

**International Society for Soil Mechanics and Geotechnical Engineering**

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President's message

Dear colleagues and friends,

As the world continues to fight the COVID-19 pandemic, which has affected each and every one of us in more ways than one. Please do monitor your own health closely and wear a face mask when you go outside.



The "ISSMGE Virtual University" that I proposed back in September 2017 is finally taking shape (see Fig. 1). The Virtual University consists of three essential components—online courses, library and publisher. Due to the serious threat of COVID-19, many universities and training centres worldwide are currently closed. A large number of students and engineers may not be able to access and receive the necessary education and training, which could affect their future significantly. It is very timely for the ISSMGE Virtual University offers a free alternative while they are staying at home or undergoing quarantine. Thanks to the hard work of Professor Mounir Bouassida and others, we have developed the following seven full courses:

- Course 1: Risk Mitigation, Monitoring & Observational Methods
- Course 2: In Situ Testing
- Course 3: Earthquake Engineering
- Course 4: Foundations
- Course 5: Soil Characterisation
- Course 6: Geo-engineering Education
- Course 7: Unsaturated Soil Mechanics

In addition, we have made available many webinars. You can visit the ISSMGE website to find out more: <http://virtualuniversity.issmge.org/>. Please let others in your country/region know about our free courses and webinars so that they may also benefit.

President's message (Con't)

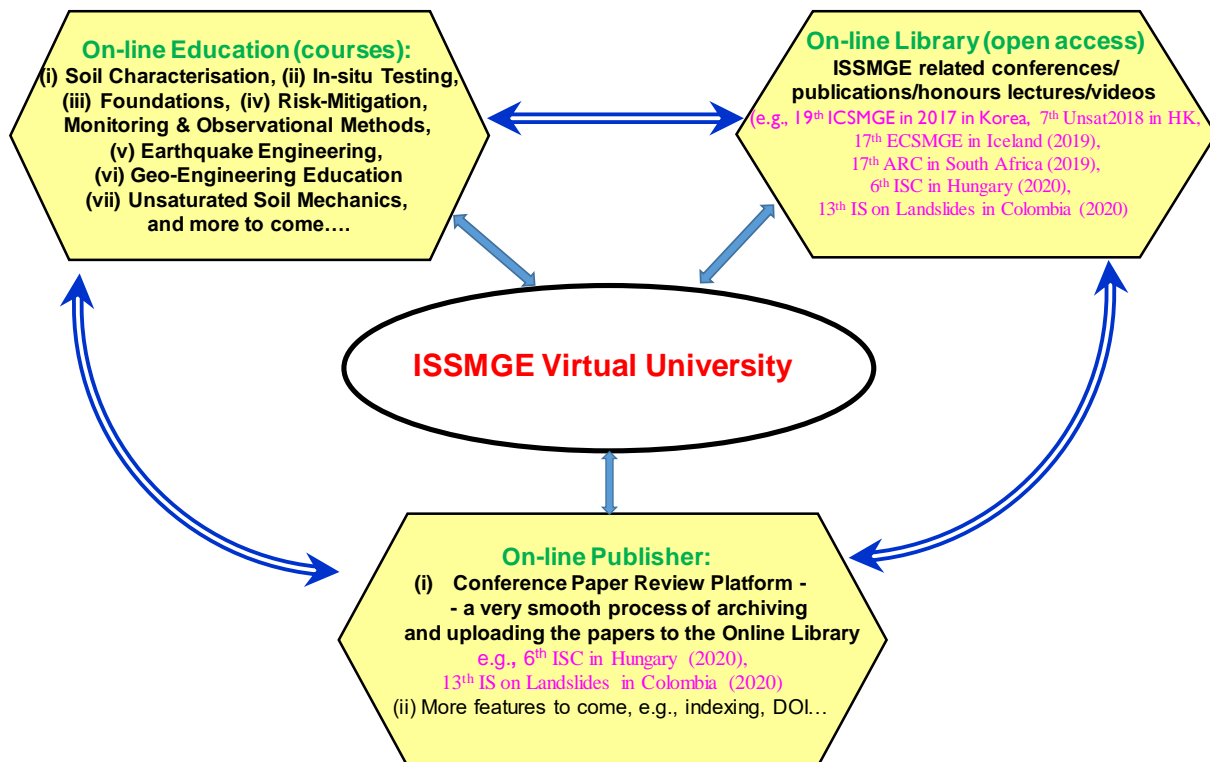


Figure 1. Education, Innovation and Diversity for a modernised ISSMGE

The open access policy initiated by the immediate past President, Professor Roger Frank, during his presidential term, has been continued and rapidly expanded. Naturally, the open access materials form part of the “ISSMGE library”. For example, the library has collected the proceedings of the 19th ICSMGE held in Seoul in September 2017 and the 7th International Conference on Unsaturated Soils held at the Hong Kong University of Science and Technology in August 2018. Please visit the following link for more information: <https://www.issmge.org/publications/online-library>.

Under the innovative leadership of Professors Dimitrios Zekkos and Kok Kwang Phoon, the Innovations and Development Committee has been exploring and developing our own “ISSMGE virtual publisher” platform, on which any conference organiser can review, accept and publish conference papers online.

Under the excellent leadership of Messrs Sukumar Pathmanandavel and Peter Day, co-chairs of the Corporate Associates Presidential Group (CAPG), many workshops and forums have been organized in regional conferences such as the 17th African Regional Conference on Soil Mechanics and Geotechnical Engineering (SMGE), the 16th Pan-American Conference on SMGE, the 16th Asian Regional Conference on SMGE and the 17th European Conference on SMGE, with the goal of narrowing the gap between academics and practitioners so that they may find a common understanding and take collective action.

As I cannot emphasize enough, young members are our hope and future. I am delighted to report you that more than 20 young members have received the Bright Spark award since the creation of the lecture series of the same name by myself about one and a half years ago. For more details including the list of award recipients, please visit <https://www.issmge.org/the-society/awards/bright-spark-lecture-award>. I would like to thank Ms Lucy Wu, chair of Young Member Presidential Group (YMPG), and her team for assisting me in organising, identifying and selecting the finalists so that I can make the final decision efficiently.

Please take care, and God bless you all.

Research highlights

Geotechnical Engineering Group, UNSW Sydney, Australia

UNSW Sydney (The University of New South Wales) is one of Australia's leading research and teaching universities. It gained its statutory status in 1949 although its origins can be traced to the Sydney Mechanics' School of Arts established in 1833 and the Sydney Technical College established in 1878. These institutions were established to meet the growing demand for capabilities in new technologies as the economy of Australia's most populous state, New South Wales, shifted from a pastoral base to industries fuelled by the industrial age.

The Geotechnical Engineering Group is part of the School of Civil and Environmental Engineering, one of the eight foundation schools of UNSW Sydney. The school has 2200+ undergraduate students, 1400+ postgraduate coursework students and 170+ PhD students across civil and environmental engineering disciplines. The group is also part of UNSW's Centre for Infrastructure Engineering and Safety.

Group members include Professor Nasser Khalili and Professor Adrian Russell, Senior Lecturers Dr Kurt Douglas and Dr Arman Khoshghalb, Lecturers Dr Asal Bidarmaghz, Dr Babak Shahbodagh and Dr Mohammad Vahab, and Research Associate Dr Thanh Vo. Emeritus Professors include Robin Fell and Somasundaram Valliappan.



Photo 1. UNSW Sydney's Geotechnical Engineering Group and PhD students. Prof Khalili (front 4th from right, Dr Vo (front 4th from left), Dr Khoshghalb, Prof Russell and Dr Shahbodagh, (rear 1st, 2nd and 3rd from right, respectively), Dr Douglas (rear 2nd from left). Dr Bidarmaghz and Dr Vahab (right, top and bottom, respectively).

Their research activities are centred around: (i) unsaturated soil mechanics, including fundamentals and applications in engineering practice, (ii) development of novel numerical and analytical problem solving techniques in geomechanics, (iii) dam and rock engineering, particularly problems related to scour and erosion, and practical design tools, (iv) energy geotechnics and (v) dynamics, liquefaction and earthquake engineering.

Some recent and ongoing research activities are mentioned below.

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

1. Unsaturated soil mechanics

Most of the group's research activity concerns the mechanical and hydraulic behaviour of unsaturated soils and other porous media. Unsaturated soils are widely spread, especially in Australia, and need to be dealt with in many engineering problems including slopes, foundations, dams, fills and pavements.

1.1 Fundamentals

In the area of fundamental mechanics, following Prof Khalili's formulation of an equivalent skeletal stress for multi-phase multi-porous media, the group have made a number of research breakthroughs including: (i) a fully coupled flow and deformation model for unsaturated porous media including hydraulic and mechanical hysteresis, (ii) bounding surface plasticity models for unsaturated soils (Figure 1) (most recently by [Dr Shahbodagh, Dr Khoshghalb and Prof Khalili](#), with early contributions by Prof Russell), (iii) a thermo-hydro-mechanical model for unsaturated porous media (Prof Khalili) ([Gelet et al., 2012](#)), (iv) a hypo-plasticity model for unsaturated media ([Masin and Khalili, 2012](#)), (v) fractal-based relationships for soil-water characteristic curves (Figure 2), including void ratio dependency and preventing erroneous determinations of air entry values and pore size distributions (Figure 3) (Dr Khoshghalb, Prof Khalili and Prof Russell) (e.g. [Russell, 2014](#), Pasha et al., [2016](#), [2017](#), [2019](#), [2020](#)), (vi) models able to predict the onset of dynamic strain localization, incorporating the total acoustic tensor as an indicator for inception of strain localization (Figure 4) (Dr Shahbodagh, Prof Khalili) (e.g. [Shahbodagh et al., 2015](#), [Oka et al., 2019](#)), and (vii) a viscoplastic constitutive model for creep and strain-rate behaviour with particular reference to capturing drained, undrained, primary and tertiary creep (Figure 1) (Dr Shahbodagh, Prof Khalili) (e.g. [Shahbodagh et al., 2017](#), [2020](#)).

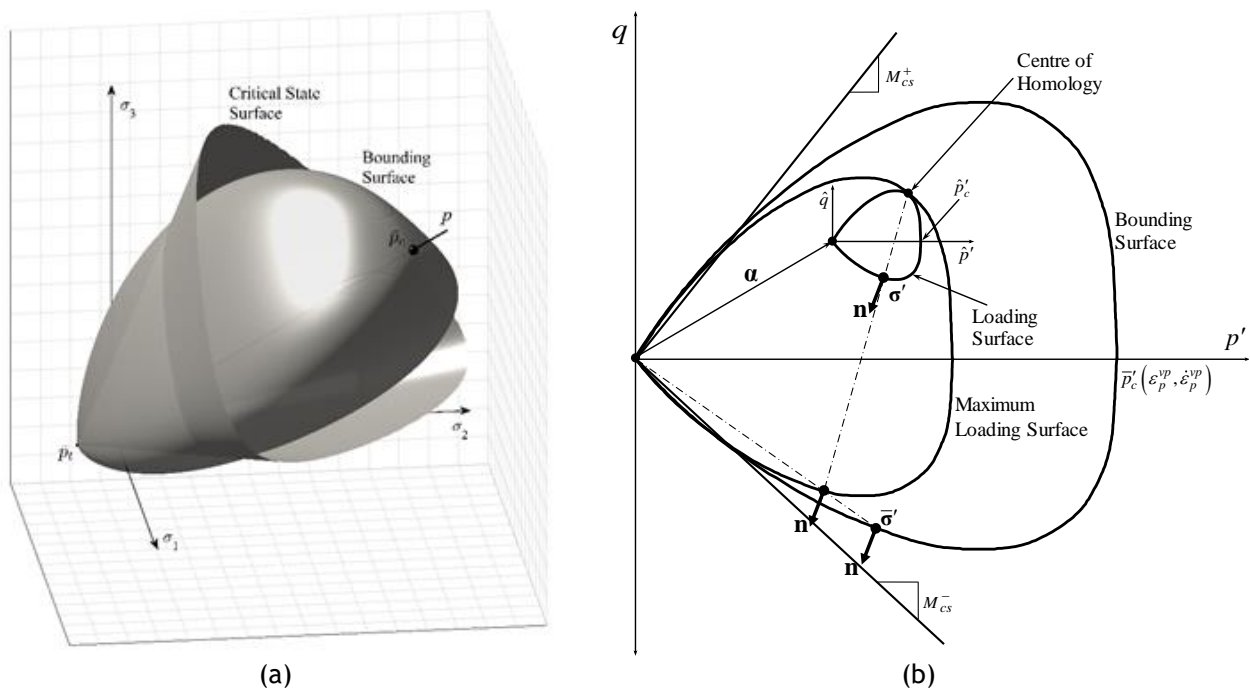


Figure 1. The bounding surface in the general stress space (Left) and in the p' - q plane (Right): The size of the bounding surface is defined as a function of suction, viscoplastic volumetric strain and strain rate

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

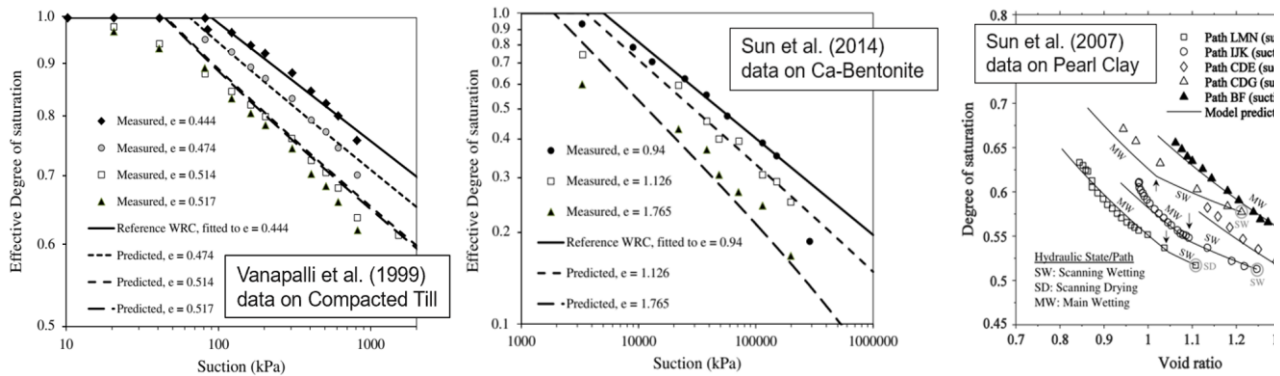


Figure 2. Examples of the prediction of the evolution of the SWRC with void ratio using the model developed at UNSW

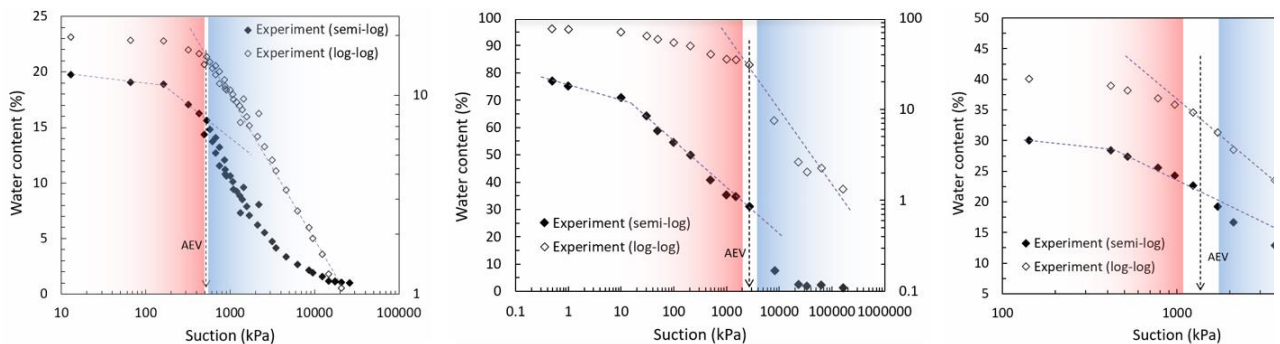


Figure 3. Examples on the application of the graphical procedure developed for determination of the air entry value from water content-based SWRC

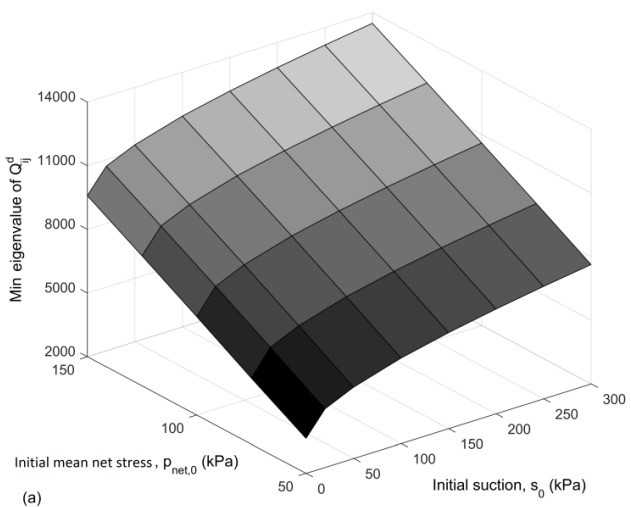


Figure 4a. Minimum eigenvalue of acoustic tensor for drained triaxial compression soil test on an unsaturated soil

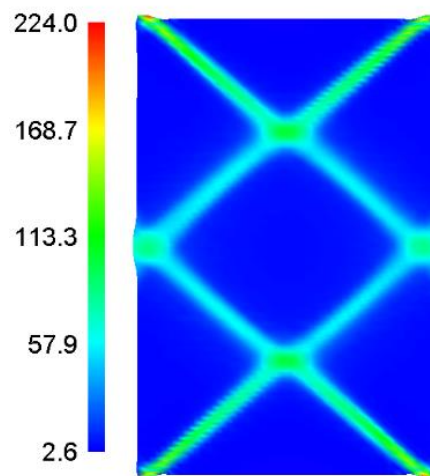


Figure 4b. Distribution of accumulated viscoplastic shear strain in an unsaturated soil sample under plane strain dynamic loading (in %)

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

1.2 Applications

Research of an applied nature has produced: (i) the first rigorous analyses and experimental observations on the way retaining walls and shallow foundations interact with unsaturated soils (e.g. Vo and Russell, 2016, 2017), (ii) practical guidelines for in situ determination of unsaturated soil properties using the cone penetration test (by Profs Russell and Khalili, with key papers published in 2013 and 2016), (iii) stability charts for curved slopes made of unsaturated soils (example papers by Dr Vo and Prof Russell were published in 2017 and 2020), and (iv) strength of unsaturated and sticky mining geomaterials (Vo and Russell, 2016).

1.3 Ongoing research

Ongoing research includes: (i) the impact of changing salt and water content on the mechanical behaviour of soils used in infrastructure, (ii) unsaturated soil-structure interactions using physical model tests, focussing on soil weakening and swelling that occurs upon wetting by rainfall or burst pipes, (iii) the time dependant behaviour of unsaturated soils used in infrastructure, especially the way they age and alter their strength and stiffness, and (iv) run-out analysis of unsaturated slope failures.

2. Numerical and analytical methods

UNSW's Geotechnical Engineering Group is also active in the development and application of numerical and analytical methods, continuing the research area forged by Prof Valliappan.

2.1 Meshfree methods

Recent contributions centre around meshfree methods (MMs) which are flexible, highly accurate and suitable for adaptive analyses (e.g. Ghaffaripour et al., 2019). Dr Khoshghalb and Prof Khalili have applied smoothed point interpolation methods (SPIMs), a subgroup of MMs, to a range of problems. In SPIMs a background mesh is used although, unlike the finite element method (FEM), the numerical operations and accuracy are not heavily tied to the background mesh. This makes them more flexible than the FEM for problems involving adaptivity and large deformations. Enriched SPIMs have been developed for the numerical modelling of domains comprising weak and strong discontinuities (Figure 5). Also, a consistent low-order stabilisation technique has been developed and applied to solve coupled flow-deformation problems, overcoming difficulties when the porous media is incompressible due to the violation of the Ladyzhenskaya-Babuska-Brezzi condition (Tootoonchi et al., under review). An example application of the one-dimensional consolidation problem is presented in Figure 6. In line with their unsaturated soil research interests Dr Khoshghalb, Dr Shahbodagh and Prof Khalili have also developed efficient computational schemes based on SPIMs for solving governing equations in problems involving hydraulic hysteresis and volume change dependency of the soil-water characteristic curve (Figure 7).

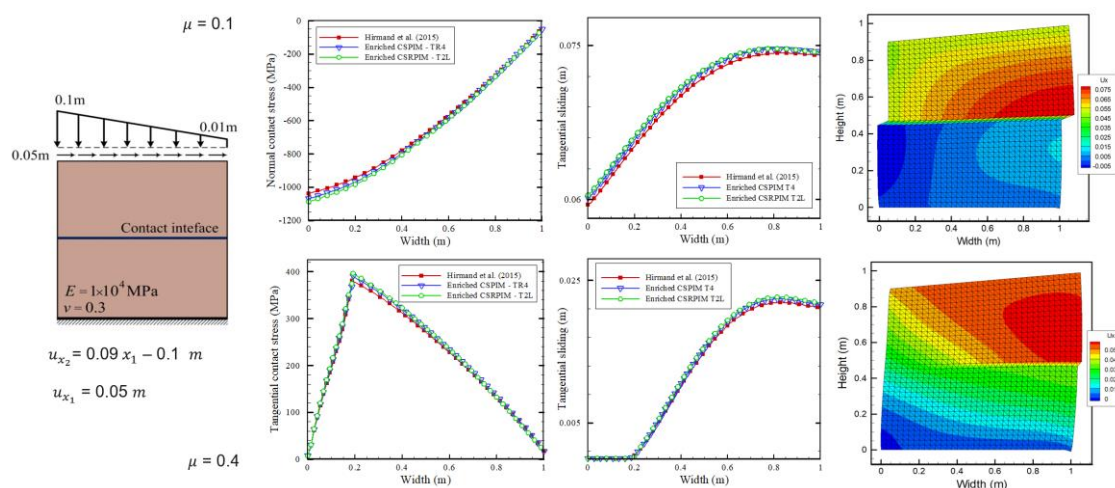


Figure 5. Example on the application of the SPIMs in simulation of a frictional discontinuity.

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

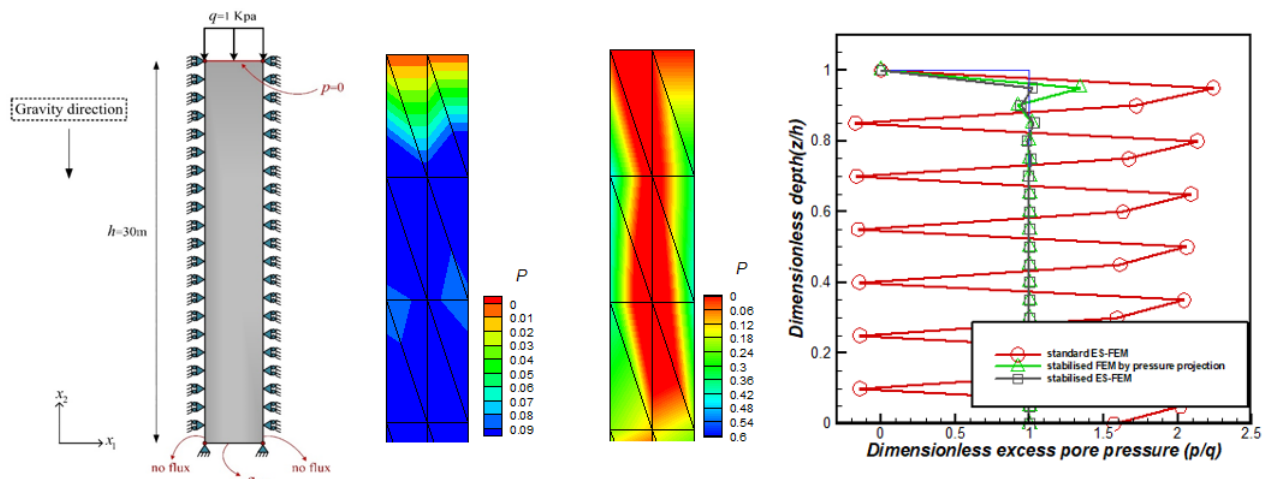


Figure 6. Application of the stabilised SPIM for simulation of 1D consolidation a short time after loading. From left to right: geometry of the problem; pore water pressure distribution at the top of the domain with and without stabilisation technique; comparison of different numerical techniques (the gray plot is the method developed).

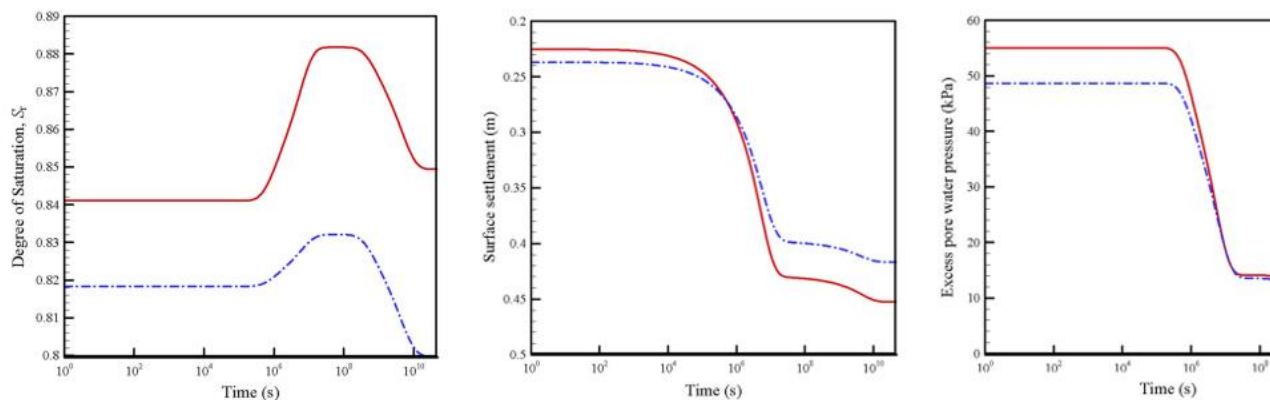


Figure 7. Examples of the effect of updating the SWRC with changes in void ratio on the numerical results in the one-dimensional consolidation of unsaturated soils (red solid line: volume change dependent SWRC is used; blue dash-dotted line: constant SWRC is used).

2.2 Finite element methods

Again aligning with the unsaturated soils theme a FEM model, based on the theory of multiphase mixtures for the nonlinear dynamic analysis of flow and deformation in unsaturated porous media, has been developed by Dr Shahbodagh and Prof Khalili. The model outputs have enhanced the understanding of dynamic responses of unsaturated soils, including slopes and embankments under seismic loadings (Figure 4) (e.g. [Shahbodagh et al., 2015](#)).

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

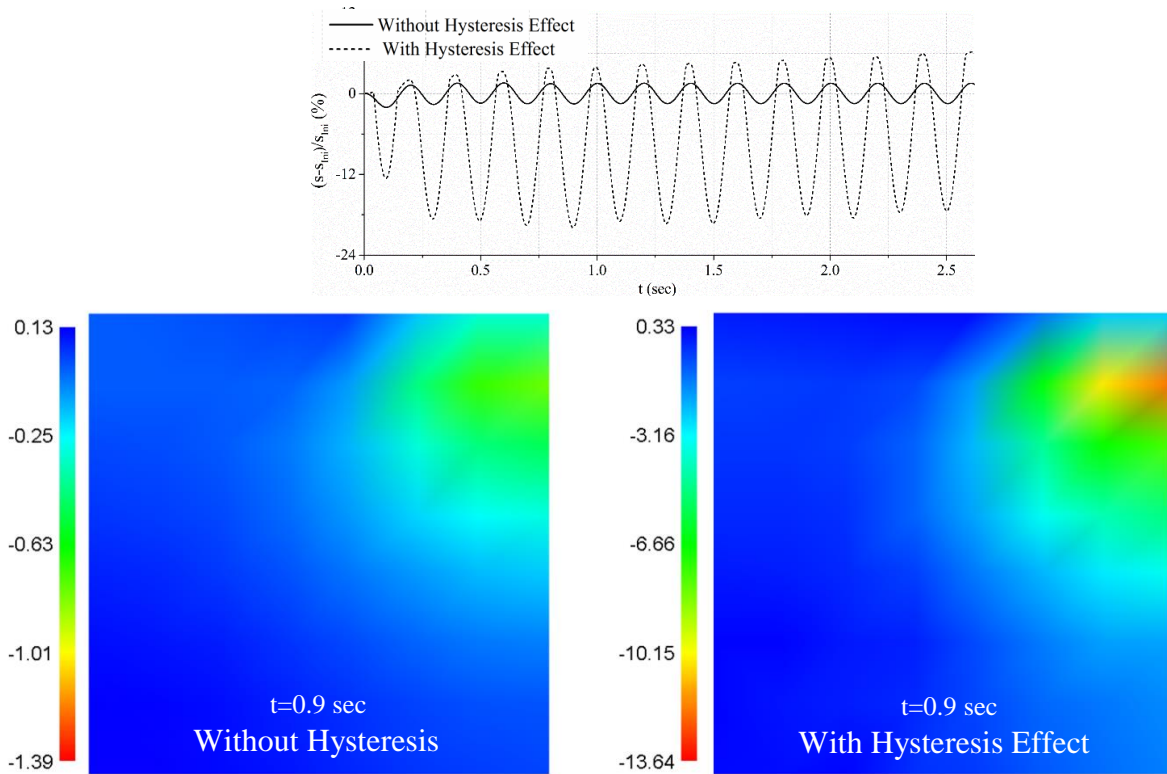


Figure 8. Effect of hydraulic hysteresis on response of an unsaturated porous medium subjected to the harmonic excitation with $\omega=31.4$ rad/sec: Variation of suction $((s-s_{Initial})/s_{Initial})$ (Unit : %)

Unsaturated soil mechanics, fracture mechanics and fluid flow have been combined in other research. This includes the development of numerical schemes for fully coupled hydro-mechanical fracturing of deformable porous media containing pre-existing discontinuities. Fracture mechanics and fracture interaction, multi-phase coupled flow deformation analysis, proppant settlement, and advanced experimental investigations have been adopted. The X-FEM was used, being the first able to deal with saturated and unsaturated porous media and interacting hydro-fractures. An energy-based simulation of dynamic fluid-driven fractures has also been completed, capturing pressure fluctuations which cannot be done properly in the context of classic forced based descriptions (Figure 9) (e.g. Vahab and Khalili, 2018a, 2018b).

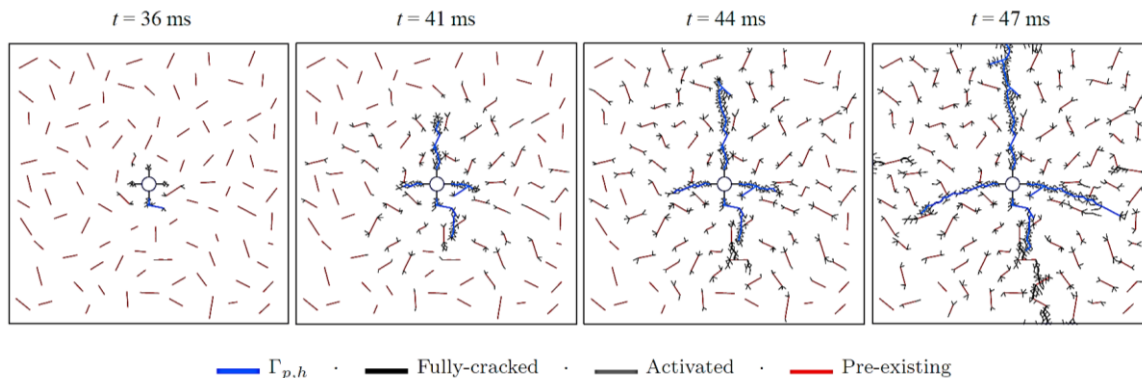


Figure 9. Evolution of discontinuities in multi-zone hydraulic fracturing of a heavily fractured square domain.

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

2.4 Analytical and semi-analytical methods

In this area a range of contributions have been made including: (i) solutions to the cavity expansion problem in unsaturated soils, considering a range of drainage conditions (by Profs Russell and Khalili, e.g. [Yang and Russell, 2015](#)), and their application to the interpretation of cone penetration tests in unsaturated soils (e.g. [Yang and Russell, 2016](#)), (ii) extension of slip line theory to model strength and stability problems in unsaturated soils including applications to earth pressures on retaining walls, bearing capacities of shallow footings (strip, circular, conical) and stabilities of slopes, in 2D and 3D (e.g., Vo and Russell, [2016a](#), [2016b](#), [2017](#), [Tang et al., 2018](#)), and (iii) and extension of the method of discontinuous stress and velocity fields to account for the presence of suction in an unsaturated soil to model hang ups in ore passes ([Vo et al., 2016](#)).

3. Dam and rock engineering

UNSW's dam and rock engineering research continues, energised by Dr Douglas and maintaining close involvement of Prof Fell.

3.1 Spillway erosion

Recently Dr Douglas and Prof Fell led large experimental and field assessments of the erosion of unlined spillways in rock (Figure 10). They developed a database of expected pressures (and fluctuations) around rock blocks within spillways ([Pells et al., 2016](#)). New erosion criteria were formed with a strong emphasis on engineering geology and failure mechanisms (Figure 11) ([Douglas et al., 2018](#)).



Figure 10. Copeton Dam spillway erosion exacerbated by a fault zone, granite sheet joints and high horizontal in-situ stresses

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

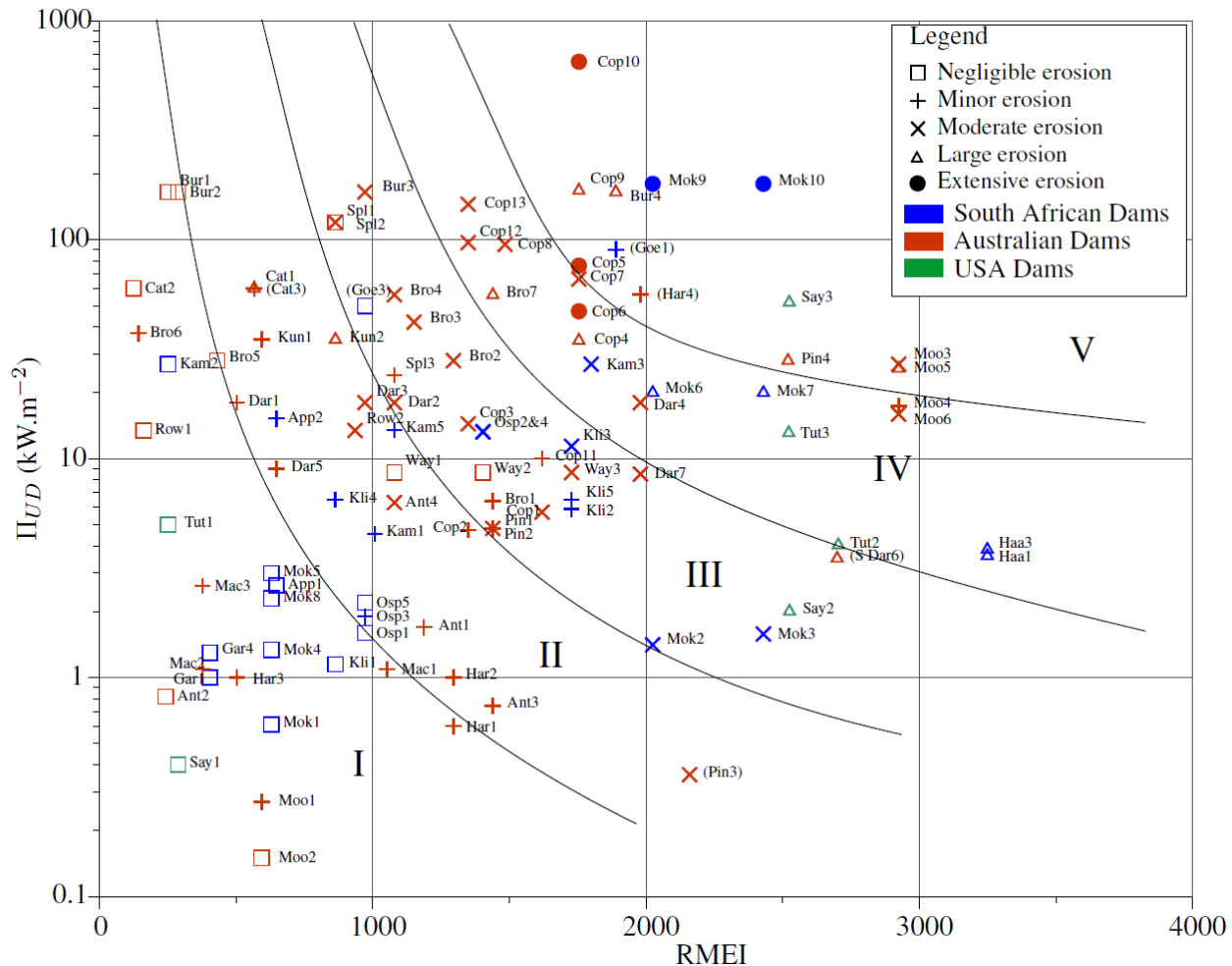


Figure 11. Case study erosion as a function of Rock Mass Erosion Index and unit stream power dissipation

3.2 Internal erosion

Dr Douglas and Prof Fell also researched the internal erosion behaviour of embankment dams and levees. This provided critical information for the ongoing management and design of embankment dams and dykes. Recent developments have included piping tests in 3.9m long flumes (Figure 12) to simulate backward erosion piping behaviour beneath dams and levees (Douglas et al., 2019; Savage et al., 2019).

Also related to dam engineering, research on suffusion in soils, focussing on the strength and stiffness changes due to soil particle removals, was led by Prof Russell. Experimental data has been collected (Li et al., 2020). Altered particle and pore scale properties of erodible soils have been characterised using fractals and incorporated into constitutive models.

3.3 Rock engineering

Dr Douglas’s rock mechanics research has traditionally focused on large-scale slopes and dams but now extends to the development of design tools for tunnels and other underground excavations like pillar-supported caverns, reflecting the large amount of civil tunnelling and underground mining activity in Australia (Bertuzzi et al., 2016a, 2016b, 2017).

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

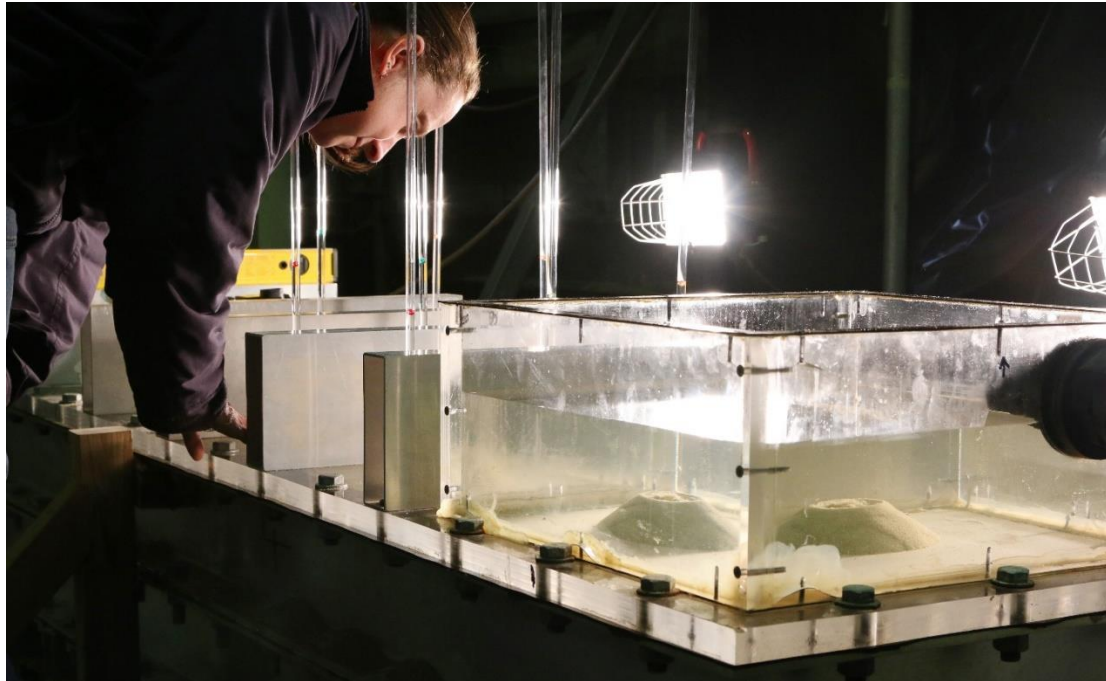


Figure 12. Backward erosion piping test showing resulting sand boil

4. Energy geotechnics

This is the group's newest research area, headed by Dr Bidarmaghz, and targets problems around underground hydro-thermal variability and geothermal potential in urban-scale, which provides critical information for resilience and sustainability of underground structures and energy resources.

4.1 Energy geo-structures

The feasibility of integrating ground heat exchangers into tunnels, piles and diaphragm walls for geothermal energy exploitation was the subject of one recent study (Figure 13) (Bidarmaghz et al., [2017](#), [2018](#), Makasis et al., [2018](#), [2020](#)). It highlighted the importance of the groundwater regime on the thermal efficiency of geothermal systems as well as on the air temperature distribution inside the tunnel. The importance of boundary conditions and induced air convection in underground spaces are demonstrated in these studies.

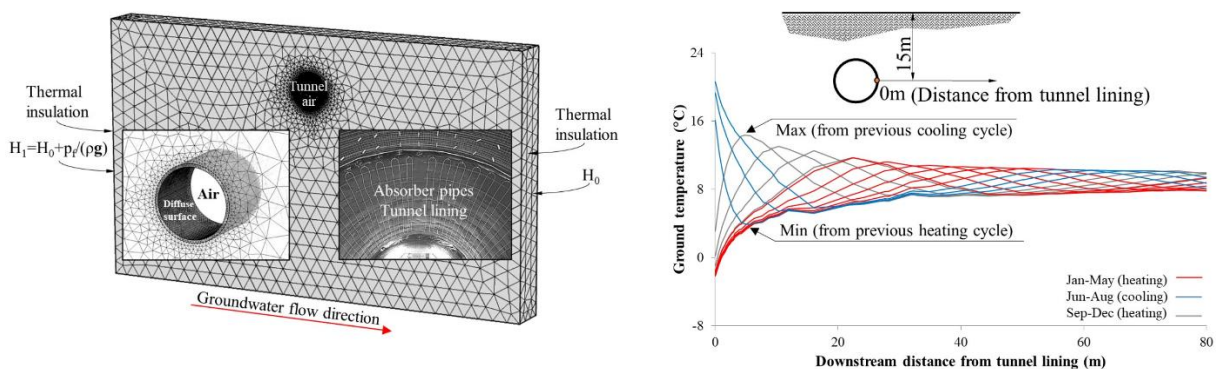


Figure 13. Energy tunnel: 3D FE model of the porous ground, tunnel structure and air and ground heat exchangers (left), ground temperature distribution resulted from heating/cooling cycles of ground heat exchangers embedded in the tunnel lining (right).

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

4.2 Underground climate change

The impact of increased urban subsurface construction on the underground climate was also recently investigated using a large-scale semi-3D FE methodology. The study accounted for heat rejection from 13,000 residential basements and 15km of train tunnels in a densely populated district in London (Figure 14-left) (Bidarmaghz et al., [2019](#), [2020](#)). The combined influence of geology, hydrogeology, underground built environment, and surface land use on hydro-thermal state of urban underground was considered when quantifying the extent of underground climate change in urban scale (Figure 14-right).

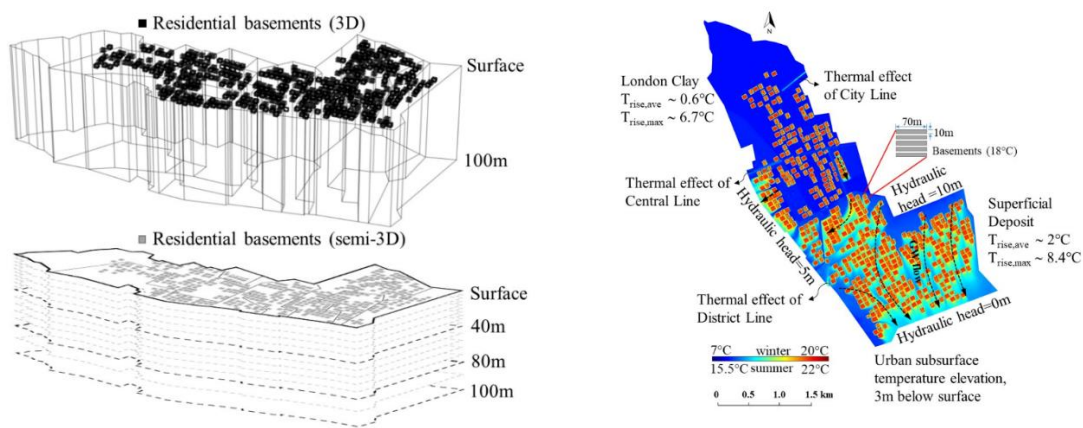


Figure 14. Underground Climate modelling: schematic of semi-3D FE model up to 100m below surface (left,) ground temperature rise due to the heat rejection from residential basements and train tunnels in a district in London (right).

5. Dynamics and liquefaction

This is a growing research area for the group. It addresses Australia's earthquake vulnerability. Significant infrastructure, including several major ports, are founded on soils which could liquefy in an earthquake. Reinsurance companies place an earthquake in Sydney in their 20 highest risk exposures worldwide. Also, it addresses the large number of tailings dams in Australia and internationally which may be susceptible to liquefaction, under static conditions or an earthquake. Central to this is UNSW's recent acquisition of a [biaxial earthquake shaking table](#) (Figure 15) and soil dynamics testing laboratory.

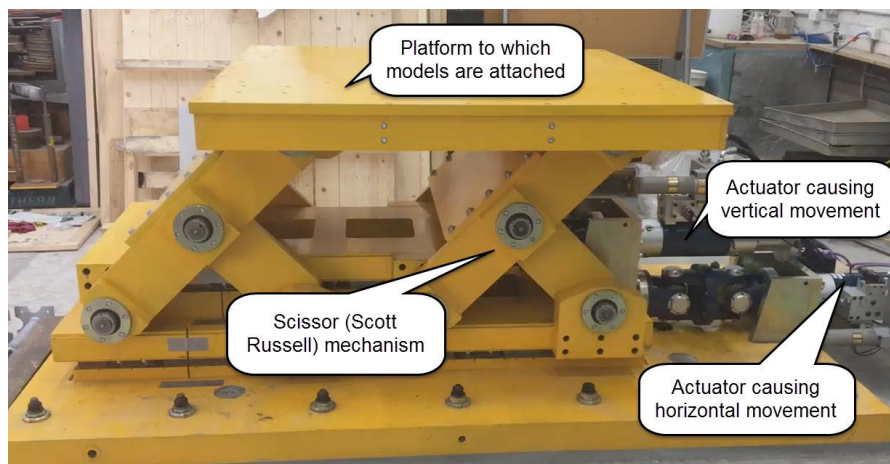


Figure 15. UNSW's shaking table, which employs a unique scissor mechanism to enable simultaneous vertical and horizontal movements (patent pending).

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

5.1 Stiffness and dynamics

In this broad area new expressions for small strain moduli and damping ratios of soils have been developed by Dr Khoshghalb and Prof Khalili, following an extensive experimental study, considering the influence of soil gradation, particle shape, stress anisotropy, stress history and suction (Figure 16) (e.g. Payan et al., 2016a, 2016b). Also, a hybrid analytical-numerical method for the dynamic analysis of single piles and pile groups embedded in transversely isotropic soils has been developed by Dr Shahbodagh and Prof Khalili (Figure 17) (e.g. Shahbodagh et al., 2017).

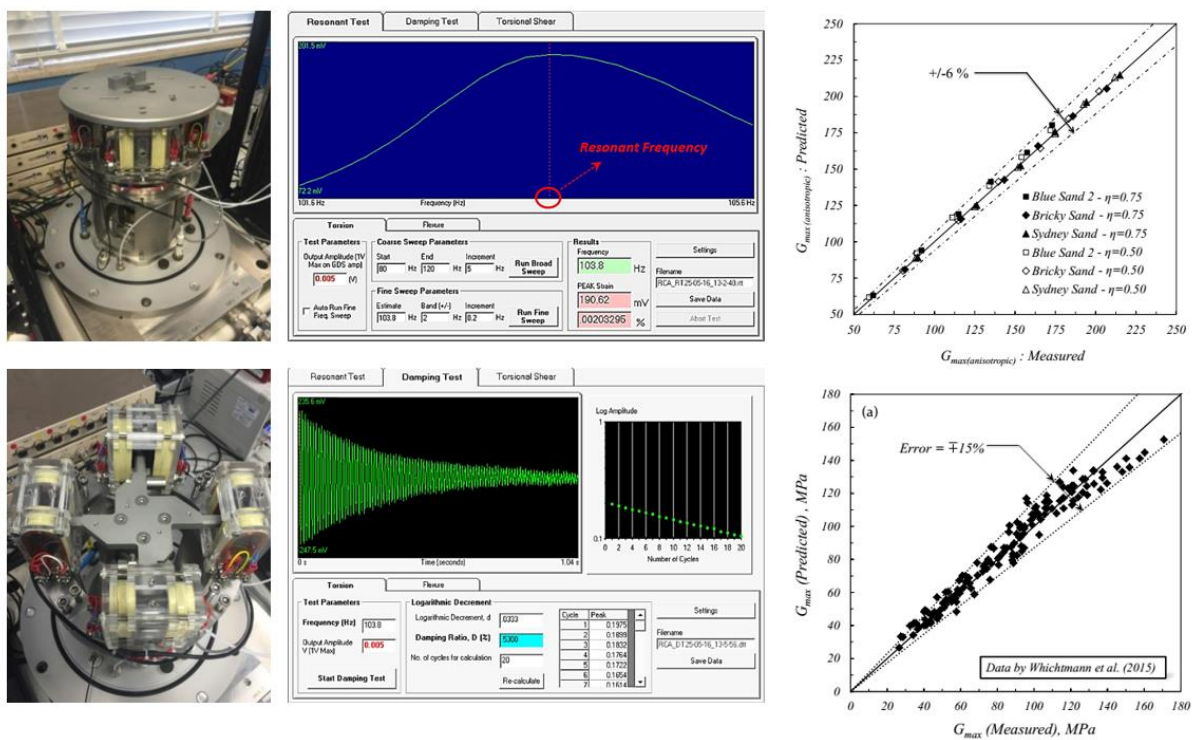


Figure 16. Study on dynamic properties of soils. From left to right: Stokoe-type resonant column apparatus at UNSW; examples of bender element and resonant column tests outputs; examples of predictions versus experimental data for the model we have developed for small-strain shear modulus of sandy soils.

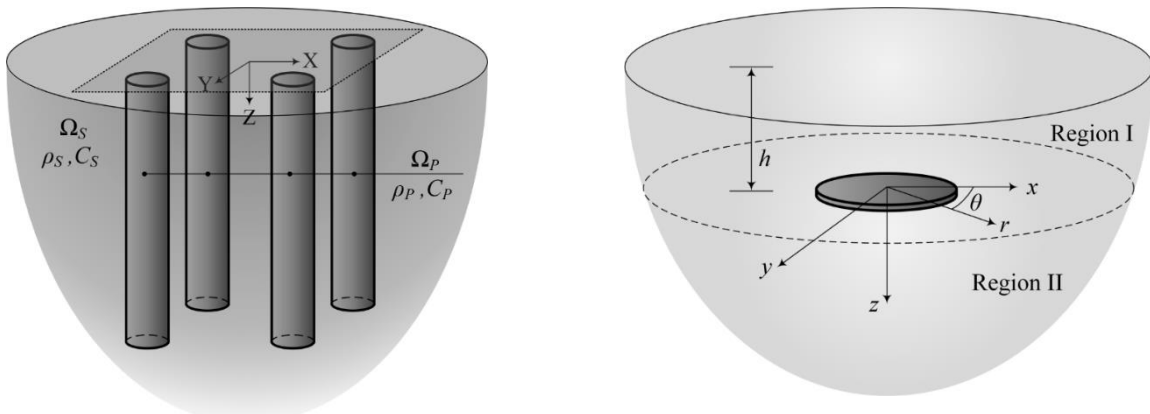


Figure 17a. (Left) Three-dimensional pile-soil-pile system, and (Right) a radiation disc buried in a half-space.

Research highlights (Con't)

Geotechnical Engineering Group, UNSW Sydney, Australia

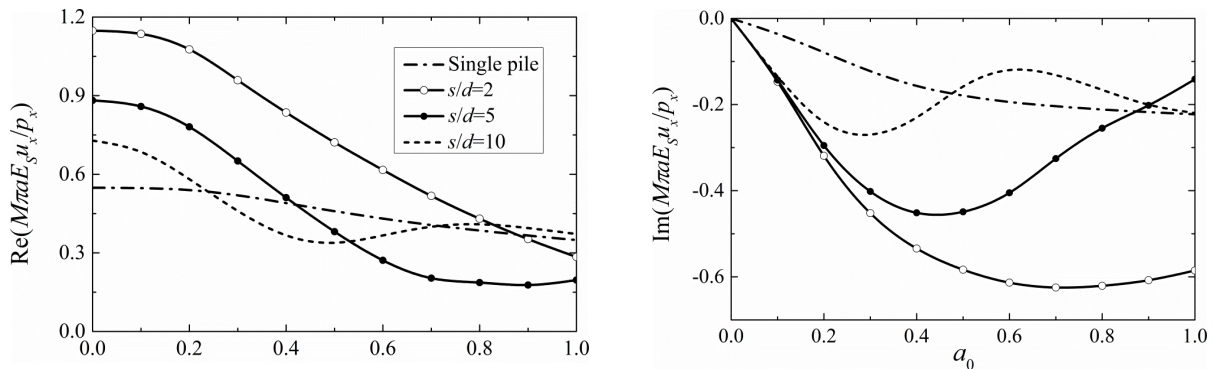


Figure 17b. Effect of pile spacing on dynamic response of pile groups embedded in transversely isotropic media: Normalised horizontal compliance vs. normalised frequency.

5.2 Liquefaction and measures to enhance resistance

Research is underway to assess the likelihood of liquefaction of variably saturated soils and tailings, where liquefaction may occur under static conditions or be caused by dynamic loading (e.g. earthquakes), under the supervision of Prof Russell. His role is to link liquefaction susceptibility to results of cone penetration tests, conducted in UNSW's calibration chamber (Figure 18). Partial saturation, partial drainage, varied wetting and drying histories and aging are amongst the complicating factors that are being considered. Three other Australian universities and six multi-national mining companies are involved through a project known as [TAILLIQ](#).



Figure 18. Dr Vo and Prof Russell prepare a tailings sample in the calibration chamber prior to conducting a CPT (left), and inside view of the chamber showing the sample being prepared (right).

In related research Prof Russell is developing a fibre reinforcement technology to suppress the potential for liquefaction. It involves adding short flexible fibres into the tailings mix. It has been proven at laboratory bench scale ([Zhang and Russell, 2020](#)). To help justify an investment by the mining industry in such a new technology large physical model experiments on tailings deposits are underway.

Message from CAPG: Regional session report

‘Geo-education for the Future’ - XVI Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Cancún, México

Introduction

The Corporate Associates Presidential Group (CAPG) is a Board level committee representing the commercial sector of the international geotechnical community within ISSMGE. One of the main objectives of CAPG is to assist ISSMGE in fostering the advancement of geotechnical knowledge and encouraging activities such as research, practice, exchange of knowledge, and education. With this in mind, CAPG, together with the Technical Oversight Committee, launched a global survey in early 2017 on the State of the Art (SoA) and the State of Practice (SoP) in geotechnical engineering. The survey attracted approximately 1300 respondents from 68 countries answering a number of questions. This was followed by CAPG holding a workshop at the 19th ICSMGE in Seoul in September, 2017 to discuss the results of the survey. A follow-up paper presenting the survey results and the workshop discussion comments was prepared by CAPG and was published in 2018 in various journals and magazines.

Encouraged by the success of the global survey and the conference workshop, CAPG embarked on organising several plenary sessions at the various ISSMGE regional conferences held in 2019. The first four sessions and its topics (some of which have been summarised in previous Bulletins) were:

- Australasia: Collaboration in geotechnical engineering - Impact on research and project delivery (Plenary session, April 2019, Perth, Australia) [Report on V13 (3), June 2019 Bulletin (<https://bit.ly/2xLWGTS>)].
- Europe: Bridging the gap between designers and constructors: how do we ensure effective ‘transfer’ of design into construction? (Plenary session, September 2019, Reykjavik, Iceland) [Report on V13 (5), October 2019 (<https://bit.ly/2RgIKt4>)].
- Africa: Geotechnical innovation (Plenary session, October 2019, Cape Town, South Africa).
- Asia: Are we overdesigning? (Theme Session, October 2019, Taipei, Taiwan) [Report on V14(1), Feb 2020 Bulletin (<https://bit.ly/3dThvNQ>)].



Figure 1: CAPG contributions to ISSMGE Regional Conferences in 2019 (before XVI PCSMGE)

Message from CAPG: Regional session report (Con't)

'Geo-education for the Future' - XVI Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Cancún, México

CAPG Session in Cancún

The last session in the series was held during the XVI Pan-American Conference held in Cancún, México, 17-20 Nov 2019. After consultation with members in the region, the topic selected for the XVI PCSMGE was 'Geo-education for the Future'. The objective was to explore what are the skills required by geomechanics professionals in the next 2-3 decades, from the perspective of different stakeholders (academia, research, industry, consulting, contractors, asset owners, etc.).

The invited panellists included: Prof J. Carlos Santamarina, Mr Juan de Dios Alemán, Mr Juan Paulín Aguirre and Mrs Daniela Pollak. Prof Tim Newson, ISSMGE VP for North America, delivered the closure notes. An opening statement and coordination of interaction with the audience was carried out by Dr Hugo Acosta-Martínez.



Figure 2: Panellists (left-right, top-bottom): Prof J. Carlos Santamarina (King Abdullah University of Science and Technology), Mrs Daniela Pollak (IDIEM and University of Chile), Mr Juan de Dios Alemán (Federal Electricity Commission, México), and Mr Juan Paulín Aguirre (IBAM Engineering Manager, Soletanche-Bachy)

It was acknowledged that geo-education needs vary per region, and as a result different programs are required to satisfy regional specific needs and societal challenges. The education is expected to comprise a combination of first principle fundamentals linked to practice and soft skills (communication, risk, digital, innovation, problem-solving, etc).

Message from CAPG: Regional session report (Con't)

'Geo-education for the Future' - XVI Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Cancún, México

Before starting an open discussion with the audience, the following provoking questions that confront educators and geomechanics practitioners were asked.

Considering that teaching hours for geotechnical engineering are limited in undergraduate courses:

- *Should universities emphasise (a) physical fundamentals, or; (b) practical solutions and case histories?*
- *Should we teach the physics and mechanics of unsaturated soils in undergraduate courses?*
- *Is there a need to teach more or less physics/chemistry of soils and rocks?*
- *Should universities teach the use of commercial software commonly used in industry?*
- *For the analysis of saturated soils, do you prefer teaching in terms of effective stresses or total stresses?*



Figure 3: (top) Audience interaction, and; (bottom) last attendees standing after 'Will you be a reference for some young geotechnical engineers in 20-30 years?' question

Message from CAPG: Regional session report (Con't)

'Geo-education for the Future' - XVI Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Cancún, México

An interesting open discussion confirmed that needs vary per region and that there are different expectations from academics and practitioners in terms of geo-education and the challenges to achieve it. It is important to promote forums where different stakeholders come together to discuss this geo-education topic and maintain geotechnical engineering as an attractive specialised discipline for future students but also as a profession that contributes in a sustainable way to solving current societal problems (climate change, increased population living in urbanised areas and associated infrastructure demands, etc). The need for both academia and industry to embrace diversity and inclusion in geo-education was also highlighted.



Figure 4: Session closure and panellists with commemorative Mayan-calendar mementos: (l-r) Dr Hugo Acosta-Martínez, Prof Tim Newson, Mr Juan Paulín Aguirre, Prof J. Carlos Santamarina, Mrs Daniela Pollak and Mr Juan de Dios Alemán.

Closure

Final thoughts from the session were summarised by Prof Tim Newson, Vice-President North America (2017-21) for the ISSMGE:

- It seems clear that employers want geoengineers who 'hit the ground running'.
- Academic courses need to match industry needs (but where does academia's responsibility stop?).
- Graduates need technical skills (fundamental/applied) and enabling skills (business, communication, problem solving, creativity, innovation, team work).
- How do we 'future-proof' geo-education? Do we want hedgehogs (specialists) or foxes (generalists)?
- Education delivery also needs to consider new teaching paradigms such as: multi-media, physical laboratory models, deep learning (project based) and better industry involvement (case history/study).
-

CAPG would be happy to know your views on this topic. A discussion post is available at the GeoWorld platform (<https://bit.ly/2R8RKPF>).

Message from CAPG: Regional session report (Con't)

'Geo-education for the Future' - XVI Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Cancún, México

Acknowledgements

The CAPG acknowledges the contribution of the ISSMGE VPs in the Pan-American region (Tim Newson and Alejo Sfriso), panellists and members of the conference organising committee for their continued support during the planning and delivery of this session. Regular teleconferences were held for over 18 months with attendees distributed over three continents, which implied discussions on early mornings and late nights. The effort and commitment of all the above to make this session a success is greatly appreciated.

*Dr Hugo Acosta-Martínez
Aurecon (Australia) and Australian Geomechanics Society*

Conference reports

16th Asian Regional Conference of Soil Mechanics and Geotechnical Engineering, Taipei



Asian Regional Conference on Soil Mechanics and Geotechnical Engineering

October 14-18, 2019

Taipei International Convention Center (TICC), Taipei, Taiwan

[Home](#)



General introduction

The Asian Regional Conference on Soil Mechanics and Geotechnical Engineering (ARC) is the largest geotechnical event in Asian region under International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) and the 1st ARC was held in New Delhi in 1960. After that, ARCs again were held in Tokyo, Japan in 1963, Haifa, Israel in 1967, Bangkok, Thailand in 1971, Bangalore, India in 1975, Singapore in 1979, Haifa, Israel in 1983, Kyoto, Japan in 1987, Bangkok, Thailand in 1991, Beijing, China in 1995, Seoul, Korea in 1999, Singapore again in 2003, Kolkata, India in 2007, Hong Kong in 2011 and Fukuoka, Japan in 2015.

In Asian Council Meeting held in 15th Asian regional conference in Fukuoka, Japan in November, 2015, it is really appreciated that Chinese Taipei (Taiwan) Geotechnical Society (hereinafter called "CTGS") had received many supports from delegates of many member society of ISSMGE and was awarded the right of hosting to organize 16th Asian regional conference (hereinafter called "16ARC").

After having the authorization from ISSMGE, under an inquiry of president (now immediate past president) of CTGS, Professor Albert K. J. Shou, Professor Chang- Yu Ou was requested to be a chair to form an organizing committee (hereinafter called "OC") and Professor Der- Wen Chang was requested to be a chair to form a conference committee (hereinafter called "CC") and these two committees become main driven forces to deliver all tasks of 16ARC. Requested by Professor Chang, three co- chair, Professor Chia- Cheng Fan, Professor Louis Ge and Dr. Wei F. Lee were appointed for the operation of CC. Professor Tai- Tien Wang and Professor Benson Hsiung were also assigned as secretary and deputy secretary of CC to assist all matters which CC has to be in charged. Under CC, several committees were formed, such as scientific committee, sponsorship/exhibition committee, YMPG/YGES committee and logistic committee and each committee has to undertake various tasks for the conference.

Having key personnel were assigned, the preparation of 16ARC then was started with full speed. Due to concerns of sustainable development, catastrophic natural geohazard and fast booming of geotechnical engineering in Asia recently, the main scheme of 16ARC is thus determined to be geotechnique for sustainable development and emerging market regions. It is also anticipated to make 16ARC to become an international platform to geotechnical professions to exchange knowledge and technology. Again, this is the

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largest event which CTGS organized after Southeast Asian Geotechnical Engineering Conference held in Taipei in 2009 so extremely efforts and heavy workloads are expected to be delivered by all colleagues in CTGS in order to host 16ARC successfully.

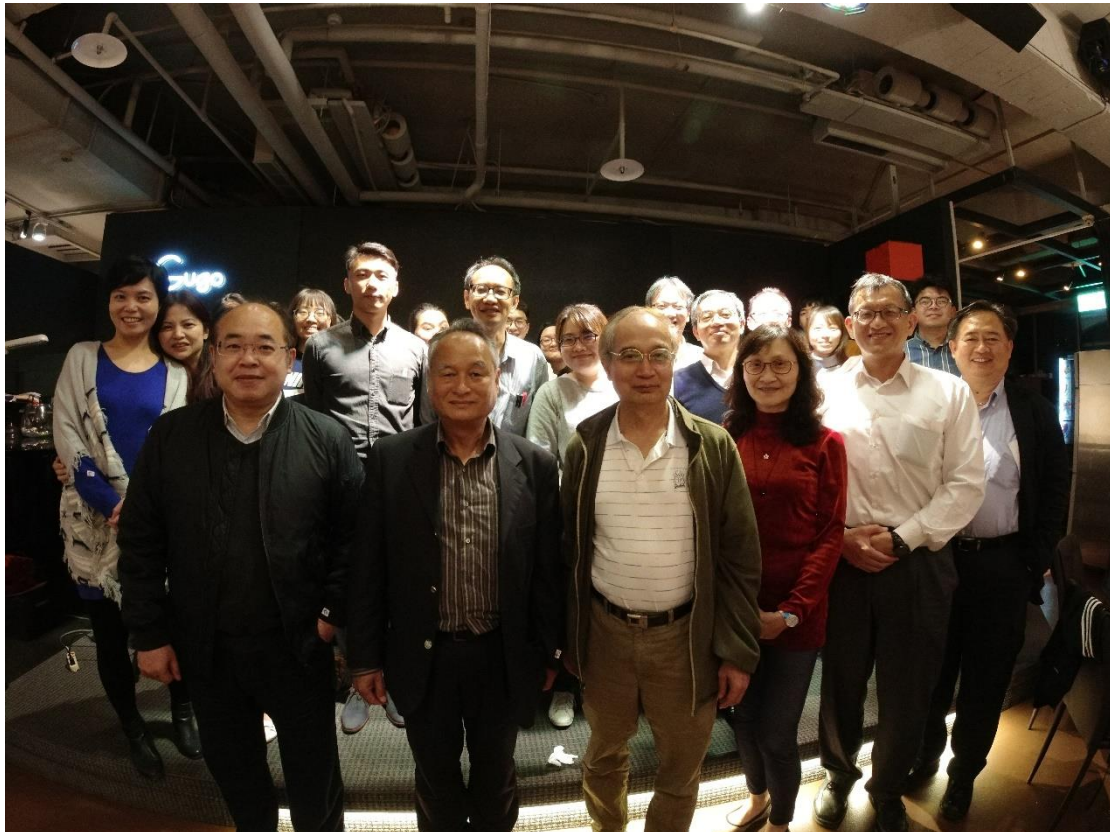


Photo 1. Photos of organizing committee and conference committee

At last, the conference venue was located in Taipei International Convention Centre, one of the most well-known venues in Taipei City to host international events, just a walking distance away to landmark building of Taipei City, Taipei 101.

1. Pre- conference Course

In order to maximum the benefit of attending 16ARC and also to achieve the purpose of technology transfer, an additional pre- conference course was arranged before 16ARC. The pre- conference course was held on 12th and 13th of October in National Taiwan University and programs of pre- conference include modern geomatics on geotechnical engineering, deep excavation and ground improvement in urban area, numerical simulation, mechanism, evaluation and monitoring technology of landslide etc. More than 50 persons in total participated the pre- conference.

2. Main Program

16ARC has 72 parallel sessions together with 492 papers presented in the conference. The main program of conference was lasted from the morning of 14th of October until late afternoon of 17th of October for 4 days. 17 speakers for keynote, invited and theme lectures were invited globally to share his/her professional knowledge with all 16ARC participants. In general, keynote, invited and theme lectures are arranged in the morning of every day of the program, except the last day (14th) and parallel sessions were arranged in the

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afternoon. Numbers of registered participants of 16ARC is 936 (among them, 578 were from overseas) but actual number of participants for the conference should be more than 1,000 which including many stop- by visitors to parallel sessions and exhibitions. These participants came from almost 40 countries all over the world, not only in Asia. These countries and regions are Australia, Austrian, Belgium, Bolivia, Canada, China, Denmark, Finland, France, Germany, Hong Kong, India, Indonesia, Israel, Japan, Kazakhstan, Malaysia, Mongolia, Nepal, Myanmar, New Zealand, Philippine, Russia, Singapore, South Korea, Sri Lanka, Syria, Thailand, United Kingdom, United States, Uzbekistan, Vietnam and of course Taiwan itself etc. Delegates of 16ARC are from government authorities, consulting firms, construction and manufacture companies.

Table 2 Numbers of participants of 16ARC (categorized by nationality)

No	Country	Number of Participants	Percentage of Participants
1	Afghanistan	1	0.11%
2	Australia	10	1.07%
3	Austria	2	0.21%
4	Belgium	2	0.21%
5	Bolivia	1	0.11%
6	Canada	1	0.11%
7	China	50	5.34%
8	Denmark	2	0.21%
9	Finland	2	0.21%
10	France	4	0.43%
11	Germany	2	0.21%
12	Hong Kong	15	1.60%
13	India	36	3.85%
14	Indonesia	13	1.39%
15	Iran	1	0.11%
16	Iraq	1	0.11%
17	Israel	1	0.11%
18	Japan	157	16.77%
19	Kazakhstan	23	2.46%
20	Macau	1	0.11%
21	Malaysia	26	2.78%
22	Mongolia	1	0.11%
23	Myanmar	2	0.21%
24	Nepal	1	0.11%
25	New Zealand	1	0.11%
26	Philippines	20	2.14%
27	Russia	13	1.39%
28	Singapore	34	3.63%

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No	Country	Number of Participants	Percentage of Participants
29	South Africa	1	0.11%
30	South Korea	93	9.94%
31	Sri Lanka	2	0.21%
32	Syria	1	0.11%
33	Taiwan	358	38.25%
34	Thailand	23	2.46%
35	United Kingdom	6	0.64%
36	United States	4	0.43%
37	Uzbekistan	2	0.21%
38	Vietnam	23	2.46%
Total		936	100%

The exhibition was held simultaneously with the conference and it has 45 stands to let various companies/professional organization/publishers to demonstrate and present their products/professional technology to attendances of 16ARC.

Many issues in geotechnical engineering were explored and discussed in 16ARC which include: soil properties and ground characterization, engineering geology and rock mechanics, dam, levee and embankment, slopes and debris flow, soil dynamics and geotechnical earthquake engineering, underground space and deep excavation, tunneling, foundation, geosynthetics, ground improvement, geoenvironmental engineering, offshore geotechnics, forensic geotechnical engineering, geotechnical risk and reliability, energy geotechnics and case histories.

Moreover, 16ARC also received supports from many technical committees (TC) and Asian technical committees (ATC). TC and ATC having parallel sessions organized in 16ARC include TC103, TC104, TC202, TC209, TC302, TC304, ATC1, ATC3, ATC6, ATC7, ATC10, ATC18 and ATC19. In addition to parallel sessions, both ATC3 and ATC6 held ATC meeting to discuss details of works and events which shall be delivered in the future.

Attentions and supports from ISSMGE on 16ARC should also be addressed here. Current and former presidents and vice presidents attending 16ARC include Prof. Charles Ng, Prof. E. C. Shin, Prof. Ikuo Tohwata, Prof. Roger Frank, Prof. Kenji Ishihara, Dr. Za- Chieh Moh, prof. Askar Zhussupbekov etc.

Many social events were covered and well- organized in 16ARC and many important delegates from government sectors participated these social events, such as Mr. Jeou- Rong Yan, Deputy Minister of Public Construction Commission (PCC), Taiwan, Dr. Cheng- Sheng Pong, Deputy Mayor of Taipei City, Mr. James Hsiao, Senior Negotiator of Office of Trade Negotiation (TNO) of Executive Yuan as well as Mr. Hsiung- Wen Chen, Deputy Mayor of Kaohsiung City in addition to honorable guests in geotechnical engineering field from Taiwan and many places in the world.

The opening ceremony of 16ARC was held in the morning of 14th of October with a 10-mins performance delivered by a well- known folk arts group, Chio- Tian Folk Arts Group. After that, Professor Chang- Yu Ou, chair of organizing committee, Professor Yong- Ming Tien, president of Chinese Taipei Geotechnical Society (CTGS), Professor Eun Chul Shin, vice president in Asia of ISSMGE, Professor Charges Ng, president of ISSMGE and Mr. Jeou- Rong Yan of PCC gave speeches and their greeting to 16ARC in opening ceremony.

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At the night of the same day, a welcome reception was hosted by 16ARC immediately after completion of all parallel sessions. Welcome speeches in the reception were given by Professor Chang- Yu Ou, Professor Eun Chul Shin, Dr. Cheng- Sheng Pong of Taipei City Government and Professor Benson Hsiung and it mainly aims to show appreciation of 16ARC to the support of all delegates, sponsors and exhibitors and hope the conference could run smoothly in the following days.



Photos during the opening ceremony

The conference banquet (Gala Dinner) was held in Grand Hyatt Hotel in the evening of 16th of October and nearly 300 guests attended the banquet. Several short speeches were delivered by Professor Yong- Ming Tien, Dr. Lie- Liang Chou, chairman of Taiwan Advisory Board of 16ARC, Professor Eun Chul Shin, Mr. James Hsiao of TNO and Dr. Wei F. Lee and these speakers mainly wanted all guests in 16ARC really enjoy his/her stay in Taipei during the conference period. Two additional events were carried out during the conference banquet: the 1st one event is guests were invited to stand by the stage and fill the glasses- tower with Champaign. The 2nd event is representatives of Diamond and Gold level sponsors were invited to be on the stage to receive appreciation certificates from Dr. Lie- Liang Chou and Professor Chang- Yu Ou.

Closing ceremony is the time to say good-bye to everyone and it was arranged at later afternoon of 17th of October, immediately after ISSMGE Bright Spark Lecture. Professor Eun Chul Shin, Professor Tian- Tien Wang and Professor Benson Hsiung made appreciation and summary speeches of 16ARC. Representatives from 3 future international events, Professor Askar Zhussupbekov for 17th Asian Regional Conference of ISSMGE in 2023, Dr. T. A. Ooi for World Tunnel Congress in 2020 and Professor John Carter for IS- Sydney 2021 were invited to be on the stage for promotions of these events. A lucky draw was offered by IS- Sydney which covers expense of return flight ticket and 4-night accommodation of one- person and the winner is

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Dr FuChen Teng from Taiwan. The whole ceremony was fully completed after a lucky draw and everyone is looking forward to seeing each other in next ARC.

Photo album of 16ARC are presented in:

<https://www.flickr.com/photos/185097181@N02/albums/72157711432542457>



Photos during the Gala dinner

3. YMPG, YGES and ISSMGE Bright Spark Lecture

Cultivating new-generation engineers has always been one of the most important tasks of the geotechnical societies. With the promotion of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), there is an International Youth Geotechnical Engineers Conference (iYGEC) and Asian Young Engineers Conference (AYGEC) every four years. The 16th Asian Geomechanics and Geotechnical Engineering Symposium (16ARC) committee plans the Young Geotechnical Engineer Session (YGES), and invites young engineers under the age of 36 from Asian member societies to submit papers. The purpose of the YGES is to enable delegates to exchange research ideas and share work experiences in geotechnical engineering profession. Among the YGES participants who are nominated as candidates of Young Member Presidential Group (YMPG), a competition was hosted by the 16ARC. The winner will deliver a Bright Spark Lecture at the closing ceremony. A total of 10 societies nominated 16 YMPG candidates. YGES is open for registration and a total of 6 young engineers have submitted papers. Participants included young scholars, young engineers, and outstanding doctoral students. It is worth noting that about 50% of them are female contestants, which shows that in the younger generation, more outstanding female engineers have emerged. The YMPG and YGES competition will generate 2 Bright Spark Lecture speakers and 1 YGES Best Presentation Award. The referee committee for YMPG was formed by 7 invited speakers in 16ARC. YMPG candidates were evaluated by their professional performance (CV), papers and presentations. The competition was held on the afternoon of October 14th. The participating young geotechnical engineers all showed outstanding

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performance. The winner of YMPG were: Prof. Anthony Leung (Hong Kong University of Science and Technology) and Prof. Ching Hung (National Cheng Kung University in Taiwan). The winner of YGES Best Presentation Award was Mr. Tsun-Ying Shih (Sinotech Engineering Consultants LTD.).



Presentations by the two ISSMGE Bright Spark Lecture Awardees (prof. Ching Hung on the left and prof. Anthony Leung on the right)

4. Luncheon Symposium

An innovation about international event of geotechnical engineering is made in 16ARC and there were 2 luncheon symposium delivered in 16ARC during lunch time on 14th and 15th of October. The 1st luncheon symposium was delivered by Mr. Mario A. Terceros from Expander Body International Inc. from Bolivia and the title of the presentation is “the future of deep foundations, today”.

The 2nd luncheon symposium was supported by Aurecon Group and Aurecon colleagues came from Sydney, Bangkok, Hong Kong and Singapore to host this lunch symposium to 500 assembled attendees on 16th of October. This is more than a presentation and 50 guests actively participated in experiencing Aurecon Design Wave and Innovate approach. It was used to unravel a fun, complex and hypothetical underground problem themed “Moving Civilization Underground”. It was amazing to see the great ideas from guests of luncheon symposium produced in the short 50 minutes of journey!

5. Taiwan Session

In order to share the development and research progress of the geotechnical engineering in Taiwan, two Taiwan Sessions were held at the 16ARC conference in the afternoon of October 15th. The two sessions were lectured by government officials. Their topic involves: tunnel-boring machine tunnel construction, soil liquefaction prevention, slope remediation and disaster investigation, smart emergency preparedness and disaster risk management, risk management of debris flow disaster, land subsidence prevention and adaptation strategies, etc. Moreover, in view of Taiwan's sensitive geology and frequent strikes of typhoons and earthquakes, each topic and study case is a good presentation of the challenges that Taiwan's geotechnical engineers have to face. It also came with discussions of solutions to the problems. I believe that it provides inspiration and reference value for all participants in the sessions. Meanwhile, these two successful Taiwan Sessions have impressed the international on the outstanding achievement of Taiwan's geotechnical engineering practice. A live video link of Taiwan session is seen in https://youtu.be/_vGlv_gQwXI

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Photos during the Taiwan session

6. 3rd ATC6 symposium and meeting

The 3rd International Symposium on Asia Urban GeoEngineering (3rd ATC6 Symposium) and committee member meetings were held during 16ARC in Taipei. The symposium was organized by the Asian Technical Committee 6 (ATC6) “Urban GeoEngineering” of ISSMGE, National Taiwan University (NTU), National Taiwan University of Science and Technology (Taiwan Tech), and National Kaohsiung University of Science and Technology. The aim of this symposium was to share ideas and experiences about urban geoenvironment in Asian countries among engineers, researchers, and academic professors. The emphasis was on improving our knowledge in meeting geoenvironment requirements for urban development and the need to protect and preserve our environment.



Group photo of the 3rd ATC6 symposium

A total of 17 papers were presented in two sessions: 10 papers were presented in the ATC6-1 Session on Monday, 14th of October and the rest were presented in ATC6-2 Session on Tuesday, 15th of October. It is worth noting that the ATC6 sessions have the most papers presented in 16ARC among all the ATC/TC which have oral presentation sessions. In these two sessions, the presenters and participants shared the new research results and the innovative technical development in the field of urban geotechnical engineering. The papers and presentations have covered a wide range of issues concerning on urban geoenvironment, including deep excavation, pile foundation, soil improvement, tunnel-boring machine (TBM)/ tunneling, and slope stabilization. The participants consisted of engineers, researchers, and academic professors from various Asian countries and regions, such as Mainland China, Taiwan, Hong Kong, Macao, Japan, Vietnam, Malaysia, Singapore and Indonesia.

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Following the presentations in ATC6-2 Session, the ATC6 committee member meetings were held to exchange ideas and experiences on the relevant topics. The future directions of research and development in the area of urban geotechnical engineering were vigorously discussed. The committee member meeting also decided that the next International Symposium (4th ATC6 Symposium) will be held by Professor Paulus Rahardjo and Professor Aswin Lim from Indonesia. It is expected to take place in Bali in March or April 2021.

7. Taiwan Moment - Home Coming

16ARC is the biggest geotechnical conference we ever had in Taiwan, and participants are from all Asian countries. It would be a great opportunity to get all friends together - especially who ever studied in Taiwan previously. That's why the conference held the "Home Coming Meeting: Taiwan Moment" for all Taiwan alumni. This event aims to get all Taiwan alumni and international students currently studying in Taiwan together, and share experience, build up connections etc. It was held on afternoon of 16-Oct-2019. More than 50 participants from Asian member societies participated the event. Several senior alumni shared their career experience and suggestions with young international students in Taiwan.



Photo of Home Coming session

8. Asian Council Meeting

Council meeting was held on the afternoon of 15th of October, in addition to activity reports from the member societies and Asian Technical Committees (ATC), the major task of the council meeting was to determine the host member society for the 17th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering (17ARC). There were two member societies competing for hosting the 17ARC. The votes were cast right after the presentations from Thailand and Kazakhstan. The Kazakhstan Geotechnical Society won over and will host the 17ARC. Professor Askar Zhussupbekov expressed sincere gratitude to the council members and committed to organizing a great conference like 16ARC. So far tentative venue and date of 17ARC which the Kazakhstan Geotechnical Society proposed is EXPO Congress Hall, Nur-Sultan City, Kazakhstan in 14th to 18th of August 2023. A dinner banquet was held in Grant Hyatt Hotel after the council meeting.

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Photos during the council meeting

9. Technical Tour

On 18th of October, the conference committee organized 4 half-day to one-day technical tours to visit different and unique projects which are (1) The Suhua Highway Improvement Project in Ilan County, (2) Construction of the Bridge and Tunnel Engineering for Ankeng Light Rail in New Taipei City, (3) Shimen Reservoir Sluicing Tunnel Project in Taoyuan City and (4) Taiwan Taoyuan International Airport Terminal 3 Area Project in Taoyuan City. 68 persons participated these technical tours in total. In addition, a special tour for YMPG/TGES delegates to ShunShan tunnel and Ilan was organized too in 16ARC.



Photos during technical tour

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10. Appreciation

In order to achieve a successful large-scale international conference, it definitely needs full supports from many parties and personnel, especially not having a similar scale international conference in geotechnical engineering held in Taiwan in the past. Thus, deeply appreciations from the heart must be expressed. First of all, key colleagues from 16ARC working team, led by Professor Chang- Yu Ou and Professor Der- Wen Chang, include Professor Chia- Cheng Fan, Professor Louis Ge, Dr. Wei F. Lee, Professor Tai- Tien Wang, Professor Benson Hsiung, Dr. Shih- Hao Cheng, Professor Pio- Go Hsieh, Professor Jian-ye Ching, Professor Ching- Jang Jeng, Dr. FuChen Teng and Dr. Ya- Chu Chiu and other 50 plus colleagues from academy and industry. It will not have such a great success without strong supports from these teammates.

Second, a special thank shall be given to colleagues from Elite Professional Conference Organizers, Mr. James Wu, Ms. Karen Lin, Ms. Kelly Ho, Ms. Sylvia Lu, Mr. Howard Chang, Ms. Amy Chen, Ms. Agnes Ko and Mr. Ryan ZhouHuang which helps a lot to settle all details of the conference, no matter conference itself or even food, transportation and accommodation. Further, up to 70 student helpers from National Taiwan University, National Taiwan University of Science and Technology, National Taipei University of Technology, Tamkang University, National Central University, National Chiao- Tong University, National Cheng- Kung University and National Kaohsiung University of Science and Technology were recruited to assist to operate the whole conference. Their great help is really appreciated. The collaboration of Chinese Taipei (Taiwan) Geotechnical Society, especially from the support from Professor K. J. Albert Shou, immediate past president and Professor Yong- Ming Tien, current president of the society, together with secretary of general, Dr. Shih- Hao Cheng (from 2017 to 2019) and Professor Wen- Yi Hung (since 2019) as well as secretary Ms. Chin- Yee Ng (since 2019) is really appreciated. I think 16ARC working colleague will not forget the time we drank the coffee made by Ms. Nita Lai, former secretary of CTGS (from 2015 to 2019) and then actively discussed what we have to do next in order to move 16ARC further. The assistance provided by Ms. Huei- Wen Yang of National Taiwan University is also very grateful.

Third, it is appreciated the support from ISSMGE, TCs, Asian Regional TCs, Corporate Members and Member Societies attending and organizing sessions and meetings in 16ARC. Fourth, the conference has up to 45 exhibitors and 115 co- organizers and sponsors from various sectors, such as government authorities, universities, research centres and companies. Their contributions are highly appreciated.

At last, it is the most grateful to all attendances participating 16ARC. Very coincidentally, a super typhoon Hagibis landed Japan just a day before opening ceremony of 16ARC. The typhoon caused up to 15 billion USD damage of Japan and of course many flights from Japan to Taiwan were cancelled. Many friends from Japan have to take various bypass flights via Seoul, Shanghai, Hong Kong, Manila and even Singapore to come to Taiwan to attend 16ARC once the airports in Japan started to operate as flights between Japan and Taiwan were not fully recovered, too many passengers have to fly to Taiwan but the seats in direct flights are limited. Without your participation, 16ARC would never became the most glorious spotlight in geotechnical field in 2019. We do wish 16ARC leaves everyone great memory not only about science, but also about Taiwan's food, scenery and hospitality.

11. Conclusion and looking for the future

Acting as organizing team of 16ARC, we are very honour to host this conference and delivered it successfully. In addition to the Geotechnique for Sustainable Developments and Emerging Market Regions presented in the conference, we sincerely hope many enlightening vision, knowledge exchange and friendship have been form during the conference, which would promise more collaboration in addressing the pertinent and cutting edge issues later. The completion of 16ARC is not only an ending point and also a beginning as it shows geotechnical engineering in Taiwan has reached a new era and it is not invisible globally anymore. Looking for the future, we believe we are seeking for more opportunities and challenges in geotechnical engineering.

Professor Der- Wen Chang, Professor Louis Ge, Professor Kuo- Hsin Yang, Professor Benson Hsiung, Dr. FuChen Teng, Dr. Shih- Hao Cheng - Chinese Taipei Geotechnical Society

Conference reports

International Conference on Geotechnical Engineering, Iraq, 19th – 20th Feb 2020

The International Conference on Geotechnical Engineering-Iraq (ICGE-Iraq 2020) had finished its work successfully in Baghdad, Iraq to discuss the Challenges, Opportunities and Problems of Application of geotechnical engineering in Civil engineering problems. The ICGE-Iraq was organized by Iraqi Scientific Society of Soil Mechanics and Foundation Engineering (ISSSMFE) with the cooperation of Civil Engineering Department (CED)/University of Baghdad (UoB). The ICGE-Iraq hold at University of Baghdad. ICGE-Iraq 2020 themes include, but are not limited to, the following research and development areas/fields (more than 120 manuscripts) classified into 11 sessions: Soil improvement; Sallow and deep foundation; Soil mechanics and dynamics; Unsaturated soils; Soil-structure interaction; Engineering geology; Geoenvironmental engineering; Applications of sustainability in geotechnical engineering; Application of remote sensing in geotechnical engineering; Transportation geotechnique; and Construction management.

ICGE-Iraq 2020 is a forum to bring together scientists, researchers, businesspeople, and industry professionals to discuss innovative ideas and diverse topics on next generation of sustainable Geotechnical and Environmental Engineering. ICGE-Iraq 2020 received 144 research manuscripts, where 120 of these manuscripts accepted and 22 were rejected. The papers submitted to the conference received from Iraq, Iran, Kazakhstan, Russia, Germany, USA, India, Turkey, Oman, Jordan and Algeria. The accepted papers will be handled by the publisher scientific.net (<https://www.scientific.net/>). More than 800 participants attended the conference in the opening ceremony and plenary session.



Hundreds of attendees, paper presenters, keynote speakers, exhibitors and tutorial participants, students have benefited in many ways from this conference. More than 120 scientific papers were presented by authors in oral presentations and posters from several countries. Five Invited, Keynote and Tutorial Speakers from different countries addressed to audience and shared knowledge and rich experience of applications of the Iraqi Scientific Society of Soil Mechanics and Foundation Engineering in their universities and companies. Organizing Committee organized also technical tour to Babylon historical site.

Conference reports

International Conference on Geotechnical Engineering, Iraq, 19th – 20th Feb 2020 (Con't)

The first day of conference started with Welcoming and Opening Ceremony in the main hall at the University of Baghdad. The following representatives of the president of University of Baghdad, co-organizing and hosting universities and supporting organizations addressed to participants with short welcoming speeches and brief summary about ISSSMFE, ICGE-Iraq, and ISSMGE by: Prof. Imad Alhassany/President of University of Baghdad, Iraq; Prof. Saba Alkhafaji/Dean of College of Engineering, University of Baghdad, Iraq; Assoc. Prof. Mahdi Karkush/President of the Iraqi Scientific Society of Soil Mechanics and Foundation Engineering, Iraq; and Prof. Askar Zhussupbekov/Past Vice-President of ISSMGE for Asia, President of Kazakhstan Geotechnical Society, Kazakhstan.



The president of UoB, the Dean of College of Engineering, and the president of ISSSMFE Assoc. Prof. Mahdi Karkush have handed shield of excellences to the Pioneers in geotechnical engineering in Iraq, organization and Scientific committees, and keynote speakers. Also, shields of excellence were granted from ISSSMFE to the president of UoB, vice-president of UoB, vice-president of university of technology-Iraq, dean of college engineering, and head of CED. Special thanks were extended to the members of ISSSMFE, staff of the CED, University of Baghdad which worked all together and extremely hard to prepare an outstanding conference. Tender thanks were expressed to the reception team and the master of ceremonies and voluntary students who did impressive and dedicated work. After that the conference continued with four keynote lectures:

- 1) **Foundations of Historical Buildings in St. Petersburg (Russia) and Some Examples of Heritage Preservation** by Prof. Rashid Mangushev/Head of Geotechnical Department. Saint-Petersburg State Architectural and Civil Engineering University, Vice-President of Russian Geotechnical Society, Russia
- 2) **Geotechnical Piling Construction and Testing on Problematical Soil ground of Kazakhstan and Russia** by Prof. Askar Zhussupbekov/President of Kazakhstan Geotechnical Society/Kazakhstan.
- 3) **Mosul Dam, Problems and Solutions** by Expert Eng. Riyadh Al-Naemi/Director of Mosul Dam, Iraq
- 4) **Influence of Initial Anisotropy, Stress Path and Principal Stress Rotation on Monotonic Behavior of Clean and Mixed Sands** by Prof. Kazem Fakharian/Amirkabir University of Technology/Tehran, Iran.

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International Conference on Geotechnical Engineering, Iraq, 19th – 20th Feb 2020 (Con't)



The second day started with three special lectures devoted for study cases in Iraq:

- 1) **Specifications and Scope of Use of Franki Piles in Iraq/Al - Saba' Concrete Piles Co. Ltd.**, Presented by Prof. Taha Yassen and Eng. Muhannad Al-Saba', Baghdad/Iraq.
- 2) **Behavior of Reinforced Ballast Layers of Railway Tracks**, Presented by Prof. Mohammed Yousif Fattah/University of Technology, Baghdad, Iraq.
- 3) **Summary on Geotechnical Aspects of Central Bank of Iraq Project**, Presented by consultants Engineers of Central Bank of Iraq.

After the special lectures, the oral presentation of papers was divided into morning and afternoon sessions, in each four halls were opened. Also, the poster presentation of papers was accompanied for first and second day of conference. At, the end of conference the following recommendations are declared:

- 1) The important role of the geotechnical engineers in the design and execution of different construction projects should be considered and enhanced. This role should not be overridden or substituted by other civil engineers, particularly when the encountered engineering problems are geotechnical ones.
- 2) Extensive efforts should be dedicated to bridging the gap between the scientific research institutions and the industry, in the field of geotechnical engineering. This can be done by carrying out more applied researches dealing with the field problems that emerge during the execution of different construction projects.
- 3) It is noticed that many of the current site investigation works and the resulting reports relevant to important construction projects are done by poorly qualified personals. Such reports may give misleading information about the real soil condition and cause undesirable consequences. The role of the ISSSMFE is therefore very important in evaluating and enriching these reports. The ISSSMFE should move toward the Professional Agencies and other related governmental offices to get a role in accrediting and issuing the licenses for the site investigation parties. It is recommended that all engineering governmental offices should not accept engineering consulting reports and designs unless signed by a geotechnical engineer who is licensed by both the Iraqi Engineers union (IEU) and the ISSSMFE. The IEU and the ISSSMFE shall prepare regulations for giving this license to geotechnical engineers based on the academic qualifications, the professional grade in the IEU, and the importance of the project subject.

Conference reports

International Conference on Geotechnical Engineering, Iraq, 19th – 20th Feb 2020 (Con't)

- 4) Due to the variety of problematic soils in Iraq, it is important to enhance the scientific research works that deal with improving such soils and giving the suitable solutions to different geotechnical problems that are expected during the construction on such soils.
- 5) It is important to encourage the Iraqi geotechnical engineers and scientists to write and review the scientific journal and conferences papers that are devoted to exposing and solving the geotechnical problems related to local Iraqi soils.
- 6) The members of ISSSMFE hope to get more roles in the committees of ISSMGE and increase the share of ISSSMFE papers in the International conferences of 20th ISSMGE conference in Australia (Sydney, September, 2021) and Kazakhstan (17th ARC on geotechnical engineering, Nur-Sultan, August, 2023)
- 7) As a result of the appealing success of the ISSSMFE in organizing the 1st International conference on Geotechnical Engineering- Iraq, planning and practical steps should be commenced to achieve the aim of hosting the Asian regional conference of the ISSMGE in Baghdad/Iraq, in real future as soon as possible.



Conference reports

International Conference on Geotechnical Engineering, Iraq, 19th – 20th Feb 2020 (Con't)



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ANDREA Engineering Tests Laboratory

Mahdi O. Karkush
President of Iraqi Scientific Society for Soil Mechanics and Foundation Engineering

Hot news

Bright Spark Lecture Award at 20ICSMGE Sydney

To promote young members of the ISSMGE to play a major role in various international and regional conferences, the President of ISSMGE, Professor Charles Ng, created the Bright Spark Award for promising young geotechnical engineers/academics to deliver keynote and invited lectures at these conferences.

The Young Member Presidential Group (YMPG) and the ISSMGE wish to invite all ISSMGE member societies to nominate their most promising young geotechnical engineers as candidates to speak at a keynote session at the 20th International Conference on Soil Mechanics and Geotechnical Engineering in Sydney, Australia (<http://icsmge2021.org>) in September 2021. Two young engineers will be chosen. They will have the opportunity to present their work as the recipient of the ISSMGE Bright Spark Lecture Award.

The awardees will be invited to present a 30 minute keynote lecture at the conference and write an associated paper, which will be included in the conference proceedings. The Bright Spark Award will be presented to young geotechnical engineers who produce mature research containing major contributions to the intellectual community.

The Award criteria are as follows:

- Age 36 or under on the last day of the conference (17 September 2021)
- Deadline of 1 June 2020 for nominations
- Limit of 3 nominees per member society
- Both English and French papers and lectures are welcome.

If you are interested in applying, please contact your ISSMGE Member Society. Previously recipients of this award and their biographies can be found at on the ISSMGE Awards webpage for the [Bright Spark Lecture Award](#).

ISSMGE Foundation reports

ISSMGE 16th Asian Regional Conference was organized by Chinese Taipei Geotechnical Society from October 14-18, 2019, at Taipei International Convention Center in Taiwan.

With the brief introduction of the ISSMGE members in the opening ceremony, the conference started with a welcome note and the presidential address. The contributions of ISSMGE towards the education, innovation and diversity were commendable. The efforts taken by the ISSMGE in providing free online courses and open access library to everyone were more constructive towards the knowledge sharing process.

The first keynote lecture was presented by Prof. Charles NG (President, ISSMGE). He discussed the fundamental framework to design multiple rigid barriers for resisting debris flows. The mentoring speech was delivered by Prof. Za Chieh Moh on the integrated solutions for geotechnical projects such as UAV and BIM techniques applied on Taipei Metro projects. Dr. Britta Bienen presented another keynote lecture, mainly discussing the design considerations and installation of wind farms. The Keynote lecture delivered by Prof. Ikuo Towhata was focused on a practical approach towards the sustainability of urban development.

The invited lectures were delivered by various dignitaries across the globe. In addition to this, two special lectures were presented by practising engineers as well. The conference was organized in such a fashion that the keynote, invited, and special lectures were presented in the forenoon session whereas the theme lectures and the technical sessions were conducted in the afternoon session. Various technical sessions were conducted in parallel sessions. The speakers were presenting their technical papers for about 10 minutes among the audience with two chair professors. Since the technical papers presented in the conference had been reviewed by the respective geotechnical society as well as the ARC technical committee, the quality of the papers was excellent. I had attended the TC103 - Numerical methods in geomechanics and SFA05 Soil dynamics and geotechnical engineering, which are my core areas of research. It was a great honour for me to present my research topic at this conference. With only technical sessions in the final day, the conference ended with the spark lecture and closing ceremony.

Apart from the technical aspects, the delegates of the conference were welcomed with a refreshing evening party on the first day of the conference. Gala dinner was arranged at Hotel Grand Hyatt on the third day of the meeting. A pre-conference short course and post-conference technical tour were also facilitated for the interested participants.



With the members of Indian Geotechnical Society



During visit to Exhibition center

Santhoshkumar Gunasekaran
Indian Institute of Technology Kanpur, Uttar Pradesh, India

ISSMGE Foundation reports (Con't)

The 17th European Conference on Soil Mechanics and Geotechnical Engineering was held on 1-6 September in Reykjavík, Iceland. According to the presentation of the European Vice President, 720 papers were published, and 400 papers were presented orally. The conference itself is the most prestigious event of the ISSMGE in Europe, therefore it is only organized in every 4 years. On the first day the presidents of the ISSMGE (Charles Ng) and IGS (Hreinn Haraldsson), also the former president of Iceland, Mr. Ólafur Ragnar Grímsson gave a welcome speech, and an Icelandic drum quartet SUMA did a short performance.

The topics of the 5 keynote lectures covered different geotechnical fields, as Suzanne Lacasse about Dams and risk assessment; Recent developments and applications; than Sigurdur Erlingsson: Geotechnical Challenges in Iceland, which was a very great overview about the country as well, followed by Antonio Gens: Hydraulic fills with special focus on liquefaction, and Jorge G. Zornberg introducing very demonstrative tests with geogrids in his Stabilization of Roadways using Geosynthetics lecture, finally was Lyesse Laloul: Energy Geotechnology; A New Era for Geotechnical Engineering. After the keynote lectures, Gioacchino Viggiani showed fantastic images of the geotechnical applications of X-rays and Maurice Bottiau highlighted the challenges of pile design as invited lecturers. While 20 ten minutes invited plenary papers made really colourful the morning sessions. The afternoon program contained app. 420 pieces 8 minutes presentation covering the entire field of geotechnics. There was also a separate Poster section hall, where participants could examine posters of papers. The Poster section hall and the Exhibition Hall gave a great opportunity to meet and talk with the geotechnical engineers from all around the world, shearing their ideas and experiences and also giving chance for new relations.

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.

Dr. János Szendefy, Budapest University of Technology and Economics



Conversation with other participants during the coffee break.



during the traveling in Iceland before and after the conference

*Dr. János Szendefy
Budapest University of Technology and Economics, Budapest, Hungary*

ISSMGE Foundation reports (Con't)

The conference was organised by the Geotechnical Division of South African Institution of Civil Engineering (SAICE). Activities for the 17th African Regional Conference on Soil Mechanics and Geotechnical Engineering started on Saturday 5th of October 2019 with ISSMGE board meeting and welcome function for the 7th African Young Geotechnical Engineers Conference, AYGE.

The next day was for the AYGE conference where Young Engineers from Africa and other parts of the world gathered to present papers on different works relating Soil Mechanics and Geotechnical Engineering. Also held on this was the ISSMGE council meeting which had in attendance the board members, Vice Presidents of member countries and Chairs of the board level committees.

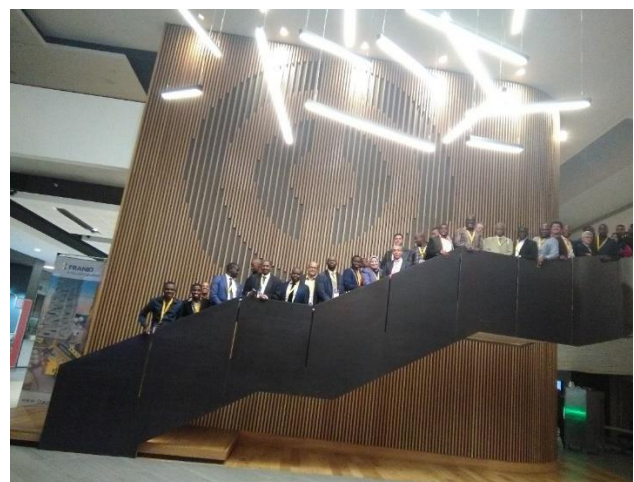
The opening ceremony of the ARC2019 took place on the 7th of October 2019 with opening performances which was followed by addresses from the Chair of the conference organising committee, SAICE Geotech Division President, Vice president Africa, ISSMGE president and IGS president. There was a book lunch by Franki (A keller Company) titled A guide to practical geotechnical engineering in Africa which was also distributed free to the conference participants. After the opening ceremony, different courses were given by eminent scholars covering Unsaturated Soils Mechanics, Design of Column-Supported Embankments, Sustainability in Geotechnical Engineering and Barrier System for Limiting Fluid Migration. I attended the course on Unsaturated Soil Mechanics and different sub-topics were delivered by renowned professors namely Prof David Toll, Prof Antonin Genes, Prof Charles Ng and Prof Samuel Ampadu. At the end of the courses, the meeting of the African Member Societies was held about 5:30hours.

The early hours of 8th October 2019 were for the Jennings and Keynote lectures delivered by prominent researchers. Paper presentations commenced in the afternoon at parallel sessions (1 & 2) with different themes. One of the social functions put together by the organisers was the conference gala dinner which started at about 19:00hours. This event was spiced with special drinks and food as well as performance from local cultural troupe settling a great atmosphere for the night.

Paper presentation continued on the 9th of October 2019 with parallel session (3 & 4). I presented my paper titled Settlement of Shallow Foundations in the Niger Delta during the parallel session 4. Another highlight of the day was the Bright Spark lecture delivered by Dr. Charles MacRobert. The conference came to an end with conference summary and closure discussion.



With some young participants from Africa



Myself (extreme left) and other participants from African Member Countries

Will Ibim Beresibo
University of Port Harcourt

ISSMGE Foundation reports (Con't)

The ASCE Geo Congress 2020 was organized by the Geo-Institute (G-I), a specialty membership organization focused on geo-professionals and the geo-industry, of the American Society of Civil Engineers (ASCE) at Hyatt Regency Minneapolis, Minnesota, USA. The theme of the conference was "Vision, Insight, Outlook". The conference was aimed at covering the topics varying from theoretical and numerical analysis to practical and field problems, and from the traditional and conventional topics to the emerging upcoming topics. The conference consisted of various programs which included the invited award lectures, special events, short courses, student programs, technical parallel sessions, exhibition and technical visits. The conference also provided an opportunity to earn Professional Development Hours (PDHs) to maintain the professional licensure of geotechnical experts while gaining relevant focused knowledge. Besides, a welcome reception was held on Tuesday 25th February and a banquet dinner was held on Thursday 27th February.

The conference started on 25th February 2020 with AGP Induction Ceremony. It was followed by the Opening remarks and H. Bolton Seed Award Lecture by Prof. Bruce L. Kutter on "Open issues about soil liquefaction from a perspective including physical model tests". The other award lectures delivered on the other days of the conference comprised of Mercer Lecture given by Prof. R. Kerry Rowe on "Geosynthetics for construction on soft foundation soils", Kersten Lecture given by Prof. Lyesse Laloui on "Energy Geotechnology: A new Era for Geotechnical Engineering Practice", Karl Terzaghi Lecture given by Professor Emeritus Edward J. Cording on "Observing and Controlling Ground Behavior during Tunneling" and Ralph B. Peck Award Lecture given by Prof. Anand Puppala on "Problematic Soils: Characterization Challenges, Innovative Solutions and Novel Monitoring Methods".

Several special events such as "Geo-PIT: Powerful, Informative Talks on Geotechnical Topics", "68th Annual Geotechnical Conference Dinner & Lecture", "68th University of Minnesota Geotechnical Conference Open Plenary Session" with two sessions on case histories, "Special Session: Canadian Geotechnical Society Technical Topics", "Special Session: COPRI Technical Topics" and "Special Session: Supporting Minnesota's Stadiums" were conducted by the organizing committee during the conference. A special session on "GeoDebate: Limit Equilibrium vs. Finite Element Analysis" attended by several geotechnical engineering students and experts was worthy to mention.

The technical sessions included papers on Computational Geotechnics, Deep Foundations, Earth Retaining Structures, Earthquake Engineering and Soil Dynamics, Risk Assessment and Management, Engineering Geology and Site Classifications, Embankments, Dams and Slopes, Geosynthetics, Rock Mechanics, Soil Properties and Modelling, Underground Engineering and Construction, Sustainability in Geoengineering and few others. Poster sessions on all the above listed topics were also arranged during the conference. In between the sessions and during the breaks, I could also visit the exhibition stalls that had interesting in situ techniques for underground excavation, ground improvement, dynamic testing and others.

Another feature of the conference was the full-day short courses which was held on 25th February to exchange research ideas and share work experiences in the geotechnical engineering profession. Courses on Geotechnical aspects of pavement design and construction, Stability & stabilization of natural and man-made slopes with climate change, Ground modification methods and their recent developments, Analysis of seismic CPT data to derive shear wave velocity profiles and An introduction to earthquake engineering computer simulation were attended by a large number of young geotechnical professionals.

In overall, the ASCE Geo Congress 2020 conference provided me a valuable opportunity to learn about the research being carried out in different universities and also to understand the different aspects of latest technologies of geotechnical engineering. This will help me in improving my area of research. I am beholden to ISSMGE Foundation for providing me with financial support for participating in this prestigious conference.

Shibayan Biswas
Indian Institute of Technology Bombay

ISSMGE Foundation reports (Con't)

The conference Geo-Congress 2020 was organized by the Geoenvironmental Engineering Committee of the Geo-Institute (G-I) of the American Society of Civil Engineers (ASCE) and Minnesota Geotechnical Society. The conference theme Vision, Insight and Outlook were aimed to provide direction to future research through thought-provoking and path-breaking research findings in geotechnical engineering. The annual lectures, technical sessions presented were in coherence with the theme of the conference.

On the first day, the short- courses were offered by the experts of the respective fields which was followed by the annual H. Bolton Seed lecture on the topic “Open Issues about Soil Liquefaction from a Perspective Including Physical Model Tests”. The lecture delivered by recipient Prof. Bruce Kutler was very informative and enriching. The lecture was followed by Welcome reception which was a joyful affair with the exchange of pleasantries by the attendees.

The technical and poster sessions were scheduled for second and third day. The Annual Mercer and Terzaghi lectures were delivered by the recipients on the second and third day respectively. The conversations with the presenters at the poster sessions was an enriching experience. The technical sessions were very informative with the crisp and comprehensive explanations by the speakers. The annual lectures were inspiring with a briefing on the progress in geotechnical engineering problem-solving skills over a period of more than four decades.

On the last day, the special technical sessions were conducted on emerging geotechnical topics like biogeotechnics, risk and modelling of tailing ponds and state of the art in unsaturated soil mechanics. The last day of the conference concluded with the annual Ralph B. Peck lecture by the recipient Prof Anand Puppala. The topic of the lecture is of great relevance to my institute which has been built over the problematic soil (expansive soils). Many Novel techniques like the usage of photogrammetry and drone technology caught the interest of the audience.

The exhibitors at the conference showcased their product with a briefing on the novelty of the principle involved in their design. Indeed, visiting the exhibitor stalls was a thought-provoking experience which is a reflection of the current status of the market needs in geotechnical engineering stream. Further, the conference provided me an ideal opportunity to interact with many young researchers and doctoral students which resulted in the exchange of ideas and feedback on our doctoral research work.



With fellow ISSMGE Awardee's from India



With Prof. Puppala, the recipient of Ralph B. Peck award

Mohammed Ashfaq
National Institute of Technology, Warangal, India.

Event Diary

ISSMGE EVENTS

Please refer to the specific conference website for full details and latest information.

2020

1st International Conference on Embankment Dams (ICED'2020): Dam Breach Modelling and Risk Disposal

Location: Beijing International Convention Center, Beijing, China,

Date: 05-06-2020 - 07-06-2020

Language: English

Organiser: ISSMGE TC210 on Embankment Dams;

Website: <http://iced-2020.host30.voosite.com/>;

Email: iced2020@163.com

International Conference on Challenges and Achievements in Geotechnical Engineering

Location: POLIS University campus, Tirana, Albania;

Date: 11-06-2020 - 13-06-2020

Language: English

Organiser: Albanian Geotechnical Society

Contact person: Erdi Myftaraga

Phone: +355699336911,

Email: emy@greengeotechnics.com

XIII International Symposium on Landslides (13 ISL) - Cartagena 2020

Date: 15-06-2020 - 19-06-2020

Location: Hotel Las Américas, Cartagena, Colombia

Language: English

Organiser: Colombian Geotechnical Society

Contact person: Juan Montero Olarte

Address: Transversal 28B No. 37-47

Phone: 57 1 2694260

Email: isl2020@scg.org.co

Website: <http://www.scg.org.co>

International Conference on Geotechnical Engineering Education

Location: Greece, Athens

Date: 24-06-2020 - 25-06-2020

Language: English

Organiser: TC306

Contact person: Marina Pantazidou

Email: gee2020athens@gmail.com

Website: <https://www.gee2020.org>

3rd International Conference on Geotechnical Engineering

Location: Cinnamon Grand, Colombo ; Sri Lanka

Date: 10-08-2020 - 11-08-2020

Language: English

Organiser: Sri Lankan Geotechnical Society ;

Contact person: Dr. JSM Fowze;

Email: slgssecretariat@gmail.com;

Website: <http://icgecolombo.org/2020/index.php>

Event Diary (Con't)**4th International Symposium on Frontiers in Offshore Geotechnics**

Date: 16-08-2020 - 19-08-2020

Location: University of Texas, Austin, United States

Language: English

Organiser: ISFOG 2020 Organising Committee

Contact person: Phil Watson

Address: The University of Western Australia

Phone: 0418881280

Email: phillip.watson@uwa.edu.au

Website: <http://www.isfog2020.org>

4th International Conference on Transportation Geotechnics (4th ICTG)

Location: Sheraton Grand Chicago, USA

Date: 30-08-2020 - 02-09-2020

Organiser: Professor Erol Tutumluer, 4th ICTG Chairman and Chair of ISSMGE TC 202,

Contact Information: Professor Erol Tutumluer,

Address: 1205 Newmark CEE Laboratory, MC-250 205 N. Mathews,

Phone: +1 (217) 333-8637,

Email: CITL-ICTG2020@illinois.edu,

Website: <http://www.conferences.illinois.edu/ICTG2020>

6th International Conference on Geotechnical and Geophysical Site Characterization

Date: 07-09-2020 - 11-09-2020

Location: Budapest Congress Center, Hungary , Budapest

Language: English

Organizer: Hungarian Geotechnical Society

Contact person: Tamas Huszak

Address: Muegyetem rkp. 3.

Phone: 0036303239406

Email: huszak@mail.bme.hu

Website: <http://www.isc6-budapest.com>

Email: info@isc6-budapest.com

27th European Young Geotechnical Engineers Conference and Geogames

Location: National Research Moscow State University of Civil Engineering, Russia, Moscow

Date: 17-09-2020 - 19-09-2020

Language: English

Organiser: Russian Society for Soil Mechanics, Geotechnics and Foundation Engineering

Contact person: PhD Ivan Luzin

Address: NR MSUCE, 26 Yaroslavskoye shosse

Phone: +7-495-287-4914 (2384)

Email: youngburo@gmail.com

Additional Information: <https://t.me/EYGEC2020>

Event Diary (Con't)

2nd International Conference on Energy Geotechnics

Location: Robert Paine Scripps Forum for Science, Society and the Environment. La Jolla, CA, USA. , Date : 20-09-2020 - 23-09-2020

Language: English

Organiser: John McCartney (UC San Diego, USA) and Ingrid Tomac (UC San Diego, USA),

Contact Information: ICEGT-2020 Secretariat,

Address: 9500 Gilman Dr., La Jolla CA,

Phone: +1-858-822-5212,

Fax: +1-858-822-2260,

Email: secretariat@icegt-2020.com,

Website: <https://icegt-2020.eng.ucsd.edu/home>

4th European Conference on Unsaturated Soils - Unsaturated Horizons

Location: Instituto Superior Técnico, Lisbon, Portugal

Address: Av Rovisco Pais, 1

Date: 24-06-2020 - 26-06-2020

Language: English

Organiser: IST, TUDelft and UPC

Contact person: info@EUNSAT2020.tecnico.ulisboa.pt

Website: <http://www.EUNSAT2020.tecnico.ulisboa.pt>

3rd International Symposium on Coupled Phenomena in Environmental Geotechnics

Location: Kyoto University, Japan

Date: 29-10-2020 - 30-10-2020

Language: English

Organiser: TC215 (Environmental Geotechnics), Japanese Geotechnical Society (JGS), and Kyoto University

Contact person: Takeshi Katsumi

Address: Yoshida-honmachi

Phone: +81-75-753-9205

Fax: +81-75-753-5116

Email: katsumi.takeshi.6v@kyoto-u.ac.jp

Website: <https://cpeg2020.org>

Email: cpeg2020@geotech.gee.kyoto-u.ac.jp

Geomeast 2020 International Congress and Exhibition - 08-11-2020 - 12-11-2020

Location: Cairo, Egypt

Language: English

Organiser: Soil-Structure Interaction Group in Egypt (SSIGE) ;

Contact person: Ms. Amany El-Masry, Address: Nasr City ;

Email: info@ssige.org;

Website: <http://www.geomeast2020.orgm>

10th International Conference on Scour and Erosion

Location: DoubleTree Washington DC - Crystal City, USA,

Date: 15-11-2020 - 18-11-2020

Language: English

Organiser: Geotechnics of Soil Erosion Committee, ASCE Geo-Institute;

Contact person: Ming Xiao (ICSE-10 Chair);

Address: Pennsylvania State University;

Phone: 010-814-865-8056;

Email: mxiao@engr.psu.edu;

Website: <https://www.engr.psu.edu/xiao/ICSE-10%20Call%20for%20abstract.pdf>

Event Diary (Con't)

6th International Conference on Forensic Geotechnical Engineering

Location: Indian Institute Technology Delhi, New Delhi, India

Date: 10-12 December 2020

Language: English

rganiser: TC 302 - Forensic Geotechnical Engineering

Contact person: Prof.Prashanth Vangla

Address: Department of Civil Engineering, IIT Delhi

Phone: +91 9611189007

Email: Prashanth.Vangla@civil.iitd.ac.in,

Website: <http://tc302-issmge.com/>

2021

14th Baltic Sea Geotechnical Conference 2020

Location: Clarion Hotel Helsinki, Finland

Date: 18-01-2021 - 20-01-2021

Language: English

Organiser: Finnish Geotechnical Society

Contact person: Leena Korkiala-Tanttu

Email: leena.korkiala-tanttu@aalto.fi

Website: <http://www.ril.fi/en/events/bsgc-2020.html>

Email: ville.raassakka@ril.fi

18th NGM Nordic Geotechnical Meeting

Location: Helsinki, Finland

Date: 18 - 20 January 2021

Contact person: Ville Raassakka

Email: ville.raassakka@ril.fi

Website: <http://www.ril.fi/en/events/ngm-2020.html>

3rd Pan-American Conference on Unsaturated Soils

Location: PUC-Rio, in Rio de Janeiro, Brazil

Date: 25-01-2021 - 28-01-2021

Organiser: Tácio de Campos (PUC-Rio), Fernando Marinho (USP), Gilson Gitirana (UFG)

Contact person: Tácio de Campos

Email: panam2021unsat@puc-rio.br

Website: <https://panamunsat2021.com>

Mediterranean Symposium on Landslides

Location: Congressi Partenope, Naples, Italy, Naples

Date: 07-06-2021 - 09-06-2021

Language: English

Organiser: Gianfranco Urciuoli (Università di Napoli Federico II), Giovanni Crosta (Università di Milano Bicocca), Luciano Picarelli (Università della Campania L. Vanvitelli)

Contact person: Università di Napoli Federico II

Email: medsymplandslides@gmail.com

Website: <https://medsymplandslides.wixsite.com/mssl2021>

Event Diary (Con't)

The 2nd International Conference on Press-In Engineering 2021, Kochi

Location : Kami Campus, Kochi University of Technology, Japan

Dates: 19-21 June, 2021

Language : English

Organiser : International Press-in Association (IPA)

Contact person: ICPE2021 Organizing Committee

Address: 5F, Sanwa Konan Bldg, 2-4-3 Konan, 2-4-3 Konan, Minato-ku

Phone: +81-(0)3-5461-1191

Fax: +81-(0)3-5461-1192

Email: icpe2021@gmail.com

Website: <https://icpe-ipa.org/>

The 1st International Conference on Sustainability in Geotechnical Engineering - Geodiversity & Resilience (1ST ICSGE'21)

Location: The Congress Center of LNEC Lisbon, Portugal , Lisboa

Date: 27-06-2021 - 30-06-2021

Organiser: The National Laboratory for Civil Engineering (LNEC)

Contact person: LNEC Congress Centre Secretariat

Address: Avenida do Brasil, 101 1700-066 Lisboa

Phone: (+351) 218 443 483

Email: formacao@lnec.pt

Website: <http://icsge.lnec.pt/>

TC204: Geotechnical Aspects of Underground Construction In Soft Ground - TC204 Cambridge 2020

Date: 29-06-2020 - 01-07-2020

Location: University of Cambridge, United Kingdom

Language: English

Organiser: University of Cambridge

Contact person: Dr Mohammed Elshafie

Address: Laing O'Rourke Centre, Department of Engineering, Cambridge University

Phone: +44(0) 1223 332780

Email: me254@cam.ac.uk

6th Geochina International Conference 2021

Location: NanChang, China

Date : 19-07-2021 - 21-07-2021

Organiser : East China Jia Tong University in Cooperation with Chinese Ministry of Education, GeoChina Civil Infrastructure Association, University of Oklahoma

Contact person: Dr. Dar Hao Chen ; Address: Texas Transportation Institute ; Email: d-chen@tti.tamu.edu;

Website : <http://geochina2021.geoconf.org>; Email : geochina.adm@gmail.com

20th International Conference on Soil Mechanics and Geotechnical Engineering

Location: International Convention Centre Sydney, Australia

Date :12-09-2021 - 17-09-2021

Language: English

Organiser: The Australian Geomechanics Society;

Contact person: ICMS Australasia;

Address: Level 9, 234 George Street Sydney NSW 200 ;

Email: emmab@icmsaust.com.au;

Website: <http://www.icsmge2021.org/>

Event Diary (Con't)

The 9th International Congress on Environmental Geotechnics

Location: Chania, Crete island, Greece,

Dates: 26-06-2022 - 29-06-2022

Language: English

Organiser: Chair: Dimitrios Zekkos, University of California at Berkeley ; zekkos@berkeley.edu

Contact person: Dr. Rallis Kourkoulis

Email: rallisko@grid-engineers.com

Website : <https://www.iceg2022.org/>

NON-ISSMGE SPONSORED EVENTS

2020

DFI Deep Mixing 2020 - POSTPONED - Please refer to the DFI website for updates

Dates: 15-06-2020 - 17-06-2020

Location: TBD, Gdansk, Poland

Organizer: Deep Foundations Institute

Contact person: Theresa Engler

Address: 326 Lafayette Avenue, Hawthorne, NJ 07506, USA

Phone: 19734234030

Fax: 19734234031

Email: tengler@dfi.org

Website: <http://www.dfi.org>

Email: staff@dfi.org

16th International Conference of the International Association for Computer Methods and Advances in Geomechanics - IACMAG

Location: Politecnico di Torino Conference Centre, Italy ,

Date: 29-06-2020 - 03-07-2020 English

Organiser: Politecnico di Torino

Contact person: Symposium srl

Address: via Gozzano 14

Phone: +390119211467

Email: info@symposium.it

Email: marco.barla@polito.it

7th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics

Location: The National Science Seminar Complex, India , Bengaluru

Date: 13-07-2020 - 16-07-2020

Organiser: Indian Society of Earthquake Technology

Contact person: Dr Ravi Jakka

Address: Department of Earthquake Engineering, Indian Institute of Technology Roorkee

Phone: + 91-1332-285591

Email: jakkafeq@iitr.ac.in

Website: <http://7icragee.org/index.php>

Event Diary (Con't)

Recent Trends in Geotechnical and Geo-Environmental Engineering and Education

Location: Bali, Indonesia

Date: 15 - 17 July 2020,

Organiser: RTEE Conference

Contact person: Amy Marshall ; Email: support@rtgee.org; Website : <https://rtgee.org/>

DFI 45th Annual Conference on Deep Foundations

Dates: 13-10-2020 - 16-10-2020

Location: Gaylord National Resort & Convention Center, Oxon Hill, MD, USA

Organizer: Deep Foundations Institute

Contact person: Theresa Engler

Address: 326 Lafayette Avenue, Hawthorne, NJ 07506, USA

Phone: 19734234030

Fax: 19734234031

Email: tengler@dfi.org

Website: <http://www.dfi.org>

Email: staff@dfi.org

Geoamerica 2020

Location: Windsor Convention Expo Center, Brazil , Rio de Janeiro

Dates: 26-10-2020 - 29-10-2020

Language: English

Organiser: International Geosynthetics Society

Contact person: André Estêvão Silva

Email: geoamericas2020@geoamericas2020.com

Website: <http://www.geoamericas2020.com>

Fifth World Landslide Forum

Dates: 02-11-2020 - 06-11-2020

Location: Kyoto International Conference Center, Kyoto, Japan

Organizer: International Consortium on Landslides

Contact person: Ryosuke Uzuoka

Address: Gokasho

Phone: +81-774-38-4090

Email: uzuoka.ryosuke.6z@kyoto-u.ac.jp

Website: <http://wlf5.iplhq.org/>

Email: secretariat@iclhq.org

3rd International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction

Location: Campus Hamburg University of Technology, Germany

Dates: 24-03-2021 - 25-03-2021

Language: English

Description

Organiser: Anura3D MPM Research Community, co-hosted by Hamburg University of Technology

Contact person: Deutsche Gesellschaft für Geotechnik e.V. / German Geotechnical Society

Email: service@dggt.de

Website: <http://www.mpm2021.eu>

Event Diary (Con't)

The Third International Conference on Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering

Location: Dokuz Eylul University, Izmir, Turkey,

Dates: 17-06-2021 - 19-06-2021

Organiser: Dokuz Eylul University

Contact person: Tugce Ozdamar Kul

Address: Dokuz Eylul University

Phone: +905325164800

Email: egrwse2020@gmail.com

Website: <http://www.egrwse2020.com>

FOR FURTHER DETAILS, PLEASE REFER TO THE WEBSITE OF THE SPECIFIC CONFERENCE

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