

ISSMGE Bulletin

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International Society for Soil Mechanics and Geotechnical Engineering

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TABLE OF CONTENTS

Select all items below

- 1 Research highlights
 <u>University of California, Berkeley</u>
- 10 Member society report

 The Kazakhstan Geotechnical Society
- 16 Conference reports
 - The 2nd International Symposium on Coastal and Offshore Geotechnics (ISCOG 2017) & the 2nd International Conference on Geo-Energy and Geo-Environment (GeGe 2017), China
 - All-Russian Conference with International Participation "Deep foundations and geotechnical problems", Russia
 - The 3rd International Symposium on Transportation Soil Engineering in Cold Regions, China
- 25 ISSMGE Foundation reports
- 29 Event Diary
- 38 Corporate Associates
- **40 Foundation Donors**

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Research highlights

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Dr. Abrahamson has been involved in strong motion seismology for over two decades. He has extensive experience in the practical application of seismology to the development of deterministic & probabilistic seismic criteria (response spectra and time histories) for engineering design or analyses. He has been



involved in developing design ground motions for hundreds of projects including dams, bridges, nuclear power plants, nuclear waste repositories, water and gas pipelines, rail lines, ports, landfills, hospitals, electric substations, and office buildings. About 3/4 of these projects have been in the Western US and the other 1/4 have been in the Eastern US or outside of the US.

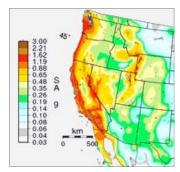
Dr. Abrahamson has published over 100 papers on ground motion and seismic hazards. He has been a leader in the development of empirical ground motion models, including using advanced statistical methods for regression analyses. He was involved in the development of the first ground motion models that included hanging wall effects, directivity effects, and fling effects. His ground motion models have been widely used in practice. He was one of the leaders of the NGA project funded by the Pacific Engineering Research (PEER) Center

http://peer.berkeley.edu

He was also the developer of one of the new NGA ground motion models. He is currently one of the leaders for an NGA-style project for the Eastern U.S. and is leading a project to develop new ground motion models for subduction earthquakes.

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Dr. Abrahamson developed the time-domain spectral matching method (RSPMATCH) that allows the engineer to modify time histories for matching the target response spectrum while preserving the key non-stationary character of the time history. This computer program is freely available and is a standard approach that is used in engineering practice. He has also developed models of the spatial variation of ground motion over short distances. These models have been used for seismic analyses of nuclear power plants and long-span bridges.



Dr. Abrahamson served as the technical leader for the PG&E/DOE program on extreme ground motions. This program integrated advanced numerical

modeling of ground motions, empirical ground motion models, non-linear site response analyses, and observations of fragile geologic features to constrain the ground motions at very long return periods that are needed for critical facilities such as the proposed nuclear waste repository at Yucca Mountain.

At PG&E, Dr. Abrahamson is responsible for developing ground seismic evaluations of PG&E facilities including nuclear power plants, nuclear waste storage, dams, penstocks, electric substations, office buildings, and gas pipelines. He is also responsible for the technical management of the PG&E seismic research program.

As a consultant, Dr. Abrahamson has been involved in the ground motion studies for several major engineering projects in California. Projects include the Caltrans major toll bridge retrofit projects, the CalFed project for the Sacramento Delta levee system, the BART seismic retrofit project, and the SFO expansion. He has been involved in developing ground motion for nuclear plants and dams in the United States and in other countries.

Jonathan D. Bray, Ph.D., P.E., NAE is the Faculty Chair in Earthquake Engineering Excellence at Berkeley. He earned engineering degrees from West Point, Stanford, and Berkeley. Dr. Bray is a registered professional civil engineer and has served as a consultant on several important engineering projects and peer review panels. He has authored more than 350 research publications on topics that include liquefaction and its effects on structures, seismic performance of earth structures, earthquake ground motions, and earthquake fault rupture propagation. He leads the National Science Foundation (NSF) sponsored Geotechnical Extreme Events Reconnaissance (GEER) Association (geerassociation.org). Dr. Bray is a member of the US National Academy of Engineering and has received several honors, including the Ishihara Lecture, Peck Award, Joyner Lecture, Middlebrooks Award, Huber Research Prize, Packard Foundation Fellowship, and NSF Presidential Young Investigator Award. Additional information is available at: ce.berkeley.edu/people/faculty/bray



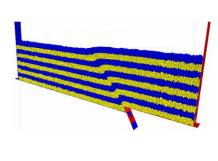
Dr. Bray has supervised the research of 32 Ph.D. students. Much of this research was in response to issues raised following major earthquakes. For example, the Bray and Sancio (2006) liquefaction of fine-grained soil criteria followed observations of silt liquefaction in the 1999 Kocaeli, Turkey earthquake (Bray et al. 2004). The simplified seismic slope displacement procedures of Bray and Travasarou (2007, 2009) were calibrated to provide results consistent with post-earthquake field measurements of earth dams and municipal solid waste (MSW) landfills. Damage observed during the 1994 Northridge earthquake motivated studies of the engineering properties of MSW with insights on its shear strength by Bray et al. (2009). The devastating effects of near-fault, pulse ground motions due to forward-directivity led to characterization schemes developed by Bray et al. (2009) and Hayden et al. (2014). Geotechnical mitigation measures proposed in Oettle and Bray (2013) are well-founded by observations of the effects of surface fault rupture following several important earthquakes. Lastly, recent studies documenting and

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discerning lessons from the effects of soil liquefaction on office buildings in Christchurch, New Zealand (e.g., Bray et al. 2014, 2017) have provided key insights on the important roles of the CPT and cyclic laboratory testing to characterize soil deposits and on the use of dynamic soil-structure-interaction (SSI) effective stress analyses to evaluate shear-induced liquefaction building settlement. A simplified procedure for evaluating liquefaction-induced building settlement is proposed in his 2017 Ishihara Lecture.



(a) soil ejecta
(b) punching failure
(c) soil-structure-interaction (ssi) ratcheting
(c) soil-structure-interaction (ssi) ratcheting
(c) sedimentation settlement
(e) consolidation settlement



Tilted building due to liquefaction

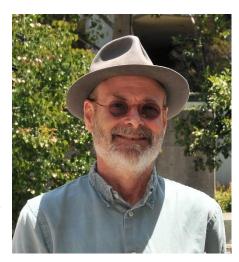
Liquefaction-induced displacement mechanisms

DEM fault rupture simulation

Significant research thrusts also utilize advanced geotechnical centrifuge modeling and advanced numerical tools such as discrete element modeling (DEM). The Dashti et al. (2010a,b) centrifuge experiments identified and evaluated the relative importance of key shear-induced and volumetric-induced liquefaction mechanisms. Mason et al. (2013), Trombetta et al. (2014), and Hayden et al. (2015) explored key dynamic SSI responses of structures founded on non-liquefiable and liquefiable ground. O'Sullivan et al. (2002, 2003a,b, 2004) emphasized the need to utilize realistic 3D sphere-cluster particles to capture the response of granular media. Further work is carried out with Ph.D. candidate Garcia who has developed a parallel-computing algorithm for evaluating fault rupture propagation through sand deposits.

Steven D. Glaser is a professor in the Dept. of Civil and Environmental Engineering, University of California, Berkeley, distinguished affiliate professor at the Technical University of Munich, and a research scientist at the Lawrence Berkeley National Laboratory. Glaser's engineering training was at The University of Texas at Austin. He also has a B.A. in philosophy from Clark University, 1975. He completed the apprentice program of Local 77 of the International Union of Operating Engineers, following which Glaser worked eight years as a driller, including one year in Iraq.

Glaser has worked on many aspects of rock mechanics and rock physics, most often by applying principles from geophysics. His work in this field has been published in Nature, Journal of Geophysical Research and other significant journals. Glaser currently operates the largest wireless network in the world, monitoring forest hydrology of snow melt and water balance in the Sierra Nevada (arho.org; https://vimeo.com/162487136).

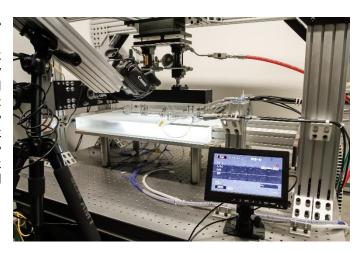


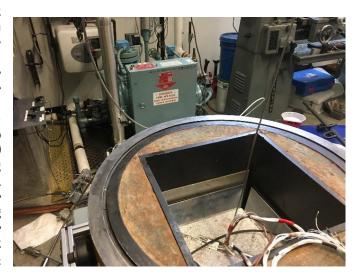
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The Glaser lab has a laboratory earthquake device that is now being used by the third Ph.D. student. The device can duplicate virtually any fault behavior leading up to gross rupture using lightly loaded PMMA. We are beginning to use extended fault source models to interpret the nanoseismic signals recorded during tests. We make use of the absolutely calibrated Glaser-type displacement sensor, which has a noise floor of 0.2 fm. We have examined asperity mechanics, effects of fault healing time, preslip mechanisms, slow-slip, and the mechanics of foreshock swarms.

(https://www.youtube.com/watch?v=AMw490jPDl A&feature=youtu.be)

Glaser is currently working on an experiment looking at injection-induced seismicity from injecting cold water into hot rock. We are investigating the effects of thermal contraction, and injected water flashing to steam, as proximate causes of fault weakening. In particular we are modeling the Geysers geothermal field in N. California. The experiments take place in our truetriaxial geothermal reservoir simulator. Integral to this device is a high-pressure boiler that floods 250 mm cubes of rock with 2 MPa steam, duplicating The dynamic Gevsers. junction-level displacement 'seeds' that lead to macro-rupture will be studied through nano-seismic imaging using high temperature increased sensitivity Glaser-type We have just finished an experiment looking at the efficiency of using supercritical CO2 as the circulating fluid in an enhanced geothermal reservoir.



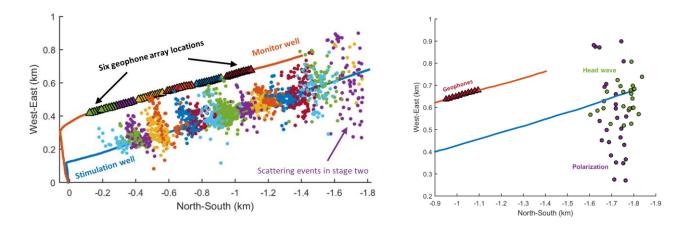


Professor Rector has been a member of the Berkeley Faculty since 1992. He is an expert in applied seismology with a focus on both near surface seismology and deep oil and gas reservoir imaging and has been a seminal contributor to seismic while drilling, crosswell seismic, near surface imaging, interferometry, anisotropic imaging, passive seismic, fracture mapping, and machine learning in seismology. He has supervised over 40 Ph.D. and Masters' students and holds a faculty appointment in the Department of Earth and Planetary Science and the Lawrence Berkeley National Laboratory. In addition to his work at Berkeley, he founded several successful commercial seismic technology companies, works with many of the major oil companies, and has patented a number of innovative technologies. He has won several major awards in the Society of Exploration Geophysicists, and has served as Editor in Chief of the Journal of Applied Seismology.

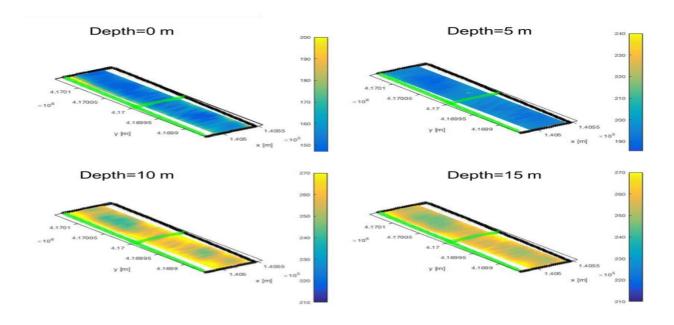


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Rector's work in oil and gas is focused on fracking and he has been a keynote speaker recently with a talk entitled "Fact and Fiction in Fracking". His research has been focused on improving the quality of microseismic data analysis. Compared to conventional event locations, event locations in real world situations have been dramatically improved through the development of Bayesian machine learning algorithms and the incorporation of other arrivals such as head waves.



He is also applying his expertise in seismic imaging to environmental and near surface geophysics. This work is aimed at understanding the mechanical properties of the soil and rock in the first 100 m of the earth. He developed and patented a new technique that uses tomographic techniques to analyze surface waves which provides a cost-effective 3-D extension of conventional 2-D analysis in MASW. This information can be used to characterize near surface soil profiles (for example to design building parameters), to detect voids, and to find near surface objects (bunkers, buried pipes, etc.), and to characterize fluids and flow such as contaminant transport and groundwater.



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Michael Riemer is an Adjunct Professor in Civil and Environmental Engineering, as well as having been the manager of the geotechnical laboratories at UC Berkeley since 1992. He completed his undergraduate studies at Virginia Tech in Civil Engineering, and focused on Geotechnical engineering for his Masters and Doctoral studies at UC Berkeley. From 2000 through 2003, he also served as Manager of the Lifelines Research Program within the Pacific Earthquake Engineering Research (PEER) Center, coordinating a \$1.3 million program of user-directed research ranging from ground motions through soil and structure response, to network risk and emergency response.

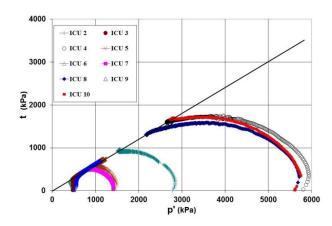
His research interests center on static and dynamic property evaluation for a broad range of geomaterials, from naturally occurring silty sands and deep clay deposits through mine tailings, rubble fills and municipal solid waste.



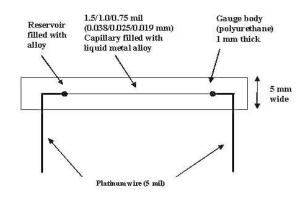
The testing conditions necessary for such measurements range in scale from conventional lab samples to triaxial testing at 12" diameter; confining pressures range from a few psi to over 60 atm. and deformations range from a few microns to nearly a foot. As such, an important part of the research is the development, refinement and upgrading of equipment across multiple scales and the incorporation of newer technologies within existing facilities.

One such example is the implementation of the Elastomer Strain Gauge (Safaqah & Riemer, 2007), a deformable elastic strip containing a metallic-filled capillary that can be attached to conventional latex or other membranes and deployed as a local strain sensor. Depending on the signal conditioning, these are capable of measuring strains as low as 0.001% up to 25%, and have been utilized both in extension and torsional shear.

In addition to his own research, Prof. Riemer often collaborates with other faculty in the program, training research students in advanced laboratory testing techniques, modifying existing research equipment to enhance particular capabilities for a specific project, or developing specialized procedures for given research goals.



Evaluating effects of grain breakage on steady state for tailings



Elastomer Strain Gauge for local measurement

University of California, Berkeley

Nicholas Sitar holds the Edward G. Cahill and John R. Cahill Chair in Civil and Environmental Engineering. His undergraduate training was in Geological Engineering at the University of Windsor in Ontario, Canada, and he completed both his M.S. in Hydrogeology and Ph.D. in Geotechnical Engineering from Stanford University. His research activities encompass a broad range of areas in engineering geology, geological engineering, groundwater hydrology, and risk and reliability, with an overarching interest in natural hazard evaluation, modeling, and mitigation. His research is driven by coupling field observations with experimental and numerical analyses.





Early mote prototype for wildfire monitoring

His experience with the challenges in field data acquisition in landslide monitoring led to his involvement in the early development of sensor boards and applications for wireless sensor systems, motes, capable of ad-hoc networking, remote data acquisition, and position tracking. Among the prototype demonstrations was an environmental sensor demonstration network for tracking of wildfires in Northern California. The basic sensor boards demonstrated in these experiments and their derivatives are now used by researchers worldwide and are starting to be implemented in engineering practice.

His involvement in geotechnical earthquake engineering started with post-earthquake investigation of seismically induced landslides in Guatemala in 1976. Since then his focus has been the seismic response of underground space, seismic earth pressures on retaining structures, and seismic slope stability. His most recent research with his graduate students (L. Al-Atik, R.G. Mikola, G. Candia and N. Wagner) focused on the seismic response of retaining walls and basements. This effort combined field observations with extensive experimental work using geotechnical centrifuge and numerical modeling to develop new guidance for analysis and design of these structures in high seismicity regions (for more information see: 10.21418/G8WC7H).



Models of retaining walls for testing



DEM model of disintegration of a jointed rock mass

The overall focus of his research in rock mechanics has been the influence of kinematics on the response of fractured rock masses. His current research is focusing on the behavior of jointed rock masses under different environmental conditions, including rock fall hazard identification using acoustic emission monitoring, evaluation of conditions leading to rock erosion in unlined spillways, and kinematics of large rock slides. With student M. Gardner he is currently leading an effort to develop a new generation of numerical codes for modeling dynamic response of jointed rock masses and rock fluid interaction. This effort aims to combine 3-D DEM rock mass model with LBM fluid model while taking advantage of new developments in parallel computing in order to make analyses of realistic field-scale problems achievable and suitable for wide application in research and practice.

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The overarching element in his research, starting with his Ph.D. dissertation, has been the influence of geologic environment on the properties of sedimentary deposits. He and his students have performed extensive studies of the influence of depositional fabric on the stability of steep slopes in sands and gravels. He is currently embarking on the exploration of the influence of depositional fabric on the strength characteristics of fluvial sediments from micro- to macro-scale.

Kenichi Soga is Chancellor's Professor in Civil and Environmental Engineering. He received his B.Eng. and M.Eng. from Kyoto University, Japan, and Ph.D. from the University of California, Berkeley, US. Prior to his move to UC-Berkeley in 2016, he was Professor of Civil Engineering at the University of Cambridge, UK. He is currently the secretary of ISSMGE's Technical Oversight committee. He is also the vice chair of TC308 Energy Geotechnics and the secretary of TC105 Macro and Micro Geomechanics. He is co-author of "Fundamentals of soil behavior, 3rd edition" with Professor James Mitchell. His research interests are fundamental soil behavior, computational geomechanics and infrastructure sensing. His current research at Berkeley continues from his research at Cambridge, which was reported in ISSMGE Bulletin: Volume 8, Issue 4.

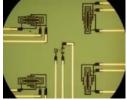


During the past 15 years, he and his research team have been developing innovative sensor for geotechnical technologies engineering applications. The technologies include distributed fiber optics (FO) sensing, wireless sensor network (WSN), low power micro-electro-mechanical sensors, energy harvesting and computer vision. They have been deployed in tunnels, deep excavations, piles and slopes, leading to industry adoption and commercial spin offs. These activities resulted in the establishment of the Cambridge Centre for Smart Infrastructure and Construction (smartinfrastructure.eng.cam.ac.uk) at Cambridge. Even after his move to the US, he continues to be an active member of the centre, leading their international activities. He is coauthor of "Distributed Fibre Optic Strain Sensing for Monitoring Civil Infrastructure" and "Wireless Networks for Civil Infrastructure Sensor Monitoring", which are available from ICE publishing. At Berkeley, he initiated research projects to test these technologies for monitoring large shafts, cutoff walls for river levees and pipelines. The main goal of these projects is to promote the concept of performance based design, construction and maintenance of our geotechnical structures by actively monitoring them throughout their lifetime.









MEM strain



Energy



Developing new sensors

University of California, Berkeley

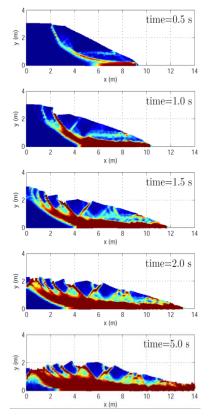
His interest in computational geotechnics started when he was working on UC Berkeley's finite element code FEAP for his Ph.D. research 25 years ago. Over the years, his research team has developed new codes for geotechnical engineering applications. These include: (i) Coupled fluid flow-deformation Material Point Method code for large deformation landslide analysis, (ii) Lattice Boltzmann Method-Discrete Element Method code for particle-scale solid-fluid interaction analysis, (iii) Coupled Lattice Element Method code for hydraulic fracturing simulations, and (iv) Thermo-Hydro-Mechanical code to solve energy geostructures and methane hydrate problems. The research also investigates the role of various constitutive models in understanding the fundamental deformation mechanisms of various geotechnical problems. The current research activities utilize high performance computing facility and techniques to conduct large scale simulations.



Computer vision for tunnel inspection



Fiber optics installation in energy piles



Fluid-soil coupled MPM simulations

The overall arching theme of his research is investigation of fundamental soil behavior in geotechnical engineering using the research tools described above. The current research topics include: (i) thermo-hydro-mechanical interactions for geothermal and deep geomechanics problems, (ii) large deformation for landslides and sand production, (iii) soil fabric and micro-macro relationships for developing models for microbial induced-cementing and soil erosion, and (iv) long term performance of underground structures.



Long-term performance of CERN tunnels, Switzerland

Member society report

Report of the International Geotechnical Activities on EXPO-2017, Astana, Kazakhstan

The Kazakhstan Geotechnical Society is pleased to share the news on two events which were held on 20th - 21st June, 2017 in Astana, Kazakhstan and supported by the Kazakhstan Geotechnical Society, KGS, LLP and ISSMGE TC305 «Geotechnical infrastructures for megacities and new capitals».

1. The Roundtable discussion on «Innovation and Challenges in the Construction of the Ground and Foundations of Renewable Energy Facilities» within the World Scientific and Engineering Congress (WSEC-2017) «Energy of the future: innovative scenarios and methods of their implementation» (Astana, Kazakhstan)

The World Scientific and Engineering Congress (WSEC-2017) «Energy of the future: innovative scenarios and methods of their implementation» started on 19-20 June, 2017 in Astana, Kazakhstan. The congress attracted more than 1,000 participants from 51 countries, including four Nobel Prize Laureates and eight Global Energy Award winners.

This important event included a Roundtable discussion on «Innovation and Challenges in the Construction of the Ground and Foundations of Renewable Energy Facilities» which was held on June 20, 2017 at the EXPO-2017 Congress Center in Astana. The Roundtable discussion WSEC-2017 provided an ideal academic platform for researchers to present the latest research findings and describe emerging technologies, and directions in geotechnical issues.

At the opening ceremony Prof. Askar Zhussupbekov as chairman of the Roundtable discussion on «Innovation and Challenges in the Construction of the Grounds and Foundations of Renewable Energy Facilities» noted the great importance of such a scientific event for Kazakhstan and for the world.



Photo 1. Participants of the Roundtable discussion on «Innovation and Challenges in the Construction of the Ground and Foundations of Renewable Energy Facilities» within the World Scientific and Engineering Congress (WSEC-2017)

Report of the International Geotechnical Activities on EXPO-2017, Astana, Kazakhstan

The Roundtable discussion brought together leading academic scientists and researchers from Asia and Europe. The future energy for heating and cooling, geomechanical challenges associated with modeling and analyzing renewable energy facilities, wind and geothermal energy was discussed during the roundtable discussion.

Prof. Rolf Katzenbach (Director of the Energy Center of Technical University of Darmstadt, Germany) as a keynote lecturer reported about the developed solutions for the storage of future energy for heating and cooling.



Photo 2. Awarding ceremony of keynote lecturer Prof. Rolf Katzenbach (Technical University of Darmstadt, Germany) (From left to right: Prof. Akira Hasegawa, Prof. Rolf Katzenbach and Prof. Askar Zhussupbekov)

Also Prof. Heinz Brandl (Vienna University of Technology, Austria) on «Thermo active ground source structures as renewable energy facilities», Prof. Akira Hasegawa (Hachinohe Institute of Technology, Japan) on «Hachinohe geotechnical information system for construction of the ground and foundations», Prof. Ayfer Erken (Istanbul Technical University, Turkey) on «Seismic evaluation of energy structures», Prof. Victor Kaliakin (University of Delaware, USA) on «Geomechanical challenges associated with modeling and analyzing renewable energy facilities», Prof. Eun Chul Shin (Incheon National University, Republic of Korea) on «Eco-friendly green campus projects at Incheon national university», Prof. Der-Wen Chang (Tamkang University, Taiwan) on «Renewables and prospects of wind and geothermal energy in Taiwan», Prof. Askar Zhussupbekov (L.N. Gumilyov Eurasian National University, Kazakhstan) on «Researches of vibrating influence of wind power tower to the foundation» presented their research paper and made a roundtable discussion to exchange and share their experiences and research results on all aspects of geotechnical and civil engineering.

Report of the International Geotechnical Activities on EXPO-2017, Astana, Kazakhstan

2. International Geotechnical Seminar on TC 305 «Geotechnical Infrastructure for Megacities and New Capitals» (Astana, Kazakhstan)

The Geotechnical Seminar TC 305 «Geotechnical Infrastructure for Megacities and New Capitals» was held as a satellite event the day after the Roundtable discussion on «Innovation and Challenges in the Construction of the Ground and Foundations of Renewable Energy Facilities» on June 21, 2017 at the L.N. Gumilyov Eurasian National University in Astana, Kazakhstan. Scientists, academic researchers, postgraduate and undergraduate students from Austria, Japan, Turkey, South Korea, Taiwan, the USA, Syria, Belarus and Kazakhstan participated in this event. Also the Extraordinary and Plenipotentiary Ambassador of Japan to the Republic of Kazakhstan, Ichiro Cavabata, and Extraordinary and Plenipotentiary Ambassador of Austria to the Republic of Kazakhstan, Dr. Gerhard Sailler, were invited as honorary guests.



Photo 3. Plenary session on the International geotechnical seminar on TC 305 of ISSMGE

During the seminar scientific reports were presented by Prof. Heinz Brandl (Austrian Society of Engineers and Architects, Austria) on «Near-surface geothermal systems for megacities and new capitals», Prof. Akira Hasegawa (Japanese Geotechnical Society, Japan) on «Important geotechnical information given by the old map - in the case of Hachinohe», Prof. Ayfer Erken (Turkish National Committee for ISSMGE, Turkey) on «Urban deep excavation and its interaction with adjacent subway tunnel», Prof. Eun Chul Shin (Korean Geotechnical Society, Republic of Korea) on «Stability analysis of geocell reinforced slope during rainfall», Prof. Der-Wen Chang (Chinese Taipei Geotechnical Society, Taiwan) on «Simplified analysis on seismic responses of pile raft foundation and prospects in PBSD», Prof. Victor Kaliakin (Geo-Institute of ASCE, USA) on «Some robust geosynthetics methodologies for use in the geotechnical infrastructure», Prof. Talal Awwad (Order of Syrian Engineers and Architects, Syria) on «An investigation of the effect of the soil on existing tunnels», Prof. Askar Zhussupbekov (Kazakhstan Geotechnical Society, Kazakhstan) on «The applications of pile in the construction site of the new railway station and light railway transport in Astana, Kazakhstan» and PhD Student Tatiana Tronda (Belarusian Geotechnical Society, Belarus) on "Ground Improvement by Dry Concrete Columns in Minsk, Belarus".

Report of the International Geotechnical Activities on EXPO-2017, Astana, Kazakhstan

Among all the participants it is important to give special mention to some of the lecturers, such as Prof. Eun Chul Shin, Prof. Akira Hasegawa, Prof. Ayfer Erken and Prof. Der-Wen Chang who were interested to provide strengthening interaction between foreign and Kazakhstan specialists in the field of geotechnics, to promote the exchange of experience and to find ways for future cooperation on education and science.

At this seminar the cooperation agreement between L.N. Gumilyov Eurasian National University (ENU) and Hachinoche Institute of Technology (HIT) was signed by the L.N.Gumilyov ENU Rector, Prof. Yerlan Sydykov and President of HIT Prof. Akira Hasegawa.



Photo 4. Signing Ceremony of the Cooperation Agreement (MOU) between ENU and HIT



Photo 5. Awarding Ceremony of the L.N. Gumilyov ENU for Honorary Doctor Prof. Heinz Brandl

L.N. Gumilyov ENU Rector Prof. Yerlan Sydykov emphasized that this agreement will breathe new life into the firmly established relationships between the two universities and will bring this cooperation to a new level

An important highlight of this workshop was the title award of Honorary Doctor of the L.N. Gumilyov ENU to the President of the Austrian Society of Engineers and Architects Prof. Heinz Brandl in recognition of his outstanding international achievements and manifold cooperation in geotechnical engineering.

In conclusion of this event on behalf of the board of TC 305 «Geotechnical Infrastructure of Megacities and New Capitals» the President of the Kazakhstan Geotechnical Society Prof. Askar Zhussupbekov expressed his deep gratitude to all the participants and members of the Organizing Committee for their great efforts and contribution. First Vice-Rector of L.N.Gumilyov ENU Prof. Assemgul Moldazhanova invited all participants to visit the EXPO 2017 exhibition site and the laboratory for civil and geotechnical engineering "ENU-Lab".

Report of the International Geotechnical Activities on EXPO-2017, Astana, Kazakhstan



Photo 6. Group photo of foreign participants and members of Kazakhstan geotechnical society

The successful seminar was followed by a technical tour to the Expo 2017 site. The theme for the Expo 2017 was "Future Energy". 115 states and 22 international organizations confirmed their participation in EXPO 2017 in Astana. At the EXPO-2017, seminar's participants visited the Pavilions of the Republic of Kazakhstan and exhibiting countries where they familiarized themselves with the advanced renewable technology and materials.

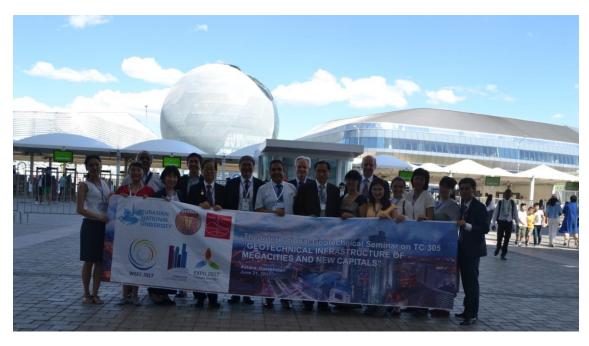


Photo 7. Participants of International geotechnical seminar on TC 305 at the Expo 2017, Astana, Kazakhstan

Report of the International Geotechnical Activities on EXPO-2017, Astana, Kazakhstan

After visiting the EXPO 2017 site the Seminar's participants visited the laboratory "ENU-Lab" of L.N. Gumilyov ENU. During the tour a Director of ENU-Lab, Dr. Rauan Lukpanov presented to the guests a perspective plan of the laboratory and introduced some new test apparatus.



Photo 8. Participants of International geotechnical seminar on TC 305 at the ENU-Lab

The 2nd International Symposium on Coastal and Offshore Geotechnics (ISCOG 2017) & the 2nd International Conference on Geo-Energy and Geo-Environment (GeGe 2017)

A joint event of the 2nd International Symposium on Coastal and Offshore Geotechnics (ISCOG 2017) and the 2nd International Conference on Geo-Energy and Geo-Environment (GeGe2017) was held at Zhejiang University (China) on 6-7 July 2017. This joint event is under the auspices of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE), and is co-organized by Zhejiang Provincial Natural Science Foundation, Geological Exploration Bureau of Zhejiang Province and Power-China Huadong Engineering Corporation Limited.

The event aims to provide a platform for sharing scientific breakthroughs in sustainable geotechnical solutions to energy production (in both offshore and onshore) and geo-environment management, which are the two crucial global challenges facing the 21st century.



Prof. Yonghua Song, Executive Vice President of Zhejiang University, delivering his opening speech



Prof. Lizhong Wang, Chair of ISCOG2017, delivering his welcome speech

The two-day program included: a Rankine lecture series by Professors Richard Jardine and Antonio Gens, a Terzaghi lecture series by Professors Kerry Rowe and Carlos Santamarina, as well as 22 plenary keynote/invited lectures delivered by prominent speakers from 14 countries in 4 continents. These lectures covered a wide range of pressing scientific issues and engineering practices that are closely linked to the themes of this joint event, as follows:

Themes for ISCOG 2017

- 1) Characterization and mechanics of marine sediments
- 2) Foundations for renewable and other energy facilities
- 3) Pipeline geotechnics
- 4) Marine geophysics and geology
- 5) Marine geohazard risk assessment and mitigation
- 6) Deepwater landslide mechanics

Themes for GeGe 2017

- 1) Energy geo-structures such as piles, walls and tunnels
- 2) Radioactive waste disposal
- 3) Unconventional and geothermal energy
- 4) Reused and recycled materials in geotechnical engineering
- 5) Bio-geotechnology such as the use of vegetation and bacteria
- 6) Landfill engineering

The 2nd International Symposium on Coastal and Offshore Geotechnics (ISCOG 2017) & the 2nd International Conference on Geo-Energy and Geo-Environment (GeGe 2017) (Con't)



Terzaghi lecture series: Prof. Kerry Rowe



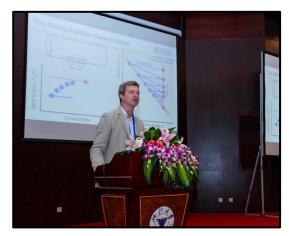
Rankine lecture series: Prof. Richard Jardine



Terzaghi lecture series: Prof. Carlos Santamarina



Rankine lecture series: Prof. Antonio Gens



Prof. David White delivering his keynote lecture in ISCOG2017



Prof. Charles W. W. Ng delivering his keynote lecture in GeGe2017

The 2nd International Symposium on Coastal and Offshore Geotechnics (ISCOG 2017) & the 2nd International Conference on Geo-Energy and Geo-Environment (GeGe 2017) (Con't)





in GeGe2017

Prof. Amir Kaynia delivering his keynote lecture Prof. Kenichi Soga delivering his keynote lecture in GeGe2017



Some participants of the event

The next ISCOG and GeGe conferences will be held at Zhejiang University (China) and École Polytechnique Fédérale de Lausanne (Switzerland) in 2022 and 2019, respectively.

Professor Lizhong Wang Zhejiang University, China

All-Russian Conference with International Participation: "Deep foundations and geotechnical problems"

The All-Russian Conference with International Participation «Deep foundations and geotechnical problems» was held at Perm National Research Polytechnic University, 29 - 31 May 2017.

The organizers of the conference were Russian Academy of Architecture and Construction Sciences, Russian Society for Soil Mechanics, Geotechnics and Foundation Engineering, International Geosynthetics Society, Perm National Research Polytechnic University.

The opening of the conference took place in the conference hall of the university where the rector of PNRPU **Anatoly Tashkinov** addressed the audience with a welcoming speech. He noted that the main message of the conference is connected with problems inherent in a large extent to urban agglomerations. The head of the university noted that the conference is not only a tribute to Professor A. A. Bartolomey, who was the founder of this direction of science in Perm Region, but also the answer to the scientific and practical tasks facing Russian contractors and scientists today.





Photo 1. Rector of PNRPU Anatoly Tashkinov

Photo 2. The conference section

The speeches of the Mayor of the city of Perm **D. I. Samoilov**, the president of RSSMGFE, the vice-president of RAACS Professor **V.A. Ilyichev** and the president of the Kazakhstan Geotechnical Society Professor **A.Zh. Zhussupbekov** were also at the opening.

131 people took part in the conference. The participants of the conference came from universities and research organizations of various regions of Russia, Kazakhstan, Azerbaijan, Ukraine, France, Italy, Germany, Turkey and South Korea. 59 reports were presented at the conference by more than 150 authors, in addition 20 poster presentations were made. The collection of proceedings of the conference was published on a CD disc.

The conference topics covered the following issues:

- 1. Laboratory and field testing of soils
- 2. Experimental and theoretical studies of foundations and underground structures
- 3. Technologies of the reinforcement of foundations and soils
- 4. Practice of development of underground space, geotechnical monitoring
- 5. Geosynthetics in geotechnics
- 6. Educational and methodological issues of training geotechnic engineers

All-Russian Conference with International Participation: "Deep foundations and geotechnical problems" (Con't)

Plenary reports at the conference were made by:

- *Ilyichev V.A.*, Professor, Doctor of Technical Sciences, President of RSSMGFE, Vice-President of RAACS; "Technological mechanics of soils";
- **Z.G. Ter-Martirosyan**, Professor, Doctor of Technical Sciences (MGSU, Russia) "Stress-strain state of deep foundations";
- **Shin E.C.**, Vice-President of ISSMGE for Asia, Professor (National University of Incheon, South Korea) "Stability Analysis of Tunnel for Underground Highway";



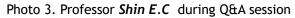




Photo 4. Professor *M. Manassero* during his presentation

- **Zhussupbekov A. Zh.,** Professor, Doctor of Technical Sciences, President of Kazakhstan Geotechnical Society (Eurasian National University, Kazakhstan) "Modern pile foundations geotechnology and express methods for testing of pile foundations";
- Guler E., Professor (Bosphorus University, Turkey) "Advantages of using geosynthetics";
- *M. Manassero*, Vice-President of ISSMGE Europe, Professor (Polytechnic University of Turin, Italy) "Modeling of swelling and osmotic properties of clay soils";
- *R. Katzenbach*, Professor (Technical University of Darmstadt, Germany) "Optimized design and independent peer review of foundations and other complex underground structures"; and
- S. Varaksin, Professor, ISSMGE TC211, (France) "European contributions to ground improvement related large scale case histories with their quality control procedures and Russian applications".



Photo 5. On the podium Professor *R. Katzenbach*



Photo 6. Discussion chaired by Professor S. Varaksin

All-Russian Conference with International Participation: "Deep foundations and geotechnical problems" (Con't)

In the course of the conference, modern geotechnologies for the design of foundations in various soils and climate conditions including potentially hazardous areas as well as modern methods of engineering surveys and testing of newly constructed facilities were discussed. The advice provided through practical experience of strengthening the foundations of existing buildings and structures was sound. New materials and technologies in road construction were presented. The results of experimental and theoretical studies in the field of geotechnics and foundation engineering were discussed as well as methods for modeling foundations. The conference was held with the active participation of foreign professors and specialists who shared their research results and valuable experience in developing of the underground space in other abroad countries.

The conference was attended by students in the construction field, graduate students and young scientists of PNRPU, representatives of design and construction organizations in Perm.

The high level of organization and operation of the conference were acknowledged by participants of the conference as well as the level of registration and preparation of all conference materials.



Photo 7. Technical tour of participants in the ethnic village of Khokhlovka

The exchange of views on topical problems of foundation engineering promotes the development of geotechnics, strengthens and expands the ties between specialists in the field of soil mechanics and geotechnics in Russia and other countries.



Photo 8. Conference participants

The 3rd International Symposium on Transportation Soil Engineering in Cold Regions (Gui-De, Qinghai, China)

The 3rd International Symposium on Transportation Soil Engineering in Cold Regions was held at Gui-De City, China on July 6-7, 2017. The symposium was organized by Qinghai Research Institute of Transportation under the auspices of TC202 of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) and AFP50, Committee on Seasonal Climatic Effects on Transportation Infrastructure of Transportation Research Board (TRB), also supported by the Chinese Transportation Geotechnics Committee.

The symposium had 4 plenary sessions including 13 keynote presentations and 8 concurrent sessions with 8 invited lectures and 43 presentations. The symposium had more than 180 attendees from 8 countries including China, Russia, USA, Japan, South Korea, Kazakhstan, Canada and Netherland, and also 52 universities or research institutes.

The General Engineer from DOT of Qinghai Province highlighted the importance of technology and research on transportation infrastructures in cold regions in his presentation. Representatives from Beijing Jiaotong University, Southwest Jiaotong University, Siberian State University of Railway Transportation and Far Eastern State Transport University also made presentations.



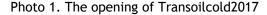




Photo 2. Prof Zhaohui Yang awarding a certificate to Prof. Askar Zhussupbekov

Keynote lectures presented were:

- 1. Prof. Erol Tutumluer, University of Illinois Urbana-Champaign "Cold Region Effects on Road Pavement and Railroad Track Foundations"
- 2. Prof. Jean Côté, Laval University, "Heat transfer properties of base-course and coarse rock fill materials"
- 3. Prof. Yang Zhaohui, University of Alaska, Anchorage, "Progresses in Assessment of Physical, Mechanical and Thermal Properties of Thawing Permafrost"
- 4. Prof. Tatsuya Ishikawa, Hokkaido University, "Coupled analysis for freeze-thaw of soil and application to transport infrastructures in cold regions"
- 5. Prof. Zhou Guoqing, China University of Mining and Technology, "Frost heave model and frost force prediction of soil"
- 6. Prof. Ashpiz E.S, Moscow State University of Railway Engineering, "Study on the Moscow Kazan HSR"
- 7. Prof. Nekhoroshkov V.P., Siberian State University of Railway Transportation, "Perspectives of international transport corridors in cold regions of Russia"

The 3rd International Symposium on Transportation Soil Engineering in Cold Regions (Gui-De, Qinghai, China) (Con't)





Photo 3. Prof. Erol Tutumluer giving a keynote lecture

Photo 4. Dr Fang Jianhong awarding a certificate to Prof. Jean Cote

- 8. Dr. Zhang Xiong, Missouri University of Science and Technology, "Mitigation of frost heave by removing capillary water using a wicking fabric"
- 9. Prof. Askar Zhussupbekov, The L.N. Gulimeyov Eurasian National University "Geotechnical Problems on Freezing Soil Ground in Kazakhstan"
- 10. Dr. Wei Yong Xing, China Railway Second Survey & Design Institute Group CO., LT, "Anti-frost Designing of the subgrade Moscow-Kazan HSR"
- 11. Prof. Jong-Sub Lee, Korea University, "Nondestructive method for the evaluation of the active layer in a cold region"
- 12. Prof. Fang Jianhong, Qinghai Research Institute of Transportation, "Introduction of the Huashixia Permafrost observation Lab"
- 13. Petriaev Andrey, St. Petersburg State Railway University, "Vibration impact of trains on the thawed soil subgrade"

Technical sessions themes:

- 1. Mechanical behavior of soil and aggregate
- 2. Diagnosis and Mitigation of Soil Structure Distress in Cold Regions
- 3. Coupled modeling of mechanical and physical processes
- 4. Frost heave and thaw weakening of subgrade, ballasted subgrade and base of slab track
- 5. Field experiments in roadway embankments
- 6. Dynamic/seismic behavior of transportation infrastructure
- 7. Soil-structure interaction related to transportation environment and infrastructure
- 8. Experience in the construction and maintenance of subgrade in cold region

The conference proceedings contain 35 peer-reviewed papers, which have been included in *Journal of Sciences in Cold and Arid Regions* (indexed by ESCI) and *Journal of Chang'an University- Natural Science Edition* (indexed by Scopus).

The 3rd International Symposium on Transportation Soil Engineering in Cold Regions (Gui-De, Qinghai, China) (Con't)







Journal of "Sciences in cold and arid regions"

Following the two days' meeting program, the technical tour to Guide National Geological Park and visiting of Qinghai Research Institute of Transportation in Xining city was held for all conference participants and their accompanying persons. The BBQ and dancing party was held on the second evening.

At the closing ceremony, Prof. Andrey Petriaev and Prof. Yang Zhaohui thanked all the participants and announced that the upcoming "4th International Symposium on Transportation Soil Engineering in Cold Regions" will be held in Saint-Petersburg (Russia) on May 20th-23rd, 2019. Further information regarding the symposium is available via website: http://conf-geotech.wixsite.com/transoilcold2019

Prof. Jiankun Liu Chair of Transoilcold2017

ISSMGE Foundation Reports

The theme of the conference was "Geotechnical Risk from theory to practice" (GEO-RISK 2017, Denver, Colorado, USA, 4th to 7th June 2017) and it mainly focused on demonstrating the emerging engineering-practice innovations by adopting the probabilistic and risk methodologies in geotechnical engineering.

The Risk Assessment and Management committee of Geo-Institute (GI) ASCE, organised the conference. On 4th June, short courses were conducted on very interesting topics like Bayesian analysis and reliability updating, risk assessment, reliability based design in geotechnical engineering. Later, the conference started with a welcome keynote, the prestigious "Suzanne Lacasse Lecture" was delivered by Prof. Gregory B Baecher on "Bayesian thinking in Geotechnics". The next day, "Wilson Tang lecture" was delivered by Prof. Gordon A Fenton on "Future Directions in Reliability-Based Geotechnical Design". These two lectures were one of the highlights of the conference. The events on 5th June and 6th June were mainly the keynote lectures and concurrent technical sessions. They also invited practicing geotechnical engineers from some of the pioneering firms in the world to understand the challenges that they face in the field and also the significance of using probabilistic methods to overcome these problems. keynote lectures by Dennis E. Becker from Golder Associates Ltd, Brain Simpson from Arup Geotechnics, John W. France from AECOM addressed the importance of risk assessment and reliability based design with project examples. They gave an understanding on the recent advances in the Bayesian methods and Reliability based design methods. Around 160 papers were selected for presentation under different themes. The two-day technical sessions had high quality presentations covering wide variety of probabilistic methods implemented in geotechnical engineering. I attended some interesting sessions on Reliability-and risk-based code developments, Practice of risk assessment and management in all fields of geo-engineering, advances in geotechnical reliability based design, uncertainty relating to geotechnical properties. I also had an opportunity to present my paper under one of these themes. The sessions were on-time and all the above events were well organised. There was also an opportunity to interact with some of the eminent professors and practicing engineers during the conference. It was a great experience to not only attend but also present in this conference and I sincerely thank ISSMGE foundation for giving me this opportunity.







Photo of me during my presentation

K.Geetha Manjari Indian Institute of Science, Bangalore

ISSMGE Foundation Reports (Con't)

The 6th International Symposium on Geotechnical Safety and Risk, GEO-RISK 2017 - Geotechnical Risk from Theory to Practice, occurred in Denver, Colorado, between June 4th to 7th, with the presence of 320 participants. The subjects of the symposium were: Spatial Variability and Site Characterization; Uncertainty Relating to Geotechnical Properties, Models and Testing Methods; Probabilistic Characterization of Soil Proprieties; Bayesian Probabilistic Asset Management Protocol; Reliability Analysis; Geotechnical Risk Assessment and Management; Risk Assessment for Landslides; Risk and Reliability Assessment of Slopes; Slope Failure and Landslides; Geotechnical Seismic Risk Assessment; Liquefaction Assessment and Mitigation; Methods for Eurocodes; Load and Resistance Factor Design; Assessment for Tunnelling; Risk Assessment and Management of Dams, Levees and Dikes.

The first day started with four short courses. At 5:00 pm the Symposium officially started with the Welcome keynote Suzanne Lacasse Lecture - "Bayesian Thinking in Geotechnics" (Figure 1). This presentation was given by G.B. Baecher, and was followed by the Exhibit Hall opening and the Reception with the Exhibitors. Between 8:00 and 10:00 pm occurred the 19th ICSMGE Organizing Committee and the ISSMGE Technical Committee meetings (TC 304/TC 205; Figure 2).

The second day started with the Opening Keynote Wilson Tang Lecture - "Future Directions in Reliability-Based Geotechnical Design" given by G. A. Fenton. This Keynote Lecture was followed by the Concurrent Technical Sessions. After lunch, two Keynote Lectures were presented. The first one was given by D.E. Becker, on the theme - "Geotechnical Risk Management and Reliability Based Design: Lessons Learned". The second one was given by B. Simpson, on the theme - "Robustness and Eurocode 7". The Keynote Lectures were followed by the Concurrent Technical Sessions. At night, the Awards Dinner was held.

The third day started with the Graduate Student Research Competition, with the distinction award of the best scientific work. This competition was followed by two Keynote Lectures given by S.G. Vick and J.W. France, respectively with the topics "Dam Safety Risk: From Deviance to Diligence" and "Risk Analysis is Fundamentally Changing the Landscape of Dam Safety in the United States", which were followed by the Concurrent Technical Sessions. In the afternoon, another two Keynote Lectures were presented. The first one was given by C.H. Juang, on the topic "Assessing Soil Liquefaction and Effect Using Probabilistic Methods". The second one was given by A.W. Stuedlein, on the theme - "Performance of Structures Founded in Spatially-Variable Soil: A Probabilistic SSI". The Keynote Lectures were followed by the Concurrent Technical Sessions.

On the last day, June 7th, technical tours were held.



Opening session by D. Vaughan Griffiths



Meeting of TC304 with TC205 of ISSMGE

Celeste Jorge

LNEC - Laboratório Nacional de Engenharia Civil, Lisboa, Portugal

ISSMGE Foundation Reports (Con't)

EUROCK2017 took place from June 20-22, 2017, in the unique industrial and mining city of Ostrava in the Czech Republic. Symposium was organized by Czech national group of the ISRM and the institute of Geonics of the Czech Academy of Sciences. The event attracted more than 250 scientists and practitioners from Africa, Asia, Europe, Australia and America. More than 150 peer-reviewed papers focusing on rock mass properties, laboratory and in-situ rock testing, mine design and ground control, underground storage and waste disposal, dynamic phenomena in rock mass, design methodology in mining and underground constructions, geothermal energy, rock disintegration as well as new materials and technologies in geomechanics and geotechnics are published in Procedia Engineering Journal, Vol. 191 (Elsevier BV).

The opening ceremony speech given by Prof. Petr Konicek was followed by Prof. Walter Wittke's Keynote lecture "Design based on the anisotropic jointed rock model (AJRM)". In total six keynote lectures were delivered during the symposium covering various topics in the field of rock mechanics and rock engineering. Keynote lectures were delivered by Prof. Heinz Konietzky, Prof. Frederic Pellet, Dr. Jiri Ptacek, Prof. Walter Wittke, Prof. Arno Zang and Dr. Marwan Al Heib.

Oral presentations were delivered throughout four parallel sessions. A large number of papers addressed sub-topics such as underground and slope stability modelling by means of DEM, in-situ stress measurements, simulation of hydraulic fracturing, rockbursts, strength and deformability of rock masses and weathering of clay-bearing rocks.

Overall the conference has given me an opportunity to meet scientists, engineers and researchers around the world to share our research work and get their suggestions. As I am interested in doing post-doctoral research in the area of influence of weathering on strength and deformation properties of clay-bearing rocks, the conference was helpful to develop contacts to continue my research in the future.

I would like to thank each and everyone from the ISSMGE Foundation for the wholehearted support and financial help which enabled me to attend the symposium.



Professor Harrison's vivid lecture on the history of permafrost



During my presentation

Zoran Berisavljevic, PhD (Rock mechanics) Member of Serbian Society for Soil Mechanics and Geotechnical Engineering Koridori Srbije Ltd, Belgrade, Serbia

ISSMGE Foundation Reports (Con't)

The PBD-III conference started with a welcome speech by Ross W. Boulanger and Dharma Wijewickreme, Conference Chair who explained the main objectives of the conference. After the welcome speech, the plenary keynote lecture titled "Evaluation of Flow Liquefaction: Influence of High Stress" was delivered by Prof. Peter Robertson form Gregg Drilling & Testing Inc. in which he explained about the flow liquefaction along with the different case histories. On the next day, plenary keynote lecture titled "Applicability of Sliding Block Analyses to Lateral Spreading Problems" was delivered by Prof. Steven L. Kramer from University of Washington. Everyday three keynote lectures were presented corresponding to the different themes of the conference. The parallel sessions started on the second day focused on liquefaction, ground motions and site response, numerical analysis, soil structure interaction, dynamic analysis, challenging soil and seismic hazard assessment. I attended the ground motion and site effect session. The discussion started with the keynote lecture by Prof. Gang Wang on Large-scale simulation of ground motion amplification considering 3D topography and subsurface soils and in the second session the keynote lecture by Prof. Domniki Asimaki on the complexity of seismic waves trapped in non-flat geologic features. Many case histories were discussed which helped me understand the difficulties associated with application on site response study in deep and shallow basin and their solutions which is going to help me in my work regarding Indo Gangetic Basin. On the following day, keynote lectures were delivered by Prof. Hashash from the University of Illinois on "Seismic Performance Evaluation of Underground Structures - Past Practice and Future Trends" and Prof Bradley from University of Canterbury on "On-going challenges in physics-based ground motion prediction and insights from the 2010-2011 Canterbury and 2016 Kaikoura, New Zealand earthquakes". The lectures were highly enlightening. Parallel sessions on this day focused on performance-based design on ground motion and site response as well as on soil-structure interaction. Discussion on the paper I presented at the conference with the experts was also useful for me. Overall the conference was really enlightening, informative and very well organized. Once again thanks to the ISSMGE Foundation for providing me financial assistance for attending the conference.



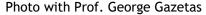




Photo of me during my presentation

Ketan Bajaj Indian Institute of Science, Bangalore

Event Diary

ISSMGE EVENTS

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

2017

2nd International Symposium on Coupled Phenomena in Environmental Geotechnics (CPEG2)

Date: Wednesday 06 September 2017 - Friday 08 September 2017

Location: Faculty of Engineering, University of Leeds, Leeds, W. Yorks, United Kingdom

Language: English

Organizer: CPD, Conference & Events Unit, Faculty of Engineering, University of Leeds, LEEDS, LS2 9JT, UK

Contact person: CPD, Conference & Events Unit

Address: Faculty of Engineering, University of Leeds, LS2 9JT, Leeds, W.Yorks, United Kingdom

Phone: +44 (0)113 343 2494 / 8104

E-mail: CPEG2@leeds.ac.uk

Website: http://tinyurl.com/cpeg2017

8th Offshore Site Investigation and Geotechnics International Conference

Date: 12-09-2017 - 14-09-2017

Location: The historic Royal Geographical Society, London, United Kingdom

Organiser: The Society for Underwater Technology

Contact person: Emma Young

Address: Enterprise Centre, Exploration Drive, Bridge of Don

Phone: 01224 823637 Email: OSIG2017@sut.org

Website: http://www.sutconnects.com/

ICSMGE 2017 - 19th International Conference on Soil Mechanics and Geotechnical Engineering, Seoul

Date: Sunday 17 September 2017 - Thursday 21 September 2017

Location: Coex Convention Center, Seoul, Korea

Language: English and French

Organizer: Organising Committee of ICSMGE 2017

Contact person: Ms. Soi LEE

Address: 4F, SUNGJI Building, 192, Bangbae-ro, Seocho-gu, 137-835, Seoul, Republic of Korea

Phone: +82-2-6288-6347 Fax: +82-2-6288-6399

E-mail: secretariat@icsmge2017.org
Website: http://www.icsmge2017.org

International Conference on Advancement of Pile Technologies and Case Histories

Date: 25-27 September 2017

Location: Discovery Kartika Plaza Hotel, Bali, Indonesia, Indonesia, Bali

Language: English

Organizer: Universitas Katolik Parahyangan Contact person: Mr. Aflizal and Mr. Aswin Lim Address: Universitas Katolik Parahyangan

Email: secretariat@pile2017.com
Website: https://www.pile2017.com/

3rd International soil-structure interaction symposium

Date: 18-20 October 2017

Location: Turkish Society for Soil Mechanics and Geotechnical Engineering, Turkey, Izmir

Language: English

Organizer: Turkish Society for Soil Mechanics and Geotechnical Engineering

Contact person: Professor Yeliz Yukselen Aksoy

Address: Dokuz Eylul University Department of Civil Engineering

Email: yeliz.yukselen@deu.edu.tr Website: http://www.zye2017.org

GEO-EXPO 2017 Scientific and Expert Conference in Sarajevo, Bosnia and Herzegovina

Date: 26-10-2017 - 27-10-2017

Location: Hotel Hollywood, Sarajevo, Bosnia & Herzegovina,

Language: English, Bosnian, Croatian, Serbian

Organiser: Geotechnical Society of Bosnia and Herzegovina (DGT)

Contact person: Sabrina Salkovic

Address: Univerzitetska 2 Phone: +38761451701

Email: geotehnika.ba
Website: http://www.geotehnika.ba

3rd International Conference on Ground Improvement and Ground Control

Date: 27-10-2017 - 29-10-2017

Location: Zhijiang Hotel, Hangzhou, China,

Language: English

Organiser: Zhejiang University of Technology

Contact person: Dr. Li Shi

Address: Chaowang Rd. #18, Xiacheng District

Phone: +86 18768160742 Fax: +86-0571-88320515 Email: shili198763@qq.com

Website: http://www.icgi2017.org/

2nd Pan-American Conference on Unsaturated Soils

Date: 12-15 November 2017

Location: Intercontinental Dallas Hotel, Dallas, TX, United States

Contact person: John S McCartney

Address: University of California San Diego

Phone: +1 (703) 295-6300

Email: mccartney@eng.ucsd.edu; registrations@asce.org

Website: http://www.geoinstitute.org/event/2017-pan-am-unsat/

2nd International Conference "Challenges in Geotechnical Engineering" 2017

Date: 20-23 November 2017

Location: Kyiv National University of Construction and Architecture (KNUCA), Ukraine, Kyiv

Contact person: Prof. Igor Boyko Address: 31,Povitroflotsky Avenue

Phone: +38(097) 717-5170 Fax: +38(044) 245-4124 Email: info@cgeconf.com

Website: http://www.cgeconf.com/en

2nd International Symposium on Asia Urban GeoEngineering

Date: 24-27 November 2017

Location: Hunan University, Changsha, China

Contact person: Dr. Xin Tan

Address: College of Civil Engineering, Hunan University

Phone: +86-731-88821342 Email: <u>urban_geoeng@163.com</u> Website: http://www.isaug2017.org/

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 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

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

China - Europe Conference on Geotechnical Engineering

Date: 13-08-2018 - 16-08-2018

Location: Institute of Geotechnical Engineering, BOKU, Vienna, Austria

Language: English Description

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

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/

2019

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

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

Nordic Geotechnical Meeting

Date: 27-29 May 2020

Location: Finlandia Hall, Finland, Helsinki Contact person: Prof. Leena Korkiala-Tanttu Address: SGY-Finnish Geotechnical Society,

Phone: +358-(0)50 312 4775

Email: <u>leena.korkiala-tanttu@aalto.fi</u>

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2017

1st International Intelligent Construction Group Conference (IICTG 2017)

Date: 26-28 September 2017

Location: Minneapolis, Minnesota, USA

Contact person: Patte Hahn Email: hahnp@egr.msu.edu

Website: http://www.iictg.org/2017-conference/

4th International Conference on Long-Term Behaviour and Environmentally Friendly Rehabilitation

Technologies of DamsDate: 17-19 October 2017

Location: International Conference Centre, Tehran, Iran

Contact person: Nima Tavakoli

Address: No.1, Shahrsaz St., Kargozar St., Zafar Ave., Tehran - I.R. Iran

Phone: +98(21)2222 5756 Fax: +98(21)2225 7338 Email: info@ltbd2017.ir

Website: http://www.ltbd2017.ir/en/

The 15th International Conference of International Association for Computer Methods and Advances in Geomechanics

Dates: 19-23 October 2017

Location: Hongshan Hotel, Wuhan, Hubei Province, China

Language: English

Organiser: State Key Laboratory of Geomechanics and Geotechnical Engineering, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences; State Key Laboratory of Hydroscience and Engineering, Tsinghua

University; Chinese Society for Rock Mechanics and Engineer

Contact person: Hang Ruan

Address: Institute of Soil and Rock Mechanics, Chinese Academy of Sciences, Xiaohongshan2#, Wuchang

District, Wuhan, P. R. China, 430071

Phone: 86-27-87198413 Fax: 86-27-87198413

Email: ruanhang307@gmail.com
Website: http://www.15iacmag.org

DFI 42nd Annual Conference on Deep Foundations

Date: 24-27 October 2017

Location: New Orleans Marriott, United States

Contact person: Theresa Engler Address: 326 Lafayette Avenue

Phone: 9734234030 Fax: 9734234031 Email: tengler@dfi.org

Website: http://www.deepfoundations2017.org

International Seminar on Roads, Bridges, and Tunnels (ISRBT2017)

Dates: 02-09 November 2017

Location: Aristotle University, Centre for Dissemination of Research Results (Red Building), Thessaloniki,

Greece

Language: English

Organiser: School of Civil Engineering, Aristotle University of Thessaloniki

Contact person: Mrs. D. Gatoula

Address: Highway Engineering Laboratory (for the ISRBT2016 Seminar), School of Civil Engineering,

Aristotle University of Thessaloniki

Phone: +30 2310 994385 Fax: +30 2310 995789 Email: <u>isrbt@civil.auth.gr</u>

Website: http://isrbt.civil.auth.gr

6th International Forum on Opto-electronic Sensor-based Monitoring in Geo-engineering

Date: 03-11-2017 - 05-11-2017 Location: Nanjing, China, Language: English and Chinese Organisers: Nanjing University Contact person: Hong-Hu Zhu

Address: School of Earth Sci & Eng, Nanjing University

Phone: +8615895996665

Email: zhh@nju.edu.cn; osmg2017@fosmg.com

Website: http://www.fosmg.com

Slope Safety Summit

Date: Monday, 11 December 2017

Location: Charles K Kao Auditorium, Science Park, Hong Kong

Language: English

Organizer: Geotechnical Engineering Office, The Government of Hong Kong Special Administrative Region

and Geotechnical Division, The Hong Kong Institution of Engineers

Contact Person: Tony Y K Ho

Address: 11/F Civil Engineering and Development Building, 101 Princess Margaret Road, Homantin, Hong

Kong

Phone: (852) 2762 5400 Fax: (852) 2714 0275

Email: tonyykho@cedd.gov.hk

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#

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: <u>mxiao@engr.psu.edu</u> Website: http://geo-shanghai.org

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/

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/

The 16th World Conference of Associated research Centers for the Urban Underground Space

Theme: "Integrated Underground Solutions for Compact Metropolitan Cities"

Date: Monday, 5 November 2018 - Wednesday, 7 November 2018

Location: Hong Kong Convention and Exhibition Centre, Wan Chai, Hong Kong

Language: English

Organizer: The Hong Kong Institution of Engineers, Hong Kong Geotechnical Society and Associated

research Centers for the Urban Underground Space

Contact Person: Mark Wallace Email: mark.wallace@arup.com Website: http://www.acuus2018.hk

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

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f. Chinese Taipei Geotechnical Society

www.tgs.org.tw

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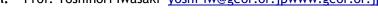
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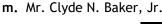
i. TC 211 of ISSMGE for Ground Improvement www.bbri.be/go/tc211

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



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