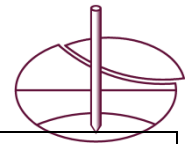


**ISSMGE FOUNDATION
REPORT ON VIRTUAL CONFERENCE ATTENDANCE**

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| Your Name: Adeleke Daniel Damilare | Your Organization: University of Cape Town | Date of report: July 27 th , 2022 |
| Conference Title: 20 th International Conference on Soil Mechanics and Geotechnical Engineering | Location of Conference: Sydney, Australia and Virtual | Dates of Conference: May 1 - May 5, 2022 |
| What you learned: <p>ICSMGE 2022 was themed "discovery", particularly through case histories and professional activities. I learned that most discovery in this profession includes understanding the geological setting, uncertainty, observation, and judgment. The lectures at this conference focused on recent development and human activities on the earth's geo-structure. The Terzaghi Oration lecture delivered by Professor Antonio Gens on the failures that occurred after the constructions in the Barcelona Harbour South breakwater was informative. He concluded that breakwater behavior is complicated, and monitoring could be hampered due to instrumentation system failure. In situations such as this, numerical modeling methods could be employed. Also, major advances such as vertical drains, terrestrial fill, and stone columns were utilized to address storm effects on breakwater structures.</p> <p>The Corporate Associates Presidential Group (CAPG) session titled "Are we overdesigning?" delivered by Peter Day and Jean-Louis Briaud investigated geotechnical problems associated with prediction and design. To address issues about design and prediction, errors must be minimized during parameter determination, model calculation, and safety provision. The conclusion derived from the presentation is that "overdesigning concern" is dependent on the inconsistent application of analysis methods.</p> <p>The state-of-the-art lecture on Transportation Geotechnics presented by Richard Kelly and Claudia Zapata focused on the bigger, heavier, faster, and longer future of transportation, management of the environment, the digital age, and the outcomes for practitioners and academics.</p> <p>Professors Santamarina and Sanchez delivered a state-of-the-art lecture on Energy Geotechnics and talked about the cutting-edge work they are doing, emphasizing the importance of reducing the carbon footprint in geotechnical engineering.</p> <p>Professor Santamarina also delivered the Bishop Lecture and his talk on the assessment of geotechnical properties in the information age was captivating. The keywords he uses are simple yet impactful. He highlighted the importance of knowing what we are measuring and not just seeking to collect more measurements.</p> <p>The tailings dams state-of-the-art lecture presented by Andy Fourie and Ramon Verdugo explores the uniqueness of tailings in terms of consolidation, seepage, and shear strength. Of interest, empirical correlations for tailings can often be misleading as a result of particle shape, fluid chemistry, salt content, and additives.</p> <p>The powerful informative talks (PITs) brought a nice summary of the limits that geotechnical engineering can reach with respect to problem-solving, reliability-based design, remote</p> | | |



sensing, and AI-based machine learning.

Overall, the conference was very informative. There were plenty of networking opportunities that allowed me to meet new people.

People you met:

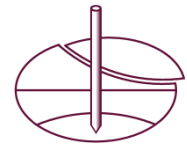
I had the opportunity to virtually meet Pooria Ghadir and Antonie Abboud during this conference through the networking platform. Also, I connected with some conference attendees via LinkedIn. They are Grace Abou-Jaoude, Dietmar Adam, Beena Ajmera, Richard Bathurst, and Derek Avalle.

Main features of the conference:

The conference emphasized how the application of theory is necessary as geotechnical engineers are making new discoveries to solve the problems that the world is facing with respect to energy, transportation, and the environment. The conference had parallel sessions which include several keynote lectures, oral presentations, and poster presentations. As the conference was held in hybrid mode, all pre-recorded and in-person presentations were made available on the website. The conference also hosted an exhibition where a large diversity of companies presented their expertise and products.

Your comments on the conference:

The conference was very well organized. The communication strategy was well coordinated from the beginning to the end of the conference. The virtual networking platform was properly structured and designed to facilitate conversation and collaboration. The organizers responded promptly to my questions and were very welcoming and the keynote lectures were very informative and captivating.



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

The theme of the ICSMGE 2022 was “a geotechnical discovery down under”. The conference schedule was implemented in a hybrid mode with parallel sessions of oral presentations and poster presentations. All pre-recorded and in-person presentations were made available on the conference website. My recorded presentation titled “Laboratory investigation of the effects of asperity concentration and geotextile-type on geomembrane-geotextile interface shear characteristics” was posted in the Gallery of the Virtual Attendee Portal.

The keynote lectures at this conference focused on the gap between practical problems and theoretical developments and accumulated recent development in field applications. The Terzaghi Oration lecture delivered by Professor Antonio Gens on the failures that occurred after the constructions in the Barcelona Harbour South breakwater was informative. He concluded that breakwater behavior was complicated, and monitoring could be hampered due to instrumentation system failure. In situations such as this, numerical modeling methods could be employed. Also, major advances such as vertical drains, terrestrial fill, and stone columns were utilized to address storm effects on the breakwater design.

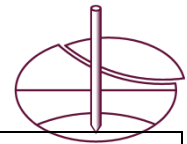
The Bright Sparks Lecture delivered by Ashani Ranathunga emphasized the importance of sustainability in the stabilization of peaty clay soils. The study explored different materials and combinations to attain its sustainability goal. While Brendon Bradley’s presentation focused on the prediction of earthquake-induced ground motions and their uses in seismic hazard analysis, further systematic and comprehensive validation is required.

Nasser Khalili delivered the state-of-the-art lecture on Unsaturated Soils with emphasis on the three-phase nature of soils. The conclusion drawn from the Session was that the science of soil mechanics should be revisited for the education and training of engineers as most soils are invariable in an unsaturated state.

The ISSMGE Time Capsule Session showcased the collective experience of the geotechnics community, the road map to stir curiosity, and a platform for community future leaders. One of the long-term outcomes of this project is to reduce the knowledge application gap.

The powerful informative talks (PITs) brought a nice summary of the limits that geotechnical engineering can reach with respect to problem-solving, reliability-based design, remote sensing, and AI-based machine learning.

Overall, the conference was very informative and well-organized even for a virtual attendee like me. There was a handful of networking opportunities that allowed me to meet new people virtual and on LinkedIn and reconnect with many who I had not seen for a long time.



Photographs from Conference: Insert here or attach to email
Virtual Attendee

Laboratory investigation of asperity concentration effects on geomembrane/geotextile interface shear characteristics

Daniel Adeleke ICSMGE Presentation Results

SYDNEY ICSMGE 2022 Watch later Share

Shear stress-horizontal displacement curve for varying asperity concentrated interfaces

Legend for GMB-T1 and GMB-T2:

- 25 kPa GMB-T1 / GTX-PET
- 50 kPa GMB-T1 / GTX-PET
- 100 kPa GMB-T1 / GTX-PET
- 200 kPa GMB-T1 / GTX-PET
- 400 kPa GMB-T1 / GTX-PET
- 25 kPa GMB-T1 / GTX-PP
- 50 kPa GMB-T1 / GTX-PP
- 100 kPa GMB-T1 / GTX-PP
- 200 kPa GMB-T1 / GTX-PP
- 400 kPa GMB-T1 / GTX-PP

Watch on [YouTube](#) Laboratory investigation of asperity concentration effects on geomembrane/geotextile interface shear characteristics 7

Laboratory investigation of asperity concentration effects on geomembrane/geotextile interface shear characteristics

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