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Research Highlights

Delft University of Technology, The Netherlands

The Section of Geo-Engineering at Delft University of Technology (TU Delft) resides within the Department of Geoscience and Engineering, one of 7 departments within the Faculty of Civil Engineering and Geosciences. It has 10 full-time and 4 part-time academic staff, 3 support staff, and around 30 PhD and post-doctoral researchers. Areas of expertise include soil mechanics, dykes and embankments, foundation engineering, underground space technology, geo-environmental engineering and engineering geology. The Section has close links with the onshore and offshore industries and with the Dutch research institute Deltares. It is a member of the European network 'ALERT Geomaterials'.

Faculty members

Dr. Michael Hicks has been Professor of Soil Mechanics at TU Delft since 2009 and is the Head of the Section of Geo-Engineering. Previously, he graduated from and worked at The University of Manchester. He has 35 years of experience in finite elements, specialising in constitutive modelling, soil heterogeneity, static liquefaction, strain localisation, stochastic analysis, adaptive mesh refinement and the material point method. Current research interests include 3D modelling of dyke and embankment reliability, including data assimilation, inverse and conditional modelling, parameter inter-dependency, small failure probabilities, ultimate limit states and length effects. Current industrial projects include the mitigation of underwater slope liquefaction near the Oosterschelde storm surge barrier in the Netherlands. Dr. Hicks is on the editorial boards of the international journals 'Computers and Geotechnics' and 'GeoRisk', is the chair of the 4th

Research Highlights (Con't)

Delft University of Technology, the Netherland

International Symposium on Cone Penetration Testing (Delft, June 2018), and will deliver a keynote lecture at NUMGE2018 in Porto, Portugal.

Dr. Ken Gavin has been Professor of Subsurface Engineering at TU Delft since 2016. The Chair is sponsored by Deltares and Rijkswaterstaat. His primary research focus is on deep foundation systems and the impact of climate change on transport networks. He has led a number of EU collaborative research projects on infrastructure resilience, and been involved in a number of joint industry projects focussed on offshore renewable developments. He was a member of the academic workgroup of the Pile Soil Analysis (PISA) project, together with researchers at Oxford University and Imperial College, that was awarded the 2017 British Geotechnical Association Fleming medal for excellence in the practical innovative application of geotechnics in a project. He is an Associate Editor of the Canadian Geotechnical Journal. He was a keynote speaker at CETRA 2014 in Split, ISFOG 2015 in Oslo, and will deliver a lecture on the design of foundations in sand at CPT18 in Delft.

Dr. Timo Heimovaara is Professor of Geo-Environmental Engineering with 30 years of research and practical experience in soil chemistry, soil physics and environmental engineering. After finishing his PhD and Post-doc, he spent 11 years in consulting and contracting in the field of soil remediation. In 2007 he joined TU Delft, where his main focus is on research and teaching. His research interests focus on utilizing the bio-geochemical activity of the subsurface as an engineering tool, as well as developing in-situ geophysical measurement technology. His research is applied in developing new approaches for landfill after-care based on active bio-geochemical stabilization of waste bodies, applying microbial induced carbonate precipitation as a means to strengthen soils, and using natural complexation dynamics of metals and dissolved organic matter to reduce in-situ soil permeability. He has been a member of several advisory boards related to soil quality issues.

Dr. Cristina Jommi is Professor of Dykes and Embankments. Her main research interests are the coupled multiphysics response of soils, the engineering of earth structures and the geotechnical aspects of environmental hazards. Her current research focuses on the behaviour of earth structures in deltaic areas under natural and anthropogenic time dependent loads, including bio-chemical processes and interaction with the atmosphere. Special attention is dedicated to improve current assessment guidelines for dykes, and to provide innovative, cost effective and sustainable monitoring systems and strengthening techniques for earth structures. Her scientific activity includes the modelling of unsaturated and gassy soils, peats and organic clays, accounting for the role of fibres and cracking. Dr. Jommi is a member of the TC106-Unsaturated Soils and TC214-Soft Soils.

Dr. Pieter Stuijfzand is Professor of (Chemical) Hydrogeology and also employed at KWR Watercycle Research Institute in Nieuwegein (the Netherlands). His research covers various groundwater related topics, such as Managed Aquifer Recharge (MAR), hydrological and hydrochemical systems analysis of coastal aquifers (e.g. regarding saltwater intrusion), forensic hydrology, and clogging of injection and pumping wells. One important issue with MAR is 'how to raise the recovery efficiency of water stored in the underground for later use', which includes a multi-disciplinary approach involving soil mechanical with applications related to the prevention of land subsidence. Forensic hydrology aims at the dating of groundwater via environmental tracers such as isotopes, gases, main and trace constituents, or at tagging water with DNA particles, in order to define, in detail, the transport pathways and times of surface and groundwater.

Research Highlights (Con't)

Delft University of Technology, the Netherland

Dr Amin Askarinejad is Assistant Professor of Experimental Soil Mechanics. His research interests include the static liquefaction of submarine slopes, triggering mechanisms of rainfall induced landslides, and soil-structure interaction with a focus on offshore pipelines and foundations. He uses advanced instrumentation and visualisation techniques in the geotechnical centrifuge, as well as large-scale 1g laboratory and full-scale field tests, to study the hydro-mechanical responses of geotechnical structures. He has been involved in the development of advanced sensors and state-of-the-art actuators for in-situ monitoring and geotechnical physical modelling within several international research and industrial projects. He is a member of the editorial board for the International Journal of Physical Modelling in Geotechnics, and member of TC208 'Slope Stability in Engineering Practice' and TC104 'Physical Modelling'.

Dr. Ronald Brinkgreve is part-time Associate Professor at Delft University of Technology and Manager Research at Plaxis BV. He graduated from TU Delft with a Civil Engineering degree in 1989 and obtained his PhD degree in 1994. He has co-supervised numerous master students and is involved with various research projects in the Geo-Engineering Section, with a particular focus on numerical methods, soil-structure interaction, constitutive models for soils and rocks, and the proper use of the finite element method for practical applications. Dr. Brinkgreve is responsible for the course 'Behaviour of Soils and Rocks', which is part of the core courses of the Geo-Engineering master track.

Dr. Wout Broere is Assistant Professor of Underground Space Technology. His research interests range from trenchless technologies, large diameter tunnelling and use of underground space, site investigation, physical modelling and offshore foundation engineering. He has been a consultant for various offshore, foundation and major tunnelling projects in the Netherlands and abroad, and previously worked for Plaxis BV. Dr. Broere is editor-in-chief for the journal of Tunnelling and Underground Space Technology. He is also a member of TC204, Underground Construction in Soft Ground, and board member of the International and Netherlands Societies for Trenchless technologies (ISTT, NSTT). He is animateur of WG20 'Urban problems – Underground Solutions' of the ITA and a member of ITACUS, the Committee on Underground Space and ITA-COSUF, the Committee on Operational Safety in Underground Facilities.

Dr. Anne-Catherine Dieudonné is Assistant Professor of Engineering Geology. Her research interests include multiphysical and multiscale processes in geomaterials – especially in clays and cemented soils, unsaturated soil mechanics, the behaviour of interfaces, and bio-inspired geotechnical engineering. She has been involved in a large number of projects related to the geological disposal of radioactive waste. Dr. Dieudonné favours a combined approach of experimental testing, constitutive modelling and numerical analysis (developing and using the finite element code LAGAMINE). In 2017, she was awarded the Ioannis Vardoulakis PhD Prize by the European network ALERT Geomaterials.

Dr. Julia Gebert is Associate Professor of Geo-Environmental Engineering. She is a biologist and soil scientist, educated at the University of Hamburg, and an international expert in the biological treatment of landfill gas to mitigate landfill greenhouse gas emissions. Her research includes process studies on factors influencing microbial methane oxidation, gas transport behaviour of unsaturated soils and performance assessment of large-scale methane oxidation systems implemented in landfills. Other research concerns are the anaerobic carbon cycling in river sediments, with relevance to flocculation, settlement and consolidation of suspended particulate matter, and hence to maintenance dredging in ports and waterways.

Research Highlights (Con't)

Delft University of Technology, the Netherland

This is also connected to research on the possible use of dredged material on land, e.g. as a construction material in dykes, and the accompanying questions of soil ripening and contaminant leaching. Dr. Gebert spent several years as head of the Environmental Services Unit at Hamburg Port Authority before joining TU Delft in 2017.

Dr. Mandy Korff is part-time Associate Professor in Geotechnical Practice (since 2016), and a Senior Advisor and Innovations Manager at Deltares. She works in the fields of underground construction, behaviour of piles, risk management and monitoring, observational methods, forensic geo-engineering, soil-structure interaction, liquefaction, and impact of construction activities and earthquakes on structures. Her research is directly related to projects such as the Groningen earthquake studies, Amsterdam subway (North-South line), Delft railway tunnel and projects in Singapore. Dr. Korff was chair of the Geotechnical Department of the Royal Institute of Engineers (KIVI) and the national representative for the ISSMGE during 2008-2017. She is currently a member of ISSMGE's TC204 and TC207 on Underground Construction and Soil-Structure Interaction, and serves on the Corporate Associates Presidential Group.

Dr. Dominique Ngan-Tillard is Assistant Professor of Engineering Geology and Coordinator of the master track in Geo-Engineering. She applies novel techniques and develops algorithms to understand and shape human interaction with the Earth. Part of her know-how is the use of non-destructive techniques to characterise the microstructure of geomaterials and archaeological remains exposed to various physico-chemical loadings. She is involved in archaeological projects covering topics as diverse as the imaging of buried archaeology using geophysics, writing the biography of antique ornaments using X-ray micro-tomography, and the prediction of the impact that construction works have on archaeological soils and the remains that they contain.

Dr. Federico Pisanò is Assistant Professor of Offshore Soil Mechanics. He received his Ph.D. from Politecnico di Milano (2011), and gained international research experience at Universidad Politecnica de Madrid (2009), University of California Davis (2012) and University of Western Australia (2016). He is a member of the ISSMGE Technical Committee on Offshore Geotechnics (TC209). Dr. Pisanò's research focuses on the modelling and simulation of geomaterials and soil-structure interaction, with emphasis on cyclic/dynamic loading conditions. He combines theoretical analysis and numerical modelling to gain insight into the response of relevant geotechnical systems, such as foundations and earth slopes. His current work in the field of offshore geotechnics is oriented towards the advanced analysis of soil-structure interaction in offshore wind turbines, jack-ups and buried pipelines.

Dr. Philip Vardon is an Associate Professor in Computational Soil Mechanics. His research concerns complex coupled processes. In particular, he focuses on the numerical simulation of the impacts on soils/geomaterials of various processes, including mechanics, heat, moisture and contaminant movement, with practical applications including geothermal energy, slope stability and radioactive waste disposal. He has recently been involved in quantifying the impact of uncertainties in soils and in the development of the material point method. He also leads the Department of Geoscience and Engineering research theme on Geothermal Science and Engineering.

Research Highlights (Con't)

Delft University of Technology, the Netherland

Research facilities

The Laboratory of Geoscience and Engineering is equipped with highly advanced instrumentation and set-ups to qualify and quantify chemical and physical processes in rocks and soils under deep and shallow in-situ conditions. In this way, the laboratory significantly contributes to the research and education of the department, and provides multi-level experimental support in the designing, development, manufacturing, and maintenance of experimental equipment and instrumentation.

Specific to the Section of Geo-Engineering, there are extensive experimental laboratory facilities for the testing and physical modelling of coupled geo-mechanical processes and geotechnical problems. Aside from standard geotechnical and geo-environmental testing facilities, other facilities include micro- and macro-CT scanners, a high-speed electrical resistivity tomography setup, full-field photo-elasticity setup, time domain reflectometer, a novel axial shear apparatus, a large static liquefaction tank and 2 geotechnical centrifuges (Figure 1).

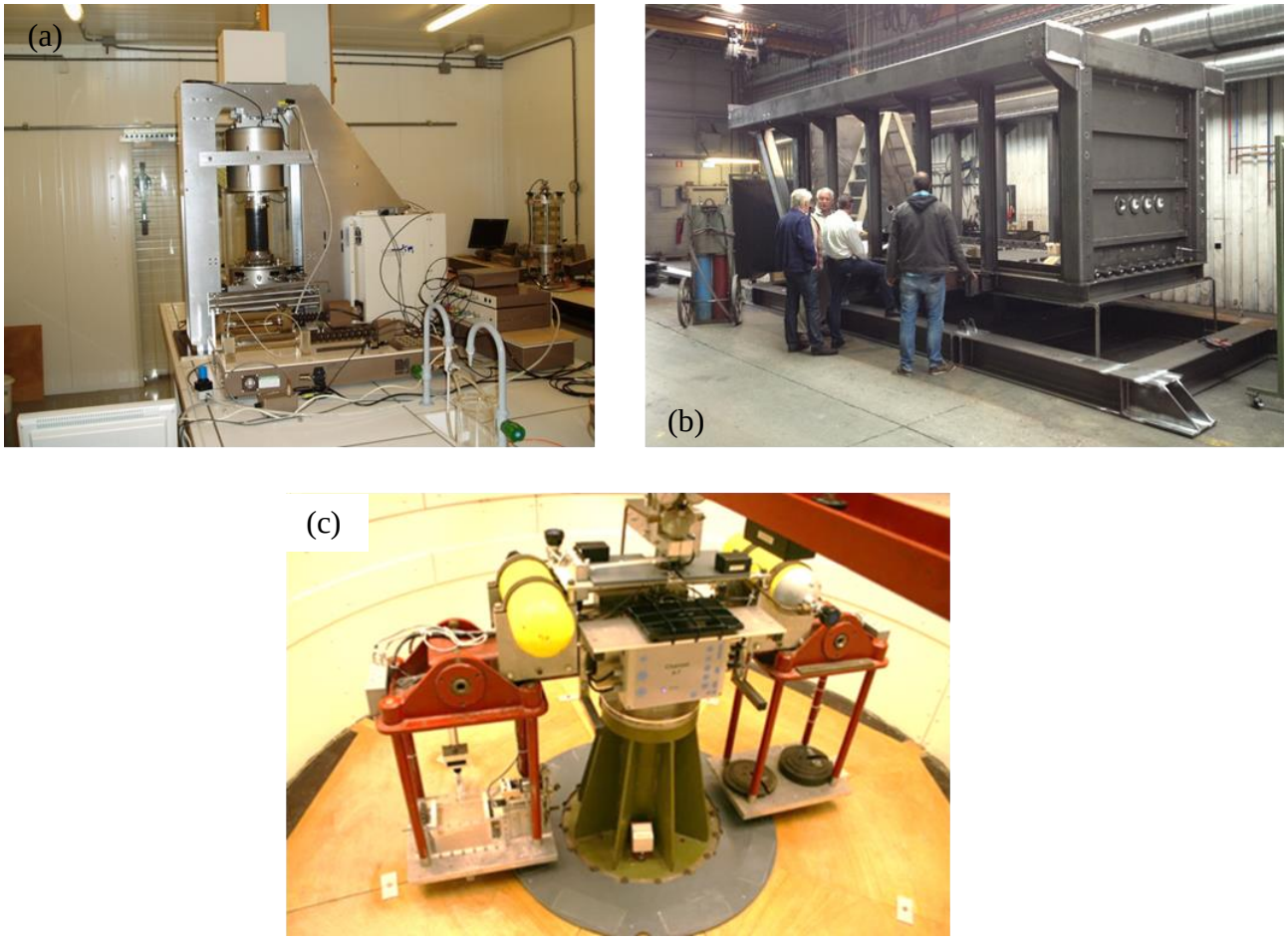

Figure 1. (a) Axial shear device for fibrous soils; (b) static liquefaction tank under construction; (c) geotechnical centrifuge

Research Highlights (Con't)

Delft University of Technology, the Netherland

Current research

1. Tunnels, earthworks and foundations in the EU Horizon 2020 SAFE-10-T project

SAFE-10-T project is a 3-year EU Horizon 2020 project which started in May 2017. It will develop a Safety Framework to ensure high safety performance while allowing longer life-cycles for critical infrastructure across the road, rail and inland waterway networks. The key scientific objective is to move from considering critical infrastructure such as bridges, tunnels and earthworks as inert objects to being intelligent (self-learning objects). The Geo-Engineering Section at TU Delft are the scientific coordinators of the project and are responsible for the following tasks in the project:

- The development of a cyclic loading model for soil-structure interaction analysis of bridge foundations;
- The instrumentation of an existing road tunnel beneath a major river in the Netherlands using fibre optic sensors to monitor tunnel movements and determine the best strategy for upgrading the tunnel (Figure 2);
- Development of system reliability approaches for the probabilistic analysis of earthworks on transport networks;
- Development of data analytics techniques for the analysis of rainfall-induced slope failures and tunnel movements using data from an instrumented rock tunnel in Croatia (Figure 3).

Figure 2. Heinenoord (immersed tube) Tunnel, the Netherlands

Figure 3. Brajdica Railway and Pecine Road Tunnel, Rijeka, Croatia

Research Highlights (Con't)

Delft University of Technology, the Netherland

2. Development of design codes and investigating ageing of axially loaded piles

The Section of Geo-Engineering is working closely with the Port of Rotterdam, contractors Dimco, the Belgian Building Research Institute, and consultants Witteveen and Bos to investigate the axial pile resistance of piles driven in sand. In October 2017, four, 35m long, 450 mm square driven pre-cast concrete piles were installed at a site in the Port of Rotterdam (Figure 4). Static load tests were performed at 1 day, 7 days, 30 days and 100 days after installation. The piles were fully instrumented using optical fibre sensors to allow the separate components of shaft and base resistance to be determined.

Figure 4. Axial load test set-up at the Port of Rotterdam

3. Large-scale offshore physical modelling tank

The unique large-scale offshore physical modelling tank of TU Delft consists of an instrumented inclinable container, designed to investigate the effects of sudden changes in water level, fast sedimentation, scouring, shock impacts, or long-term cyclic loads to offshore geotechnical structures (Figure 5). The liquefaction tank comprises a base frame, tank frame, glass sheets and components connecting these elements. The base frame enables the tank frame to be rotated. Isolators supporting the base frame only allow the passing of externally induced vibrations with frequencies well below the eigen-frequency of the very loose sand layers and slopes excavated in the tank. A pair of hinges and jack-up screws connect the base frame to the tank frame. The tank frame consists of a steel frame with steel plates at the ends and glass sheets on the sides. The tank frame measures (length x width x height) 5 x 2 x 2 m^3. The width has been selected based on minimization of lateral boundary effects.

Research Highlights (Con't)

Delft University of Technology, the Netherland

Figure 5. Initiation of static liquefaction in a loose sand bed due to tilting of tank

Two pumps recirculate the water through the system during the preparation of the sand bed by means of fluidization. The sand bed in the tank can be further prepared by the controlled dredging of a slope. The behaviour of the sand layer can be monitored using: 3 fluid pressure sensors at the bottom; 2 fluid pressure sensors at each of the two vertical end walls; 2 compensated total load sensors; a differential pressure sensor; 10 high-speed floating sensors which measure acceleration along three axes and point pore water pressures; and a high speed, high resolution side camera for image analysis.

This facility has been widely used for two projects: 'Flow slides of submerged slopes composed of loose sands' sponsored by STW, Dutch Technology Foundation, and 'Role of scour protection on prevention of static liquefaction-induced flow slides' sponsored by the Dutch Ministry of Infrastructure and Environment. In addition, the facility has the potential to be used in a wide range of investigations including:

- Large-scale testing of offshore anchoring systems;
- Generation of tsunami waves induced by submarine landslides;
- Submarine slope–pipeline interaction;
- Destructive effects of flow slides on coastal and offshore facilities;
- Quantifying the efficiency of dredging methods.

Facility website: https://www.tudelft.nl/en/ceg/about-faculty/departments/geoscience-engineering/laboratory/facilities/static-liquefaction-tank-slt/

Research Highlights (Con't)

Delft University of Technology, the Netherland

4. Reliable Dykes: Reliability-based geomechanical assessment tools for dykes and embankments in delta areas

Around 1 billion euros per year are required to maintain and upgrade the Dutch dyke network, which protects around 40% of the Netherlands from inundation by the sea. Research is urgently needed to improve understanding in dyke geo-engineering, so that: (a) financial savings can be made; and (b) financial resources can be more effectively focused in areas of real need. In particular, there is a need to fill knowledge gaps relating to the 14,000 km of rural dykes, which are currently maintained and upgraded using guidelines mainly derived from research on primary dykes (a very different type of structure). Of these, 7,000 km of dykes have peat-related issues, including 3,500 km that are estimated to be constructed purely of peat.

This research is funded by NWO and aims to provide industry-focused guidance relating to rural dykes, including guidance on the partial factors to be used in design, as well as prototype probabilistic and numerical tools for the effective design, management and maintenance of rural dykes and embankments in delta areas. This will be achieved via the following inter-connected stages: (a) the design, implementation and evaluation of a field test involving the controlled failure of a real dyke (Figure 6); (b) the use of the field test (including laboratory and site investigation data) to validate state-of-the-art probabilistic and numerical techniques developed in the Section of Geo-Engineering (Figure 7); (c) the use of these techniques to conduct parametric studies pertinent to stability assessments for rural dykes, including the benchmarking of existing simpler design tools (Figure 8); (d) the development of industry guidance and prototype tools.

Figure 6. Leendert de Boerspolder, showing main test areas: A, slope failure zone; B, wetting/drying zone; C, main CPT area. The failure test (Zone A) was successfully carried out in 2016

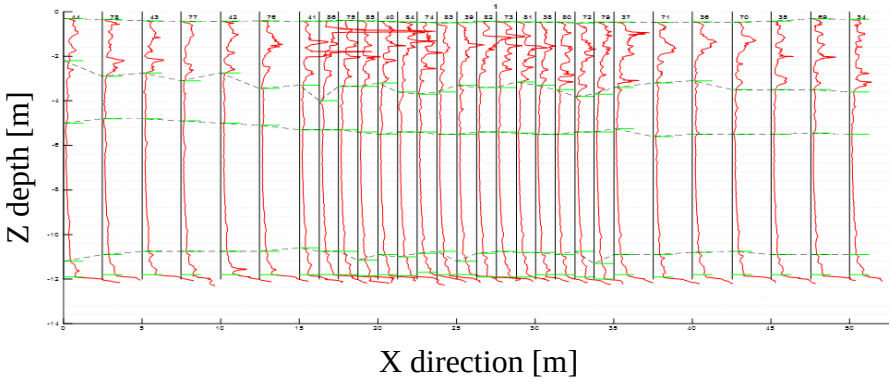

Figure 7. CPT profiles beneath dyke crest (Zone C)

Research Highlights (Con't)

Delft University of Technology, the Netherland

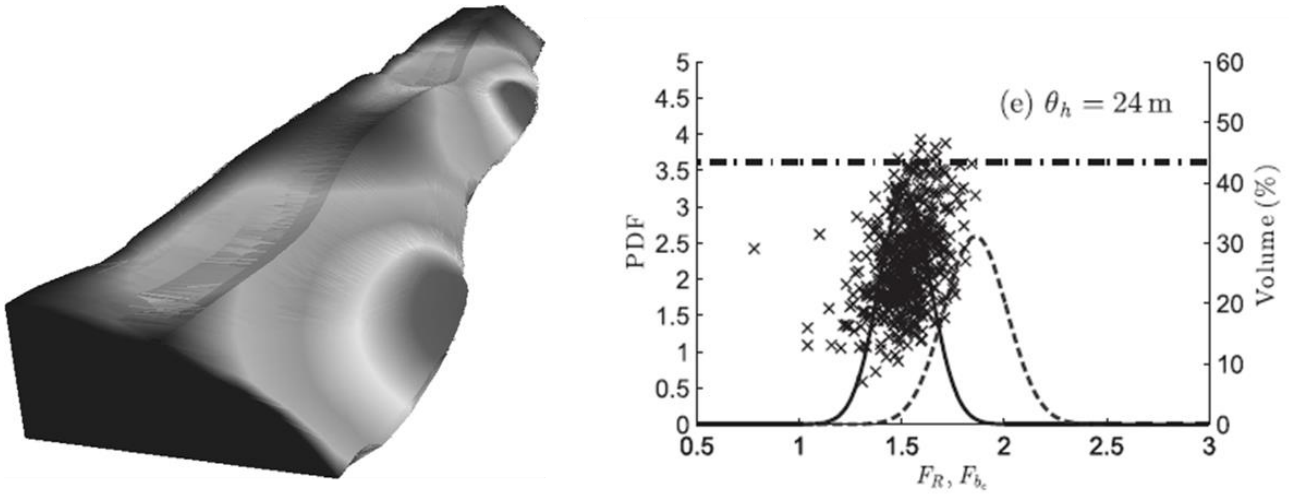

Figure 8. Influence of soil heterogeneity on embankment reliability in 3D. Right: Use of random finite element method to benchmark analytical approach

5. Soil sealing by enhanced aluminium dissolved organic matter leaching

Water management of low lying delta areas often requires control of infiltration or seepage of water. Although several civil engineering techniques are available, their application becomes increasingly complicated with increasing operational scale; for example, over long stretches of dykes.

The SoSEAL project aims to develop a bio-based geo-engineering technology for in-situ permeability reduction of sub-surface systems. Naturally occurring processes such as the formation of spodic horizons in podzols by precipitation of organic matter (OM) and polyvalent cations such as aluminium (Al) have been proven to reduce permeability. We aim to utilize the potential of these natural processes for engineering purposes. The research is primarily focused on increasing the understanding of these natural processes and translating them into conditions that can be engineered to ensure a substantial reduction in permeability.

Together with industry partners, field tests are carried out based on the proposed in-situ technology. For this, several different approaches have been developed for in-situ application of the Al and dissolved organic matter (DOM) in the targeted layers for permeability reduction, using both laboratory and field experiments.

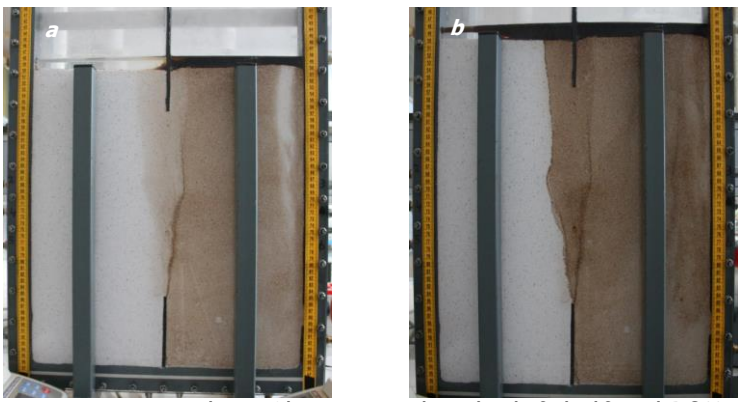

Figure 9. Laboratory experiment where Al is injected in the left half and DOM in the right half of the sandbox. Al-DOM precipitation is the dark band in the middle. (a) result after the first injection; (b), after the second injection. Differences between images (a) and (b) are caused by reduced permeability during first injection

Research Highlights (Con't)

Delft University of Technology, the Netherland

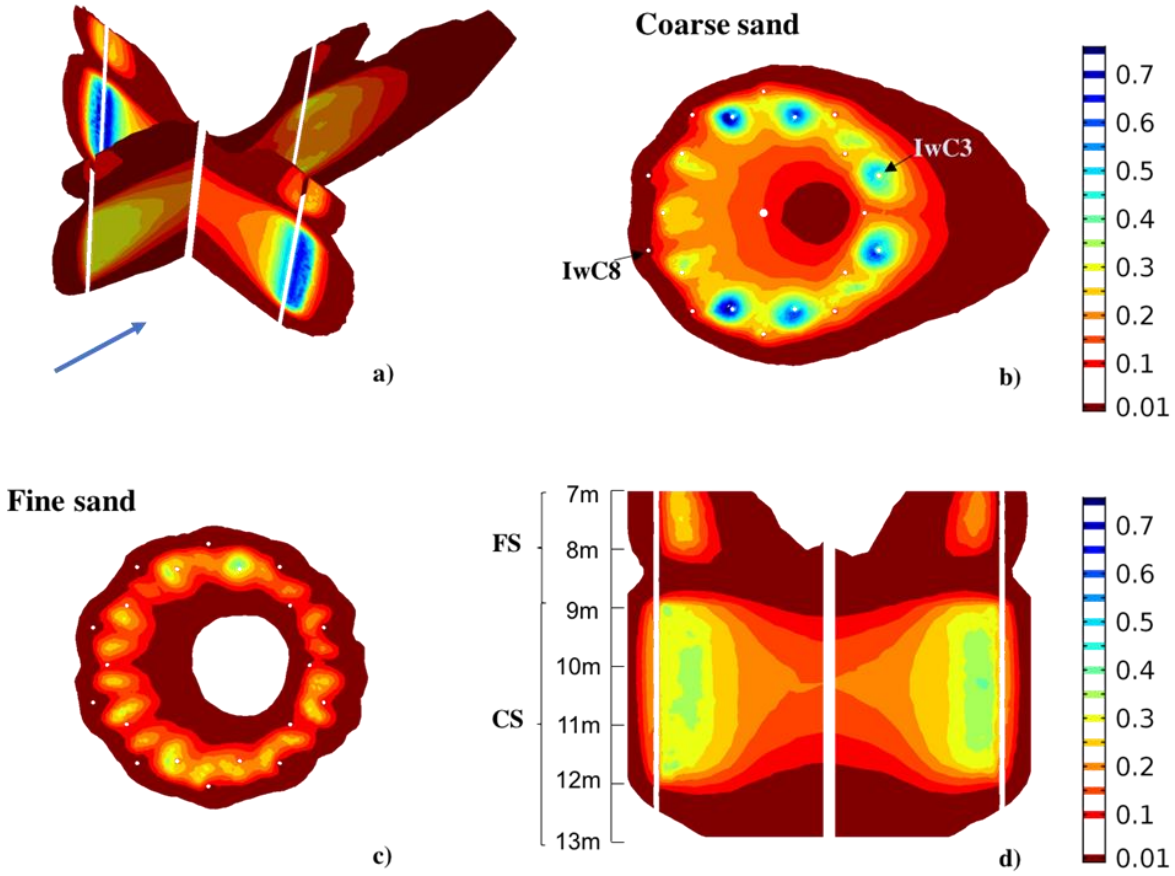

Figure 10: Simulated 3D spatial distribution of Al-DOM precipitates at the end of a field test: (a) where Al and DOM were injected in a circular well field. Horizontal cross-sections in the two sand layers are shown in (b) and (c). A vertical cross-section perpendicular to the flow direction is shown in (d)

Message from Corporative Associates Presidential Group (CAPG)

Global survey on the state-of-the-art and state-of-the-practice in geotechnical engineering

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[3] *Federal Highway Administration, USA*
[4] *GHD, Australia*
[5] *Jones & Wagener and University of Stellenbosch, South Africa*

Abstract
This paper presents the results of a global survey on the State-of-the-Art and State-of-Practice in geotechnical engineering initiated by the ISSMGE Corporate Associates Presidential Group and the Technical Oversight Committee in March 2017. It also summarises the discussions held on the topic during the 19th ICSMGE in Seoul on 20 September 2017.

1. Introduction
The International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) is the pre-eminent professional body representing the interests and activities of Engineers, Academics and Contractors all over the world that actively participate in geotechnical engineering. As a truly global organisation, the ISSMGE provides a focus for professional leadership to some 90 Member Societies and around 20,000 individual members. Further details on the activities of the ISSMGE can be found at www.issmge.org.

One of the objectives of the Corporate Associates Presidential Group (CAPG) of the ISSMGE is facilitating the uptake of geotechnical research in practice thereby narrowing what is referred to as the "research-practice gap". To this end, the CAPG in conjunction with the Technical Oversight Committee (TOC) initiated a worldwide survey on the state-of-practice and the state-of-the-art in geotechnical engineering. The results of this survey were presented at a workshop at the 19th International Conference of the ISSMGE in Seoul on 20 September 2017. The workshop was organised jointly by the CAPG and the TOC, both of which are Board-level committees of the ISSMGE.

The purpose of this paper is to present a summary of the survey results and of the discussions held at the Seoul Workshop. The paper then identifies potential follow-up actions required to maintain the momentum of this initiative.

2. The CAPG, TOC and Technical Committees
2.1. Corporate associates presidential group
In his introduction to the Seoul Workshop, Karel Allaert (Jan de Nul) described the CAPG as an ISSMGE Board-level committee which comprises representatives drawn from the Corporate Associates (CAs) of the ISSMGE. At the time of the Seoul Workshop, there were thirty-one CAs including corporations, consultancies, contractors, equipment and product manufacturers, as well as one university. CA logos, with links to their company websites, are displayed prominently on the ISSMGE web page and included in each issue of the ISSMGE Bulletin. The CAs list as at September 2017 is presented in Figure 1.

The number of CAs peaked at 43 and it is clear that more members are required. It is believed that a stable platform of CAs could be about 60.

The key purpose of the CAPG is to assist the ISSMGE in developing actions and activities that will enhance the commercial sector of the geotechnical profession. Among these, identifying and helping to bridge the gap between the State-of-the-Art (SoA) and State-of-Practice (SoP) in geotechnical engineering has been a key activity for CAPG during the last term (2013-2017).

Message from Corporative Associates Presidential Group (CAPG) (Con't)

2.2. Technical Committees

The mission of Technical Committees (TCs) is to provide a forum for active participation by the individual members of the ISSMGE, and to promote the objectives, activities and results of the technical committees throughout the ISSMGE membership. The TCs are a meeting arena for discussing, developing and applying specialist geotechnical knowledge related to the behaviour of geo-materials, geotechnical engineering and engineering for society.

Figure 1. List of Corporate Associates (September 2017)

There are 33 technical committees of the ISSMGE divided into three categories, namely Fundamentals, Applications and Impact on Society (Delage, 2017). These technical committees are listed in Table 1. Technical committees may be removed or added in the future depending on the interest and activity of the members. For example, a new TC309 is currently being created on Machine Learning and Big Data in Geotechnics.

Message from Corporative Associates Presidential Group (CAPG) (Con't)

2.3. Technical Oversight Committee
The Technical Oversight Committee (TOC) is in charge of supervising and coordinating the activities of the TCs of the ISSMGE.

The TOC is managed by a Chair and a Secretary. Its members are the six Vice-Presidents of the Regions. Each Vice-President follows the activities of the TCs from his/her region (http://bit.ly/2D5xfyx).

Table 1: List of ISSMGE Technical Committees

Fundamentals • TC101 - Laboratory Stress Strain Strength Testing of Geomaterials • TC102 - Ground Property Characterization from In-Situ Tests • TC103 - Numerical Methods • TC104 - Physical Modelling in Geotechnics • TC105 - Geo-Mechanics from Micro to Macro • TC106 - Unsaturated Soils • TC107 - Laterites and Lateritic Soils
Applications • TC201 - Geotechnical Aspects of Dykes and Levees and Shore Protection • TC202 - Transportation Geotechnics • TC203 - Earthquake Geotechnical Engineering and Associated Problems • TC204 - Underground Construction in Soft Ground • TC205 - Safety and Serviceability in Geotechnical Design • TC206 - Interactive Geotechnical Design • TC207 - Soil-Structure Interaction and Retaining Walls • TC208 - Slope Stability in Engineering Practice • TC209 - Offshore Geotechnics • TC210 - Dams & Embankments • TC211 - Ground Improvement • TC212 - Deep Foundations • TC213 - Scour and Erosion • TC214 - Foundation Engineering for Difficult Soft Soil Conditions • TC215 - Environmental Geotechnics • TC216 - Frost Geotechnics • TC217 - Land Reclamation • TC218 - Reinforced Fill Structures
Impact on Society • TC301 - Preservation of Historic Sites • TC302 - Forensic Geotechnical Engineering • TC303 - Coastal and River Disaster Mitigation and Rehabilitation • TC304 - Engineering Practice of Risk Assessment and Management • TC305 - Geotechnical Infrastructure for Megacities and New Capitals • TC306 - Geo-engineering Education • TC307 - Sustainability in Geotechnical Engineering • TC308 - Energy Geotechnics

Message from Corporative Associates Presidential Group (CAPG) (Con't)

3. GLOBAL SURVEY

3.1. Background

In late 2013, the core group of the CAPG, with the support of the then President of the ISSMGE, Prof. Roger Frank, embarked on a project to work towards improving the understanding of the SoA and SoP in geotechnical engineering. The Chair of the TOC, Pierre Delage joined this working group in late 2014 and was pivotal in engaging in regular communications with all of the TCs. As a result, a mini survey on the SoA and SoP was conducted involving all of the TCs in early 2015, culminating in a discussion session during the European Conference in Edinburgh in September 2015.

Encouraged by the success of the mini survey and the discussion session, the CAPG core group and TOC decided to undertake a global survey inviting the TCs to develop the specific survey questions considered as "hot issues" in their field.

SurveyMonkey was selected as the tool for hosting the survey questions. Sam Mackenzie (GHD) kindly offered to implement and administer the survey. The global survey was subsequently launched in March, 2017.

The main aims of the CAPG/TOC global survey were to gain a better understanding of the state-of-practice in the geotechnical profession, to identify areas for improvement and to provide feedback from the profession to the Technical Committees.

The survey was divided into three sections. The first section included general questions regarding the demographics of the survey respondents. This section also allowed the respondent to identify the Technical Committees they were interested in within the ISSMGE. The second section consisted of targeted questions compiled by each of the technical committees. Most of these questions were aimed at ascertaining the extent to which existing knowledge is being applied in practice, and the needs of industry and practicing geotechnical engineers. The final section invited respondents to provide general feedback on ways of narrowing the gap between the SoA and the SoP.

3.2. Respondent Demographics

The survey drew 1,295 responses from 68 countries. 84% of the respondents were male and 16% were female.

Figure 2 shows the number of responses received from the various participating countries. The majority of responses (56%) came from the European Region followed by 13% from Asia and 12% from Australasia.

Figure 3 shows the sectors of the industry in which the respondents are employed. Clearly the survey has achieved its objective with about 70% of the responses being from practitioners. One response was received from lawyers with none from insurers.

Figure 4 shows the distribution of respondents' number of years of experience in the industry. Overall, a wide range of experience was represented, helping to provide different viewpoints.

Figure 5 shows the percentage of respondents interested in each technical committee of the ISSMGE. Twenty eight percent of the respondents are members or corresponding members of technical committees. Seventeen percent of the respondents attend TC meetings and 25% attend TC-related conferences.

Message from Corporative Associates Presidential Group (CAPG) (Con't)

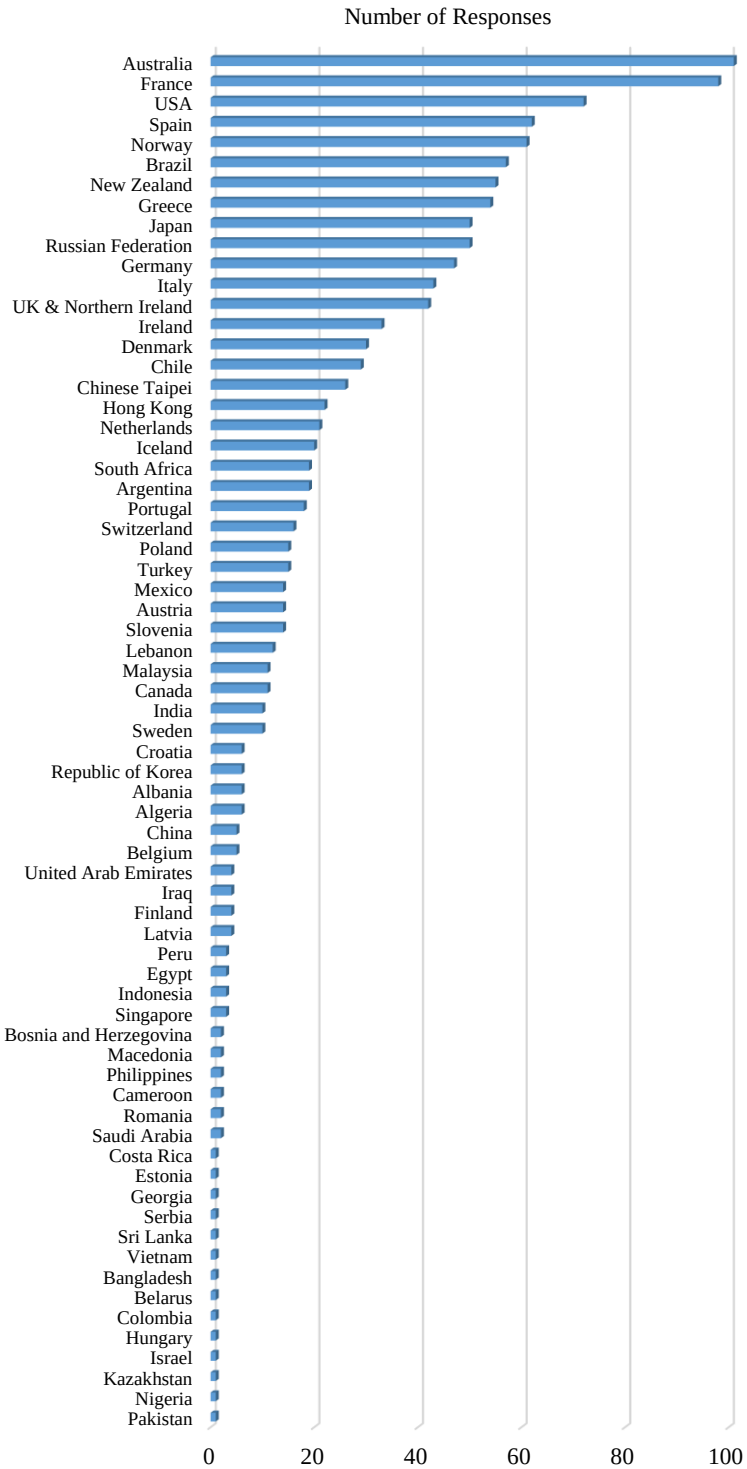

Figure 2. Number of responses by country

Message from Corporative Associates Presidential Group (CAPG) (Con't)

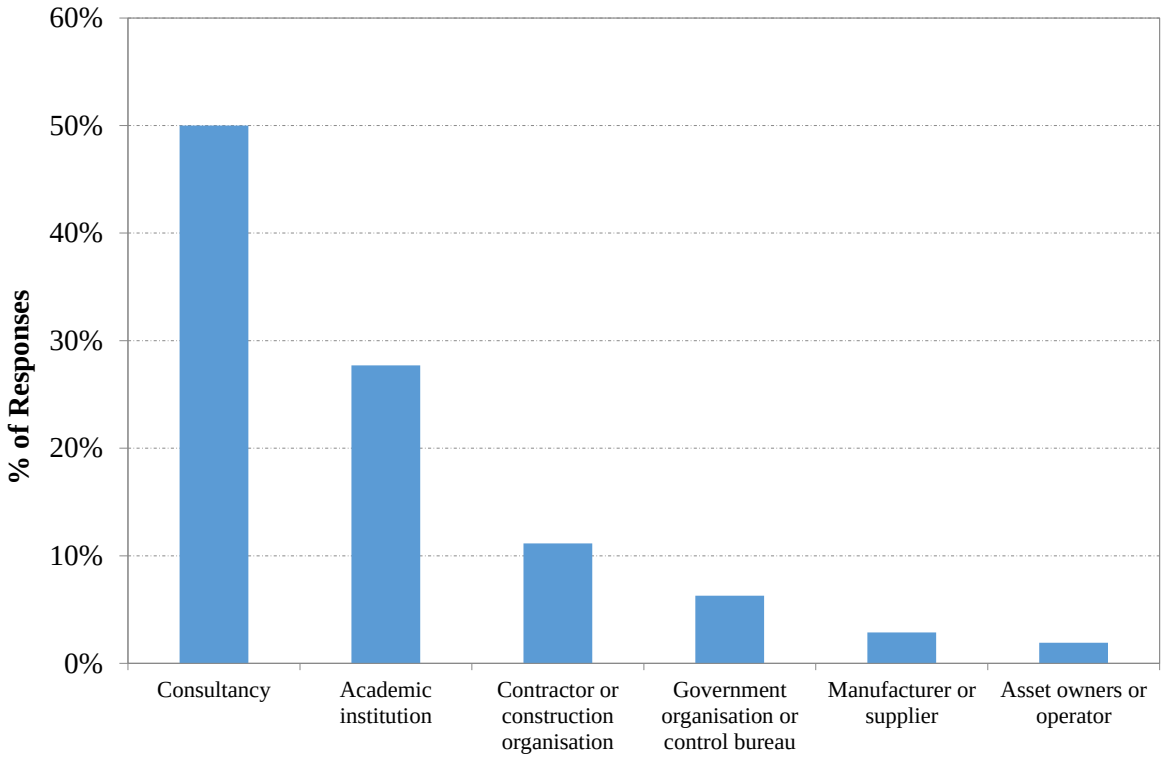

Figure 3. Industry sector of respondents

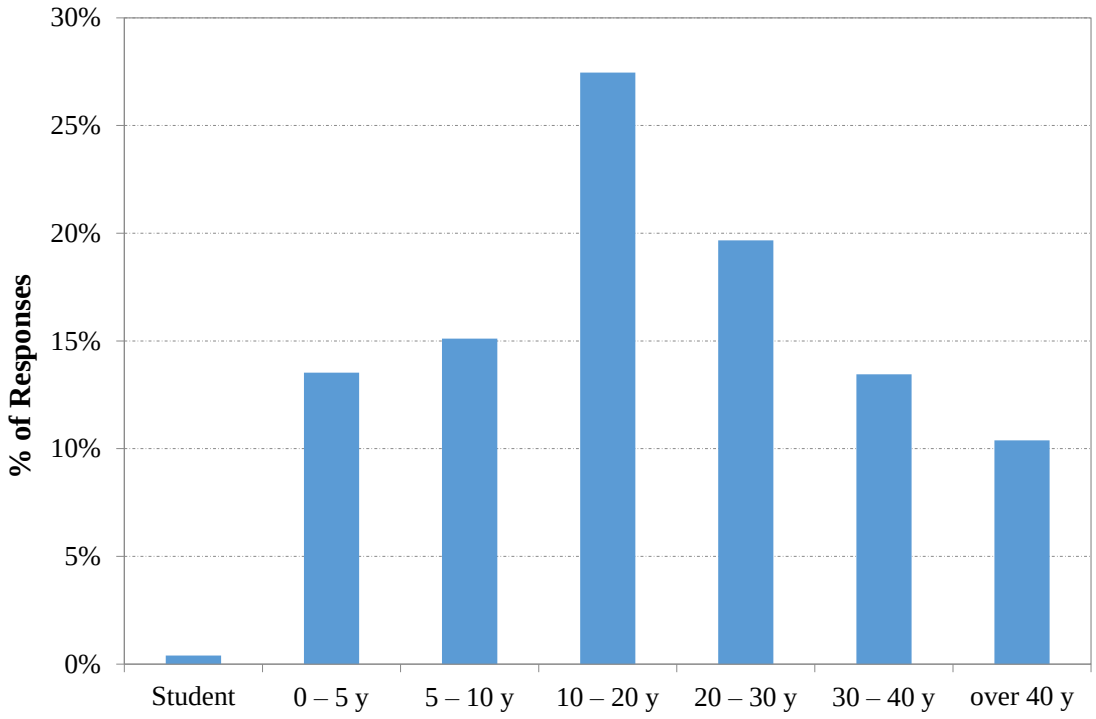

Figure 4. Number of years of experience of respondents

Message from Corporative Associates Presidential Group (CAPG) (Con't)

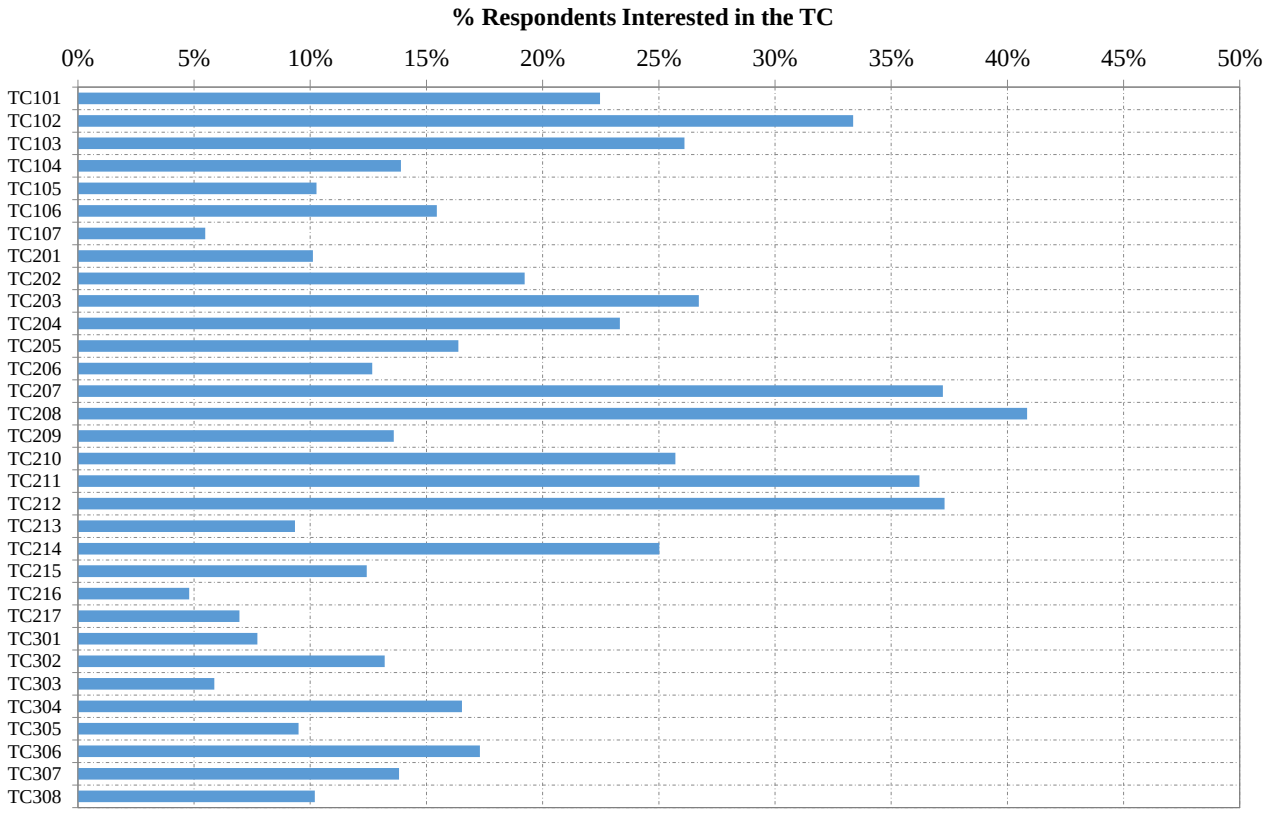

Figure 5. Respondents' interest in various Technical Committees

3.3. Response to TC survey questions

Twenty nine of the 33 Technical Committees listed in Table 1 provided a total of 232 questions for inclusion in the global survey. Respondents could contribute to the sections of the survey relating to the technical committees of their choice. A complete list of the questions and the responses received is available on the CAPG website at CAPG/Downloads http://bit.ly/2mkAaIj. Note that, in each case, responses have been numbered sequentially and that the numbers bear no connection to individual respondents. This summary is an adaptation of the analysis of survey results produced by Jennifer Nicks (FHWA, USA). Figures 2 to 5 come from this analysis.

In his capacity of Chair of the Technical Oversight Committee, Pierre Delage presented feedback on the survey to the Seoul Workshop with particular reference to the roles of the technical committees. A copy of the presentation is available on the CAPG web site at http://bit.ly/2mkAaIj. A summary of the salient points is given below.

3.3.1. Role and objectives of Technical Committees

The objectives of the TCs as per ISSMGE guidelines are:

a) To disseminate knowledge and practice within the TC's subject area to the membership of the ISSMGE.
b) To establish guidelines and technical recommendations within the TC's subject area.
c) To assist with the technical programs of international and regional conferences organized by the ISSMGE.
d) To interact with industry and overlapping groups working in areas related to the TC's specialist area.

These objectives are closely aligned with the objectives of the CAPG. Furthermore, all these objectives form a part of the knowledge development and interaction cycle (Day, 2017) as illustrated in Figure 6.

Message from Corporative Associates Presidential Group (CAPG) (Con't)

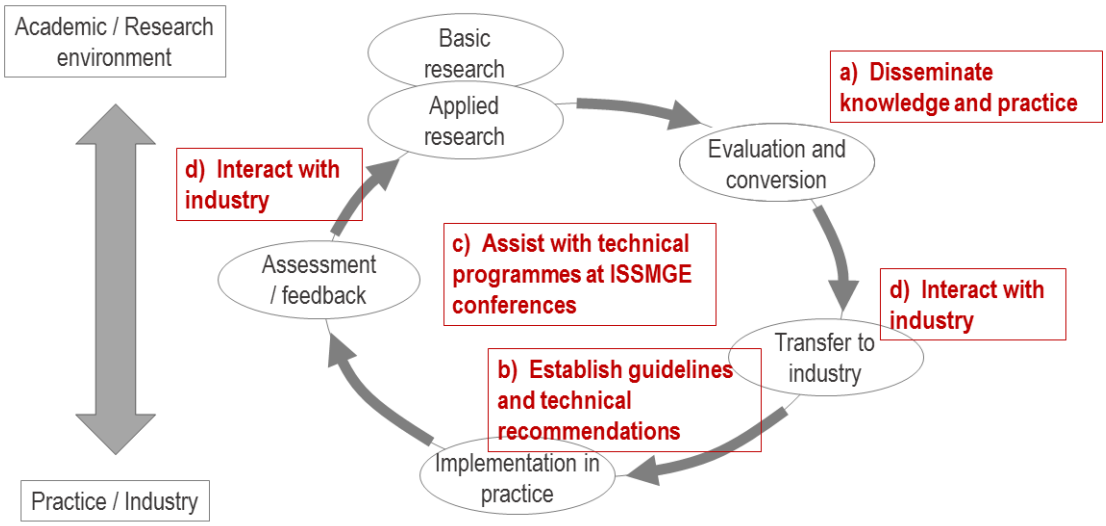

Figure 6. Integration of TC objectives in the knowledge development and implementation cycle

As shown in Table 1, the ISSMGE technical committees are divided into three groups. The Series 100 committees deal with fundamentals such as soil properties and calculation / test methods. The Series 200 committees deal with the application of knowledge in practice. The Series 300 committees deal with the impact on society. These three groups of committees, although positioned differently as shown in Figure 7, each play a role in the knowledge development and implementation cycle.

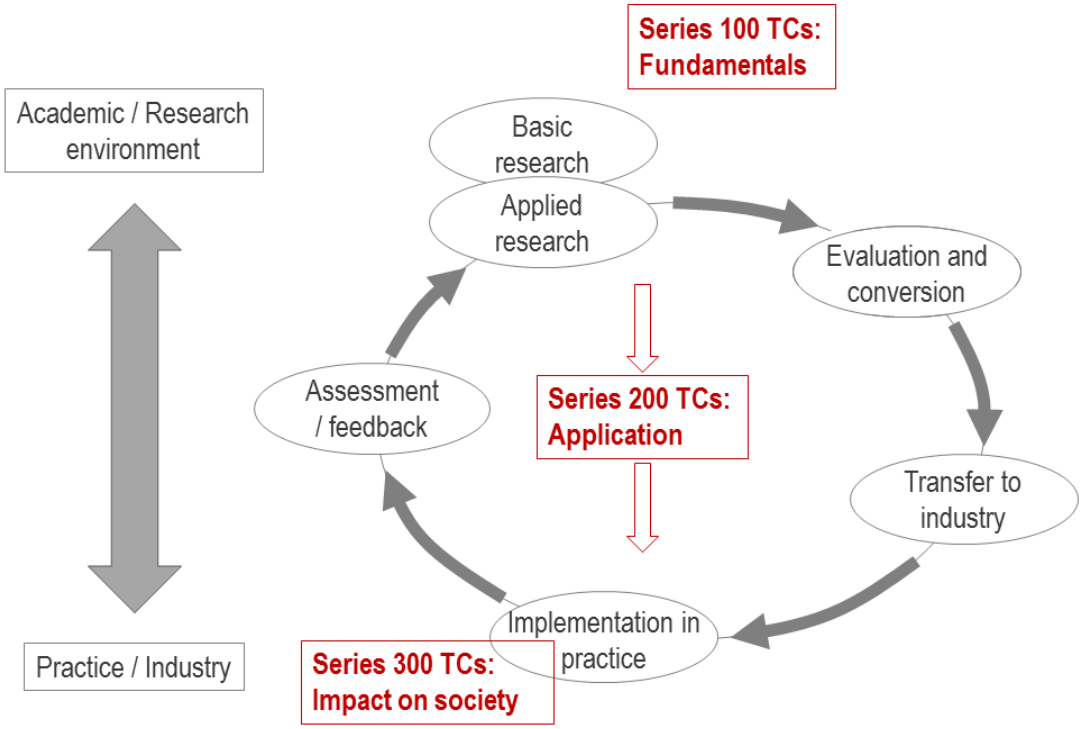

Figure 7. Role and positioning of the three groups of technical committees in the knowledge development and implementation cycle

Message from Corporative Associates Presidential Group (CAPG) (Con't)

Pierre Delage stressed that the vast majority of technical committees, particularly the Series 200 TCs, comprised a good balance of academics and practitioners, with approximately half of the participants from industry. The majority of the TCs hold regular activities aimed at transferring knowledge into practice, i.e. reducing the gap between the SoA and the SoP.

3.3.2. General feedback from global survey

Pierre Delage noted that the survey was an ambitious and difficult project and thanked all involved including the organisers, technical committees and respondents. A lot of effort and thought by the TCs went into preparing the survey questions and analysing the results.

The survey produced many interesting contributions, thoughts and feedback, providing new insights into the professional practice and technical committee activities. It is clear that academics, practitioners and contractors often think in different ways and may have divergent interests.

While the survey was a success, some of the TCs expressed frustration in that there was no information in the feedback they received on the origin of the responses and disappointment at the limited number of responses received. The timing of the survey may also not have been ideal for certain member societies with respect to the timing of their own activities.

Certain TCs expressed an interest in getting more responses to the questions asked, possibly by way of a follow-up survey. However, the results of the current survey should be evaluated first.

It is clear that the gap between the State-of-the-Art and the State-of-Practice requires careful consideration by the TCs and should receive further consideration in the planning of future TC meetings and activities.

3.3.3. State-of-the-Art and State-of-Practice

The State-of-the-Art (SoA) is the theoretical basis of the subject matter and is generally provided by the relevant technical committee, particularly TCs dealing with fundamentals (Series 100). This then needs to be incorporated into the State-of-Practice (SoP) in conjunction with the practical TCs (Series 200). The SoP represents a synthesis and analysis of practical experiences at any particular time in the light of the SoA. The SoP may be national, regional or international in application. Among the difficulties faced are that existing regulations may not be consistent with the current SoA and the time it takes for advances in the SoA/SoP to be incorporated into codes and standards. Often, no SoP documentation exists, and practice is based on personal experience of successes and failures.

In many instances, the SoA in the subject area of the TCs is contained in papers published at speciality conferences (e.g. the series of in-situ site characterisation conferences hosted by TC102). Certain TCs, such as TC215 (Environmental Geotechnics), TC301 (Historical Sites) and TC304 (Risk Assessment) disseminate this information in dedicated journals, books or working group reports.

The SoP in the subject area of many TCs is encapsulated in national, regional or international design codes and guidelines. These include EN, ASTM, ASCE, AASHTO, API, DNV, FHWA, CIRIA and other codes or documents. TCs that fall into this category include TCs 201, 203, 205, 209, 211, 213 216, and 218.

In the survey, respondents expressed the need for further guidelines (TCs 202, 208, 209, 211 and 304) while others requested better inclusion of the SoA in existing codes (TC212).

3.3.4. General feedback

The final section of the survey dealt with general feedback of respondents on ways of narrowing the gap between the SoA and the SoP. This general feedback was presented at the Seoul Workshop by Kim Chan (GHD) who summarised the main opinions as follows:

Message from Corporative Associates Presidential Group (CAPG) (Con't)

- Compulsory professional accreditation is seen as a key step in narrowing the gap between the SoA and the SoP.
- TCs should interact more with industry and the public sector so that the TCs are exposed to more real needs.
- Data interoperability and the establishment of pre-competitive data federations (such as those used in Australia and Canada to federate groundwater data) could assist in closing the gap. The application of the SoA requires the SoP practitioners to have access to such data.
- Academia should sometimes focus more on "practical questions" in their research. Research in geotechnical engineering must seek an application in practise.
- Coming up with a set of guidelines for each sub-discipline within Geotechnical Engineering and making these available to the ISSMGE community will go a long way to bridging the gap between SoP and SoA.
- Increase the number of symposia focusing on the case studies in geotechnical engineering to assist researchers in understanding the real behaviour of structures in order to model them in a better way.
- The gap between SoA and SoP can be bridged with continued professional education and involving practicing engineers in specific geotechnical committees.
- In the steering / drafting committees of regulations such as Eurocodes, a better balance between academics and practicing engineers should be sought.
- Often, SoA and SoP are both used for solving practical problems, SoA for more demanding problems vs SoP for more common problems.

4. Seoul Workshop panel discussion

4.1. Discussion topic

In the spirit of the Seoul conference theme *"Unearth the Future, Connect Beyond []"*, two questions were formulated for the panel discussion:

a) Q1: How should we 'unearth' this material for the future to serve the geotechnical community?
b) Q2: How should we 'connect' this work to the 20th ICSMGE in Sydney in 2021?

Members of the audience were invited to come forward, join a circle of their colleagues and express their views. One such group is shown in Photo 1.

Photo 1. Panel discussion session in full swing

Message from Corporative Associates Presidential Group (CAPG) (Con't)

4.2. Panel discussion contributions

A summary prepared by Hugo Acosta-Martinez (AECOM) of the main comments and discussions is given below.

Peter Day, University of Stellenbosch / Jones & Wagener Consultants, South Africa

- The application of new technology is often limited by the availability of the data required to apply the technology.
- Universities should consider asking industry which topics they wish to have researched.
- Universities should involve members from industry in both teaching and research activities.
- Discussion documents, such as the TC205/304 (2017) report made available at the conference, are valuable as they contain practical guidance and have been compiled by both practitioners and academics.
- We need to improve the quality and sufficiency of site investigation data by clearer specification of minimum requirements.

Kenichi Soga, UC Berkeley, USA

- Work with companies, invite them, have open discussions about how to work together.
- Organise sessions with companies.
- Foster company-university interaction.
- Bring infrastructure owners, contractors and clients to ICSMGE-Sydney-2021.

Jay Ameratunga, Golder, Australia

- Contractors and owners are the missing link. Work with them for further development of the profession.

Marcelo Sanchez, Texas A&M University (USA) and Chair of TC308 (Energy Geotechnics)

- There were no surprises in the survey outcome.
- Ask ourselves where we want to be in four years.
- The diagnostics are there in the survey
- Define milestones and objectives for Sydney-2021.

Peter Van Impe, Jan de Nul (Belgium)

- Transfer of knowledge is an issue.
- Specific knowledge is not always easy to find.
- Academia is controlled by the need to publish as this is often linked to research funding and career advancement. This has a perverse effect on the profession.
- It is impossible to follow up on everything that is being published.
- The need to publish to survive in academia is killing applied research.

Graham Scholey, Golder Associates (Australia)

- There is an opportunity to synthesise and address these concerns in ICSMGE-Sydney-2021.
- Identify the key people to address the conference.
- How to balance the number of papers with the quality of conference is an issue that needs careful consideration.
- An important question for the CAPG to answer is "What is in it for me as a Corporate Associate?".
- Corporate Associates need to receive tangible benefits.
- Important to increase number of CAs.

K.K. "Muralee" Muraleetharan, University of Oklahoma, USA

- Repeat the survey among chosen respondents.
- Analyse regional differences.
- Consider carefully the issue of sampling.
- Need 'far thinking' clients to support improvement.

Message from Corporative Associates Presidential Group (CAPG) (Con't)

Jennifer Nicks, Department of Transportation's FHWA (USA) and Chair of ISSMGE's Young Member Presidential Group

- Researchers are not rewarded for doing better.
- There are risks associated with trying something new.

Walter Paniagua, Chair of TC214 Soft Soils, Mexico

- Organise special sessions for commercial services / products.
- Contractors to be encouraged to present case histories in association with consultants.
- Research-to-practice papers should be encouraged at conferences.
- Acknowledgement that bridging the gap and managing expectations of commercially-oriented members are not easy tasks.

Soheil Nazarian, University of Texas at El Paso, USA

- Mutually exclusive expectations from academic and practitioners.
- Dissemination of research findings may not be permitted. Universities are funded by government.
- Invite the right people to write specifications and guidelines. Where no specifications exist for the application of new techniques, these techniques will not be used by designers for fear of litigation.
- Do not invite managers; they will not transfer knowledge; bring in young active engineers instead.

Ana Heitor, University of Wollongong, Australia

- Referred to experience at the University of Wollongong which has deep involvement with contractors and development of practical solutions to specific problems.
- Bridge the gap between SoA and SoP with education and training.
- Access to journals and databases is expensive.
- Suggest creating a platform for review of papers from the last few years on specific topics.
- Look further than Sydney-2021.

Ken Ho, Government of Hong Kong

- Reference to SoA could be ambiguous; for a given topic different answers from different universities are possible
- Add an assessment process before transferring knowledge. The GEO Office (Hong Kong) attempts to fulfil the role of assessing research findings and transferring relevant findings into practice by producing practical guidelines.
- Proposal to consider a Technical Review Board and consultation at local and international level.
- There is not always consensus among researchers on the value of new knowledge.
- Bring the right stakeholders to the table.
- 'Technovation forums' are suggested.
- Calibration of methods with real data and actual performance is important.
- New knowledge needs to be interpreted, e.g. by translating into design charts or computer programmes. The research institutions themselves need to take this process further.

Anand Puppala, University of Texas (Arlington), USA

- Work on big data.
- Industry funding is difficult.

4.3. Discussion closure and thanks

Valerie Bernhardt (Terrasol) closed the discussion session and thanked all the participants. In her closing remarks, she mentioned:

Message from Corporative Associates Presidential Group (CAPG) (Con't)

- The survey serves as a point of reference for next steps.
- The survey makes people aware of the real issues.
- The communication problem is from both sides. Everyone needs to make an effort; it is not a one-sided problem.
- Interact with other Board level committees.
- Survey for academic/consultant members.
- Open access is an important initiative to be maintained and expanded.

5. Next steps

In concluding the joint TOC and CAPG workshop session, Sukumar Pathmanandavel (Aurecon, Chair of CAPG) set out what he sees as the next steps in the process. The CAPG and TOC, with help from TCs, plan to disseminate these findings among the profession. (This paper helps fulfil this intention).

Specialised sessions are planned for the five ISSMGE mid-term regional conferences in 2019 to discuss, debate, and promote issues relating to geotechnical engineering that have, or are perceived to have, a significant impact on the commercial sector of the ISSMGE. CAPG will interact with the local organising committees to develop topics and invite participants relevant to the needs of each region.

The possibility of a further survey before the 20th ICSMGE in Sydney in 2021 has been raised. Inclusion of a request for topics that industry would like researched has also been mentioned. This will be considered by the CAPG/TOC.

Suggestions on this work can be submitted to:
Sukumar Pathmanandavel (S.Pathmanandavel@aurecongroup.com); and
Peter Day (day@jaws.co.za)

6. Acknowledgements

The following representatives of the Corporate Associates were actively involved in the development and launch of the global survey:

- Sukumar Pathmanandavel (CAPG Chair), Aurecon
- Chaido Doulala-Rigby (Yuli), Tensar
- Kim Chan and Sam Mackenzie, GHD
- Karel Allaert, Jan de Nul
- Gabriele Zapf, formerly with Siemens
- Mandy Korf, Deltares
- Ian Hosking, AECOM
- Valérie Bernhardt, Terrasol/ Setec group

Special thanks are due to:

- Roger Frank, ISSMGE Immediate Past President, for his leadership and his interest and involvement in all CAPG's activities
- Pierre Delage, Chair of the TOC, for invaluable assistance both in the development of the global survey, and for being the focal point for communication with the TCs
- Sam Mackenzie of GHD for his excellent work of developing and deploying the survey tool
- Jennifer Nicks, Chair of the Young Member Presidential Group for support in reducing complexity of the survey data for use by the technical committees
- all the ISSMGE Technical Committees for participating, framing of survey questions and analysis of results
- and, finally, to the ISSMGE members who participated in the survey.

Message from Corporative Associates Presidential Group (CAPG) (Con't)

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Report from the Kazakhstan Geotechnical Society

Joint Workshop on "Geotechnical Infrastructure for Megacities and New Capitals", Florida and New York, USA

The Second Geo-Institute – Kazakhstan Geotechnical Society Joint Workshop on TC 305 "Geotechnical Infrastructure for Megacities and New Capitals" was held in Orlando, Florida, and New York City (USA), on March 5-11, 2018 (Fig. 1).

Figure 1. Participants of the Second Geo-Institute – Kazakhstan Geotechnical Society Joint Workshop (Orlando, Florida)

The formal relation between the ASCE's Geo-Institute (GI) and the Kazakhstan Geotechnical Society (KGS) traces back to an Agreement of Cooperation that was endorsed by the two societies in 2013 and signed in Paris (France) at the ICSMGE. The First Kazakhstan-USA Geotechnical Engineering Workshop, which was held in Astana and Almaty, Kazakhstan during 13-16 July, 2015, was another historical milestone. The workshop resulted not only in productive technical discussions and exchanges of technical and professional knowledge as outlined in the aforementioned Agreement of Cooperation, but also in subsequent educational exchanges both in Kazakhstan and in the United States.

The Second GI-KGS Geotechnical Workshop consisted of two parts. The first part was held at the International Foundations Congress and Equipment Expo - 2018 (IFCEE 2018) from 5 to 8 March in Orlando.

Welcome speeches during the workshop were delivered by the President of the Federation of International Geoengineering Societies, Prof. Jean-Louis Briaud, the International Secretary of GI, Prof. Robert D. Holtz, and the President of KGS, Prof. Askar Zhussupbekov. Prof. Jean-Louis Briaud then presented a copy of his book "The Pressuremeter" to Prof. Askar Zhussupbekov.

Report from the Kazakhstan Geotechnical Society

Joint Workshop on "Geotechnical Infrastructure for Megacities and New Capitals", Florida and New York, USA (Con't)

During the opening ceremony, the co-chairs of the Organizing Committee of the Second American-Kazakhstan Geotechnical Workshop awarded medals to two invited professors of the L.N. Gumilyov Eurasian National University (ENU). The Medal of L.N.Gumilyov, ENU was awarded to Prof. Victor Kaliakin (University of Delaware). The Medal of Kultegin was awarded to Prof. Hoe I. Ling (Columbia University). Profs. Kaliakin and Ling have lectured for 10 years to undergraduate and graduate students of ENU, and have constantly participated in the international geotechnical conferences organized at ENU. They are also foreign scientific advisers of Doctoral Students in the specialty "Civil Engineering" at ENU.

At the beginning of the workshop all participants briefly introduced themselves with a brief overview of themselves and their research interests (Fig. 2).

Figure 2. Typical workshop oral presentation by Prof. Vitaliy Khomyakov (KGS)

Invited keynote speakers and special lecturers from the USA, Kazakhstan, Japan, Turkey and Russia shared their vision and wisdom through presentations on solving problems related to challenges of foundation engineering in problematic ground conditions. All keynote and special lecturers were awarded with a plague of appreciation, which was signed by the co-chairs of the Second American-Kazakhstan Geotechnical Workshop.

Professor Jie Han (University of Kansas) gave a keynote lecture titled "Wicking geotextile to mitigate freeze-thaw potential of base courses in cold regions". Next, a keynote lecture about the performance of geothermal systems integrated in geotechnical engineering infrastructure was given by Professor John Scott McCartney (University of California San Diego) (Fig. 3).

Report from the Kazakhstan Geotechnical Society

Joint Workshop on "Geotechnical Infrastructure for Megacities and New Capitals", Florida and New York, USA (Con't)

Figure 3. Chairman of the Keynote Lecture session, Professor Jorge G. Zornberg (University of Texas at Austin), with Keynote Lecturers: Prof. Jie Han (left) and Prof. John McCartney (right)

Professor Erol Guler (Bogazici University and invited professor of George Mason University) delivered a keynote lecture on the design of complex buildings and infrastructure in Turkey and innovative solutions using geosynthetics. Finally, Professor Askar Zhussupbekov (L.N. Gumilyov Eurasian National University) delivered a keynote lecture about the geotechnical construction of mega projects on problematic soils of Kazakhstan (Fig. 4).

Figure 4. Chairman of the Keynote Lecture session, Professor Hoe I. Ling (Columbia University), with Keynote Lecturers: Prof. Erol Guler (left) and Prof. Askar Zhussupbekov (right)

Report from the Kazakhstan Geotechnical Society

Joint Workshop on "Geotechnical Infrastructure for Megacities and New Capitals", Florida and New York, USA (Con't)

A Special Lecture by Prof. Yoshinori Iwasaki (Japan) presented an overview of active faults in the mega-cities of Los Angeles, Osaka, and Almaty, as well as the fault characterization by boring data (Fig. 5).

Figure 5. Chairman of the Special Lecture session Professor of Saint-Petersburg Mining University Anna Shidlovskaya (right) with Special Lecturer Prof. Yoshinori Iwasaki (left)

The workshop included two breakout working group sessions, where participants shared their experiences about challenges in areas of education, commercialization, practice, and research (Fig. 6). Specific opportunities for Kazakhstan – USA collaborations were emphasized during these sessions.

Figure 6. Typical breakout working group session

Report from the Kazakhstan Geotechnical Society

Joint Workshop on "Geotechnical Infrastructure for Megacities and New Capitals", Florida and New York, USA (Con't)

Following the interesting lectures, most of the participants attended the Friendship Dinner, where the Kazakh National Costume (chapan) was awarded to Prof. Jim Hanson (California Polytechnic State University), chairman of the G-I International Activities Council by Prof. Askar Zhussupbekov (President of KGS) (Fig. 7).

Figure 7. Group photograph at the Friendship Dinner

A very important aspect of the workshop was the large technical exhibition associated with IFCEE 2018. This was particularly of interest to members of the KGS. The Kazakhstan delegation also participated in the Ceremony of the 2018 Ben C. Gerwick Award for Innovation in the Design and Construction of Marine Foundations presented to Mr. Akio Kitamura, founder and president of Giken, Japan.

The second part of the GI-KGS Geotechnical Workshop was held at Columbia University in New York City. Here the KGS delegation participated in a geotechnical seminar (Fig. 8) and visited the Donald M. Burmister and Robert A.W. Carleton Laboratories. They also took part in a technical tour to the construction sites of high-rise buildings in New York City.

Figure 8. Participants of the geotechnical seminar at Columbia University

Report from the Kazakhstan Geotechnical Society

Joint Workshop on "Geotechnical Infrastructure for Megacities and New Capitals", Florida and New York, USA (Con't)

The geotechnical seminar was opened by the remarks of Prof. George Deodatis, Chair of the Department of Civil Engineering and Engineering Mechanics of Columbia University. These were followed by the remarks of Prof. Seriktay Baimukhanov, Dean of the Faculty of Architecture and Civil Engineering of L.N. Gumilyov Eurasian National University (Fig. 9).

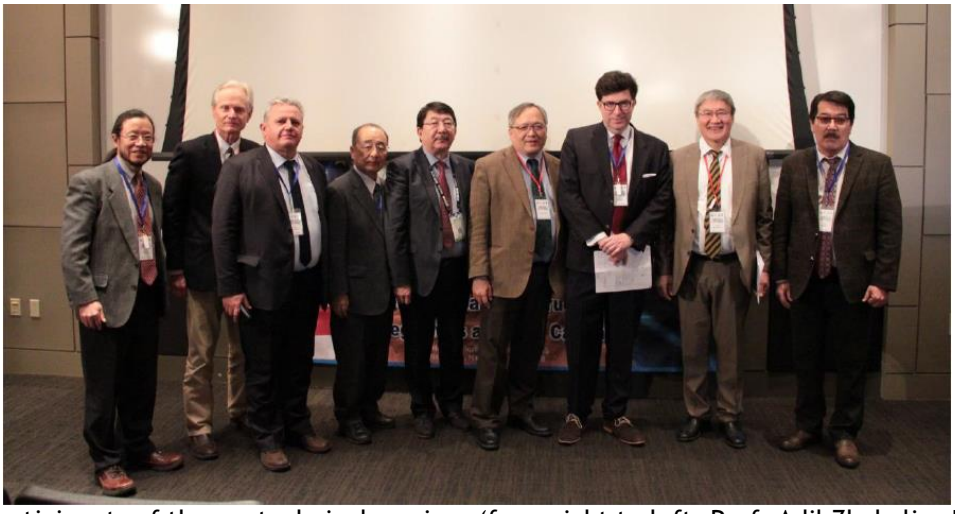

Figure 9. Participants of the geotechnical seminar (from right to left: Prof. Adil Zhakulin, Prof. Askar Zhussupbekov, Prof. George Deodatis, Prof. Hoe Ling, Prof. Seriktay Baimukhanov, Prof. Akitoshi Mochizuki, Prof. Vitaliy Khomyakov, Prof. Victor Kaliakin, Dr. Liming Li)

During the seminar at Columbia University, Associate Professor Manolis Veveakis (Duke University) presented a keynote lecture titled "Towards a unified multi-physics framework for environmental and resource engineering". Associate Professor Zhanbolat Shakhmov (L.N.Gumilyov Eurasian National University) followed with a keynote lecture titled "Estimation of the bearing capacity of pile foundations in seasonally freezing soil ground" (Fig. 10).

Figure 10. Keynote Lecturer Dr. Manolis Veveakis with Prof. Askar Zhussupbekov (left) and Keynote Lecturer Dr. Zhanbolat Shakhmov with chairman of the Keynote lectures section Prof. Steve Waiching Sun (right)

Report from the Kazakhstan Geotechnical Society

Joint Workshop on "Geotechnical Infrastructure for Megacities and New Capitals", Florida and New York, USA (Con't)

Professor Victor N. Kaliakin (University of Delaware) gave the 2018 Burmister Lecture, titled "Modeling the time- and temperature-dependent response of cohesive soils in a generalized bounding surface framework". The geotechnical seminar culminated with the memorable New York City Lights Dinner Cruise.

On March 11th, participants of the joint GI-KGS Geotechnical Workshop visited the construction site of New York city transit authority "Sandy" repair and core capacity improvement project Canarsie tunnel rehabilitation and core capacity improvement in the boroughs of Manhattan and Brooklyn, where silent sheet piles are being installed by GIKEN AMERICA CORPORATION.

The main goals of the workshop were to exchange scientific ideas and to study advanced technologies in the field of design, installation, and testing of foundations in complex engineering-geological conditions.

We are confident that organizing future joint geotechnical workshops and seminars will provide a means to further formalize the development of cooperation between GI and KGS and will facilitate the solution of problems related to the geotechnical infrastructure of mega cities and new capitals.

For their financial support of the Second GI - KGS Joint Geotechnical Workshop, with appreciation we thank the following sponsors of this historical forum: GI (USA), KGS (Kazakhstan), L.N. Gumilyov Eurasian National University (Kazakhstan), Columbia University (USA), SHIMANSKI OY Co. (Finland), BAUER (Germany), KaragandaGIIZ and K* (Kazakhstan), Mr. Ahmet Duran Karahan (KARAM INSAAT, Kazakhstan-Turkey), Prof. Yoshinori Iwasaki (Geo-Research Institute, Japan) and the ISSMGE Foundation.

Prof. Victor N. Kaliakin
Prof. Askar Zhussupbekov
Prof. Hoe I. Ling
Co-Chairs of the Organizing Committee
of the Second Geo-Institute-Kazakhstan Geotechnical Society Joint Workshop, March 5-11, 2018, Orlando and New York (USA)

Conference reports

The 3rd International Conference on Ground Improvement and Ground Control, Hangzhou, China

The 3rd International Conference on Ground Improvement and Ground Control (ICGI2017) was successfully held at Hangzhou during Oct. 27~29, 2017, under the auspices of ISSMGE-TC217 Land Reclamation and ISSMGE-TC211 Ground Improvement Technical Committees. ICGI2017 was organized by Zhejiang University of Technology together with the Chinese Institution of Soil Mechanics and Geotechnical Engineering and the Chinese Society of Theoretical and Applied Mechanics – Geotechnical Mechanics Technical Committee. The organizing committee included members from the University of Wollongong, Australia, Wenzhou University, China and Zhejiang University, China.

ICGI2017 had 11 themes covering various topics in ground improvement, e.g., ground improvement in transportation infrastructure, tideland reclamation, soft soil consolidation, vacuum and surcharge preloading, etc. More than 180 registered delegates, coming from 10 different countries such as USA, UK, Australia, France and Japan attended this conference.

ICGI2017 began with the opening and welcoming speeches, given by Xiaodong Xuan, the Director of Zhejiang Provincial Natural Science Foundation (Fig. 1), and Prof. Yuanqiang Cai, the Chair of the Organizing Committee (Fig. 2). The Conference scheduled 22 featured keynote lectures delivered by well-known scholars from around the world, to name a few, Prof. Buddhima Indraratna from University of Wollongong; Prof. Jie Han from Kansas University; Prof. Jian Chu from Nanyang Technological University; Prof. Yujun Cui from Ecole des Ponts ParisTech; Prof. Antonio Correia from University of Minho; Prof. Yoichi Watabe from Hokkaido University; Prof. Yuanqiang Cai from Zhejiang University of Technology and Prof. Maosong Huang from Tongji University. Among these keynote lectures, Prof. Indraratna presented the lessons and limitations learnt from the case histories in vacuum preloading of coastal clays; Prof. Cai discussed the applications and innovations in the field of vacuum preloading technique in treating dredged clay slurry; Prof. Watabe highlighted the successful use of cement-treated soils in Tokyo Haneda Airport and Prof. Correia summarized the shallow ground improvement practice in transportation infrastructures.

Fig. 1. Opening speech by Director Xiaodong Xuan from Zhejiang Provincial Natural Science Foundation

Fig. 2. Welcoming speech by Prof. Yuanqiang Cai, Chair of ICGI2017 Organizing Committee

ICGI2017 has arranged 14 invited speeches in the parallel sessions on the morning of Oct. 29, given by researchers from academic and industrial institutions such as Saga University, CCCC Fourth Harbor Engineering Institute Co., Ltd., Ghent University, Zhejiang University, Shandong University and Wenzhou University. Young Professional Awards (cash prize of USD $1000) were given to 3 young professionals based on the quality of their conference papers and oral presentations. At the end of ICGI2017, it has been decided by the Chair of ICGI2017, Prof. Yuanqiang Cai, and the former Chair of ICGI2012, Prof. Indraratna that the next ICGI will be held in Egypt, organized by Prof. Mohamed A. Sakr from Tanta University.

Conference reports

The 3rd International Conference on Ground Improvement and Ground Control, Hangzhou, China (Con't)

In conclusion, this conference brought fruitful discussions and further collaborations among the participants. It successfully promoted concepts and applications of ground improvement in various aspects of geotechnical engineering. At the end, the Organizing Committee wished to acknowledge the financial supports from National Natural Science Foundation of China, Zhejiang Provincial Natural Science Foundation and Earth Products China Limited. The continuous supports from the conference co-Chair Prof. Buddhima Indraratna, A/Prof. Cholachat Rujikiatkamjorn, Dr. Fernanda Ferreira, Dr. Yujie Qi and all other volunteers are acknowledged.

Fig. 3. Overview of the conference hall

Fig. 4 Group Photo

Li Shi
College of Civil Engineering and Architecture, Zhejiang University of Technology

Conference reports

Annual Conference of the Italian Geotechnical Society, Roma, Italy

The Italian Geotechnical Society (Associazione Geotecnica Italiana - AGI) organized the annual Conference on the 13th of December 2017 at the "Auditorium Antonianum" in Roma: the conference was dedicated to the memory of the late Professor Arrigo Croce, who was the first professor of Soil Mechanics and Geotechnical Engineering in Italy, President of the AGI, vice-President for Europe of the ISSMFE and co-founder of the Technical Committee devoted to the Geotechnical Aspects of Preservation of Historic Sites.

The Croce lecture 2017 was delivered by Kerry Rowe, Queen's University – Canada and Past President of IGS, with the title: "Environmental Geotechnics: Looking Back, Looking Forward".

The conference was opened with the greetings from Nicola Moraci, President of the Italian Geotechnical Society AGI, and the Croce lecturer was introduced by Daniele Cazzuffi, President of AGI-IGS, the Italian Chapter of IGS, who highlighted the important contributions of Prof. Rowe in the area of environmental geotechnics and engineering with geosynthetics.

The outstanding lecture provided excellent state-of-art lessons learned from the past and provided future perspectives in different topics of the environmental geotechnics, for example the contaminant migration in compacted clay liners, the behavior of the leachate collection systems, the geomembranes long-term performance both in contaminated sites and also in landfill applications and the interaction between harsh climate and composite liners.

All of these topics were discussed from the theory to practice and vice versa, which provided a better understanding of the phenomena and the relevant factors which influence it.

More than 200 geotechnical professionals from different sectors including universities, public institutions, enterprises and contractors came from different parts of the world to gather together for this special event.

Nicola Moraci closed the session with the announcement of the new Croce Lecturer for the following year, which will be Augusto Desideri, from the "Sapienza" Roma University.

The annual conference closed with a light buffet where all the participants could spend a nice time together and have the chance to exchange traditional greetings for the coming new year.

The written versions of the Croce lectures from the past lecturers can be downloaded from the website of AGI (http://www.associazionegeotecnica.it/rig/croce_lecture)

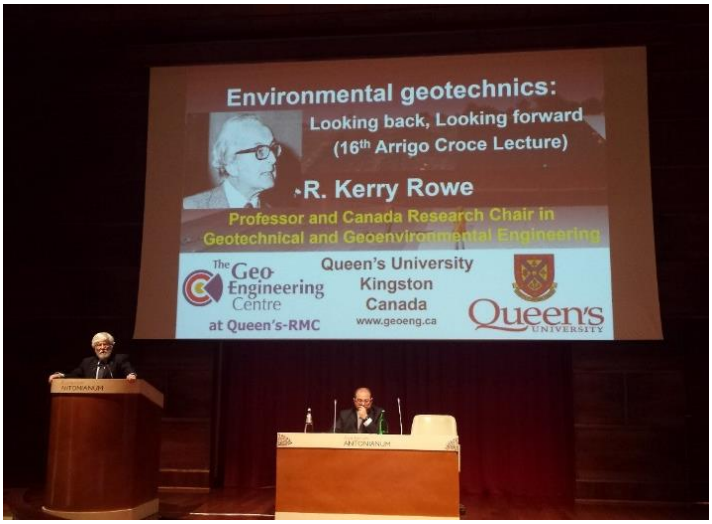

Fig. 1 Kerry Rowe during his Croce Lecture

Conference reports

Annual Conference of the Italian Geotechnical Society, Roma, Italy (Con't)

Fig. 2 Group photo: From left to right: Paolo Croce, Nicola Moraci, Kerry Rowe, Mario Manassero and Daniele Cazzuffi

Fig. 3. From left to right : Kerry Rowe, Nicola Moraci and Daniele Cazzuffi

Nicola Moraci
President of AGI;

Giuseppe Cardile
Secretary of the AGI-IGS

Conference reports

The 2nd Pan-American Conference on Unsaturated Soil, Dallas, USA

Introduction

The 2nd Pan-American Conference on Unsaturated Soils (PanAm-UNSAT 2017) was held in Dallas, Texas, 12th to 15th November 2017. The venue was the Intercontinental Dallas Hotel. The conference theme was 'Unsaturated Soil Mechanics for Sustainable Geotechnics' and a wide range of subjects were covered including: field and laboratory investigation towards unsaturated soils characterization; constitutive and numerical modeling; field performance construction; design; and sustainability.

The specific conference topics were:

- Stress state quantification
- Experimental laboratory and in-situ testing
- Unsaturated rock behavior
- Unsaturated permafrost behavior
- Energy geotechnics
- Sustainability
- Cohesive-frictional soils
- Numerical and constitutive modeling in geotechnical and geo-environmental applications

The PanAm-UNSAT 2017 built upon the success of PanAm-UNSAT 2013 (the 1st Pan-American Conference on Unsaturated Soils, Cartagena, Colombia). The 202 attendees were well-distributed amongst researchers, practitioners, students and policy makers. They came from around the world, particularly from America. The sessions were well-attended. The four-volume conference proceedings will be part of a Geotechnical Special Publication (GSP) of the ASCE.

Conference reports

The 2nd Pan-American Conference on Unsaturated Soil, Dallas, USA (Con't)

Conference Organization

The following committees and people were involved in the PanAm-UNSAT 2017 organization.

Conference Co-Chairs

Chair: Laureano R. Hoyos, Ph.D.
University of Texas at Arlington

Co-Chair: John S. McCartney, Ph.D.
University of California, San Diego

Conference Program Committee

- **Technical Program Chair:** Sandra L. Houston, Ph.D. Arizona State University
- **Technical Program Co-Chair:** William J. Likos, Ph.D. University of Wisconsin, Madison
- **Local Chair:** Marcelo J. Sanchez, Ph.D. Texas A&M University
- **Local Co-Chair:** Gerald A. Miller, Ph.D. University of Oklahoma
- **Logistics Coordinator:** Majid Ghayoomi, Ph.D. University of New Hampshire
- **Sponsorships/Exhibits Chair & Liaison from the G-I Technical Coordination Council (TCC):** Anand J. Puppala, Ph.D. University of Texas at Arlington

Photo 1. Brad Keelor, Laureano Hoyos, John McCartney, Sandra Houston, and William Likos (left to right)

Conference reports

The 2nd Pan-American Conference on Unsaturated Soil, Dallas, USA (Con't)

The Geo-Institute (G-I) of the ASCE:

- Brad Keelor, Director
- Helen Cook, Board and Meetings Specialist
- Lucy King, Senior Manager, Conferences
- Cristina Charron, Manager, Conferences
- Drew Caracciolo, Manager, Sponsorships and Exhibits
- Rachel Hobbs, Administrator, Conferences

The officers of the TC106 Committee on Unsaturated Soils (ISSMGE) provided a tremendous support to the PanAM-UNSAT 2017 organizers, as well as the members of the Technical Advisory and International Technical Committees, who provided guidance during the planning phases of the conference.

TC106 Committee on Unsaturated Soils (ISSMGE)

- David Toll, Chair, University of Durham, UK
- Bernardo Caicedo, Vice Chair, Universidad de Los Andes, Bogotá, Colombia
- Adrian Russell, Secretary, University of New South Wales, Australia

Technical Advisory Committee

- Sai Vanapalli, University of Ottawa, Canada
- Greg Siemens, Royal Military College, Canada
- Kanthasamy (Muralee) Muraleetharan, University of Oklahoma, USA
- Xiong Zhang, University of Cincinnati, USA
- Ning Lu, Colorado School of Mines, USA
- Claudia Zapata, Arizona State University, USA
- Jorge Zornberg, University of Texas at Austin, USA
- Jorge Abraham Diaz-Rodriguez, UNAM, Mexico
- Bernardo Caicedo, Universidad de Los Andes, Bogotá, Colombia
- Julio E. Colmenares, Universidad Nacional, Bogotá, Colombia
- Orencio Villar, University of São Paulo, São Carlos, Brazil
- Tacio de Campos, PUC-Rio, Brazil
- Fernando Marinho, University of São Paulo, Brazil
- Manoel Porfírio Cordão Neto, Universidade de Brasília, Brazil
- Diego Manzanal, University of Buenos Aires, Argentina
- Alejo Sfriso, University of Buenos Aires, Argentina

International Technical Committee

- David Toll, University of Durham, UK
- Adrian Russell, University of New South Wales, Australia
- Eduardo Alonso, UPC, Barcelona, Spain
- Antonio Gens, UPC, Barcelona, Spain
- Lyesse Laloui, EFP Lausanne, Switzerland
- J. Carlos Santamarina, KAUST, Saudi Arabia
- Charles Ng, HKUST, Hong Kong

Conference reports

The 2nd Pan-American Conference on Unsaturated Soil, Dallas, USA (Con't)

Conference Activities

The conference included a wide range of knowledge-enhancing short courses, technical and panel sessions, and workshops.

Short courses

Two well attended short courses were organized on Sunday 12th November:

- Deformation of Unsaturated Compacted Fills by Dr. Iraj Noorany and Dr. Christine Detournay
- Simple Methods to Characterize and Model Unsaturated Soil Behavior by Dr. Xiong Zhang, Dr. Laureano Hoyos, and Dr. Marcelo J. Sanchez

Keynote Lectures

The four keynote lectures were delivered by leading experts on unsaturated soils, as follows.

- "Effect of Initial Conditions on the Interpretation of Soil-Water Characteristic Curves (SWCCs) in Geotechnical Engineering" by Delwyn G. Fredlund, Feixia Zhang
- "Generalized Elastic Modulus Equation for Unsaturated Soil" by Ning Lu
- "A Mechanical Framework for Soil Compaction" by Bernardo Caicedo
- "Failure Mechanisms of Unsaturated Soil Slopes under Rainstorms in Rio De Janeiro, Brazil: An Overview" by Tácio de Campos, Mariana Motta, Thiago Carnavale, Eurípedes do A. Vargas Jr, Antônio de Oliveira

Pan-American Distinguished Lecture on Unsaturated Soils

The PanAm-UNSAT 2017 hosted the 1st Pan-American Distinguished Lecture on Unsaturated Soils delivered by: Sandra Houston and William Houston on "Suction-Oedometer Method for Computation of Heave and Remaining Heave"

Photo 2. Jean-Louis Briaud introducing Sandra Houston 1st Pan-American Distinguished Lecturer

Photo 3. David Toll, and Gerald Miller with Dr. Sandra

Conference reports

The 2nd Pan-American Conference on Unsaturated Soil, Dallas, USA (Con't)

Dr. Delwyn Fredlund Symposium Lectures
Two plenary session were advocated to the Fredlund I and II Symposia, with the participation of the following speakers:

- "Numerical Analyses for Assessment of Geobarrier System Performance" by Harianto Rahardjo
- "Empirical Approach for the Use of Unsaturated Soil Mechanics in Pavement Design" by Claudia Zapata
- "Spatial Resolution of Degree of Saturation Measurements in Unsaturated Transparent Soil Experiment" by Gregory Siemens
- "Microstructure and Shear Strength of Widely Graded Soils during Desaturation" by Limin Zhang
- "Fundamentals of Soil Shrinkage" by Fernando Marinho
- "Simple Approaches for the Application of the Mechanics of Unsaturated Soils into Conventional Geotechnical Engineering Practice" by Sai Vanapalli

Photo 4. Sandra Houston, Delwyn Fredlund, Harianto Rahardjo and Laureano Hoyos (left to right), during the Delwyn Fredlund Symposium

State-of-the-Art and State-of-the-Practice Lectures
Two plenary sessions were advocated to the State-of-the-Art (SOA) and State-of-the-Practice Lectures (SOP) lectures

- "Desaturation via Biogenic Gas Formation as a Ground Improvement Technique" by Edward Kavazanjian and Dr. Leon Van Paassen (SOA)
- "Unsaturated Soil Mechanics in Mining" by Luciano Oldecop (SOA)
- "Soil-Atmosphere Interaction in Unsaturated Soils Problem Solving" byGilson de F. N. Gitirana (SOA)

Conference reports

The 2nd Pan-American Conference on Unsaturated Soil, Dallas, USA (Con't)

- "Using Principles of Unsaturated Soil Behavior to Design Water Balance Covers for Waste Containment: Case Study" by Craig Benson (SOP)
- "Compaction and Volume Change Behavior of Embankment Soil" by Gerald Miller (SOP)
- "Models to Predict Resilient Modulus at Optimum Conditions and Its Variation Due to Soil Suction" by John Siekmeier (SOP)

Photo 5. Adrian Russell moderating the SOA session

Photo 6. Luciano Oldecop delivering his SOA lecture

Concurrent Technical Sessions
A total of six concurrent sessions were organized covering a wide range of topics.

Other Activities
The "Unsaturated Soils Technical Committee" of the ASCE Geo-Institute met during the PanAm-UNSAT 2017.

Conference reports

The 2nd Pan-American Conference on Unsaturated Soil, Dallas, USA (Con't)

Photo 7. Geo-Institute ASCE Unsaturated Soils Technical Committee Meeting

A number of non-technical activities were organized including the welcome reception, the off-site key social, and the gala dinner.

Photo 8. William Houston, Sandra Houston, Jean-Louis Briaud, William Likos and John McCartney (left to right), at the gala dinner

Conference reports

The 2nd Pan-American Conference on Unsaturated Soil, Dallas, USA (Con't)

Photo 9. Edward Kavazanjian, David Toll, Laureano Hoyos, Gerald A. Miller, and Marcelo Sanchez (left to right), at the gala dinner

Photo 10. Luciano Oldecop, Laureano Hoyos, Enrique Romero and Bernardo Caicedo (left to right), at the off-site key social: Texan barbecue and line dancing

Marcelo Sanchez
Zachry Department of Civil Engineering, Texas A&M University, USA

Hot news

The 8th International Symposium on Environmental Vibration and Transportation Geodynamics, Changsha, China

Invitation

The 8th International Symposium on Environmental Vibration and Transportation Geodynamics (formerly named as the International Symposium on Environmental Vibration) will be held at the Central South University (CSU) located in Changsha, the capital city of Hunan Province, China on October 27-28, 2018. Hunan Province, being at the crossroads of China's transportation networks, is a logical location for this symposium, and the CSU is in a unique position to host it with its highly ranked School of Civil Engineering, its prominent transportation/railroad centers and programs, and a long-standing reputation of cutting-edge research on railroad engineering and transportation infrastructure.

The first ISEV symposium was initiated by H. Takemiya of Okayama University, Japan and Yunmin Chen of Zhejiang University, China, and held at Zhejiang University, Hangzhou, China in 2003. The subsequent six symposia were successfully convened in Okayama University, Japan (2005), National Taiwan University, Taipei (2007), Beijing Jiaotong University, China (2009), Southwest Jiaotong University, China (2011), Tongji University, China (2013), and Zhejiang University, China (2016), respectively. With the increasing impact over academia and industry, the symposia have attracted much attention from government officials, scientific and research communities, and engineering professionals. Geotechnical challenges associated with dynamic loads on railroad track and road pavements often require scientific and technological breakthroughs for design innovations. To effectively reflect such frontiers, this symposium was renamed as International Symposium on Environmental Vibration and Transportation Geodynamics in 2016 and held under the auspices of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) TC202 Transportation Geotechnics Committee.

The scope of the 8th International Symposium on Environmental Vibration and Transportation Geodynamics 2018 (ISEV 2018) will continue to cover environmental vibrations induced by industrial, civilian and transportation activities, problems associated with dynamic vehicular loading on road foundations, and sustainability challenges of transportation infrastructures and the built environment. The symposium will consist of workshops (including one dedicated to Young Transportation Geotechnics Engineers) and plenary and breakout sessions as well as a technical exhibition for dissemination of research findings and engineering best practices. The ISEV 2018 event will serve as a platform for academic exploration, experience exchange, and thought inspiration amongst the practitioners engaged in management, design and construction of large-scale civil and transportation infrastructure, researchers, academics and students. Engineers from planning, design construction and management engineering companies, decision makers, transport infrastructures managers and owners, and governmental bodies are especially encouraged to attend this symposium.

Call for Papers

The Symposium will primarily include aspects of transportation geotechnics focusing on railways, roads, and airfields. Topics will include but not limited to the following: (i) dynamic interaction of vehicle and transportation infrastructure (highway and airfield pavements and track structures for rail and transit); (ii) soil-structure dynamic interaction problems in transportation; (iii) wave propagation and traffic induced structural and ground vibrations; (iv) analyses and testing of environmental vibrations; (v) vehicle, machine and human induced vibrations; (vi) monitoring, evaluation and control of traffic induced vibrations; (vii) environmental vibration issues in urban subway and metro lines; (viii) cyclic deformation of soils and transportation foundation settlement; (ix) structural safety and serviceability of railway, metro, roadway and bridges; (x) application of geosynthetics in transportation infrastructure; (xi) advances in materials characterization, laboratory and field evaluation, and full scale testing (ALF, HVS) and monitoring of roads, railways and airfields; and finally, (xii) stabilization/treatment of foundation geomaterials of transportation infrastructure (road, airfield, railway and transit).

Hot news

The 8th International Symposium on Environmental Vibration and Transportation Geodynamics, Changsha, China (Con't)

As of April 2018, the organizing committee of ISEV 2018 has received nearly 150 abstract submissions from all around the world. Interested participants who missed the deadline of abstract submission are still invited to submit high-quality full-length papers through the conference website (www.isev2018.cn) or via the conference secretariat (isev2018@yahoo.com) by May 31, 2018 and can expect to be notified of paper acceptance by August 31, 2018. Full-length papers submitted to the conference and accepted after a rigorous peer-review process will be included in the conference proceedings to be indexed by Web of Science.

In parallel with the ISEV 2018 event, the Elsevier journal of Transportation Geotechnics is publishing full-length papers submitted under the symposium themes in a Special Issue on "Geomaterials and transportation structures under dynamic and environmental loads." The Transportation Geotechnics journal publishes high quality and original research in all aspects of geotechnics for transportation infrastructure. It is currently indexed by Scopus, Engineering Village, SCImago Journal Rank (SJR), and Emerging Sources Citation Index. Full manuscripts for this Special Issue, should be submitted to the journal no later than June 3, 2018, which will go through the same rigorous review process as all original submissions to the journal. For further details on this special issue, please go to the Journal's home page at:

https://www.journals.elsevier.com/transportation-geotechnics/call-for-papers/special-issue-on-geomaterials-and-transportation-structures

Any further questions can be directed to the Special Issue Guest Editors:
Professor Daichao Sheng (Daichao.Sheng@newcastle.edu.au);
Professor Xiaobin Chen (chen_xiaobin@csu.edu.cn); and
Professor Yuanjie Xiao (yjxiao@csu.edu.cn).

Contact

E-mail: isev2018@yahoo.com (Conference Secretariat)

Website: http://www.isev2018.cn

Chair of 8th ISEV 2018: Prof. Erol Tutumluer (tutumlue@illinois.edu), Chair of ISSMGE TC202; Professor and Paul F. Kent Endowed Faculty Scholar and Director of International Programs, Department of Civil & Environmental Engineering, University of Illinois at Urbana-Champaign, USA; also Changjiang Chaired Professor, School of Civil Engineering, Central South University, China.

Co-Chair of 8th ISEV 2018: Prof. Zhiwu Yu, Director, National Engineering Laboratory for High-speed Railway Construction, Central South University, China.

Local Organizing Committee of 8th ISEV 2018: Prof. Chunyang Chen (Chair), Vice President of Central South University (CSU); Prof. Youjun Xie (Co-Chair), Dean of School of Civil Engineering, CSU; Prof. Shifan Qiao (Vice Chair), Vice Dean of School of Civil Engineering, CSU; Prof. Xiaobin Chen (Vice Chair), School of Civil Engineering, CSU; Prof. Yuanjie Xiao (Secretary General), School of Civil Engineering, CSU.

Hot news

The 2nd Young Transportation Geotechnics Engineers (YTGE) Meeting, Changsha, China

Invitation

As part of the 8th International Symposium on Environmental Vibration and Transportation Geodynamics (8th ISEV 2018), the 2nd Young Transportation Geotechnics Engineers (YTGE) meeting will be held at Central South University, Changsha, China on October 26, 2018. The 1st meeting of the YTGE associated with the 3rd International Conference on Transportation Geotechnics (ICTG) was successfully convened at University of Minho, Guimarães, Portugal on September 4, 2016. Inspired by the successful 1st meeting of the YTGE, the 2nd YTGE forum will be organized and hosted by students at the Central South University (CSU) located in Changsha, the capital city of Hunan Province, China with student participation from all around the world. Hunan Province, being at the crossroads of China's transportation networks, is a logical location for this forum, and the CSU is in a unique position to host it with its highly ranked School of Civil Engineering, its prominent transportation/railroad centers and programs, and a long-standing reputation of cutting-edge research on railroad engineering and transportation infrastructure.

The 2nd YTGE meeting will cover all disciplines in transportation geotechnics (roads, highways, bridges, airports, railways, waterways, canals and terminals-harbors) and serve as a forum for knowledge exchange among young engineers from both academic and industrial backgrounds. The main goal of this forum will be to increase the attractiveness of the transportation geotechnics field for younger generations of engineers (less than 35 years old), whilst contributing to strengthen the role of young engineers in society. Latest and most advanced practices in the transportation geotechnics field worldwide will be discussed in workshop sessions. The meeting will provide an international forum for doctoral and post-doctoral students as well as research engineers and engineers involved in innovation in transportation geotechnics to present and discuss their research findings and identify future research and engineering practice needs.

Call for Extended Abstracts / Papers (due May 31, 2018)

We are pleased to invite you to be part of the YTGE network and present your relevant work related to all disciplines in transportation geotechnics [roads, highways, bridges, airports, railways, waterways, canals and terminals-harbors], by submitting either (i) a full-length paper and the respective presentation or (ii) a two-page extended abstract and the respective presentation. Even those who are not able to attend the 2nd YTGE meeting are encouraged to be enrolled in this network. All submissions (Full length paper, extended abstract, and the respective presentation) will be compiled into a USB drive and made available for members of the YTGE network.

Original abstract/paper contributions should be submitted through the conference website (http://www.isev2018.cn) or via email to the ISEV 2018 conference secretariat (isev2018@yahoo.com) by May 31, 2018. Authors will be notified of all abstract/paper acceptances no later than August 31, 2018. Note that full-length papers submitted to the 2nd YTGE meeting and accepted after a rigorous peer-review process, depending on the authors' consent, will be eligible for inclusion in the Conference Proceedings of the 8th ISEV 2018 to be indexed by Web of Science.

Conference Venue

The 2nd YTGE meeting will take place at the Central South University, Changsha, China, on October 26, 2018 and is free of charge for all participants. Participants also attending the 8th ISEV 2018 are expected to register through the symposium website (http://www.isev2018.cn).

Hot news

The 2nd Young Transportation Geotechnics Engineers (YTGE) Meeting, Changsha, China (Con't)

Contact

E-mail: isev2018@yahoo.com (Conference Secretariat); joyzhen@csu.edu.cn (Ms. Zhen Zhang)

Website: http://www.isev2018.cn

Chair, 2nd YTGE Meeting (ISEV 2018): Ms. Zhen Zhang, PhD Candidate, School of Civil Engineering, Central South University (CSU).

YTGE Core Members (Members to be added): Liuxin Chen (China); Keyang Zheng (China); Qunding Yu (China); Yeshun Wang (China); Joaquim Tinoco (Portugal); André Paixão (Portugal); Cristina Alves Ribeiro (Portugal); Ana Heitor (Australia); André Paixão (Portugal); Antti Kalliainen (Finland); Camilo Herrera (Colombia); Cristina Alves Ribeiro (Portugal); David Milne (UK); Debakanta Mishra (USA); Fabian Szymkiewicz (France); Joaquim Tinoco (Portugal); Johannes Pistrol (Austria); Lucas Festugato (Brazil); Mehran Mazari (USA); Takahisa Nakamura (Japan).

ISSMGE Foundation Reports

The 6th International Young Geotechnical Engineers' Conference (iYGEC6) and the 19th International Conference on Soil Mechanics and Geotechnical Engineering (19th ICSMGE) took place in Seoul between September 16 – 22, 2017.

The iYGEC6 was a two-day conference prior to the main event, which started with an opening ceremony and concluded on the evening of the following day with a closing ceremony. The conference featured two keynote lectures as well as 8 parallel sessions. A gala dinner was organized on the evening of the first day. The conference took place at the Seoul National University, which gave us the opportunity to have a brief glance of the campus.

The main conference (19th ICSMGE) started on September 17, 2017 with a welcome reception and with an opening ceremony on the following morning. The opening ceremony featured a very prestigious guest, Ban Ki-moon, the former Secretary-General of the United Nations; we were greatly honoured by his attendance. The keynote lectures were presented on the first two days by acknowledged members of the society including both professionals and university professors. The gala dinner was scheduled after the keynote lecture on the second day. The parallel sessions were held on 21-22 September when brief presentations were given by attendees from various nations. During the conference an Exhibition Hall allowed companies and organizations to introduce themselves, and the hall also gave place to the Poster Section.

Overall, both conferences were professionally organized, the organizers were very helpful, and we received warm-hearted welcome. All participants received a welcome package including the program book and the proceedings as well as other useful gifts, such as transportation tickets and city guides. These helped the visitors to explore Seoul and its sights and to make unforgettable cultural experiences in the country besides developing as a geotechnical engineer.

Photo 1. Representatives of Budapest University of Technology and Economics, Hungary

Photo 2. During my presentation at iYGEC6

Zoltan Ban
Budapest University of Technology and Economics, Budapest, Hungary

ISSMGE Foundation Reports (Con't)

The 19th ICSMGE 2017 was held at COEX convention centre in Seoul, South Korea. The theme of the conference was well chosen with the aim of bridging the gaps between past and future, between young and senior engineers and between developing and developed nations. The conference was attended by around 2000 participants from almost all corners of the world. There were Honours lectures, Special lectures, Parallel sessions and Poster sessions.

It started with a gala opening ceremony in a grand auditorium followed by plenary lectures by renowned experts in the field of Geotechnical engineering. All these deliberations were of extraordinary quality. Some of these are worth mentioning, e.g., "Terzaghi Oration" by Prof. Peter Day, "Bishop Lecture" by Prof. David Muir Wood, and the "Schofield Lecture" by Prof. Mark Randolph. The organizers selected the topics in a very commendable way so as to incorporate new and emerging fields, which also find their due importance. Notable amongst these was the special lecture delivered by Prof. Sivakumar Babu GL from IISc, India on the "Role of Stress Deformation behaviour of Municipal Solid Waste (MSW) in landfill design".

Meetings of all the technical committees were held in a very systematic and punctual manner in well-organized smart rooms. The present author attended the meeting of the ATC 7 committee and is privileged to become part of the core committee henceforth. Special thanks are extended to the Chair, Prof. Jin Man Kim from Pusan National University, Korea for his encouraging eulogies for the paper presented by this author. Being a member of the TC 102 committee, the present researcher feels proud to have successfully organized the "Prof. Silvano Marchetti Memorial Session on In-Situ Testing" under the able leadership of Prof. Antonio Viana da Fonseca from the University of Porto. It was attended by most of the eminent scholars in the field of In-situ testing. Hope that Er. Diego Marchetti, will steer through all the obstacles to raise DMT testing to new heights fulfilling the unfinished dreams of his great father.

Finally, the author would like to sincerely acknowledge the financial aid extended by the ISSMGE foundation for attending this conference.

The author will be failing in his duty if he does not mention the contributions and timely support provided by his parent national body namely, the Indian Geotechnical Society and its office-bearers. Thanks are also due to the organizers from this society for their kind inclusion of the author's work for presentation at the 2nd Indo-Korea workshop held during this conference.

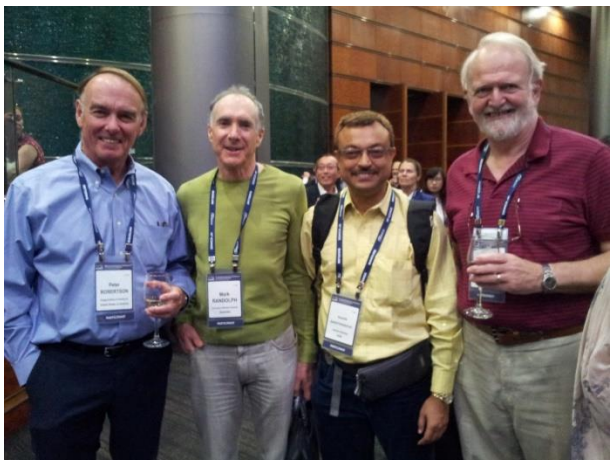

Photo 1. Group photograph with living legends, namely Prof. Robertson, Prof. Randolph and Dr. John Powel

Photo 2. Group photograph with ATC 7 office-bearers with the Chairman, Prof. Jin Man Kim (2nd from right), Vice-Chair, Prof. Yun Tae Kim (left) and Secretary, Tae Hyung Kim (far right)

Kaushik Bandyopadhyay
Jadavpur University, Kolkata, India

ISSMGE Foundation Reports (Con't)

The International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE), held every four years, is considered as the main event in geotechnical engineering. This year, the 19th ICSMGE was organised in Seoul, Republic of Korea, from 17 to 22 September. The conference attracted 1952 participants, including academics, practitioners and students from 82 countries, which created a world-class platform for sharing the most recent knowledge and technologies.

Thanks to the financial support from the ISSMGE Foundation, I was able to present my paper concerning the reinforcing effectiveness of forepoling umbrella system in open face tunnelling. Moreover, attending this conference allowed me to learn from other researchers including renowned experts and connect with other researchers.

The Plenary Sessions covered some key topics in modern geotechnical engineering which were thought-provoking, especially the Terzaghi Oration lecture in which Peter Day highlighted the importance of implementing the available knowledge into engineering practice. The presentation also urged the geotechnical engineers and researchers to close the gap between research and industry to achieve added values.

Regarding the application of numerical methods in geotechnical engineering, David Muir Wood presented fundamental aspects of constitutive soil models including the significance of the link between modelling and testing. David Haberfield demonstrated the practical application of soil structure interaction analysis and its importance in geotechnical engineering through interesting case studies including foundations for tall towers and support for deep excavations.

The parallel sessions organised by technical committees covered every aspect in geotechnical engineering including the topics that I currently focus on: Underground Construction in Soft ground (TC204) and Geotechnical Infrastructure for Megacities and New Capitals (TC305). The presentations from these workshops were of high-quality which provided the latest updates on recent research projects from both industry and academia.

Besides the immense knowledge delivered by the participants, the conference also created opportunities for in-depth discussion with other researchers and networking. Through discussion with Adam Bezuijen the Chair of TC204 – Underground construction in Soft Ground, I learnt that there are opportunities researchers who would like to participate in the committee activities including conference organisation and contribution towards knowledge dissemination.

I believe the knowledge that I gained from the conference is paramount to my professional career development. In future it will be highly beneficial for the projects I am working on, especially the research concerning underground structure construction in urban area in Vietnam in a near future.

Binh Le
City University of London

ISSMGE Foundation Reports (Con't)

The 6th International Young Geotechnical Engineers Conference (iYGEC6) and the 19th International Conference on Soil Mechanics and Geotechnical Engineering (19th ICSMGE) were both organised and successfully hosted by the Korean Geotechnical Society under the auspices of the International Society of Soil Mechanics and Geotechnical Engineering. The two-day iYGEC6 started with an opening ceremony which included a welcome addresses by Prof Moonkyung Chung, Prof Roger Frank and Prof Sangseom Jeong. The young members conference featured two key note lectures by Prof. Choong-Ki Chung and Prof. Za-Chieh Moh. About 70 technical papers were presented by young engineers from across 55 different countries which provided a good platform for young ones to share research ideas together. A fun-filled gala dinner was held where young engineers had enough time to socialise. iYGEC6 came to a close on the 17th with a closing report by Prof. Mookyung Chung and a welcome reception for the 19th ICSMGE.

The 19th ICSMGE organized under the theme, "Unearth the Future Connect Beyond" consisted of an Opening Ceremony with a welcome address by Ban Ki-Moon as well as a spectacular display of the Korean Culture. This was followed by lectures in Honour of Terzaghi, Bishop, James K. Mitchell, Gregory Tschebotarioff, Blight, Heritage, Schofield, Proctor, Ishihara, Louis Menard, R.K. Rowe, Kerisel, and Suzanne Lacasse, Parallel sessions of technical presentations, Technical Committees discussions, Closing Ceremony and Technical Visits. Honor lectures were provided by Professors David Muir Wood (UK), John Powell (UK), Mark Randolph (Australia), Delwyn G. Fredlund (Canada), Chris Haberfield (Australia), Antonio Gomes Correia (Portugal), Carlo Viggiani (Italy), Jonathan D Bray (USA), Buddhima Indraratna (Australia), Mario Manassero (Italy), Farrokh Nadim (Norway). The Closing Ceremony, saw the introduction of the new President of the ISSMGE, Professor Charles W. W. Ng and his administration. This was followed by technical visits to the Incheon International Airport and Sihwa Lake Tidal Power Station

The International Conferences were both well-organized giving chance to the young and old, to add on to technical expertise and knowledge, meeting old and new friends and also a relaxed atmosphere. It was indeed the place to be. I have learnt a lot from this conference which will help me in my geotechnical pursuit until we meet again in Australia 2021.

I thank the ISSMGE Foundation for supporting me to attend, and also Dr. Nicks, the outgoing YMPG chair for her active role in getting the younger generation on board.

Photo 1. After presentation at iYGEC6

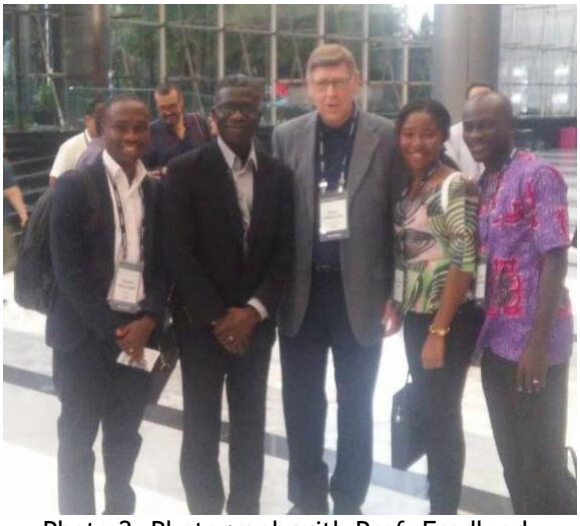
Photo 2. Photograph with Prof. Fredlund

Denise Samuella Boadu
Kwame Nkrumah University of Science and Technology, Ghana

ISSMGE Foundation Reports (Con't)

The 19th ICSMGE conference was organised by ISSMGE and the local organizing committee headed by Prof. Dong-Soo Kim. The theme of the conference is "Unearth the Future, Connect beyond [ ]" and it aimed at bridging the gaps between past and future, between young and senior engineers and between developing and developed nations among others.

On 17th September, prior to the main conference, welcome reception was organised. Next day, the conference started with welcome address from organizing committee and Prof. Ban ki-moon, former Secretary of the United Nations delivered the theme address. Dr. Peter Day delivered the "Terzaghi Oration" which gave an in-sight into the challenges in geotechnical engineering practice which was followed by ISSMGE Honour lectures. Prof. David Muir Wood delivered the "Bishop lecture" and the "James K. Mtichell" lecture was presented by Dr. John Powell from Geolabs Limited. The events on 18th and 19th September were mainly Honour and special lectures delivered by distinguished researchers. The conference had 11 Honour lectures and there were special lectures on Heritage of Korea, municipal solid waste and geo-hazards. All the presentations were invigorating and provided in-sights into the developments in different research areas. Around 800 papers were selected for presentation under different themes. The two-day technical sessions had high quality presentations covering wide variety of topics in different research areas of geotechnical engineering. I attended sessions on slope stability, earthquake geotechnical engineering, Engineering practice of risk assessment and management and Natural slopes and landslides and also had an opportunity to present my paper under one of these themes. All the sessions were observed by a good gathering of people who had come there to explore new ideas and innovation in the field of geotechnical engineering. The sessions and all the events were maintained on-time and well organised. All the days, the breaks were dedicated to explore the exhibitions and posters. The conference had a good attendance from geotechnical practitioners and people from industry. The organisers also included a series of social events showcasing the rich culture of Korea. Finally, on 22nd September Technical visits were organised. Two options were given for the technical tour: 1) Sihwa Tidal power plant and Gwangmyeong Tunnel 2) Incheon National Airport and Gyeongin ARA Waterway. I opted for the first technical visit and found it very interesting.

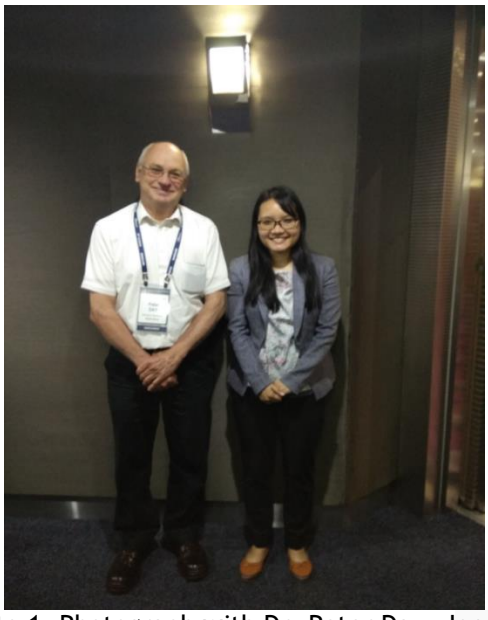

Photo 1. Photograph with Dr. Peter Day, Jones & Wagener Consulting Civil Engineers, South Africa

Photo 2. Photograph with Dr. Suzanne Lacasse, Former Technical Director, Norwegian Geotechnical Institute

Pinom Ering
Indian Institute of Science, Bangalore

ISSMGE Foundation Reports (Con't)

The 19th ICSMGE was an exciting, inspiring and insightful conference. From the opening address by Ban Ki-Moon, where he acknowledged the role geotechnical engineers must play in combatting the devastating effects of climate change, it was clear the conference theme "Unearth the Future, Connect Beyond [ ]" prompts delegates to consider the limitless roles geotechnical engineers will play in years to come.

The calibre of the keynote speakers was amazing. During my undergraduate years I learnt so much from the textbooks by Professor David Muir Wood and Professor Mark Randolph, and to be given the opportunity to witness them presenting a large body of their life's work was an incredible experience. My colleague, Dr Chris Haberfield, was also given the honour of presenting the Gregory Tschebotarioff Lecture on the practical application of soil structure interaction analysis. I thoroughly enjoyed Chris' lecture and it was great to see his achievements acknowledged with being awarded such a prestigious lecture.

Having been on the Young Geotechnical Presidential Group for the last 2 years, the conference allowed me to finally meet a number of the other members. As we have only ever spoken over skype and emails, it was nice to finally talk face to face. The workshop run by the YMPG was a valuable session, where a panel of academics and industry professionals answered questions by the predominantly younger audience. Some valuable insight into the direction of the ISSMGE and their engagement with younger geotechnical practitioners was given by both Professor Roger Frank (outgoing ISSMGE president) and Professor Charles W. W. Ng (incoming ISSMGE president).

The conference was also an opportunity to catch up with colleagues and make new connections. As I am currently working on my PhD, I find it rewarding to discuss preliminary results with other researchers in related fields, and the 19th ICSMGE was great for this.

Seoul is an incredible city, and the conference did a wonderful job showcasing the city and Korean culture. I am extremely grateful to the ISSMGE foundation for giving me the opportunity to travel to Korea to attend the 19th ICSMGE and visit a part of the world I had yet seen.

Photo1. Schofield Lecture delivered by Professor Mark Randolph

Louis King
Monash University

Event Diary

ISSMGE EVENTS

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

2018

XVI Danube-European Conference on Geotechnical Engineering: Geotechnical Hazards and Risks: Experiences and Practices
Date: Thursday 7 June 2018 - Friday 9 June 2018
Location: Skopje, Macedonia, Former Republic of Yugoslav, Skopje
Language: English and German
Organizer: Macedonian Association for Geotechnics
Contact person: Jovan Br. Papić
Address: blvd.Partizanski odredi No.24
Phone: +389 2 3116 066 ext.157
Fax: +389 2 3 11 88 34
Email: mag@gf.ukim.edu.mk
Website: http://www.decge2018.mk

4th International Symposium on Cone Penetration Testing (CPT'18)
Date: Thursday 21 June 2018 - Friday 22 June 2018
Location: Delft University of Technology (TUD), Delft, Netherlands
Language: English
Organizer: Delft University of Technology (endorsed by TC102)
Contact person: Prof. Michael Hicks, Dr. Federico Pisanò and Ir. Joek Peuchen
Address: Faculty of Civil Engineering and Geosciences, Section of Geo-Engineering, Building 23, Stevinweg 1, 2628 CN Delft, The Netherlands
Phone: +31 70 31 11299
E-mail: info@cpt18.org
Website: http://www.cpt18.org

9th International Conference on Physical Modelling in Geotechnics
Date: 17-07-2018 - 20-07-2018
Location: City, University of London, United Kingdom
Language: English (UK)
Organiser: City, University of London
Contact person: Dr Andrew McNamara
Address: City, University of London, Northampton Square, London, UK
Phone: 02070408149
Email: a.mcnamara@city.ac.uk; ICPMG2018@city.ac.uk
Website: http://www.ICPMG2018.London

Event Diary (Con't)

Geotechnical Construction of Civil Engineering & Transport Structures of the Asian-Pacific Region
Date: 04-07 July 2018
Location: Yuzhno-Sakhalinsk, Russia
Language: English
Organiser: Far Eastern State Transport University
Contact person: Tatyana Valtseva
Address: 47 Serisheva st., Khabarovsk, Russia
Phone: +7 (4212) 407-502
Email: geotexsimpozium2018@bk.ru
Website: http://gccets/com

9th European Conference on Numerical Methods in Geotechnical Engineering
Date: 25-27 June 2018
Location: University of Porto. Faculty of Engineering, Portugal
Contact person: Prof. António Silva Cardoso
Address: Department of Civil Engineering
Phone: 22508 1469
Fax: 22508 1446
Email: scardoso@fe.up.pt

5th GeoChina International Conference-Civil Infrastructures Confronting Severe Weathers and Climate Changes: From Failure to Sustainability
Date: 23-25 July 2018
Location: Hangzhou, China
Contact person: Dr. Dar Hao Chen
Address: 13208 Humphrey Dr
Phone: +86 5127056263
Email: GEOCHINA.ADM@GMAIL.COM
Website: http://geochina2018.geoconf.org/

7th International Conference on Unsaturated Soils (UNSAT2018)
Date: Friday 03 August 2018 - Sunday 05 August 2018
Location: The Hong Kong University of Science and Technology (HKUST), Hong Kong, China
Language: English
Organizer: The Hong Kong University of Science and Technology (HKUST)
Contact persons: Prof. Charles W. W. Ng (Chair), Miss Shirley Tse (Administrative Secretary) or Dr Anthony Leung (Technical Secretary)
Address: Geotechnical Centrifuge Facility, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, HKSAR, China
Phone: (852) 2358-0216
Fax: (852) 2243-0040
E-mail: unsat2018@ust.hk
Website: http://www.unsat2018.org

Event Diary (Con't)

China – Europe Conference on Geotechnical Engineering
Date: 13-08-2018 - 16-08-2018
Location: Institute of Geotechnical Engineering, BOKU, Vienna, Austria
Language: English
Organiser: Institute of Geotechnical Engineering, University of Natural Resources and Life Sciences Vienna (BOKU) and University of Leeds, UK
Contact person: Secretariat of the Institute of Geotechnical Engineering, BOKU
Address: Feistmantelstrasse 4
Email: geotech@boku.ac.at
Website: https://china-euro-geo.com/

26th European Young Geotechnical Engineers Conference
Date: 11-09-2018 - 14-09-2018
Location: Hotel Klugbauer, Austria
Language: English
Organiser: Dr. Franz Tschuchnigg & Prof. Helmut F. Schweiger
Contact person: Dr. Franz Tschuchnigg
Address: Computational Geotechnics Group, Institute of Soil Mechanics and Foundation Engineering, Graz University of Technology, Rechbauerstrasse 12
Phone: +43(0)316-873/6729
Email: franz.tschuchnigg@tugraz.at
Website: http://soil.tugraz.at/eygec2018

Urban Planning Below The Ground Level: Architecture And Geotechnics
Date: 19 – 21 September 2018
Location: The House of Architects, Saint Petersburg, Russia
Language: English, Russian
Organiser St. Petersburg Council of Architects, ISSMGE TC 207 "Soil-Structure Interaction and Retaining Walls"
Contact person: Eugene Dubinin
Address: Russia, Izmaylovsky prosp. 4, of. 414
Phone: +7-812-3393587
Fax: +7-812-5753625
Email: georeconstruction@gmail.com
Website: http://tc207ssi.org

International Symposium on Energy Geotechnics
Date: 26-28 September 2018
Location: Swiss Tech Convention Center, Lausanne, Switzerland
Language: English
Organiser: Swiss Federal Institute of Technology in Lausanne (EPFL)
Contact person: SEG-2018 Organizing Committee
Address: EPFL - ENAC - LMS Station 18
Phone: +41 21 693 23 15
Fax: +41 21 693 41 53
Email: seg2018@epfl.ch
Website: http://seg2018.epfl.ch/

Event Diary (Con't)

Geo-Expo 2018 Scientific and Expert Conference
Location: Hotel Sunce, Neum, Bosnia & Herzegovina
Date: 18-10-2018 - 19-10-2018
Language: English, Bosnian, Croatian and Serbian
Organiser: Geotechnical Society of Bosnia and Herzegovina
Contact person: Sabrina Salkovic
Address: Univerzitetska 2
Phone: +387 61 451 701
Email: geotehnika@geotehnika.ba
Website: http://www.geotehnika.ba

International Scientific-Technical Conference "Geotechnics of Belarus: Science and Practice "
Date: 23-26 October 2018
Location: Minsk, Republic of Belarus
Language: Russian, English
Organiser: Belarusian National Technical University, Belarusian geotechnical society, Department "Geotechnics and Ecology in Construction"
Contact person: Tamara Ulasik
Address: Department "Geotechnics and Ecology in Construction", Belarusian National Technical University
Phone: +375 29 329 70 83
Email: tamaraul@mail.ru; geotechnika2018@gmail.com
Website: http://geotech.by

8th International Symposium on Environmental Vibration and Transportation Geodynamics
Location: Xiandai Grand Gloria Hotel, Changsha, China
Date: 26-10-2018 - 28-10-2018
Language: English
Organizer: Central South University
Contact person: Prof. Yuanjie Xiao, Prof. Xiaobin Chen
Address: Central South University, School of Civil Engineering. 22 South Shaoshan Road Changsha, Hunan
Phone: (+86) 731-8265-5177
Email: ISEV2018@yahoo.com
Website : http://www.isev2018.cn/

8th International Congress on Environmental Geotechnics
Location: Sheraton Hangzhou Wetland Park Resort, Hangzhou, China
Date: 28-10-2018 - 01-11-2018
Language: English
Organiser: MOE key Laboratory of Soft Soils and Geoenvironmental Engineering; CISMGE; HKGES
Contact person: Bate Bate
Address: 866 Yuhangtang Road, B428 Anzhong Building, Hangzhou, China
Phone: +86-18757582046
Fax: +86 (0)571-88208793
Email: batebate@zju.edu.cn
Website : http://www.iceg2018.org
Email : iceg2018@zju.edu.cn

Event Diary (Con't)

4ème Colloque International Sols Non Saturés & Construction Durable UNSAT Oran 2018
Date : 30-31 October 2018
Location : Oran, Algeria
Language : French, English
Organiser : Université des Sciences et de la Technologie M. Boudiaf d'Oran Faculté d'Architecture et de Génie Civil, Laboratoire Matériaux, Sols et Thermique (LMST) et le réseau UNSAT-DZ
Contact person: Secrétariat Unsat Oran 2018
Address: Faculty of Architecture and Civil Engineering USTO-MB
Phone: (+213) (0) 41 62 71 77
Fax: (+213) (0) 41 62 71 77
Email: unsatoran2018@gmail.com
Website : http://www.unsat-dz.org/index.php

16th World Conference of the Associated Research Centers for the Urban Underground Space
Location: S421 – S430, Hong Kong Convention and Exhibition Centre (HKCEC), Hong Kong
Date: 05-11-2018 - 07-11-2018
Language: English
Organiser: The Hong Kong Institution of Engineers - Geotechnical Division, Hong Kong Geotechnical Society and Associated Research Centers for the Urban Underground Space
Contact person: Tony Ho
Phone: (852)27625400
Email: tonyykho@cedd.gov.hk
Website: http://www.acuus2018.hk
Email: enquiry@acuus2018.hk

6th African Young Geotechnical Engineering Conference (6TH AYGEC)
Location: University of Khartoum, Sudan
Date: 24-11-2018 - 27-11-2018
Organiser: Sudanese Society for Soil Mechanics and Geotechnical Engineering
Contact person: Prof Ahmed El Sharief
Phone: 00249912144181
Email: aelsharief@hotmail.com
Website: http://www.sssmge.org
Email: info@sssmge.org

GEOMEAST 2018 International Congress and Exhibition
Date: 24-11-2018 - 28-11-2018
Location: Cairo, Egypt
Organizer: Soil-Structure Interaction Group in Egypt (SSIGE) and Housing & Building National Research Center (HBRC)
Contact person: Dr. Eng. Hany Farouk Shehata
Email: hanyfarouk808@gmail.com,
Website: http://www.geomeast2018.org/

Event Diary (Con't)

Second JTC1 Workshop on Triggering and Propagation of Rapid Flow-Like Landslides
Date: 03-05 December 2018
Location: Hong Kong University of Science and Technology, Hong Kong
Language: English
Organiser: Joint Technical Committee on Natural Slopes and Landslides (JTC1)
Co-organiser: The Hong Kong Geotechnical Society; The Geotechnical Division of the Hong Kong Institution of Engineers; The Hong Kong University of Science and Technology
Contact person: Professor Clarence Choi
Address: Hong Kong University of Science and Technology, Clear Way Bay, Kowloon
Email: ceclarence@ust.hk

2019

13th Australia New Zealand Conference On Geomechanics 2019
Date: 01-04-2019 - 03-04-2019
Location: Perth Convention and Exhibition Centre, Australia
Language: English
Organiser: Australian Geomechanics Society
Contact person: Conference Managers Arinex Pty Ltd
Address: 3/110 Mounts Bay Road
Phone: +61 8 9486 2000
Fax: +61 8 9486 2000
Website : http://geomechanics2019.com.au/
Email: anzgeomechanics2019@arinex.com.au

7 ICEGE 2019 - International Conference on Earthquake Geotechnical Engineering
Date: Monday 17 June 2019 - Thursday 20 June 2019
Location: Rome, Italy
Language: English
Organizer: TC203 and AGI (Italian Geotechnical Society)
Contact person: Susanna Antonielli
Address: AGI - Viale dell' Università 11, 00185, Roma, Italy
Phone: +39 06 4465569
Fax: +39 06 44361035
E-mail: agi@associazionegeotecnica.it

ISDCG 2019 - 7th International Symposium on Deformation Characteristics of Geomaterials
Date: Wednesday 26 June 2019 - Friday 28 June 2019
Location: Technology and Innovation Centre (TIC) of the University of Strathclyde, Scotland, UK,
Language: English
Organizer: TC101
Website: *in construction*

Event Diary (Con't)

ECSMGE 2019 – XVII European Conference on Soil Mechanics and Geotechnical Engineering
Date: Sunday 01 September 2019 - Friday 06 September 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

XVII African Regional Conference on Soil Mechanics and Geotechnical Engineering
Date: 07-10 October 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: Monday 21 October 2019 - Friday 25 October 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

XVI Panamerican Conference on Soil Mechanics and Geotechnical Engineering
Date: Monday 18 November 2019 - Friday 22 November 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

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

Event Diary (Con't)

18th NGM Nordic Geotechnical Meeting
Date: 25 – 27 May 2020
Location: Helsinki, Finland
Contact person: Ville Raassakka
Email: ville.raassakka@ril.fi
Website : http://www.ril.fi/en/events/ngm-2020.html

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 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

NON-ISSMGE SPONSORED EVENTS

2018

EUROROCK 2018 Geomechanics and Geodynamics of Rock Masses
Date: 22-05-2018 - 26-05-2018
Location: Saint-Petersburg Mining University, Russia
Language: Russian and English
Organiser: International Society for Rock Mechanics, Saint-Petersburg Mining University, Russian Geomechanics Association
Contact person: Vladimir Noskov
Address: 2, 21st Line
Phone: +7 909 588 31 47
Email: post@eurorock2018.com
Website: http://www.eurock2018.com/index_en.html#

Event Diary (Con't)

4th GeoShanghai International Conference
Date: May 27-30, 2018
Location: H Ming Hotel Shanghai (http://www.whminghotel.com/default-en.html), China , Shanghai
Organizer: Tongji University, China
Contact person: Ming Xiao
Address: Department of Civil and Environmental Engineering, Pennyslvania State University
Phone: 1-814-865-8056
Email: mxiao@engr.psu.edu
Website: http://geo-shanghai.org

5th Italian Workshop on Landslides (IWL 2018) - "Rainfall-Induced Landslide Nowcasting for Early Warning"
Date: 28 – 30 May 2018
Location: Centro Congressi Federico II, Naples, Italy
Language: English
Organiser: Promoters/Editors: Luciano Picarelli, Thom Bogaard, Roberto Greco, Gianfranco Urciuoli
Contact person: Technical Secretary: Luca Comegna, Ph.D.
Address: Via Roma 29
Phone: +39 081 5010384
Fax: +39 081 5037370
Email: luca.comegna@unicampania.it
Website: https://www.facebook.com/iwl2018

micro to MACRO mathematical modelling in soil mechanics
Date: 29 May – 01 June 2018
Location: Reggio Calabria, Italy
Organiser: DICEAM, University of Reggio Calabria
Contact person: Giuseppe Mortara
Address: Via Graziella, Feo di Vito
Phone: +39 0965 1692 271
Fax: +39 0965 1692 201
Email: giuseppe.mortara@unirc.it
Website: http://www.microtomacro2018.unirc.it/

DFI-EFFC International Conference on Deep Foundations and Ground Improvement
Date: 06-06-2018 - 08-06-2018
Location: Sapienza University, Rome, Italy
Organizer: DFI and EFFC
Contact person: Theresa Engler
Address: 326 Lafayette Avenue
Phone: 19734234030
Fax: 19734234031
Email: tengler@dfi.org
Website : http://www.dfi.org/dfieventlp.asp?13310
Email: staff@dfi.org

Event Diary (Con't)

Geotechnical Earthquake Engineering and Soil Dynamics V
Date: 10-06-2018 - 13-06-2018
Location: AT&T Executive Education and Conference Center, Austin, United States
Organizer: American Society of Civil Engineers (ASCE) Geo-Institute
Contact person: Ellen M. Rathje, Ph.D., P.E., F.ASCE
Address: 1900 University Ave
Phone: +1 800 548 2723
Email: e.rathje@mail.utexas.edu
Website: http://www.geesdconference.org
Email: registrations@asce.org

11th International Conference on Geosynthetics
Date: 16-21 September 2018
Location: Coex, Seoul, Korea
Contact person: 11ICG Secretariat
Address: Haeoreum B/D (1F), 16 Yeoksam-ro 17-gil, Gangnam-gu
Phone: +82-2-566-6031
Fax: +82-2-566-6087
Email: secretariat@11icg-seoul.org
Website: http://www.11icg-seoul.org/

DFI 43rd Annual Conference on Deep Foundations
Date: 24-10-2018 - 27-10-2018
Location: Hilton Anaheim, United States
Organizer: Deep Foundations Institute
Contact person: Theresa Engler
Address: 326 Lafayette Avenue
Phone: 19734234030
Fax: 19734234031
Email: staff@dfi.org
Website: http://www.dfi.org/dfieventlp.asp?13325

The First Vietnam Symposium on Advances in Offshore Engineering
Date: 01-11-2018 - 03-11-2018
Location: National University of Civil Engineering, Hanoi, Vietnam
Language: English
Organiser: Association of Vietnamese Scientists and Experts
Contact person: DOAN, Dinh Hong
Phone: +33 1 40 97 38 03
Email: DinhHong.DOAN@Subsea7.com
Website: https://vsoe2018.sciencesconf.org/
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Event Diary (Con't)

2019

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
Website: http://www.dfi.org
Email: staff@dfi.org

2020

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
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Fax: 19734234031
Email: tengler@dfi.org
Website: http://www.dfi.org
Email: staff@dfi.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

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
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