

## ISSMGE Foundation reports

ECSMGE-2019 was an important gathering of researchers and experts supported by ISSMGE in Soil Mechanics and Geotechnical Engineering from all around the world. According to the conference website, the conference committee received 915 papers from 58 countries. There were 5 keynote lecturers delivered by Profs Suzanne Lacasse, Sigurour Erlingsson, Antonio Gens, Jorge Zornberg and Lyesse Laloui from top-tiered universities and institutes presenting various topics such as dams and risk assessment recent developments and applications, geotechnical challenges in Iceland, hydraulic fills with special focus on liquefaction, stabilization of roadways using geosynthetics and energy geotechnology. There were also seven workshops supported by ISSMGE focusing on safety and serviceability (TC205), transportation (TC202), physical modelling (TC104), dykes and levees (TC201), slope stability (TC208), dams and embankments (TC210) and numerical methods (ERTC7). The oral presentation sessions included mechanics of soils related to time, temperature and chemistry, numerical methods, in-situ testing, ground improvement, megacities, engineering practice of risk, geo mechanics, ground improvement and anthropic soils, numerical methods, underground construction, unsaturated soils, reinforced fill structures, laboratory testing, transportation geotechnics, environmental geotechnics, offshore geotechnics, preservation of historic sites, sustainability, deep foundations, dams and embankments, earthquake, energy geotechnics, piles-in-situ testing and numerical methods, slope stability, soil-structure, dykes and levees, physical modelling, safety and serviceability and soft soils. The conference program shows that ECSMGE-2019 was one of the most comprehensive geotechnical engineering conferences.

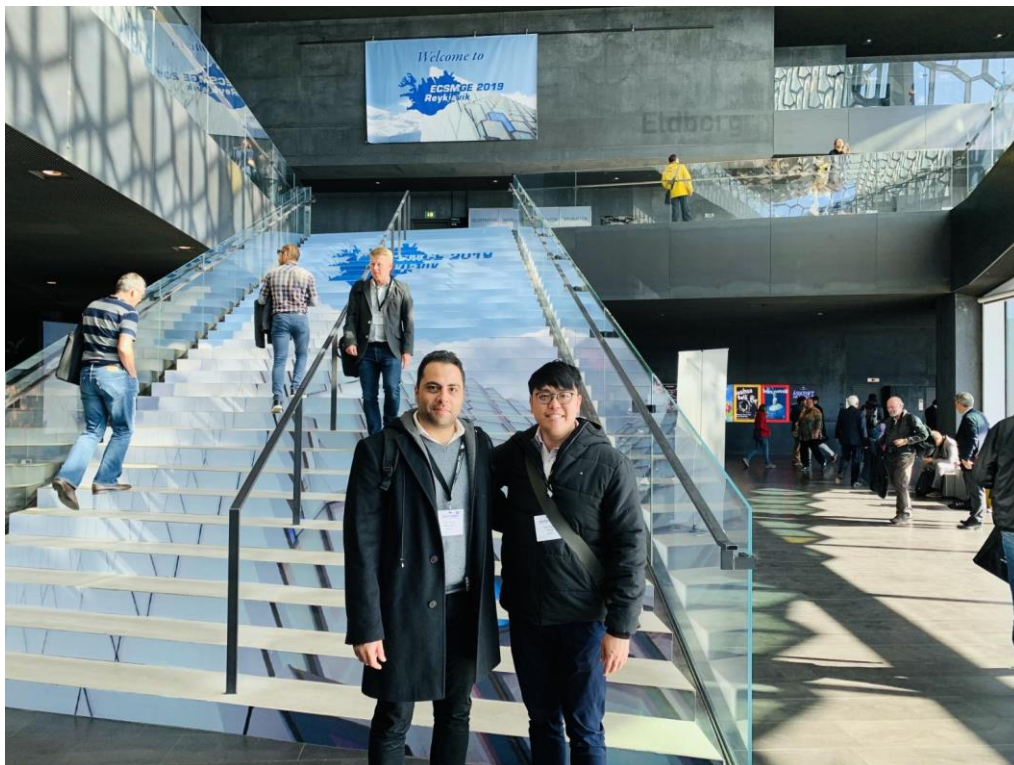


Photo 1. With my colleague Philip Tsang making ourselves ready for our presentations

*Dr Amirhassan Mehdizadeh  
The University of Melbourne*

## ISSMGE Foundation reports (Con't)

The XVII European Conference on Soil Mechanics and Geotechnical Engineering was held in Reykjavik, Iceland between 1<sup>st</sup> and 6<sup>th</sup> of September 2019 in the Harpa conference hall. This conference is the most important in Europe for geotechnical engineers and its prestige was also raised by the architecture masterpiece of Harpa. The conference started with the meetings of technical committees, which was followed by a get together event, providing a nice opportunity to have a light chat with new and long-time-no-see colleagues. The conference was opened the next day by honoured guests such as the former president of Iceland and the president of ISSMGE, Prof. Charles Ng. The following three days comprised keynote lectures and invited plenary papers in the morning, and technical discussions and parallel sessions in the afternoon. During the day the attendants could also visit the exhibited posters. Coffee and lunch breaks between the sessions provided good opportunities to exchange ideas with colleagues and discuss the presentations. The closing ceremony took place on Thursday afternoon, during which the attendants were invited to forthcoming conferences, including the next ECSMGE in Lisbon. The last day was a perfect closure for the conference as this included various technical tours to destinations including one of the largest ice tunnels in Europe, a geothermal power plant or to the open sea to observe whales.

I also would like to thank the generous support of ISSMGE foundation, which allowed me to visit this absolutely stunning country and attend the most prestigious geotechnical conference in Europe.



Photo 1. Hungarian delegates of the conference

*Zoltán Bán*  
*Budapest University of Technology and Economics*

## ISSMGE Foundation reports (Con't)

To promote young members of ISSMGE to play a major role in various international and regional conferences, the President of ISSMGE - Professor Charles Ng created the Bright Spark Lecture Award. Young geotechnical engineers have a chance to deliver a keynote and publish an associated paper. The 5<sup>th</sup> of September 2019 I had the honour to receive this award and present my work at the European Conference on Soil Mechanics and Geotechnical Engineering in Reykjavik. As each national geotechnical association member of the ISSMGE nominates one or two candidates to the young members presidential group (YMPG) of the ISSMGE (which then come up with up the winner), I am really thankful to the BGA for having supported me. Thursday morning in front of hundreds of delegates, in the main hall of the beautiful *Harpa Conference Centre* in the Icelandic capital, I delivered my first Keynote ever which was entitled “Pile penetration in crushable soils: Insights from micromechanical modelling” (Figure 1). The goal of my presentation was to convince the audience that the discrete element method (DEM) is a numerical tool that can be successfully used to investigate complex geotechnical problems. I showed how the particle-scale mechanics that underlie the observed macroscopic responses affects distributions of particle stresses and forces around the shaft. The paper associated with the Bright Spark Lecture is open access and provides insights into one of the mechanisms proposed for the well-known, yet not fully understood, marked shaft capacity increases developed over time by piles driven in sands.



Photo 1. A couple of photographs of me delivering the Bright Spark Lecture.

On top of delivering my first (hopefully not the last) Keynote presentation, during the conference I also presented my work on critical state in crushable soils. Unfortunately, I was not able to get a decent picture of myself while presenting. On the other hand, I attended the conference excursion trip on the Friday morning where we entered into the Langjökull (Long Glacier) glacier.

*Matteo Oryem Ciantia*  
*University of Dundee*

## ISSMGE Foundation reports (Con't)

The first Mediterranean Young Geotechnical Engineers Conference was held in Bodrum, Mugla, Turkey, and I had a chance to get an ISSMGE grant to attend it. I had submitted two presentations which were accepted.

The first one was about an improvement of a limit-equilibrium software developed by IFSTTAR in the 80's for the design of soil-nailed walls. These kind of software are generally bad at predicted the facing loads profile and the improvement I presented tackles this problem. After my presentation, I received some questions during the session and numerous other questions during the coffee break. Some of the attendants have expressed their will to collaborate when my version of the software comes out on Open Access. The second presentation was about to tackle the determination of soil-nail interface parameters through pull-out tests. Even if it did not raise the same level of enthusiasm, attendants made some comments that will help the improvement of the method.

On top of that, this conference was the occasion of rewarding meeting with young geotechnical engineers from across the Mediterranean region. We talked about the cultural aspects of our differences and similarities as well as the technical ones. A point who stroke me was the different approaches people had on the subject of physical modelling. The similarities that we try to keep between the model and the prototype are not always the same and the scaling rules diverge. On the other hand, the rules to design geotechnical buildings seems relatively coherent between us.

Last but not least, this conference provided me an opportunity to exchange with Prof. George Gazetas about the seismic behaviour of soil-nailed walls, a subject that I try to study. His expertise in the seismic field helped me to understand some aspects of the problem from a point of view I never had before.

To sum up, despite my throat infection, this conference provided me an important help in the development of my works.

*Jean de Sauvage*  
IFSTTAR, France