presentations and case studies broadened my understanding of in-situ characterisation and monitoring, especially the application of advanced CPTu methods for evaluating soil state and strength in high-plasticity clay foundations. Discussions with exhibitors and peers exposed me to state-of-the-art field sampling and real-time surveillance technologies that support better risk assessment and early warning systems for tailings facilities.

People you met:

I had the opportunity to meet several leading figures in geotechnical engineering. I met Professor Peter Robertson, whose pioneering work on CPTu-based state parameter interpretation forms a central foundation of my current research. I also met Professor Marcus Arroyo, with whom I discussed my planned future research at Imperial College London, particularly the application of advanced site characterisation techniques in geotechnical risk assessment. Further technical exchanges took place with Professor Luiz Torres-Cruz on challenges in tailings facility characterisation and stability evaluation. In addition, I engaged with numerous conference attendees and industry practitioners who expressed interest in the work I presented during the Day 3 technical sessions, leading to valuable technical discussions and new professional connections.

Main features of conference:

The main features of the conference included a strong focus on advancing tailings facility safety through both experimental and numerical innovation. The keynote lecture set the tone by addressing the next generation of safe tailings storage and the evolving global standards governing tailings management. A particularly insightful technical presentation was delivered by Professor Luiz Torres-Cruz, who presented recent research on pore pressure measurements during vane shear testing, offering improved understanding of undrained behaviour in soft tailings and clay foundations. In addition, Professor Marcus Arroyo presented his work on the soil mechanics relevant to the Feijão tailings storage facility failure of 2019.

Your comments on the conference:

The conference was exceptionally well organised, with a clear structure that balanced keynote lectures, technical sessions, and industry exhibitions. The layout of the programme encouraged interaction between academia and industry, and the broad range of topics ensured that both fundamental research developments and practical engineering challenges were addressed. The high quality of presentations and the open atmosphere for discussion created an engaging environment for knowledge exchange. Overall, the conference provided a valuable platform for collaboration and learning, and effectively highlighted the multidisciplinary nature of modern tailings and mine waste engineering.

Please attach short report suitable for publication in the ISSMGE Bulletin:

The conference brought together researchers, consultants, regulators and industry practitioners who were clearly passionate about the shared central theme of shaping the future of mining and the next era of safe tailings storage. From the outset, it was clear that the central theme of the event was the next era of safe tailings storage, with strong emphasis on advancing characterisation, monitoring and risk-informed design of tailings facilities.

A key learning outcome from the conference was the growing focus on rigorous in-situ assessment of foundation conditions for tailings storage facilities. Several technical sessions addressed the evaluation of soil state and strength using CPTu testing, particularly for facilities founded on high-plasticity clays. These discussions aligned closely with my current research on state parameter interpretation from CPTu data. In addition, conversations with exhibitors introduced me to state-of-the-art in-situ sampling, instrumentation and real-time monitoring technologies, highlighting recent advances in field characterisation and surveillance systems for tailings facilities.

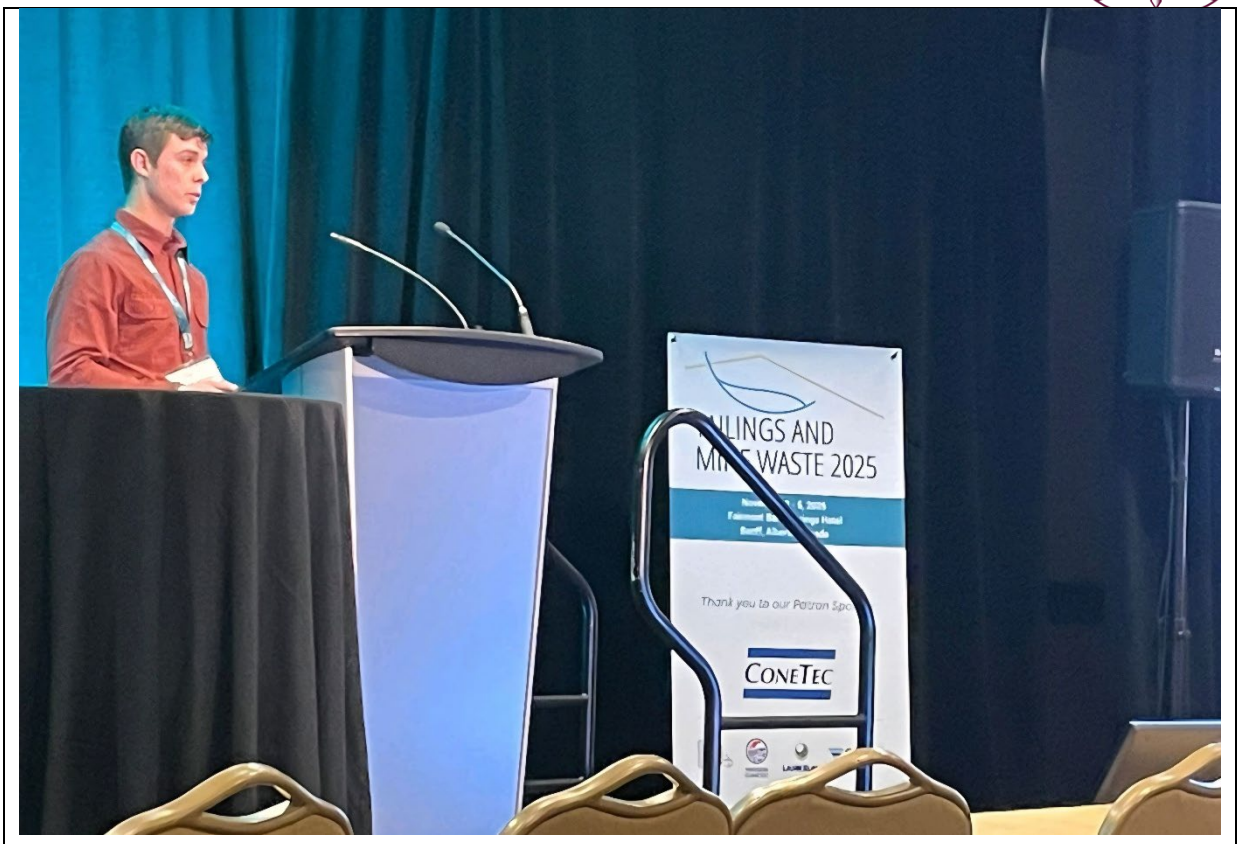
The main features of the conference included an engaging keynote lecture that framed current and future directions in global tailings management practice. A particularly insightful presentation by Professor Luis Torres-Cruz explored pore pressure measurements during vane shear testing, providing improved understanding of undrained behaviour in soft tailings and clay foundations. Professor Marcus Arroyo presented advanced numerical modelling of tailings dam failure mechanisms, demonstrating how modern computational methods are being applied to better predict instability processes and support risk-based decision-making.

Overall, the conference offered a well-structured and diverse technical programme covering the broad spectrum of mine waste and tailings engineering. The experience provided meaningful knowledge exchange, strengthened international research connections and offered valuable insight that will directly inform my ongoing work in advanced in-situ characterisation of geotechnical structures.

Photographs from Conference:



The University of Pretoria geotechnical engineering research group



My presentation



Visiting the University of British Columbia