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INTRODUCTION

The Research Laboratory in Geotechnical Engineering and Georisk (RLGEG, identifier LR14ES03) was launched in 2014 as an upgrade of the previously established Geotechnical Engineering Research Team (GERT) founded in 2005 at the National Engineering School of Tunis (NEST).

Research themes covered by the GERT were oriented to soil mechanics, engineering geology and applied geophysics. In 2010, environmental geotechnics and rock mechanics were the two added themes and formed the main orientations developed up to 2017 within the RLGEG.

Main activities led in the former GERT were concretized by publications of journal papers and organization of three international Geotechnical Engineering conferences labelled "*Innovative Geotechnical Engineering*". Those international conferences held in 2008, 2010 and 2013 were attended by participants from more than 20 countries spread over the six continents [1], [2] and [3]. Papers in those proceedings were accepted after peer review by selected members of the scientific committees. Each proceeding included more than 50 papers from which several papers in revised form were published in specialized international journals.

Research activities within the RLGEG had been supported, first, by two collaborative research projects between French and Tunisian universities and, second, by two projects of valorization of research results related to reinforced soils by columns and sediments' valorization both partnered with national institutions.

Research highlights

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RESEARCH PROJECTS

There are four main research projects: soil mechanics; rock mechanics; environmental geotechnics and geomatics-georisk.

Soil mechanics

The research program includes the design of foundations of civil engineering structures, analysis of disorders affecting dams and environmental problems faced by national authorities. Main components of foundations design comprise the ground improvement techniques and the design of shallow and deep foundations. Throughout those themes special attention is made, first, on soil characterization by establishing correlations for typical Tunisian soils, especially Tunis soft clay. Second, it is aimed to establish advanced methods of design related to improved/reinforced soils.

Ground improvement: related techniques are columnar-reinforcement (stone columns, deep soil mixing, and sand compaction piles), geodrains, vacuum consolidation. Feasibility of those techniques is investigated in particular for Tunis soft clay, a well-known problematic soil. For reinforced soil by columns, focus is made on the optimization of design of floating columns which requires solving the consolidation of unreinforced compressible layers. Meanwhile, accelerating the consolidation by combining the improvement using geodrains and vacuum consolidation.

Shallow and Deep foundations: The design of piles and the study of behavior deep foundations are undertaken for several purposes. Characterization of soil-pile interface, installation of piles using high injection technology and response of piles subjected to cyclic lateral loading represent the most analyzed aspects in current soil mechanics applications. It is aimed to propose updated design methods by taking into account realistic soil parameters (especially for Tunis soft clay) avoiding underestimated pile capacity. Dams foundations: The network of Tunisian dams was built since the sixties. After decades, several pathologies were identified, especially, on earth dams. Synthesis of disorders of affected dams followed by repairing solutions, as rehabilitation alternatives, were investigated in the RLGEG since 2010 to date. In this context, numerical investigations using FE codes aided in understanding the mechanism of dams' behavior linked to slope stability subject to water flow.

Environmental geotechnics: The first crucial problem is the characterization and valorization of dredged marine sediments, either polluted or unpolluted, of Tunisian coastal cities: Rades, Gabes and Zarzis harbors. Intensive research program was led between 2012 and 2018 throughout a collaborative action, supported by the Tunisian Marine Authority and Harbors, with the "Ecole Centrale de Lille" (France). Various approaches and several contributions were developed in suggesting valorization solutions for buildings applications and road projects. Second challenge is linked to the management of high phosphogypsum (PG) embankments which pose serious lands and climate pollutions. Research led in the RLGEG in collaboration with the Tunisian Chemical Group, since 2012, addressed two main concerns. First concern is the determination of maximum height of PG embankments for delaying the occupation of new lands by such polluting residue. Second concern is related to the change of PG deposit method (from the dry to the wet one) for ensuring a better global behavior in time of very high PG embankments. Such predictions will quite helpful to decision makers to efficiently manage phosphogypsum challenges.

Rock mechanics

Rock mechanics team was initially established to address problems related to characterization and integrity of fractures rocks crops, which represents a key interest for quarrying industry. The commitment to excellence of the rock mechanical engineering group has led to elevate the scope of our research work to overlook the implication of rock mechanics in the production and exploitation of natural resources as a valuable addition to the typical geotechnical application. This cross-disciplinary approach enables the exchanges of expertise between both fields of research, natural resources and geotechnics, implying exploration of innovative solutions to meet specific needs and concerns of various range of industries. The rock mechanics research program includes the following themes.

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Sonic wave propagation and the numerical homogenization of fractured rock crops: This study aims to numerically addressing the homogenized 3 on problematics encountered during most of the studies investigating integrity of fractured crops. Based on field survey collected in accordance with the scanline method, a statistical study is initiated in order systematically classify the fractures into major directional families. The fractures network was initially generated all over the rock crops before numerically calculating the homogenized parameters, e.g. Young modulus, etc. The numerical program, HLA_Dissim, that was developed in this regard showed a good agreement between predictions and estimations from correlations. The workflow adopted for previous program is illustrated in Figure 1.

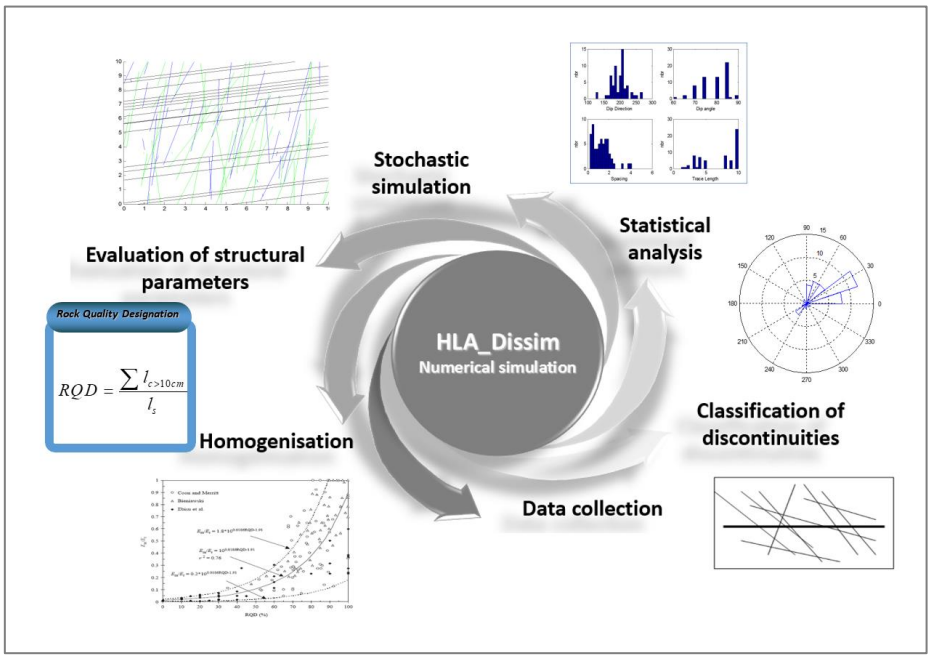

Figure 1. Workflow of HLA Dissim program

Assessment of Long-Term Integrity of Naturally Fractured Carbonate Reservoir-Well System "Hasdrubal" Field as Case Study: Production mechanisms are well investigated for classic reservoirs, e.g. sandstones. Less effort has been made to understand the production behaviour of fractured carbonate reservoirs and associated reservoir-well system integrity. Deliverability of such formation are dominantly governed by the set of fractures networks rather than the inherent properties of the gas and oil bearing layers. Reservoir compaction and induced closure of fractures will not only compromise deliverability of the reservoir but; also, may bring the well system to its yielding point and such result in local or total damage of the well structures: casing and cement sheath. In this view, it is aimed to study the reservoir integrity of Hasdrubal field, a naturally fractured carbonate reservoir located in the offshore of Tunisia; and the impact of pore pressure depletion on its constituting fractures network, and reciprocally the associated hydrocarbon production trend. With the collaboration of Shell Tunisia, industrial operator of Hasdrubal field, a three-dimensional (3D) geo-mechanical model was built to estimate strains and fluctuations of the stress state governing the field, as result of depletion over the life span of the field. The 3D geomechanical model built with the Petrel software falls short in estimating the behaviour of fractures as response to stresses changes thus the need to another model, which would be a two-dimensional model (Figure 2). However, the results yielded from the 3D model will be incorporated in the 2D as initial loading input in order to appraise the behaviour of the network fractures (closure or opening). Finally, the well skeleton structures, casing and cement sheath, are appraised for stability that may be compromised due to reservoir compaction.

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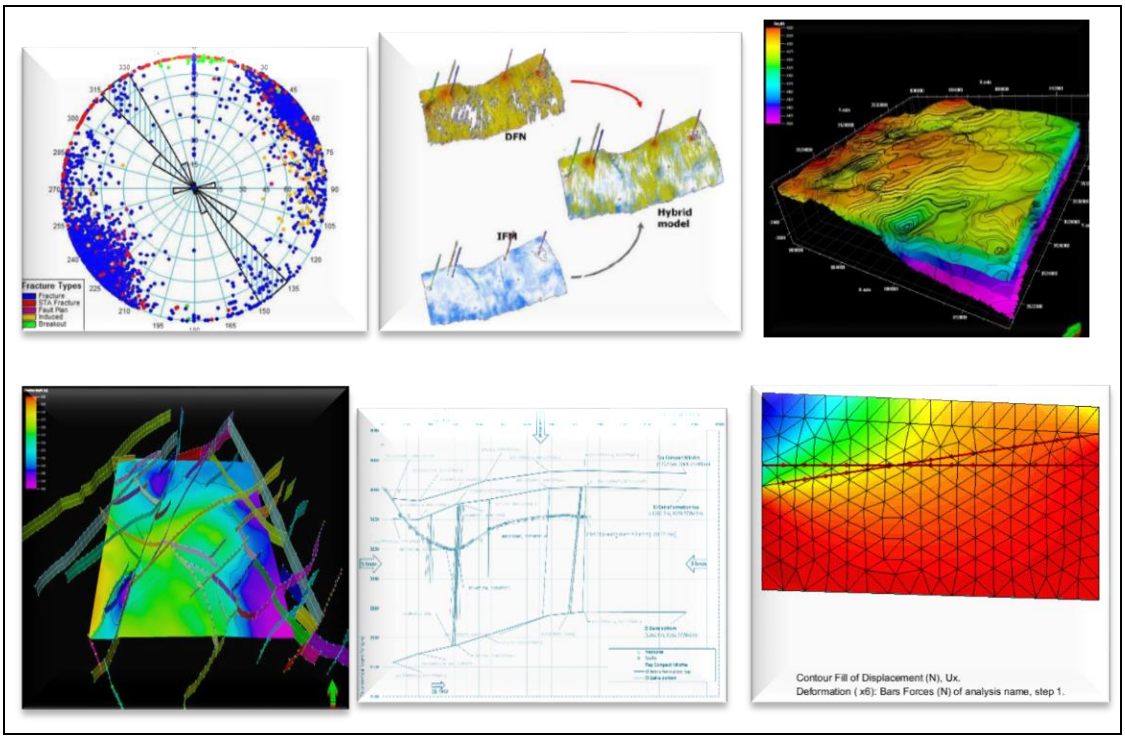

Figure 2. Predictions of network fractures

A micro-mechanical damage approach for anisotropic rock thermo-mechanical behavior under indentation: This study aims to understand the fragmentation of stiff rock by indentation during drilling by tricone drill bit and it was supported by appraisal of the impact of the rock mineralogy and textures on the behavior of studied rocks. Initially, the homogenization of rock mechanical properties that was achieved in previous research work was validated in current study before analytically formulate damage increment in isothermal conditions. Then, homogenization of effective thermal properties was carried out prior to investigate the heat effects on stress and damage increments. Finally, the numerical model developed in current research work was validated by results of indentation experiments conducted on anisotropic rock (Figure 3).

Characterization and quality control of quarry products through non-destructive testing: It is the very recent theme which addresses the characterization of rock mechanical properties of different limestone rocks, extracted from several Tunisian quarries, at a microstructure scale. The induced micro-cracking by crushing operations will be carried out in a typical quarry. In particular, the monotonic and cyclic effect on intrinsic rock cracking (i.e. porosity of pores and crack porosity) is appraised.

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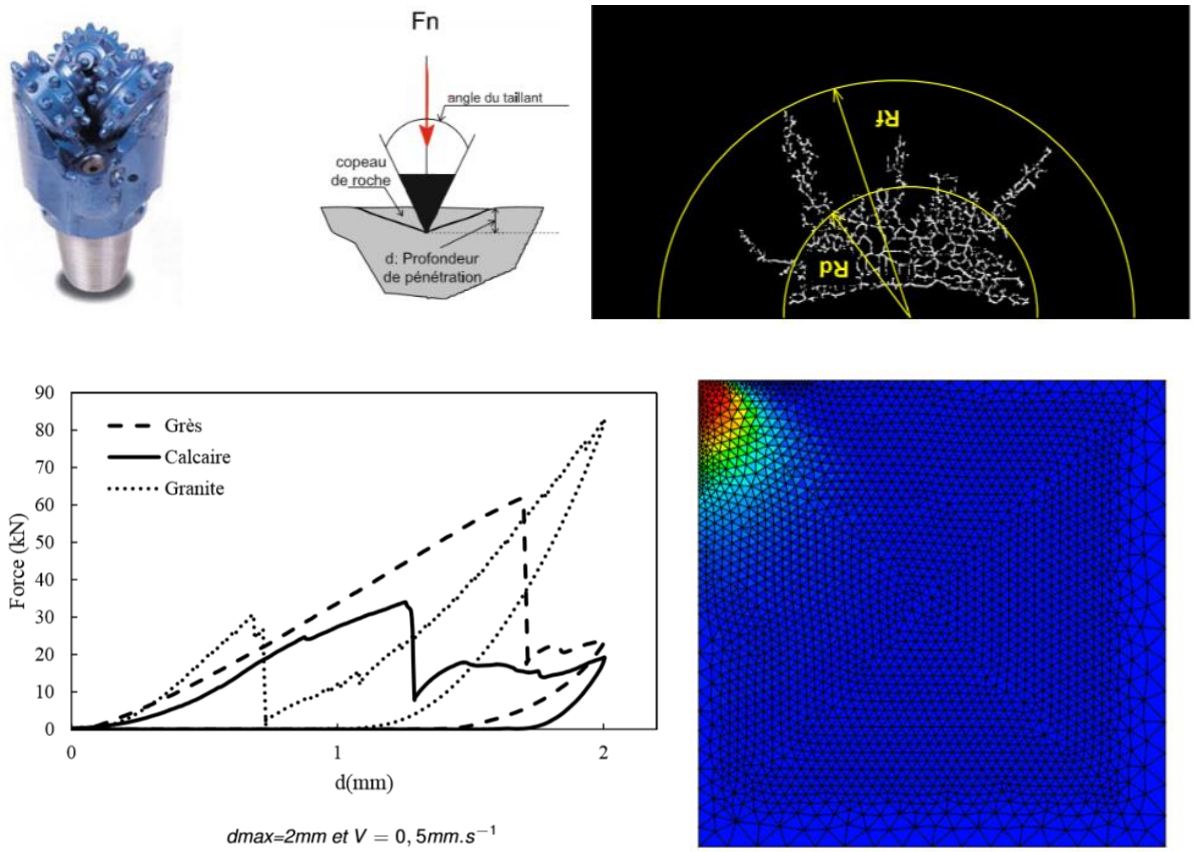

Figure 3. Validation of numerical predictions by indentation test results

Geomatics and Georisks

This very recent field of investigation is very enriching to encompass the geotechnical engineering applications at big scale. Cartography and spatial analysis of natural risks towards a better knowledge of natural hazards "Mapping and Spatial Analysis of Natural Hazards" is the main goal of researchers interested in geomatics and georisks applications. As global climate change and anthropogenic pressures on the environment are increasing, the concepts of ecosystem management, protection and sustainability are currently developing at a high level. It is the general framework in which research activities are focusing, in an attempt to cartography some natural risks which are widespread in the Mediterranean basin.

Erosion and Soil loss "ESL", silting, flooding, landslides, coastal degradation, recent deformations, etc.: Considering, first, the discrete temporal dimension of the relief evolution and, second, the mechanism of the recent deformation, scenarios of simulation of deformation are projected. In addition, it would be possible to set up a map of recent deformation for the whole of Tunisia followed by thorough field observations and geophysical subsurface data. Then, the tectonic response to those morphometric indicators according to the physiography and the field geology can be estimated. It remains enigmatic how to proceed for extracting lineaments in the Quaternary deposits where traditional mapping of tectonic accidents is missing. In this context, the plain of Kasserine, Central Tunisia, is typical case of interest, and for which the Quaternary deposits can sometimes reach 700 m of thicknesses.

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Mapping the seismic hazard and modeling erosion and soil losses :Expected results are the reduction of the effects of erosion and landslides can be undertaken by two major domains of actions.

First, is the development of the cartography of erosion and landslides hazards by monitoring actions in delayed time (prevention and repairing). Whatever the type of undertaken action, the fight against those risks is a priority in a sustainable environmental and agricultural irreversible policy; indeed, the soil is a non-renewable natural resource at the historical time scale.

Second, is the implementation of methodological approach for monitoring land and marine Environments. Thus, the establishment of a high-resolution 3D cartography of terrestrial and maritime environments using the LIDAR technique (mobile or airborne) can be performed.

Third objective is the development of a quantitative topographic approach for morphotectonic analysis. Expected result is the extraction of lineaments by an intelligent methodology combining and merging several approaches of remote sensing and morphometry, since each of them provides a partial solution to the stated problem. Indeed, from research studies on the approach dealing with the extraction of lineaments, it has been shown that the likelihood between the real model and the generated model does not exceed 50%. Improving the implementation of these extraction methods represents the main objective of the research program.

SCIENTIFIC PRODUCTION

Between 2014 and 2018 members of the RLGEG published 23 JCR indexed papers; 23 Scopus indexed papers in international journals, one published book and 15 book chapters. They also contributed to 51 defended PhDs and 4 defended MSc. Members of the RLGEG are also active reviewers in many specialized journals; some members are associate-editors and members of the editorial committees of recognized journals.

INTERNATIONAL IMPACT OF THE RLGEG's SENIORS

- Professor Mounir Bouassida is an appointed member of the ISSMGE board 2017-2021. He in managing the program of ISSMGE virtual university set up of courses from delivered webinars).
- Professor Essaieb Hamdi is the chair of the Tunisian Society for Rock Mechanics which is member of the ISRM since 2014.
- Professor Wissem Frikha is member of the international committee on pressuremeter.
- Professor Noamen Rebai is the president of Tunisian Society of geomatics.

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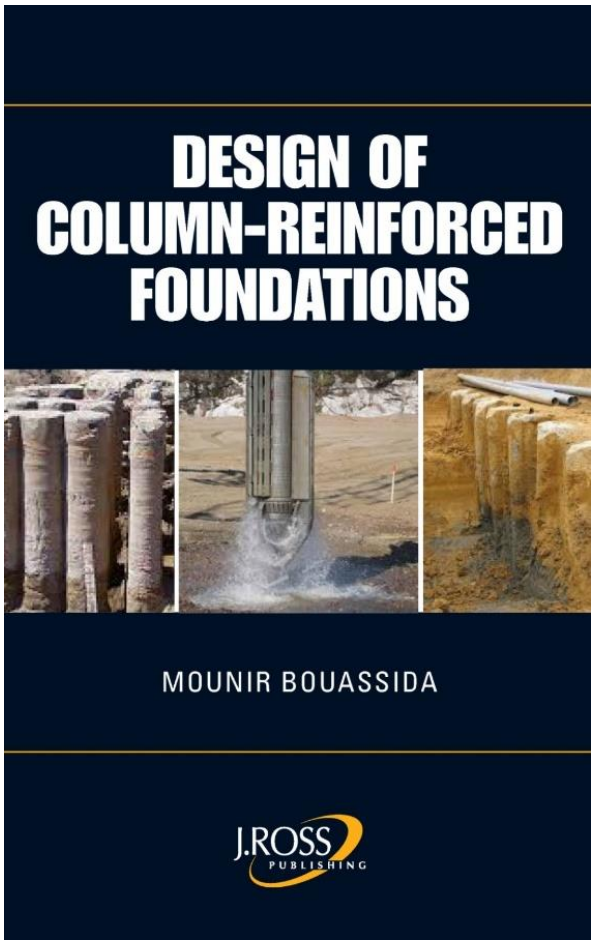


Report from member society

New cabinet of the Hong Kong Geotechnical Society (HKGES)

In January 2019, a new cabinet of the Hong Kong Geotechnical Society (HKGES) has been formed for the session 2018/2020, led by Ir Dr Johnny Cheuk.

The primary aim of the HKGES is the exchange and dissemination of knowledge and experience amongst geotechnical practitioners in the Hong Kong Special Administrative Region (HKSAR) with the view of contributing to the achievement of excellence in geotechnical engineering for the benefit of society. The Hong Kong Geotechnical Society also aims to promote international cooperation amongst engineers and scientists for the advancement of knowledge in the field of geotechnics and its engineering applications.

The HKGES promotes its aim by holding regular local technical meetings, site visits and seminars. It also organizes and participates in the organisation of international and regional conferences and symposia, exchange information with counterparts, and cooperates with other organisations whose aims are complementary to those of the HKGES, the Geotechnical Division (GD) of the Hong Kong Institution of Engineers (HKIE) and the ISSMGE. More detailed information about the HKGES can be found in the website http://www.hkges.org/home.vbhtml.

Members of the HKGES can enjoy numerous benefits and rights, including:

- become a member of the ISSMGE automatically;
- access to ISSMGE publications, such as bulletins and reports released by ISSGEM Technical Committees;
- submit papers to conferences and symposia organised by ISSMGE and its Technical Committees;
- pay lower registration fees for attending conferences, worksops and seminars;
- access to the work of the ISSMGE in various fields, including education, communications and technology transfer;
- be a Hong Kong representative in one or more of the 38 ISSMGE Technical Committees working on specific topics;
- be nominated and sponsored by the HKGES to attend events of the ISSMGE, such as the South East Asian Geotechnical Conferences, Asian Regional Conferences and Young Geotechnical Engineers Conferences;
- be nominated for the awards and honours presented by the ISSMGE and HKGES;
- build lasting contacts with geotechnical practitioners all over the world.

The HKGES is composed by a group of 14 core members from industry and academic sectors.

Ir Dr Johnny C. Y. CHEUK
President

Johnny is a chartered civil and geotechnical engineer. He obtained his PhD from Cambridge University and is currently Director of Operations and Executive Director of the geotechnical operations of AECOM in Hong Kong. Johnny handles a wide spectrum of geotechnical projects for public and private clients. Recent major projects include the West Kowloon Terminus of the Express Rail Link, the Tuen Mun – Chek Lap Kok Link and the Pilot Study of Underground Space Development in Selected Strategic Urban Areas. Johnny was named the Young Engineer of the Year in 2013 by the Hong Kong Institution of Engineers (HKIE). Johnny has also won numerous local and international awards, including the Tan Swan Beng Best Paper Award by the Southeast Asia Geotechnical Society, R.M. Quigley Honourable Mention by the Canadian Geotechnical Society and the British Geotechnical Association (BGA) Medal. He is a HKIE Fellow and an Adjunct Professor at the University of Hong Kong.

Report from member society

New cabinet of the Hong Kong Geotechnical Society (HKGES) (Con't)

Ir Tony Y. K. HO
Vice President

Tony is serving in the Development Bureau, the Government of the HKSAR. He has been practicing in the field of civil and geotechnical engineering for over twenty years. His professional experience covers many different aspects, including landslip preventative and mitigation, natural terrain hazard assessment, ground investigation and laboratory testing, site formation, foundation and underground excavation. In recent years, he has been actively promoting the use of rock cavern and underground space for sustainable city development and steering a number of strategic studies, including formulation of Cavern Master Plan and related policy initiatives to facilitate wider applications of underground space in Hong Kong. Tony has also supervised a number of projects concerning the use of innovative and smart technologies (e.g. remote sensing, Virtual Reality and Artificial Intelligence) for various engineering applications.

Ir Patrick A. CHAO
Immediate past president

Patrick is a Registered Professional Engineer (Civil, Geotechnical) in Hong Kong and has practiced in the field of civil and geotechnical engineering since 1986 after obtaining his BEng in Civil Engineering in the UK. In Oct 2013, he managed over 1000 staff in Asia in his capacity as Senior Vice President, Civil & Infrastructure for AECOM. The projects he oversaw encompass underground metro projects, major water & wastewater engineering projects, and tunneling projects spread across Asia. His current role in AECOM includes overseeing the Operations across multiple disciplines and countries.

Dr Andy Y. F. Leung
Secretary General

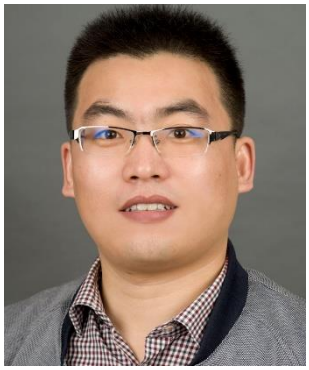
Andy obtained his PhD from University of Cambridge, UK, and is currently Assistant Professor at The Hong Kong Polytechnic University. Before joining the academia, he had practised as geotechnical engineer in Hong Kong and the United States. His research interests include soil-structure interaction, reliability assessments in geotechnical engineering, and geomechanics of methane hydrate-bearing sediments in gas production operations. Andy is keen to bridge the gap between research and practice in geotechnical engineering, working to provide various platforms such as forums and training workshops to facilitate communications among different sectors of the profession.

Report from member society

New cabinet of the Hong Kong Geotechnical Society (HKGES) (Con't)

Ir Ringo S. M. YU
Honary Treasurer

Ringo graduated from McGill University, Montreal, Canada with a Bachelor Degree in Civil Engineering and Applied Mechanics in 1982. He is a Registered Professional Engineer and Fellow Member of HKIE in the Civil, Geotechnical and Structural Disciplines. He is the Founder and Managing Director of Fraser Construction Co., Ltd. With over 30 years of experience working for both the consultants and contractors, Ringo is actively serving the Hong Kong community in different public bodies: the HKIE, Construction Industry Council, Engineers Registration Board, Hong Kong Construction Association, Construction Workers Registration Board and Employee Compensation Assistance Fund Board. He was awarded the Bauhinia Leadership Volunteer Award in 2016.



Dr Dongsheng CHANG
Core member (Assistant Secretary)

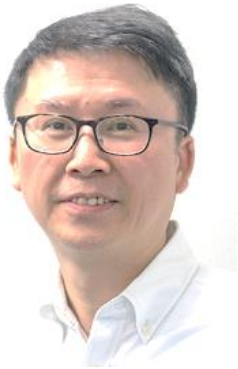
Dongsheng is a project geotechnical engineer of AECOM Asia Company Ltd. He received his PhD degree in January 2012 from the Hong Kong University of Science and Technology. He has over 11 years of experience on Engineering Design and Academic Research on a number of Civil and Geotechnical Topics (e.g., Deep Excavation, Ground Improvement, Slope Engineering, Dam Engineering, and Debris Flow-barrier Interactions). He won the second prize of the Natural Science Award of the Ministry of Education of China 2017. He is the winner of the HKIE Outstanding Paper Award for Young Engineers 2014. He is responsible for the design of ground improvement works for Tung Chung New Town Extension and Development of Lok Ma Chau Loop Projects currently.

Ir Dr Raymond W. M. CHEUNG
Core member

Raymond is a HKIE member, Institution of Civil Engineers and Institution of Structural Engineers in the UK, and American Society of Civil Engineers in the US. He has been involved in a number of mega civil engineering projects in Hong Kong under the Airport Core Programme, including Airport Railway, Chek Lap Kok Airport site formation and Western Harbour Crossing, before joining the Hong Kong SAR Government in the late 1990s. Since then, Raymond has participated in various areas of geotechnical engineering like the administration of landslip prevention and mitigation works, preparation of Geoguide 7 (Guide to Soil Nail design and Construction), slope greening, quantitative risk assessment (QRA), technical development of debris mobility modelling, flexible debris-resisting barriers and earthquake engineering. He is currently a Deputy Head of the Geotechnical Engineering Office (GEO) of the Civil Engineering and Development Department responsible for landslide emergency service, and control of geotechnical works, mining operation and quarrying. He is also the Chairman of a Steering Committee overseeing the development of Innovation and Technology in the GEO.

Report from member society

New cabinet of the Hong Kong Geotechnical Society (HKGES) (Con't)



Ir Sammy P. Y. CHEUNG
Core member

Sammy works in the Geotechnical Engineering Office (GEO) of the Civil Engineering and Development Department. He is an experienced geotechnical engineer with more than 29 years of experience, particularly in slope stabilization, setting of geotechnical standards and guidelines, foundations and application of information technology. Sammy is also leading the innovation and technology developments in GEO, which include the digital transformation and integration of the emergency management systems. Currently, he is the Chief Geotechnical Engineer of the Slope Safety Division responsible for executing the public education strategy, which focuses on emergency preparedness and response, community resilience and recovery.

Sammy was the Chairman of the Geotechnical Division of the HKIE in 2017/18 session and has also served in a number of committees in the HKIE.

Ir Edwin K. F. CHUNG
Core member

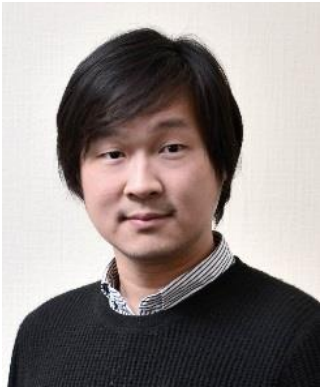
Edwin is a Director of Black and Veatch (Hong Kong) Ltd. and now is a CRE administrating a major civil engineering project. He obtained his MASc from UBC, Vancouver Canada and conducted his research on cyclic behaviour of Sand. He has over 40 years practical experience in both public and private geotechnical projects in Hong Kong and the Pearl River Delta (PRD). Most notable was plan, design and construction supervision of an innovative and environmental friendly scheme to house an existing service reservoir inside a cavern to make room for the development of the HKU Centenary Campus. Edwin is now VP of HKIE and in the past twenty years, he has been actively involved in serving HKIE in different committees and boards and was the Chairman of the Geotechnical Division in 2014. He has been a core member of HKGES for 15 years.

Dr Clarence E. CHOI
Core member

Clarence is an Assistant Professor in the Department of Civil Engineering at the University of Hong Kong (HKU). His research is on sustainable development against subaerial and subaqueous landslides. He is Chair of the debris flow and steep creek hazards mitigation committee of the Association of Geohazard Professionals (AGHP), board member of the International Consortium of Landslides of the United Nations Educational, Scientific and Cultural Organization (UNESCO), chair-nominated member of TC208 (slope stability) of the ISSMGE, and Hong Kong's representative for the Joint Technical Committee (JTC1) on natural slopes and landslides. Dr Choi received the 2017 Telford Premium Prize from the Institution of Civil Engineers in UK and the 2017 R.M. Quigley award from the Canadian Geotechnical Society.

Report from member society

New cabinet of the Hong Kong Geotechnical Society (HKGES) (Con't)

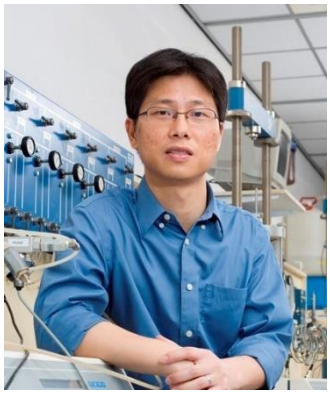


Dr Anthony K. LEUNG
Core member

Anthony is an Assistant Professor and the Associate Director of the Geotechnical Centrifuge Facility at the Hong Kong University of Science and Technology (HKUST). Prior to his appointment at HKUST in 2018, Anthony was a Senior Lecturer and have been working in the Discipline of Civil Engineering at the University of Dundee, UK for five years. His expertise is unsaturated soil mechanics, root biomechanics, vegetation effects on slope hydrology and stability, tree stability. Anthony is the awardee of the *International Award for Innovation in Unsaturated Soil Mechanics* by TC106 (Unsaturated Soils). Anthony is the Editor-in-Chief of the Bulletin of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE). He is also serving the Editorial Boards of international journals, including *Canadian Geotechnical Journal*, *Landslides*, and *Institute of Civil Engineers (ICE), Geotechnical Engineering Journal*.

Ir James Sze
Core member

James is the Leader of Geotechnics & Maritime Group in Arup Hong Kong and manages a pool of resources and skills development of over 200 technical staff. The Group houses expertise in Geotechnics, Tunnel, Maritime and Energy. He has taken a leading role in various aspects of infrastructure projects including site investigation planning, land study, reclamation, pile study, foundation design, slope inspection, slope stability assessment, retaining wall design, tunnel and deep basement excavation & lateral support design. The projects he has been involved cover a wide range of structures and construction cost located in Hong Kong as well as overseas. James was the Chairman of the Geotechnical Division of the HKIE in 2016/17 session and has served in various committees/panels/boards for the institution as well as the Hong Kong government. He is an adjunct associate professor with the Civil Department of the HKU.



Dr Yu WANG
Core member

Yu is an Associate Professor of geotechnical engineering at City University of Hong Kong. He is a Registered Professional Civil Engineer in Hong Kong and an elected Fellow of ASCE. He served as president of ASCE Hong Kong Section in 2012-2013. His recent research efforts have focused on analytics and simulation of spatial data, machine learning in geotechnical engineering, geotechnical uncertainty, reliability and risk, and numerical simulation of large deformation problems in geotechnical engineering. His research has earned several international recognitions, including the Highly Cited Research Award by the international journal of Engineering Geology in 2017, the First Class Award of the Natural Science Award in 2017, Hubei Provincial Government, China, the GEOSNet Young Researcher Award by the Geotechnical Safety Network (GEOSNet) in 2015 in the Netherlands, and the Wilson Tang Best Paper Award in 2012 in Singapore. Dr Wang has authored/co-authored more than 140 technical publications, including about 90 journal papers and 2 books by Wiley and Springer respectively.

Report from member society

New cabinet of the Hong Kong Geotechnical Society (HKGES) (Con't)

Dr Louis L. N. WONG

Louis is an Associate Professor in the Department of Earth Sciences at the University of Hong Kong (HKU). He is also the Programme Director of the Master of Science in the field of Applied Geosciences and Postgraduate Diploma in Earth Sciences. His teaching and research interests are in engineering geology, rock mechanics and underground engineering. He is the Editor-in-Chief of the *Bulletin of Engineering Geology and the Environment* (Springer). He won the Richard Wolter's Prize from the International Association of Engineering Geology and Environment in 2014.

Promoting geotechnical engineering to undergraduates in civil engineering

The first event organised by the new cabinet of the HKGES was an education session in May 2019, supported by the Geotechnical Division (GD) of the HKIE. This is in line with the 'Geotechnical Pioneer' programme of the GD to promote Geotechnical Engineering. The event was a two-hour session aiming to promote the geotechnical engineering professions and introduce geotechnical engineers' challenges to undergraduate students. The event was taken place at the Hong Kong University of Science and Technology (HKUST) during a core course entitled "*Discovering Civil and Environmental Engineering*" lectured by Dr Anthony Leung.

The invited speakers were Ir Chris LEE (from C. M. Wong & Associates Lid.; Fig. 1), Ir Maureen NG (from ESA Consulting Engineers Ltd.; Fig. 2), the chairman-elect and vice-chairlady-elect of the GD, HKIE, respectively, and Miss Lotty LEE (Fig. 3), a fresh graduate geotechnical engineer working for the Geotechnical Engineering Office (GEO), Civil Engineering Development Department (CEDD), HKSAR. The moderator of the event was Dr Anthony Leung.

The session was interactive. After the speakers' introduction and sharing, students have been actively asking a lot of interesting and intelligent questions; for example, what is the role of innovation and technology in geotechnical engineering sector under this very fast-transforming digital era; the importance of geotechnics in creating a more sustainable built environment; differences of overseas practice and chartership etc.

Fig. 1. Chris introducing geotechnical engineering and major tasks of geotechnical engineers

Fig. 2. Maureen sharing her work experiences in consultants

Report from member society

New cabinet of the Hong Kong Geotechnical Society (HKGES) (Con't)

Fig. 3. Lotty sharing the importance of university education and training in her daily practical work

There are more upcoming events and activities organized by the HKGES. Please follow their updates in the society's website: http://www.hkges.org/home.vbhtml.

Conference reports

The 13th Australia New Zealand Conference on Geomechanics, Perth, Western Australia

Introduction

The 13th Australia New Zealand Conference on Geomechanics was organised by the Australian Geomechanics Society (AGS) and held in Perth, Western Australia, at the Perth Convention and Exhibition Centre between 1 and 3 April 2019. The current ANZ series of conferences on geomechanics is held under the auspices of the ISSMGE and started in 1971 (noting that five ANZ conferences on soil mechanics and foundation engineering were held between 1952 and 1967). Previous events in the current series were held in Melbourne (1971), Brisbane (1975), Wellington (1980), Perth (1984), Sydney (1988), Christchurch (1992), Adelaide (1996), Hobart (1999), Auckland (2004), Brisbane (2007), Melbourne (2012) and Wellington (2015). The cooperation of the sister New Zealand Geotechnical Society (NZGS) is acknowledged.

The Chief Scientist of Western Australia, Prof Peter Klinken, opened the conference. Other invited speakers at the opening ceremony included Gavin Alexander, ISSMGE VP for Australasia, Michael Smith, Conference Chair, and Prof Stephen Fityus, Chair or the Australian Geomechanics Society. Figure 1.

Figure 1. Speakers at opening ceremony (l-r): Michael Smith, Prof Peter Klinken, Gavin Alexander, Prof Stephen Fityus

Technical program

Abstracts and papers

A total of 369 abstracts were submitted and peer reviewed, resulting in 199 papers in the proceedings volume. The host country led the submissions as shown in Figure 2. It is interesting to note that 10.4% of final papers came from 13 countries belonging to other regions of the ISSMGE.

The full proceedings will be made available at the AGS website and the ISSMGE Online Library by the end of June 2019.

Conference reports

The 13th Australia New Zealand Conference on Geomechanics, Perth, Western Australia (Con't)

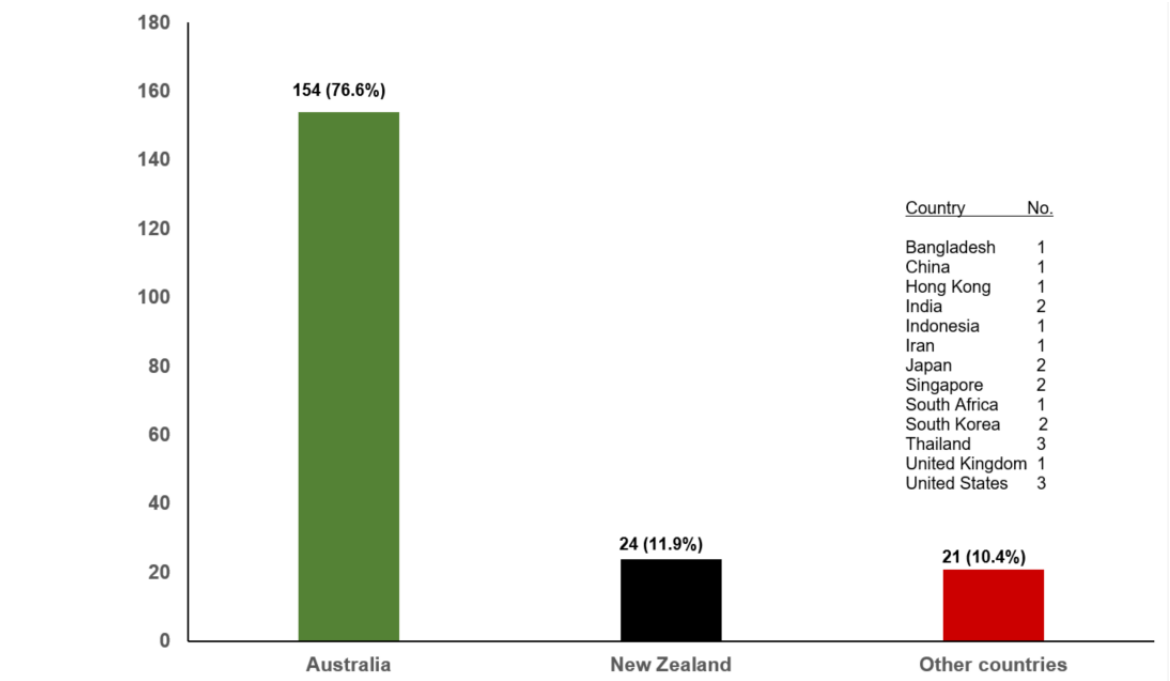


Figure 2. Distribution of papers by country of origin

The distribution of papers by the main themes of the parallel sessions is presented in Figure 3.

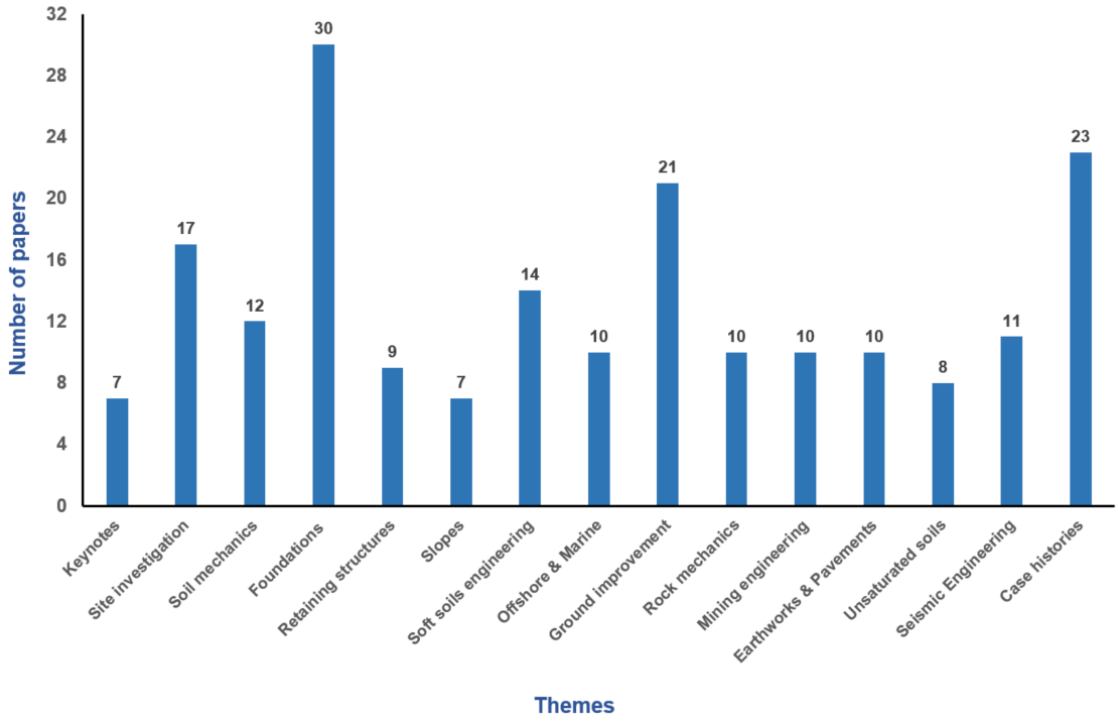


Figure 3. Paper submissions by conference themes

Conference reports

The 13th Australia New Zealand Conference on Geomechanics, Perth, Western Australia (Con't)

Keynote lectures

Seven keynote lectures (plenary sessions) were delivered by:

- Prof (Emeritus) Fumio Tatsuoka (University of Tokyo and Tokyo University of Science, Japan) - *Geosynthetic-reinforced soil structures for transportation – from walls to bridges*
- Rob Day (Arup, Australia) - *Trying to make a difference – and why sometimes we can't* [AGS Practitioner Award Lecture (2016)]
- Prof Misko Cubrinovski (University of Canterbury, New Zealand) - *Some important considerations in the engineering assessment of soil liquefaction* [NZGS Geomechanics Award Lecture (2018)]
- Dr Doug Stewart (Golder Associates, Australia) - *Unexpected ground movements and their impact*
- Dr Oskar Sigl (Geoconsult Asia, Singapore) - *Dealing with the challenges of underground construction*
- Mike Jefferies (Golder Associates, UK) - *The utility of critical state soil mechanics*
- Marc Woodward (CMW Geosciences, Australia) - *Effective communication – A critical component of geotechnical engineering*

Figure 4. Keynote lecturers (L-R, top-bottom): Prof Fumio Tatsuoka, Rob Day, Prof Misko Cubrinovski and Dr Doug Stewart

Conference reports

The 13th Australia New Zealand Conference on Geomechanics, Perth, Western Australia (Con't)

Figure 4 (Con't). Keynote lecturers (L-R, top-bottom): Dr Oskar Sigl, Mike Jefferies and Marc Woodward

ISSMGE's Corporate Associates Presidential Group (CAPG) session

A plenary session for a panel discussion organised by the ISSMGE's Corporate Associates Presidential Group on the topic of 'Collaboration in geotechnical engineering – Impact on Research and Project Delivery' was held on the first day of the conference. The panellists included representatives from academia, industry, asset owners (public and private) and contractors. This special session was opened by Gavin Alexander, ISSMGE VP for Australasia, and the closure notes were delivered by Sukumar Pathmanandavel, Chair of CAPG. Details of this session are included elsewhere in this June 2019 issue of the ISSMGE Bulletin.

Figure 5. Gavin Alexander (ISSMGE VP Australasia) and Sukumar Pathmanandavel (CAPG Chair) during the CAPG session at the ANZ Conference.

Conference reports

The 13th Australia New Zealand Conference on Geomechanics, Perth, Western Australia (Con't)

Conference awards:

An independent panel of judges from Australia and New Zealand selected the winners and highly commended finalists for the following awards that are traditionally presented at this conference series:

a) Best paper (Joint Societies Award)
   - Winner: Strath Clarke, Garry Mostyn and Bernard Shen - *Collapse of the Old Pacific Highway, Piles Creek, Somersby*
   - Highly commended: Ian Finnie, Rick Gillinder, Mark Richardson, Carl Erbrich, Mark Wilson, Fiona Chow, Meysam Banimahd and Steve Tyler - *Design and installation of Mobile Offshore Drilling Unit mooring piles using innovative drive-drill-drive techniques*

b) Best paper by a young professional (< 35 years old)
   - Winner: Sean Goodall - *Design of a reinforced soil capping beam over a soil-bentonite barrier wall*
   - High Commendation: James Watton and Mark Fowler - *Geotechnical management of large scale slope deformations at the Teal Gold project*

c) Best poster
   - Winner: Su Kwong Tan - *Geotechnical design and construction considerations for Old Mandurah traffic bridge project*
   - Highly Commended: Elisabeth Boczek and Marc Amtsberg - *Operational and construction impacts on GCL performance in TSFs*

Each winner received a certificate and A$1,000 and the highly commended finalists received a certificate and A$500.

Figure 6: Tony Fairclough (NZGS Chair), Sean Goodall, Ian Finnie, Su Kwong Tan and Prof Stephen Fityus (AGS Chair)

Conference reports

The 13th Australia New Zealand Conference on Geomechanics, Perth, Western Australia (Con't)

Social program

A pre-conference field trip showcasing Perth's regional geology highlights was organised. The tour went to the rugged Darling Range to the East of Perth and visited Canning Dam, its quarry and the surrounds. Then it returned to the centre of Perth for lunch at the iconic Old Swan Brewery. After lunch the tour head to the magnificent Indian Ocean Coastline with its coastal limestones in Fremantle at the Fremantle Port, historic Round House and Whalers Tunnel. From Fremantle the tour returned to the Perth CBD.

The conference gala dinner was held at Fraser's in Kings Park, the state's reception centre that celebrates the best Western Australia has to offer in food and wine. The event included entertainment from Domenic Zurzolo, one of Australia's premier guitarists, and Mick Collis (author, poet and rugby commentator) with a fascinating story of how it took him '42 years to play for Australia'.

Figure 7. Domenic Zurzolo (left) and Mick Collis during the gala dinner

Conference attendance

A total of 465 delegates (including exhibitors and sponsors) attended the conference (Figure 8). The distribution by country of origin is presented in Figure 9, noting that apart from Australia and New Zealand, 20 other countries were represented.

Conference reports

The 13th Australia New Zealand Conference on Geomechanics, Perth, Western Australia (Con't)

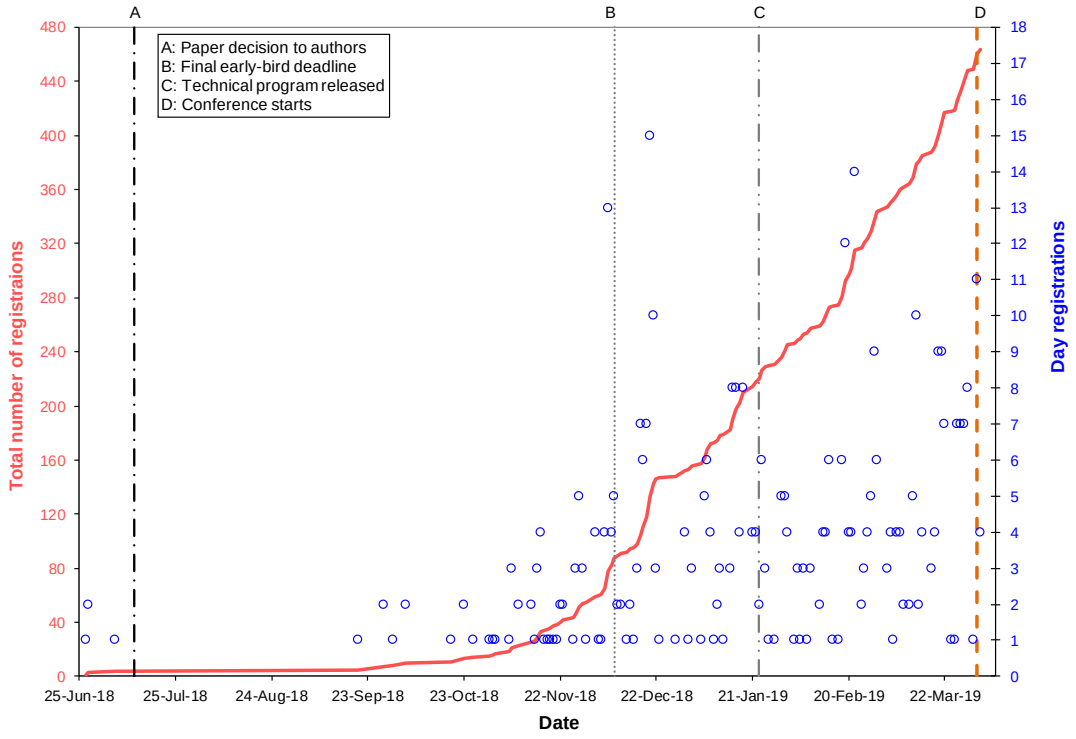


Figure 8. Day and total number of registrations by date

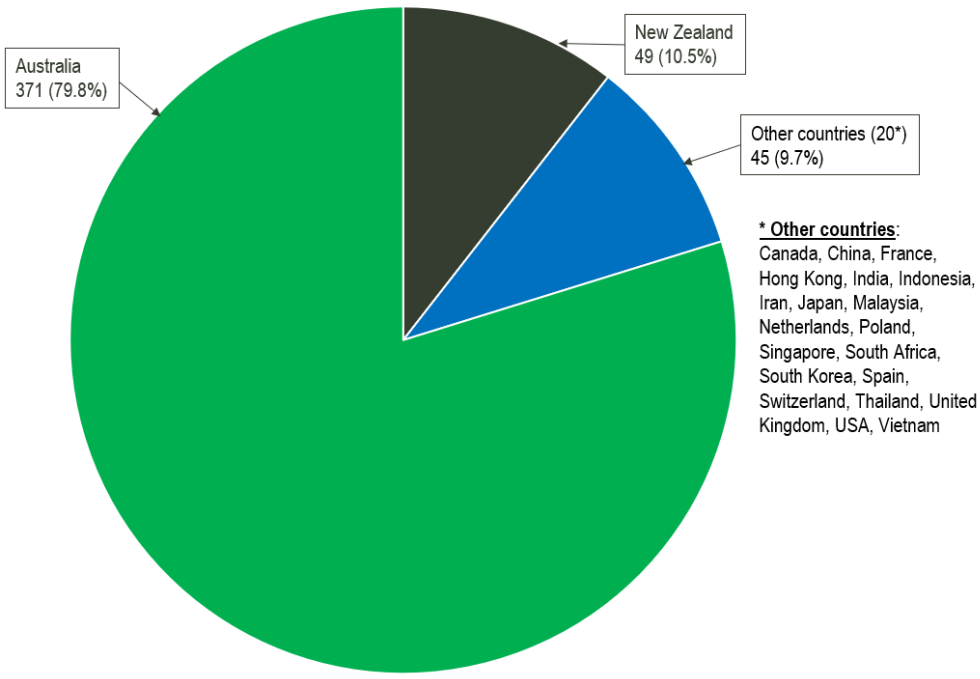


Figure 9. Registrations by country of origin

Conference reports

The 13th Australia New Zealand Conference on Geomechanics, Perth, Western Australia (Con't)

A total of eight plenary sessions were held, including seven keynotes and a panel discussion organised by the ISSMGE's Corporate Associates Presidential Group on the topic of 'Collaboration in geotechnical engineering – Impact on Research and Project Delivery'. A total of 179 papers were presented in 40 parallel sessions. The technical program was complemented with 20 electronic poster presentations.

Exhibition

The exhibition space was sold-out to accommodate 43 booths for sponsors and exhibitors. Two prizes of A$500 were drawn among attendees that completed a delegate passport by visiting several stands.

Figure 10. General view of exhibition area

Venue for next ANZ Conference on Geomechanics

Hosting of the ANZ Conference on Geomechanics rotates 2:1 between Australia and New Zealand. The AGS will host the 14th ANZ Conference on Geomechanics in Cairns, Queensland in 2023. A promotional video prepared for the closing ceremony is available at https://vimeo.com/329974535.

Acknowledgements

The AGS thanks all the delegates, speakers, voluntary reviewers, sponsors and exhibitors for their contribution to the success of this event. A special mention to Arinex, Professional Conference Organiser, for their support in the organisation.

Prepared by: *Dr Hugo Acosta-Martinez, Aurecon, Australia*

Conference reports

CAPG Plenary Session – 13th Australia New Zealand Conference on Geomechanics, Perth

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 organizing a number of plenary sessions at the various regional conferences to be held in 2019 in Africa, America, Asia, Australasia and Europe. The first one of these plenary sessions was held during the 13th Australia New Zealand (ANZ) Conference on Geomechanics in Perth, Australia in April, 2019. The title of the CAPG session was "Collaboration in Geotechnical Engineering – Impact on Research and Project Delivery". The main objectives of the session were:

- To promote collaboration among various stakeholders in academic research and project delivery; and
- To stimulate discussions and communication in the geotechnical fraternity to produce best project outcomes.

Prior to the Perth conference, CAPG also sought the assistance of local chapters of the Australian Geomechanics Society (AGS) and the New Zealand Geotechnical Society to organize a few local events. The main purposes of these local events were to promote the Perth plenary session and to capture ideas and comments from those who were not able to attend the Perth conference. The local events held before the ANZ Conference were as follows:

- AGS Sydney Chapter debate night held on 12 December 2018 with two debate topics:
- Geotechnical designers are too conservative while the contractors are too ambitious
- Unsaturated Soil Mechanics is of no use to the practicing geotechnical engineer
- AGS Queensland Chapter panel discussion on "Cast-in-place Piling Practice, Design & Construction" held on 21 February 2019
- New Zealand Geotechnical Society panel discussion "Collaboration in Geotechnical Engineering – Impact on Research and Project Delivery" held in Auckland on 18 March 2019

Figure 1. AGS Queensland Chapter panel discussion held on 21 February 2019

Conference reports

CAPG Plenary Session – 13th Australia New Zealand Conference on Geomechanics, Perth (Con't)

Figure 2. AGS Sydney Chapter debate night held on 12 December 2018

Figure 3. New Zealand Geotechnical Society panel discussion held in Auckland on 18 March 2019

In addition to the local events held before the ANZ Conference, some other local events are being planned to be held after the Perth conference.

The format of the CAPG plenary session at the ANZ Conference took the form of a panel and floor discussion. It was held on the first day of the Conference, 1 April 2019 and was attended by about 400 participants. The Vice President Australasia, Gavin Alexander opened the session and introduced ISSMGE and CAPG. He was followed by the organizer of the event, Kim Chan who briefly described the CAPG activities and provided

Conference reports

CAPG Plenary Session – 13th Australia New Zealand Conference on Geomechanics, Perth (Con't)

the participants with some background and objectives of the session and what CAPG was trying to achieve from this exercise. David Airey as the Vice Chair of Technical Committee TC306 "Geo-education" then introduced the technical committee and promoted TC306's next conference.

Figure 4. Gavin Alexander opened the session and Kim Chan provided some background of the session

The panel and floor discussion was facilitated by Camilla Gibbons. The panelists included representatives from academia, Buddhima Indranatna; design consultants, Richard Kelly; contractors, Amir Nik Eftekhari; private asset owners, Fiona Chow and government authorities, Sam Henwood. The panelists provided their views and opinions on various discussion points, such as academic research and industry involvement; the great divide between designers and constructors; traditional vs collaborative and agile project management approaches; examples of collaboration between industry and academia; knowledge sharing and dissemination; transferring research into practice and project risks management considerations.

Figure 5. David Airey introduced TC306 Geo-education

Figure 6. Camilla Gibbons was the facilitator of the panel and floor discussion

Conference reports

CAPG Plenary Session – 13th Australia New Zealand Conference on Geomechanics, Perth (Con't)

Figure 7. (l to r) Kim Chan, David Airey, Buddhima Indranatna, Fiona Chow and Richard Kelly

Figure 8. (l to r) Richard Kelly, Amir Nik Eftekhari and Sam Henwood

The panel discussion generated active floor participation and many critical questions. Most of the questions from the floor were posted digitally via the conference app for the panelists to respond and address. There was also a voting function with the conference app which enabled the facilitator to select the most popular questions from the audience to be responded first. In addition, some comments from the floor were being made by the participants using the traditional method of floor discussion.

Some of the questions being asked included:

- It is not often you get a cross section like this from industry. What will you be taking back to ISSMGE to ensure Geotechnics does not become a lost profession.
- Do you feel the tender process and rules for public works discourages innovation by typically selecting the cheapest proven option?
- Is collaboration in research only really possible in high value industries such as oil and gas?
- How do you stop people or organisations being afraid of losing intellectual property through collaboration?
- What need to be done to encourage industries to invest more in education and research collaborations, especially for long term and future applications across the Industry?
- Do you think collaboration adversely affect competition on projects? If so, how can we create a balance between the two, noting collaboration in academics and research might be easier to achieve compared to commercial projects in the Geotech industry.
- There is a culture in the construction industry to avoid taking on risk. Does the tender process need to change to meet the need for such collaboration and innovation towards advancing the industry?

Following nearly one hour of panel and floor discussion, the session was closed by the CAPG Chair, Sukumar Pathmanandavel, who also introduced the four main avenues for advancement pursued by the CAPG, being public face, innovation, analytical and connector, and urged the participants to join Corporate Associates.

Based on the feedback received from the conference attendees, the CAPG plenary session was a resounding success and generated a fair amount of interests in the topic. A number of suggestions were made by conference attendees on what can be done to improve collaboration among various stakeholders. CAPG will take advantage of the enthusiasm shown by the participants and will adopt some of these suggestions to promote collaboration in geotechnical engineering.

Conference reports

CAPG Plenary Session – 13th Australia New Zealand Conference on Geomechanics, Perth (Con't)

Some of the opportunities identified include:

- A CAPG sponsored session on the management of tailings storage facilities involving the major mining houses;
- A 2-minute video competition for young engineers; and
- A special edition of the Australian Geomechanics Society journal on Industry Collaboration.

For further information about the CAPG and their activities, please visit:
https://www.issmge.org/corporate-associates/corporate-associates-presidential-group

Figure 9 Audience during the panel discussion

Figure 10 Sukumar Pathmanandavel giving a closure speech at the end of the session

Kim Chan
Coordinator of Corporate Associates Presidential Group

Conference reports

9th IAGIG – Annual Conference of the Italian Young Geotechnical Engineers

The 9th edition of IAGIG (Annual Conference of Italian Young Geotechnical Engineers) was held in Naples on May 10th -11th 2019. The event aimed to gather young professionals from various fields of Geotechnical Engineering and to share knowledge and experience among young professionals as well as the academia.

IAGIG 2019 was organised by the Italian Geotechnical Association (AGI) with the support of the University Parthenope and the board of Italian Professional Engineers of Naples.

More than 170 participants attended the conference with 22 oral presentations and 18 posters on different topics such as: geotechnical structures monitoring and control, earthquake geotechnical engineering, environmental geotechnics, case histories and lessons learnt, in situ and laboratory tests, slope stability, engineering with geosynthetics. A short summary of each contribution was reviewed by the scientific committee and made available online at http://www.iagig.unisa.it/iagig_2019/iagig2019atti.

This year's novelty was to have four Invited Lectures given from the members of the IAGIG scientific committee. The first two keynote lectures were presented by Raffaele Di Laora with the title "Bearing capacity of pile groups under vertical eccentric load: an innovative approach" and by Gabriele Della Vecchia on "the role of microstructure on the chemo-hydro-mechanical behaviour of clay barriers" respectively. The second day two other keynote lectures were given by Sara Amoroso on "Full-Scale Testing of Liquefaction Mitigation using Blast Test" and by Luca Masini on "the seismic behavior of geosynthetic reinforced-earth retaining structures".

Figure 1. The IAGIG 2019 attendees with AGI president Prof. Nicola Moraci and past president Prof. Stefano Aversa

Conference reports

9th IAGIG – Annual Conference of the Italian Young Geotechnical Engineers (Con't)

IAGIG is a place for active discussions on issues related to both practice and the latest research findings on geotechnical engineering and it encouraged exchanges of experiences and knowledge among the young geotechnical engineers. Some contributions were delivered by young Italian engineers working abroad and eager to share their recent professional experiences. Before the closure of the event there was the opportunity of presenting the activities of other young groups of national and international geotechnical associations. Giulia Buffi, (Young Engineers Forum of ITCOLD – Italian Committee of Large Dams), Laura Carbone (Young Member of IGS – International Geosynthetics Society) and Stefania Fontanella (Young Tunnelers of SIG – Italian Tunneling Society introduced their groups, the main missions and activities and shared their personal motivation and experience to inspire other young members to join the community and to encourage further liaison and interaction among the groups.

The conference ended with a technical visit to the Galleria Borbonica where the young attendees had the opportunity to capture the potentialities and difficulties arising from the use of Naples's underground for different purposes not only related to mobility infrastructures. Interesting technical solutions proposed by the designer Errico Alvino have been discussed. Next edition of IAGIG will take place in May 2020 in Pisa.

Figure 2. Organizing and scientific committee (from left to the right): Sabatino Cuomo, Diego Valusso, Gabriele Della Vecchia, Luca Esposito, Giuseppe Maria Gaspari, Francesca Ceccato, Raffaele Di Laora, Sara Amoroso, Maria Iovino, Sabrina Moretti, Laura Carbone

Conference reports

9th IAGIG – Annual Conference of the Italian Young Geotechnical Engineers (Con't)

Figure 3 Participants at the social dinner on Friday night in the city centre

Figure 4. Some of the attendees at the Galleria Borbonica during the technical visit

Francesca Ceccato, Laura Carbone and Sabatino Cuomo

Hot news

The 3rd International Conference on Geo-Energy and Geo-Environment (GeGe2019), Nov 30 – Dec 1 2019, ChangSha, China

GeGe 2019

The 3rd International Conference on Geo-Energy and Geo-Environment

Venue: Worldhotel Grand Jiaxing, ChangSha, China

Date: 30th November – 1st December 2019

Language: English

Description

Following the last two successful GeGe conferences held in Hong Kong (HKSAR) and Zhejiang, in 2015 and 2017, respectively. We are pleased to invite you to attend the 3rd International conference on ***Geo-Energy & Geo-Environment*** Conference in November 2019. This conference will cover both Geo-energy and Geo-environment areas that are highly relevant and essential to maintaining the sustainability of the society. Worldwide academics, engineers, scientists are most welcome to join, to contribute and share the latest developments and information.

Conference chair

Renpeng Chen

Contact Information

Wei Yang, College of Civil Engineering, Hunan University, ChangSha, China
Email: gege2019@hnu.edu.cn

Website

www.gege2019.com

Event Diary

ISSMGE EVENTS

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

2019

7th Asia-Pacific Conference on Unsaturated Soils
Date: 23-08-2019 - 25-08-2019
Location: Nagoya Congress Center, Nagoya, Japan
Language: English
Organiser: Prof. Feng ZHANG - The Japanese Geotechnical Society. Supported by: TC106 Unsaturated Soils of ISSMGE
Contact person: Dr. Hiromasa Iwai (Technical Secretary)
Phone: (+81) 052-735-7525
Fax: (+81) 052-735-7525
Email: ap-unsat2019@jiban.or.jp; iwai.hiromasa@nitech.ac.jp
Website: https://www.jiban.or.jp/e/activities/events/20190823-25-seventh-asia-pacific-conference-on-unsaturated-soils/

ECSMGE 2019 – XVII European Conference on Soil Mechanics and Geotechnical Engineering
Date: 01-09-2019 – 06-09-2019
Location: Harpa Conference Centre Reykjavik, Iceland
Language: English
Organizer: The Icelandic Geotechnical Society
Contact person: Haraldur Sigursteinsson
Address: Vegagerdin, Borgartún 7, IS-109, Reykjavik, Iceland
Phone: +354 522 1236
E-mail: has@road.is
Website: http://www.ecsmge-2019.com

3rd International Conference "Challenges in Geotechnical Engineering" CGE-2019
Date: 10-09-2019 - 13-09-2019
Location: University of Zielona Gora (Poland),
Language: English
Organiser: University of Zielona Gora (Poland) and Kyiv National University of Construction and Architecture (Ukraine)
Contact person: Co-Chairmen of the Organising Committee: Volodymyr Sakharov, Waldemar Szajna
Address: 1, Prof. Zygmunta Szafrana str
Fax: +48 (68) 328 47 23
Email: info@cgeconf.com
Website : http://www.cgeconf.com

Event Diary (Con't)

International Symposium on Geotechnical Aspects of Heritage Structure
Date: 16-09-2019 - 18-09-2019
Location: IIT Madras, Chennai, India
Language: English
Organiser: National Centre for Safety of Heritage Structure of IIT Madras (NCSHS-IITM) and IGS-Chennai Chapter in collaboration with IGS-Trichy Chapter and Anna University under the aegis of Technical Committee (TC301) of International Society of Soil Mechanics and
Contact person: Subhadeep Banerjee
Address: BSB117A, Dept of Civil Eng, IIT Madras
Phone: +919840132095
Email: subhadeep@iitm.ac.in
Website: http://www.igschennai.in/ISGHS2019
Email: isghs19chennai@gmail.com

1st Mediterranean Young Geotechnical Engineers Conference
Location: Kefaluka Resort Hotel, Bodrum, Mugla, Turkey
Dates: 23-09-2019 - 24-09-2019
Language: English
Organiser: Turkish Society for ISSMGE - ZMGM
Contact person: Altug Saygili
Address: Mugla Sıtkı Kocman University, Engineering Faculty, Department of Civil Engineering, Kotelki, Mugla, Turkey
Phone: +90 252 211 1942
Fax: +90 252 211 1912
Email: secretariat@mygec2019.org
Website: http://mygec2019.org

27th European Young Geotechnical Engineers Conference
Location: Kefaluka Resort Hotel, Bodrum, Mugla, Turkey
Dates: 26-09-2019 - 27-09-2019
Language: English
Organiser: Turkish Society for ISSMGE - ZMGM
Contact person: Altug Saygili
Address: Mugla Sıtkı Kocman University, Engineering Faculty, Department of Civil Engineering, Kotekli, Mugla, Turkey
Phone: +90 252 211 1942
Fax: +90 252 211 1912

3rd International Conference on Information Technology in Geo-Engineering (3RD ICITG2019)
Date: 29-09-2019 - 02-10-2019
Location: Cultural Centre of Vila Flor, Guimarães, Portugal
Language: English
Organiser: University of Minho and Portuguese Geotechnical Society under the auspices of JTC2 of FedIGS)
Contact person: 3rd ICITG Secretariat
Address: University of Minho/ School of Engineering/ Civil Engineering Department, Campus de Azurem
Phone: (+ 351) 253 510 750
Fax: (+ 351) 253 510 217
Email: 3rd-icitg2019@civil.uminho.pt
Website: http://www.3rd-icitg2019.civil.uminho.pt/

Event Diary (Con't)

XVII African Regional Conference on Soil Mechanics and Geotechnical Engineering
Date: 07-10-2019 – 10-10-2019
Location: Cape Town Convention Centre, South Africa
Language: English
Organiser: SAICE
Contact person: Dr Denis Kalumba
Email: denis.kalumba@uct.ac.za

XVI Asian Regional Conference on Soil Mechanics and Geotechnical Engineering
Date: 21-10-2019 – 25-10-2019
Location: Taipei, China
Contact person: 16th ARC Secretariat
Phone: 886-2-27988329 ext.35
Fax: 886-2-27986225 (fax)
Email: secretariat@16arc.org
Website: http://www.16arc.org

11ème Édition des Journées Africaines de la Géotechnique
Date: 21-10-2019 - 24-10-2019
Location: Niamey, Niger
Languages: French and English language
Organiser: CTGA and ALBTP
Website: http://www.ctgaafrique.org
Email: emk2cm@Yahoo.fr

GEOMEAST 2019 International Congress and Exhibition
Location: Cairo Marriott Hotel, Zamalek, in front of the Great Nile, Corniche El-Nile, Egypt
Dates: 10-11-2019 - 14-11-2019
Language: English
Contact person: Amany El-Masry
Address: Nasr City
Phone: +201151885508
Email: info@geomeast2019.org; info@ssige.org
Website: https://geomeast.org/

XVI Panamerican Conference on Soil Mechanics and Geotechnical Engineering
Date: 18-11-2019 – 22-11-2019
Location: Cancun, Quintana Roo, Mexico
Organizer: SMIG
Phone: +(52) 1 55 5677-3730, +(52) 1 55 5679 3676
E-mail: support@panamerican2019mexico.com
Website: http://panamerican2019mexico.com

Event Diary (Con't)

The 4th International Conference on Geotechnics for Sustainable Infrastructure Development
Location: National Convention Center (NCC), Hanoi, Vietnam,
Date: 28-11-2019 - 29-11-2019
Language: English
Organiser: Vietnamese Society for Soil Mechanics and Geotechnical Engineering (VSSMGE), FECON Corporation, Thuyloi University (TLU), and Kokusai Kogyo Co., Ltd (KKC, Japan)
Contact person: NGUYEN Tien Dung
Address: FECON, 15th Floor, CEO Tower, HH2-1 Lot, Me Tri Ha Urban Area, Pham Hung Street, Me Tri Ward, Nam Tu Liem District
Phone: +84 903 440 978
Email: secretariat@geotechn.vn
Website: https://geotechn.vn/

9th Asian Young Geotechnical Engineers Conference
Location: University of Engineering & Technology (UET) Lahore, Pakistan
Date: 05-12-2019 - 07-12-2019
Language: English
Organiser: Pakistan Geotechnical Engineering Society (PGES)
Contact person: Dr. Muhammad Irfan
Address: 54810 G.T. Road
Phone: +92 306 66 666 010
Email: 9AYGEC@uet.edu.pk;
Website: http://15icge-9aygec.uet.edu.pk/

15th International Conference on Geotechnical Engineering, and 9th Asian Young Geotechnical Engineers Conference
Location: Lahore, Pakistan,
Date: 05-12-2019 - 07-12-2019
Language: English
Organiser: Pakistan Geotechnical Engineering Society (PGES)
Contact person: Dr. Muhammad Irfan (for 15ICGE); Dr. Jahanzaib Israr (for 9AYGEC)
Address: Civil Engineering Department, UET Lahore, Pakistan
Phone: +92 306 66 666 010; +92 334 413 2808
Email: 15icge@uet.edu.pk , 9aygec@uet.edu.pk

First Indian Symposium on Offshore Geotechnics
Date: 05-12-2019 - 06-12-2019
Location: School of Infrastructure, Khordha, India
Language: English
Organizer: Indian Institute of Technology Bhubaneswar and Institute of Engineering and Ocean Technology, ONGC
Contact person: Sumanta Haldar and Shantanu Patra
Address: School of Infrastructure
Phone: +916747136636
Email: isog2019@gmail.com
Website: https://sites.google.com/iitbbs.ac.in/isog2019

Event Diary (Con't)

International Conference On Case Histories And Soil Properties
Date: 05-12-2019 - 06-12-2019
Location: Furama Riverfront Hotel, Singapore,
Language: English
Organiser: Geotechnical Society of Singapore
Contact person: Geotechnical Society of Singapore
Address: 1 Liang Seah Street #02-11
Email: geoss@cma.sg
Website: http://www.iccs2019.org
Email: geoss@cma.sg

2020

14th Baltic Sea Geotechnical Conference 2020
Date: 25-05-2020 - 27-05-2020
Location: Clarion Hotel Helsinki, Finland
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
Date: 25-05-2020 – 27-05-2020
Location: Helsinki, Finland
Contact person: Ville Raassakka
Email: ville.raassakka@ril.fi
Website : http://www.ril.fi/en/events/ngm-2020.html

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

Event Diary (Con't)

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

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

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

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

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

NON-ISSMGE SPONSORED EVENTS

2019

EUROCLAY, Paris 2019: Geotechnical characterisation of clayey geomaterials from micro to macroscale: the role of microstructure and anisotropy
Location: Pierre & Marie Curie University, Sorbonne Universités, Paris, France
Date: 01-07-2019 - 05-07-2019
Language: English
Organiser: French Clay Group (GFA), part of the European Clay Groups Association (ECGA)
Contact person: Prof. Philippe Cosenza
Email: philippe.cosenza@univ-poitiers.fr
Website: https://euroclay2019.sciencesconf.org
Email: euroclay2019@sciencesconf.org

Event Diary (Con't)

International Symposium on SPH and Other Particle-Based Continuum Methods and their Applications in Geomechanics
Date: 11-09-2019 - 13-09-2019
Location: Institute of Geotechnical Engineering, BOKU, Vienna, Austria English
Organiser: Institute of Geotechnical Engineering, University of Natural Resources and Life Sciences Vienna (BOKU)
Contact person: Prof. Wei Wu
Address: Feistmantelstrasse 4
Phone: +4314765487300
Fax: +4314765487309
Email: geotech@boku.ac.at
Website: https://sph-vienna.com/

ISRM - 14th International Congress of Rock Mechanics
Location: Bourbon Cataratas Convention & Spa Resort, Foz do Iguassu, Brazi
Date: 13-09-2019 - 18-09-2019
Language: English
Organiser: ABMS, SAIG, SPG
Contact person: Sergio A. B. da Fontoura
Email: fontoura@puc-rio.br
We
bsite: http://www.isrm2019.com

12th Asian Regional Congress of IAEG
Location: Booyoung Jeju Hotel & Resort, South Korea , Seogwipo-si
Date: 21-09-2019 - 27-09-2019
Language: English
Organiser: The Korean Society of Engineering Geology and Korea national group of International Association of Engineering Geology and the Environment (IAEG
Contact person: Jen. Ryu
Address: 4F Officia BD, 92 Saemunan-ro
Phone: +82--3276-2206
Email: secretariat@iaegarc12.org
Website: http://www.iaegarc12.org/main/main.html

Canadian Geotechnical Society's Annual Conference
Location: St. John's Convention Centre in St. John's, Newfoundland and Labrador, Canada,
Date: 29-09-2019 - 02-10-2019
Organiser: Canadian Geotechnical Society
Contact person: Lisa McJunkin
Email: admin@cgs.ca
Website: http://www.geostjohns2019.ca
Email: sponsors@geostjohns2019.ca

Event Diary (Con't)

DFI 44th Annual Conference on Deep Foundations
Dates: 15-10-2019 - 18-10-2019
Location: Hilton Chicago, United States
Organizer: Deep Foundations Institute
Contact person: Theresa Engler
Address: 326 Lafayette Avenue
Phone: 19734234030
Fax: 19734234031
Email: tengler@dfi.org; staff@dfi.org
Website: http://www.dfi.org

ReSyLAB & GEO-EXPO 2019 – Sarajevo, Bosnia and Herzegovina
Location: Sarajevo, Bosnia and Herzegovina
Date: 23-10-2019 - 25-10-2019
Languages: Bosnian, Croatian, Serbian and English
Organiser: Geotechnical Society of Bosnia and Herzegovina
Contact Information
Contact person: Sabrina Salkovic
Address: Univerzitetska 2, Tuzla 75000 Bosna i Hercegovina
Phone: + 387 61 451 701
Email: geotehnika@geotehnika.ba
Website: http://www.geotehnika.ba/

8th International Geotechnical Symposium
Date: 13-11-2019 - 15-11-2019
Location: Suleyman Demirel Kultur Merkezi, ITU Ayazaga Campus, Istanbul, Turkey
Language: English and Turkish
Organiser: UCTEA Turkish Chamber of Civil engineers, Istanbul Branch and Turkish Society for ISSMGE
Contact person: Kubilay Sahin
Email: bilimsel@geoteknik2019.org
Website: http://www.geoteknik2019.org

2020

2nd International Symposium on Seismic Performance and Design of Slopes
Location: John McIntyre Conference Centre in Pollock Halls, 18 Holyrood Park Road, Edinburgh EH16 5AY, UK,
Date: 18-01-2020 - 22-01-2020
Language: English
Organiser: The University of Edinburgh, UK
Contact person: Chongqiang Zhu, Ph.D.
Address: Institute for Infrastructure and Environment, School of Engineering, the University of Edinburgh, Thomas Bayes Road, Edinburgh EH9 3FG, UK
Phone: 441316505588
Email: v1czhu3@exseed.ed.ac.uk
Website: https://www.isspds.eng.ed.ac.uk/

Event Diary (Con't)

DFI Deep Mixing 2020
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; marco.barla@polito.it

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

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

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

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Foundation Donors

The Foundation of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) was created to provide financial help to geo-engineers throughout the world who wish to further their geo-engineering knowledge and enhance their practice through various activities which they could not otherwise afford. These activities include attending conferences, participating in continuing education events, purchasing geotechnical reference books and manuals.

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  - **d.** The Chinese Institution of Soil Mechanics and Geotechnical Engineering – CCES www.geochina-cces.cn/en
  - **e.** Korean Geotechnical Society www.kgshome.or.kr
  - **f.** Comité Français de Mécanique des Sols et de Géotechnique www.cfms-sols.org
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Foundation Donors (Con't)

d. CalGeo – The California Geotechnical Engineering Association
www.calgeo.org

e. Prof. Ikuo Towhata
towhata.ikuo.ikuo@gmail.com
http://geotle.t.u-tokyo.ac.jp/

f. Chinese Taipei Geotechnical Society www.tgs.org.tw

g. Prof. Zuyu Chen
http://www.iwhr.com/zswwenglish/index.htm

h. East China Architectural Design and Research Institute ECADI
http://www.ecadi.com/en/

i. TC 211 of ISSMGE for Ground Improvement
www.bbri.be/go/tc211

j. Prof. Askar Zhussupbekov www.enu.kz/en, www.kgs-astana.kz

k. TC302 of ISSMGE for Forensic Geotechnical Engineering
http://www.issmge.org/en/technical-committees/impact-on-society/163-forensic-geotechnical-engineering

l. Prof. Yoshinori Iwasaki yoshi-iw@geor.or.jpwww.geor.or.jp

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