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INSIDE THIS ISSUE

EDITORIAL BOARD

Message to ISSMGE Members from Prof. Ikuo Towhata, Appointed Board Member of ISSMGE and Editor of ISSMGE Bulletin

On behalf of the editing team of the ISSMGE Bulletin, I would express my sincere thanks to readers who have been contributing to the publication of the magazine by submitting articles and sending opinions. Bulletin is a property of the entire ISSMGE family and is open to everybody who wants to submit articles that accord the mission of the society. Bulletin is not a peer-reviewed academic journal and is trying to help you write articles.

From 2011 on, the bulletin is going to be issued 6 times a year and increases the capacity of communication channel of the society. Upon this opportunity, I would like to appeal one important point to the individual members of ISSMGE. When I attended the GeoEng 2000 Conference in Melbourne, there was a heavy discussion on the current and future status of geotechnical engineers. What was impressive to me was the point that the income of geotechnical engineers is lower than that of structural engineers. It was therefore emphasized that the job status of geotechnical engineers had to be improved.

In my opinion, the situation of income comes from the structure of projects as schematically illustrated in Fig. 1. Construction projects originate from public demands and its initiative is taken by the government or big industries that are called “client” in this figure. The client develops the overall and fundamental ideas about the project and carries out the budget business. In this respect, the client has the biggest “power” over the entire project. People are able to see what the client is going to do, and the client wishes to show people its scope. Thus, there is a substantial interaction between people and the client.

After the client’s activities, the leadership is given to a chief designer, who is possibly a general manager, and this person takes care of the engineering aspects in general. Although the chief engineer is expected to follow the idea of the client in most cases, possibly the chief engineer is as strong as or stronger than the client. The chief engineer is able to decide money allocation in more details. People are able to see what the chief engineer is trying to achieve.

Message to ISSMGE Members (continued)

Professor Ikuo Towhata

To date, most constructed structures stay above the ground surface. Therefore, structural engineers play major roles in the design of details of the planned structure. Structural engineers' idea is often illustrated and distributed among people, and people are able to understand the ongoing project. The structural design determines such details of design as the weight of the structure and other loads as well as the allowable displacement of the foundation that the geotechnical engineers have to cope with. Because most geotechnical structures are installed under the ground surface, people are not aware of their importance. The least visible job attracts the least public concern.

Figure 1 illustrates not only the flow of job as stated above but also the flow of money, starting from the client down to the geotechnical business. It is true that geotechnical engineers have been doing good jobs over decades on bearing capacity, deformation analysis, in-situ tests and so on so forth. We should note, however, that those good jobs were conducted to satisfy the requirements of clients and engineers of the higher ranks in Fig. 1, while people did not recognize the importance of soil improvement, reliable foundation, reinforced soil, mitigation of natural disasters, etc. Consequently, the most downstream side in Fig. 1 earns the least.

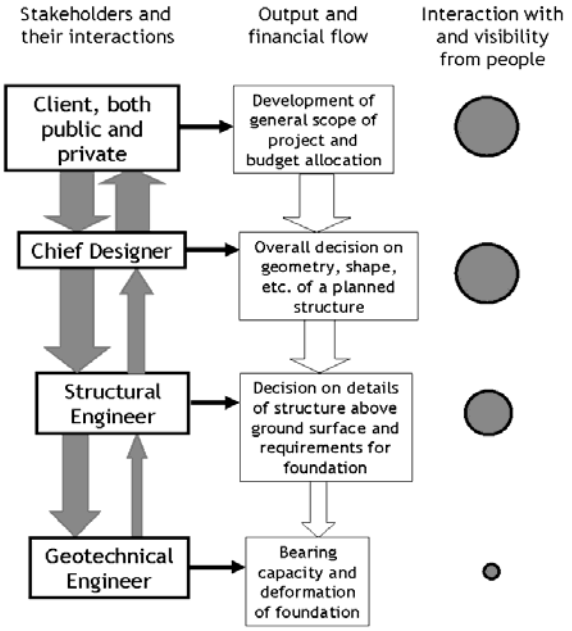

Figure 1. Conceptual structure of project and flow of money

To change the situation, it is important to establish a more direct interaction between geotechnical engineering and people. The key issue is a direct proposal to people on what geotechnical engineering can do for the welfare of people. We should not propose the improvement of soil investigation technology, less expensive construction of pile foundation, and reliable slope stabilization measure directly to people because they do not understand them. We should propose what people can understand easily such as subway construction in a busy city that can mitigate traffic problems, an ecological water management facility, a supply of new energy resources, and protection of people's lives and properties from natural disasters.

In 2005, I was nominated to be the organizing chairman of 3rd International Young Geotechnical Engineer Conference in Osaka. A variety of activities took place for young participants from many countries of the world. Near the end of that event, I asked the participants to make an appeal to the world that was then called Osaka Manifesto. For your reference, I would quote it in what follows, where importance of a challenge towards the new horizon is described.

3rd iYGEC OSAKA MANIFESTO

The delegates who attended the Third International Young Geotechnical Engineers' Conference in Osaka, Japan, from September 12 to 16, 2005 (3rd iYGEC) wish to express their commitment to face the challenges of the 21st century, which are numerous and varied. Challenges such as the rapid increase in population, demands for further provision of infrastructure, major natural disasters, and the need to protect and improve our environment have strained resources and increased social problems. We recognize that the international geotechnical community plays a role in reducing the impact of such challenges, but consider that this contribution should be more widely acknowledged and can be further developed and enhanced.

Message to ISSMGE Members (continued)

Professor Ikuo Towhata

At the 3rd iYGEC discussions among delegates from six continents were centered on the themes of Environment and Disaster Prevention, Frontiers in Geotechnical Engineering and Engineering Practice. Despite the cultural variations and differing themes, several common objectives arose. These focused on knowledge transfer, our obligations to future generations and developing nations, and the issues of sustainable development and efficient use of natural resources. With these points in mind, the participants of the 3rd iYGEC present the following Appeals to the international geotechnical community:

A. *Worldwide, the volume of information relevant to geotechnical engineers is enormous, and yet much of this information is out of reach or difficult to access, especially for those in developing nations. The following are suggested to resolve this situation:*
   - *Consolidate information into international databases - including journals, conference proceedings, past and present research, laboratory methods, data, practical guidelines, project experience, and government sponsored reports.*
   - *Reduce and ultimately remove the linguistic and financial barriers to obtaining this information.*

B. *Promote interdisciplinary collaboration and improved communication between academics and practitioners.*

C. *The quantity of site investigation, instrumentation, laboratory testing and experimental work is constantly being influenced by political and financial constraints. We should continue to resist this trend.*

D. *Reach out to international, national and local media and policy-makers. Promote the important contribution of geotechnical engineering and raise the profile and standing of the profession in society.*

E. *Provide developing nations with engineering assistance, support and solutions that are sustainable at the local level. Create research partnerships between developed and developing countries to solve regional problems in a locally achievable manner.*

F. *Encourage the development of open-source engineering software applications, to be distributed via international databases.*

G. *The knowledge and experience of our senior colleagues is invaluable. Experienced engineers should be encouraged to pass their knowledge to the next generation of engineers.*

H. *Encourage every engineer to provide feedback from project experience to the geotechnical community.*

The realization of these goals will require continual oversight and support from an international body. In this context, we suggest that they be developed as a working group of the ISSMGE. Furthermore, to maintain the momentum of these efforts we encourage a program of regular iYGEC conferences, with sufficient time and scope within the framework of each conference to monitor and develop these Appeals.

I would introduce two ideas that have been developed in my geotechnical group at the University of Tokyo. Fig. 2 illustrates a huge island in Tokyo Harbor that is made of municipal solid waste (MSW) landfill. Because Tokyo has been expanding towards the sea throughout its history since the end of 16th Century, this island should be the downtown in near future. Although this landfill island is situated near the city center, there are engineering problems that are the ground subsidence and the protection of environment. It is, however, very possible that capable geotechnical engineers will solve those problems and offer a big space for the future development of the city (Towhata et al., 2010).

Message to ISSMGE Members (continued)

Professor Ikuo Towhata

Figure 2. Landfill island in Tokyo Harbour

Figure 3. Inexpensive early warning device for slope failure during heavy rainfall

The second idea concerns the early warning of slope failure during heavy rainfalls. There are many people who are living in front of potentially unstable slopes and do not know how to protect themselves from slope disasters during heavy rainfalls. To assist them, geotechnical engineers should develop an inexpensive technology for early warning and safe evacuation. Although construction of slope stabilization measure is the best solution to help people, the required cost always makes this option difficult. Relocation of the residence to a safer place is not acceptable in most cases because those people need to live in the present place for their daily life (farming and business activities). Fig. 3 shows a simple instrument for early warning that can detect minor (precursor) displacement / deformation of a slope during rainfall and send an evacuation message to local residents through internet. It is aimed to maintain its cost less than 300 US $ (hopefully) and enable people to install it for themselves. For the validation of this low-cost warning equipment, many experiments have been performed in the laboratory and in the field.

To conclude my message to ISSMGE members, I would propose that everybody spend 15 minutes in Sunday afternoon on thinking what he/she can do for the welfare of people by using geotechnical knowledge, experience, and capability. When tens of thousands of geotechnical engineers thus spend a short time on every weekend, there will certainly be many great ideas and proposals. Consequently, people will start to recognize the importance of our discipline and respect geotechnical engineers. This movement within our society can be symbolized by a short remark of "*geotechnical engineering of the people, by the people, for the people.*" People's recognition is the best way for our discipline to improve its status in the community.

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Case History
Deep Mixing for the New Orleans East Back Levee (USA)

Wesley Schmutzler, Project Manager, TREVIICOS Corp., Boston, MA, United States
Mitsuo Nozu, General Manager of International Department Fudo Tetra Corp., Japan
Masaru Sakakibara, President of Fudo Construction Inc., United States
Alessandro Bertero, Trevi Spa, Design, Research and Development, Italy

Introduction

Reach LPV-111 is a part of a levee system designed to protect the city of New Orleans and the surrounding areas from the storm surge resulting from a 100 year hurricane event (URL:http://www.mvn.usace.army.mil/hps2/). This reach specifically protects the Bayou Savage National Wildlife Refuge, which is the largest urban wildlife refuge in the United States and home to several threatened or endangered species of birds as well as many reptiles, amphibians and small mammals.

Due to the sensitivity of the protected marshlands, deep soil mixing technologies were utilized to limit the footprint of the raised levees. The increase in the load bearing capacity of the treated soil allows for a significant decrease in the footprint necessary to attain the required height increase.

The Hurricane Protection Office of the US Army Corps of Engineers attributed failure of the New Orleans East levees system to overtopping, erosion, and subsequent breaching of LPV 111 along the Gulf Intracoastal Waterway (GIWW), as well as other sections of flood protection during hurricane Katrina in 2005 (Figures 1 and 2).

Figure 1. Damaged Section of Levee after Hurricane Katrina (LPV-111)

Case History (continued)

Deep Mixing for the New Orleans East Back Levee (USA)

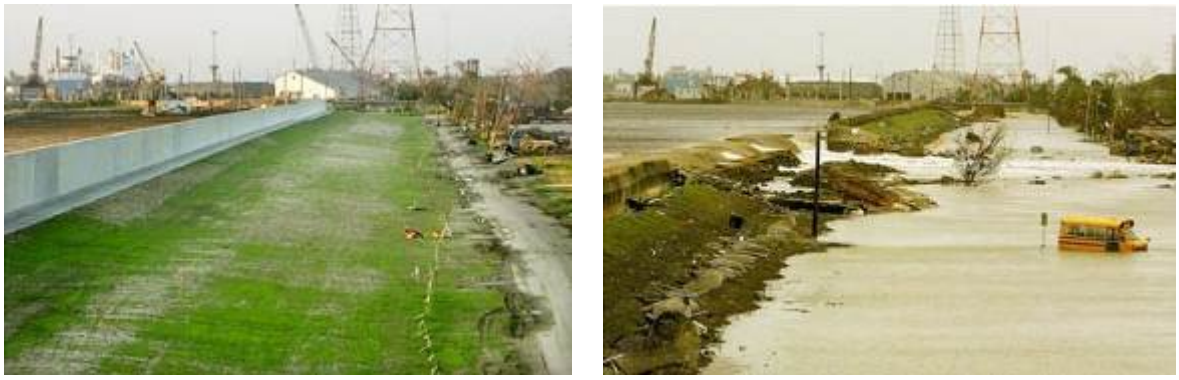


Figure 2 Damaged Section of Levee after Hurricane Katrina

Scope of work

The scope of work consisted of improving the soil beneath the existing levee in order to increase the height of the levee within a limited footprint. The levee to be improved was 8,527 meters (5.3 miles) in length (Figure 3). Deep Mixing was performed to a maximum depth of 20.5 meters (67' - Figure 4) and it was designed to increase the bearing capacity of the existing soils, limit future settlement, and to resist lateral loads imposed by storm surges on the levee (Figure 3). The general contractor was Archer Western/ Alberici JV (AWA) in alliance with TREVIICOS.

Figure 3 Overall view of the LPV-111 site

Case History (continued)

Deep Mixing for the New Orleans East Back Levee (USA)

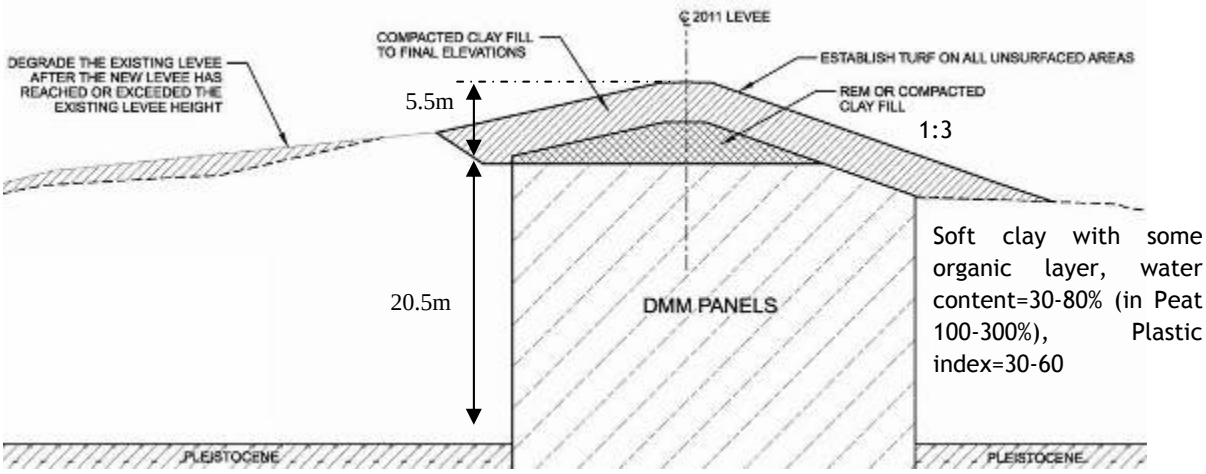


Figure 4. Typical Cross Section (REM: Recycled Embankment Material which is the cement/soil spoil from the Deep Mixing)

The 1.6 meter diameter (5.25 feet) DMM elements were overlapped to form a double auger element which then were arranged in buttresses perpendicular to the levee alignment. Buttresses were then installed at a maximum on center spacing of 4.7 meters (15.5 feet). One additional double auger DMM element was placed midway between consecutive buttresses at the centerline of the levee to further help prevent settlement (Figure 5).

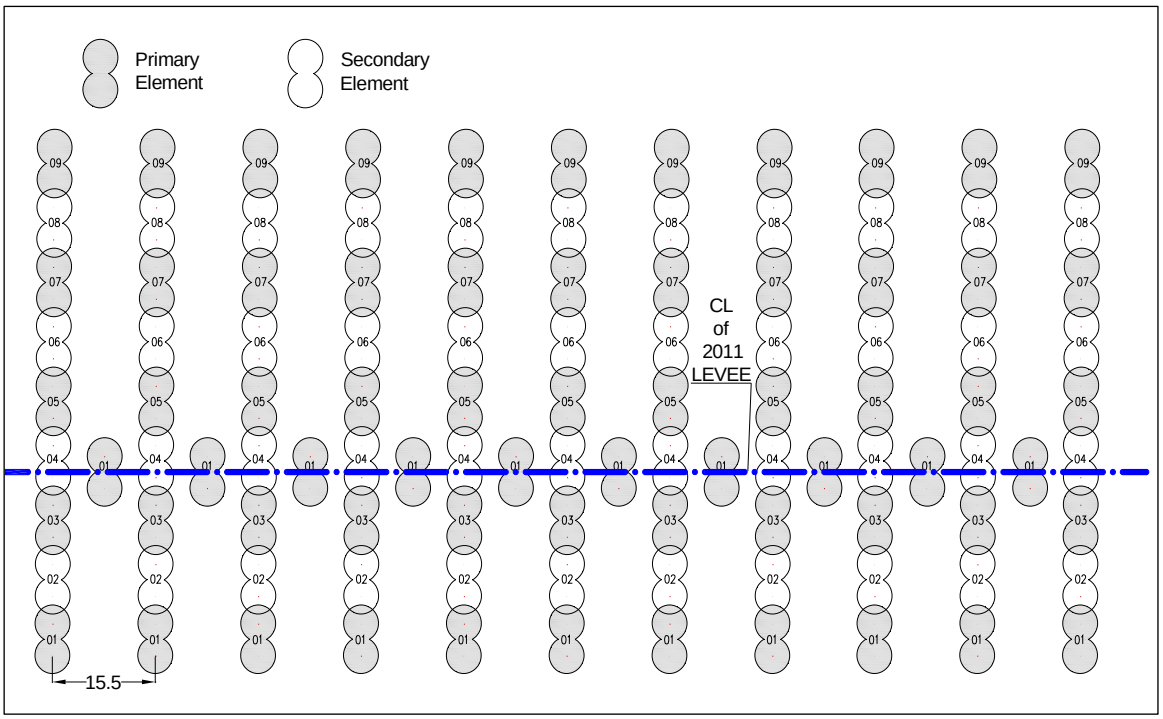


Figure 5. Typical DMM Buttress Layout

Case History (continued)

Deep Mixing for the New Orleans East Back Levee (USA)

Over 17,000 elements were installed to compete the project. Most elements were formed by using double auger rigs. Each auger was 1.6 meter (63 in) in diameter and had an overlap of 0.30 meters (12 in). Some areas of the site had limited access and single auger TTM rigs were utilized in these areas. The wet method of DMM was utilized.

Schedule

The schedule for the project was quite simple, but very aggressive; as the project had to be substantially completed by June 1, 2011. The original start date for the DMM was to have been November 9, 2009, and the DMM was to be completed by March 30, 2011. The validation portion of the project started November 24, 2009. Due to the length of the project, the Validation Phase was divided into 5 areas specified along the levee to ensure proper parameters were in accordance with actual geology. The Validation Phase included the installation of test elements in 5 different areas spaced along the levee (Figure 6) to insure that the parameters selected for the DMM would produce acceptable results. It was originally intended that all 5 areas of the Validation Phase were to be completed before actual production started. However, in order to insure completion of the project on time, production TEST was initiated when only two Validation areas were complete. Conservative DMM parameters were utilized until the remainder of the Validation areas could be completed. Once all validation AND PRODUCTION TEST locations were complete, production began in full force. DMM work was scheduled accordingly while occurring simultaneously with earthwork. One additional DMM rig and two additional grout plants were mobilized to make sure the completion date was met.

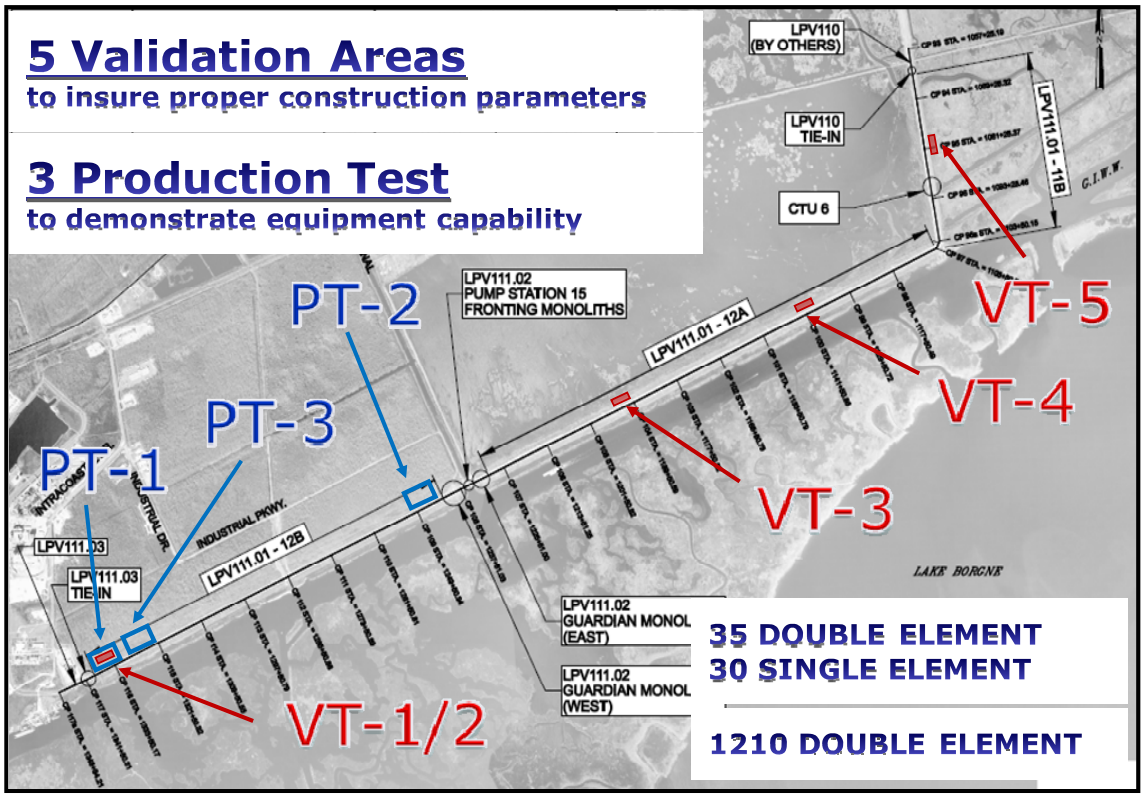


Figure 6. Validation and Production test Layout

Case History (continued)
Deep Mixing for the New Orleans East Back Levee (USA)

Materials

The material used for the project consisted of binder and water. The binder consisted of type I/II Portland Cement and slag cement. The proper proportions of cement/slag were determined during the Bench-Scale Testing program. For the entire project, over 417,000 tons (460,000 short tons) of binder was used.

The water used in the grout mix was supplied by a potable (city) water line installed along the entire length of the project.

Drill Rigs

A total of eight DMM drill rigs were utilized. Three double, and two single axis using TREVI Turbo Mix (TTM) and three double axis rigs were supplied by FUDO Construction using CI-CMC.
The 5 Soilmec TTM rigs; 3 SR-90s, 1 SR-80 and 1 SR-70 were all equipped with the Drilling Mate System (DMS) software to insure the quality of the elements. The TTM rigs are equipped with pass through rotaries. The grout was mixed at localized grout plants and sent to the rig where it was injected at pressures between 100 and 200 bar through strategically place nozzles to provide homogeneous soil mixing (Figures 7 and 8).

The 3 FUDO rigs were supplied with top drive rotaries and a parameter recording system. These rigs utilized air pressure supplied at 15 bar simultaneously with low pressure grout (Figure 9).

Figure 7. TREVIICOS Rig (Soilmec SR-90 - double shaft)

Figure 8. TREVIICOS Rig (Soilmec SR-70 – single shaft)

Case History (continued)
Deep Mixing for the New Orleans East Back Levee (USA)

Mixing Equipment

Twelve locations for the grout plants (Figure 10) were equally spaced along the project to facilitate the supply of grout to the DMM rigs. Eight complete grout plants were supplied and were relocated as areas of the project were completed. The equipment required for each grout plant included; 1 high shear grout mixer, one agitator, 2 SOILMEC high pressure pumps, 2 vertical cement silos, 1 cement pig, and one 75,000 liter water tank. Each of these plants was capable of mixing more than 225 tons (250 short tons) of binder per shift.

Coring Equipment

The specification required that 3% of the elements be cored to verify the quality of the DMM. To accomplish this, 3 Soilmec coring rigs were utilized with a PQ3 or Geobore coring system (Figure 11). The cored samples were typically retrieved once the columns had set for at least 26 days. Subsequently, on the 28th day after element installation, these samples were trimmed and Unconfined Compressive Strength testing was performed. (Designed UCS is 100psi=700kPa)

Figure 9. FUDO DMM Rig – (double shaft)

Figure 10. Grout Batching Plant

Case History (continued)

Deep Mixing for the New Orleans East Back Levee (USA)

Figure 11. Coring Rig

Case History (continued)
Deep Mixing for the New Orleans East Back Levee (USA)

Production methods

In order to meet the demanding schedule, production work occurred 24 hours per day, 5.5 days per week. At the peak of production, TREVIICOS had over 170 personnel working. By the completion of the project, over 500,000 man-hours were worked.

The delivery of cement was a key factor in maintaining production rates that would keep the project on schedule. On an average day, over 100 cement tankers, carrying about 23 tons each, were needed to supply the 7 grout plants in operation. The peak production rate for one month was approximately 140,000 cubic meters (180,000 cubic yards) of DMM treatment.

Logistics

In order to meet the demanding schedule on LPV-111, batch plant placement, rig sequencing, and site support was critical to the successful completion of the project.

The 7 active batch plants were spaced at approximately 500 meter (1,500 feet) intervals along the protected side of the Levee. Each batch plant could supply grout to one double axis DMM rig or two single axis DMM rigs. The concern of the placement of the plants was that, with increased pumping distance, there was a risk of comprising grout quality, especially considering the extreme high temperatures during the summer months in New Orleans. Each batch plant could store approximately 225 tons (250 short tons) of binder. The cement tankers used to feed the silos had to share the site haul road with the trucks hauling clay (Figure 12) and other site traffic, so extra binder capacity was needed to insure an adequate supply of binder.

Figure 12. Haul Road Traffic

The DMM rigs were positioned on a platform prepared by AWA, and the DMM rigs were always on timber mats to guarantee the stability of the rigs. The sequencing of the elements was in a primary/secondary pattern (Figure 2).

Case History (continued)
Deep Mixing for the New Orleans East Back Levee (USA)

Batch Plant Quality Control

Quality control of the batch plants was a crucial component in the process to verify that the grout supplied to the DMM rigs met the specifications. The mixing equipment was calibrated using test weights periodically to insure proper proportioning. Tests performed on the fresh grout included apparent viscosity, using a Marsh Funnel, and density, using a calibrated mud balance. Cylinders of the fresh grout were taken daily from each plant and checked for unconfined compressive strength.

DMM Rig Quality Control

All of the DMM rigs were equipped with a GPS system to facilitate the accurate layout of the elements. The rig GPS was validated at least once per shift by a hand-held GPS to verify element location.

The SOILMEC drill rigs were equipped with the Drill Mate System (DMS) installed to control, record, and transmit installation parameters and rig performance data (Figure 13). The DMS was also capable of controlling the drill rig to preset parameters for up to 4 different soil types. The DMS transmitted all the data by e-mail when each element was completed so it could be reviewed for accuracy in near real time.

In the same context, ISSMGE Website will be improved; that means that it will be easy to use, including complete contents and activity and will be properly described. It will also include RSS news subscription, members' blogs and forums. Thus, ISSMGE members will be able to access to geotechnical knowledge resources of successful universities to improve the level of the global geotechnical knowledge, and declare their demands directly to the society as well as the society can.

Furthermore, it is hoped in the next future that all young members around the world find same facilities to send their message (especial investigation results, geotechnical pictures, educational videos) to the other members simply and inquire their geotechnical questions easily via geotechnical forum.

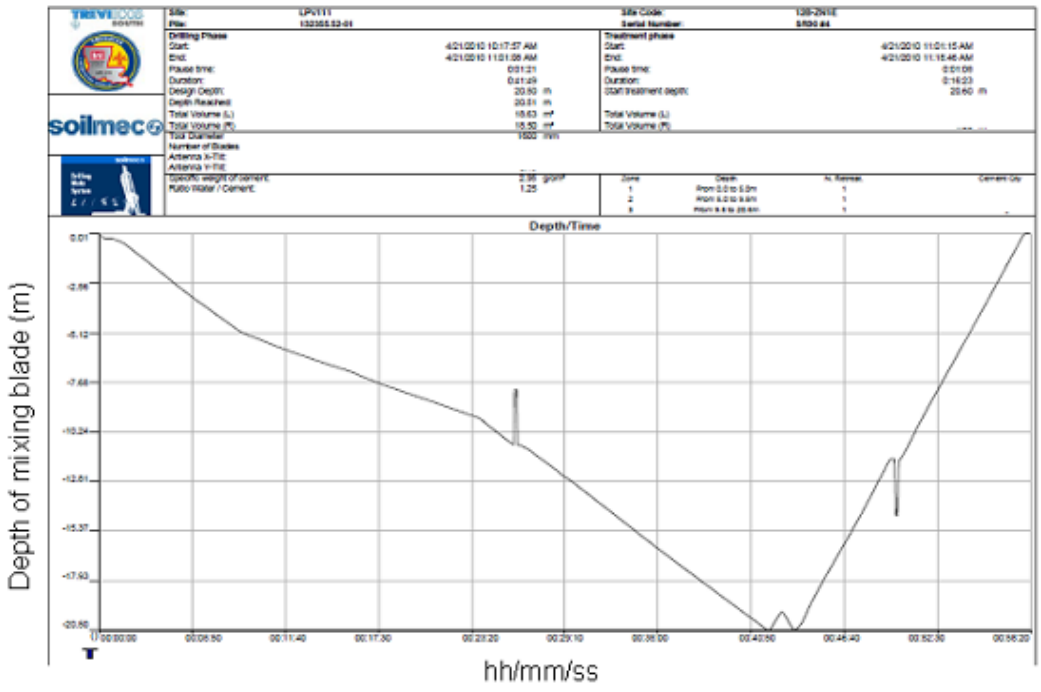


Figure 13. DMS Report

Case History (continued)
Deep Mixing for the New Orleans East Back Levee (USA)

The DMM rigs supplied by FUDO were equipped with a system capable of monitoring and recording the installation parameter (Figure 14).

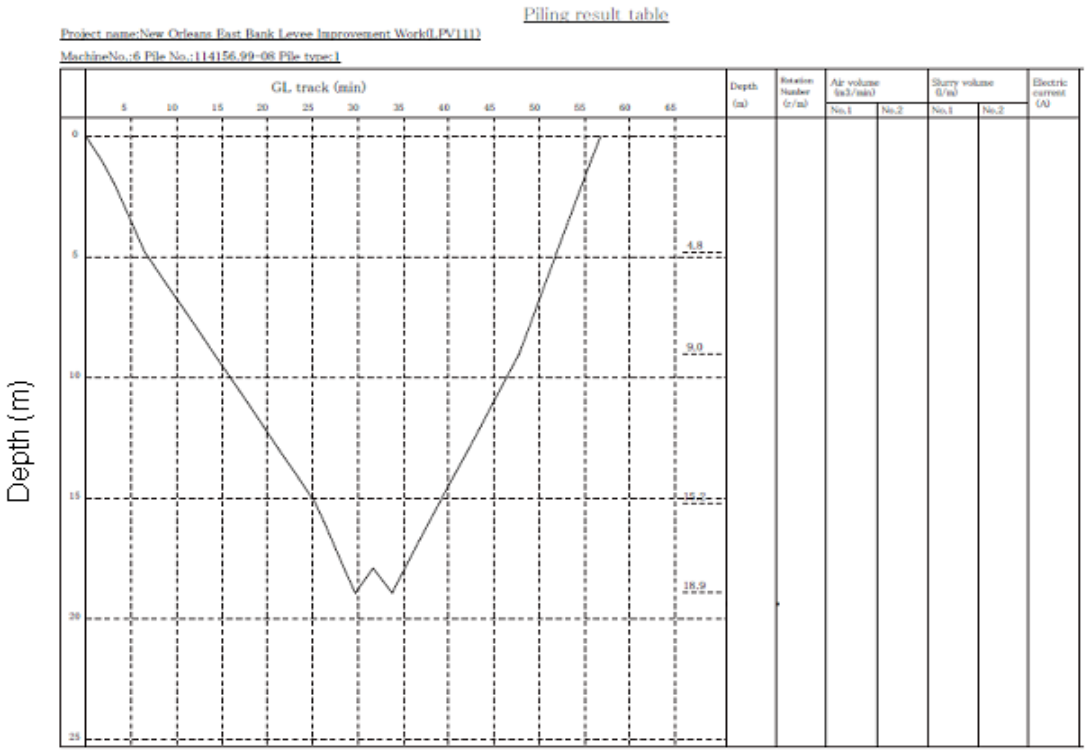


Figure 14. FUDO Rig Report

CONCLUSION

This gives a brief overview of the equipment used and the logistics of the largest DMM project performed to date in the United States, and one of the largest land projects ever performed anywhere. It also provides an overview of the challenging logistics required to move and place massive quantities of binder in a short period of time. Other facets of this world-class project such as quality control, laboratory mix test and advanced mixing technology, can be found in additional papers that will be presented at the **4th International Conference on Grouting and Deep Mixing in New Orleans in 2012 (ICOG2012, DFI)**.

The challenges presented on the LPV-111 project were daunting, but with the assistance of all the parties, the DMM portion of the project was completed ahead of schedule with exceptional quality.

AKNOWLEDGMENTS

Hundreds of individuals contributed to the success of the LPV 111 project. The authors wish to acknowledge the following individuals in particular: Pete Cali, David Druss, Tom Cooling, Donald Bruce, Pete Nicholson, George Filz, AWA and all involved with TREVIICOS and FUDO.

Technical News

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

Shun-ichi Sawada, OYO Corp.
Ikuo Towhata, University of Tokyo

INTRODUCTION

Cone penetration test is one of the most important and convenient tools for subsoil investigation and many efforts have been made in the recent decades to extend its application to a variety of field of geotechnical engineering. The present paper addresses a new development of dynamic cone penetration with pore water pressure measurement in the course of impact. The validation test results indicate that this newly developed equipment is highly useful for mitigation of liquefaction-induced problems due to earthquakes.

MECHAMISM OF DYNAMIC CONE PENETRATION WITH PORE PRESSURE MEASUREMENT

Figure 1 illustrates the overall structure of the new CPT device. The device penetrates into soil by means of dynamic impact which employs 35cm falling of a drop hammer that measures 300N in weight using the mini-RAM device. This device is characterized by the monitoring of pore pressure change during impact near the cone tip. The detailed design of the cone tip is shown in Fig. 2. The transient change of excess pore water pressure in the course of dynamic penetration is measured and recorded near the cone tip through porous stones. Note that the cone tip is covered and protected by a disposable coverage that remains underground upon removal of the device after penetration.

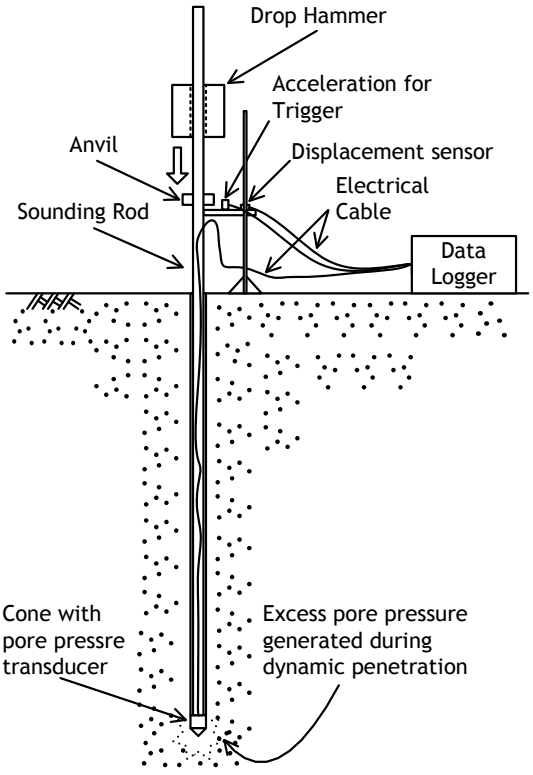


Fig. 1 Schematic illustration of the new piezo drive cone

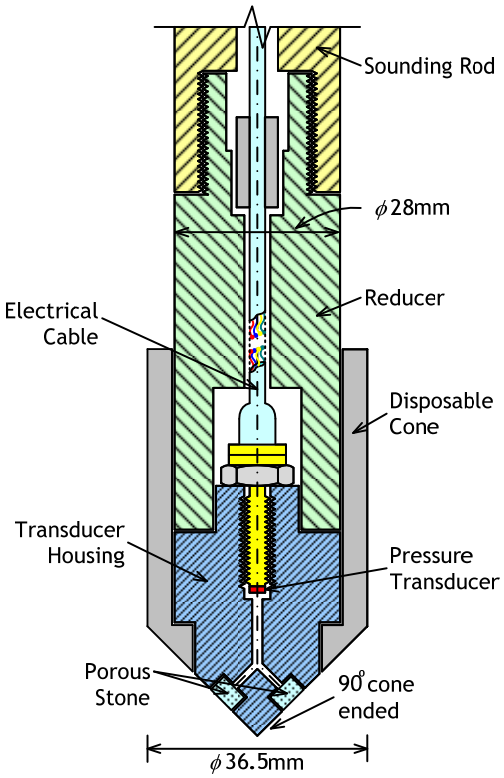


Fig. 2 Detailed structure of cone apex with pore pressure transducer

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

EXECUTION OF DYNAMIC CONE PENETRATION IN THE FIELD

Figure 3 demonstrates the ongoing cone penetration in the field. The device is equipped at its bottom with a small hydraulic motor mechanism that uplifts the drop hammer (30 kg) to make a free fall of 35 cm. The impact is made at a time interval of 2 seconds. See Fig. 4 for more details where the cone apex with pore pressure transducer is shown. Noteworthy is that the relatively small size of this device allows its use on a small and inexpensive platform on water (Fig. 5).

Fig. 3 Onshore practice of dynamic cone penetration.

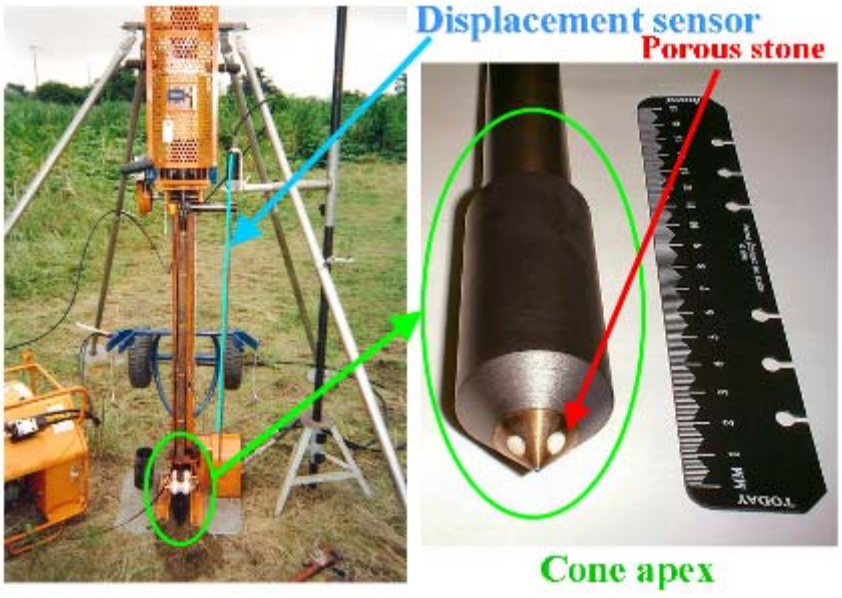


Fig. 4 Details of the new device.

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

Fig. 5 Cone penetration test upon a small platform in river.

INTERPRETATION OF MEASURED RECORD

This section is going to describe the application of the new device to liquefaction problems. The major output from dynamic cone penetration tests is the number of blows for penetration of 20 cm into soil and is named N_d. Fig. 6 compares the SPT-N profiles together with the N_d profiles at two sites. The N_d value is obtained after each impact and therefore the interval of N_d records is 1 to 5 cm.

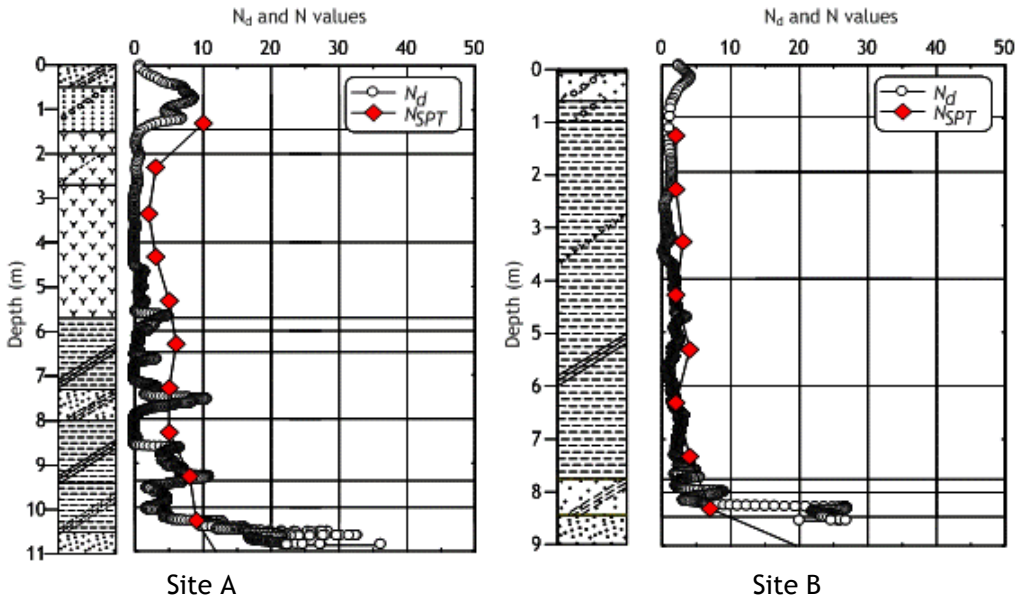
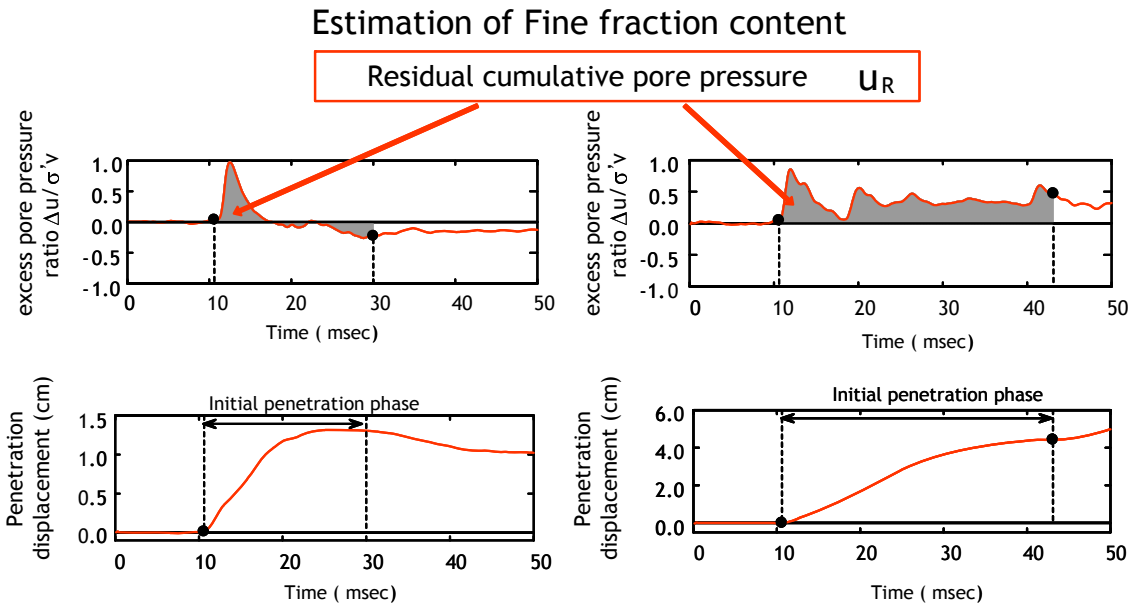


Fig. 6 Penetration resistances at two sites of study.

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

Because the current practice of liquefaction studies relies rather on SPT-N values than the direct use of CPT penetration resistance, the measured Nd value has been converted to equivalent N values by N = Nd. Moreover, the accurate assessment of liquefaction resistance of subsoil by means of penetration resistance requires soil types (cohesive or cohesionless) to be determined. This goal is achieved by examining the time history of excess pore water pressure during penetration. Fig. 7 illustrates the schematic variations of excess pore water pressure and penetration displacement for sandy and clayey soils, respectively. It is reasonably stated that excess pore water pressure in sandy soil dissipates within a short time because of the high permeability of sand, while it remains unchanged for a while in less pervious clayey soils. Thus, the residual cumulative pore pressure, u_R, is defined as the excess pore water pressure that remains at the end of the initial penetration phase of the cone tip (the cone tip still moving down after each impact). This pore pressure is called cumulative because the effects of previous impacts have been accumulated in the magnitude of excess pore water pressure after the particular impact. By dividing this u_R by the initial effective vertical stress, the pore pressure ratio in Fig. 8 is determined and employed for evaluation of fines content in the soils. The pore pressure ratio may become more than 1.0 in less pervious soils because of practically undrained conditions and high impact pressure exerted by the cone tip. Fig. 9 indicates that the soil types thus determined are consistent with soil types found by SPT procedures.



(a) Loose sandy soil (b) Clayey soil

Fig. 7 Schematic illustration of pore pressure change during cone penetration

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

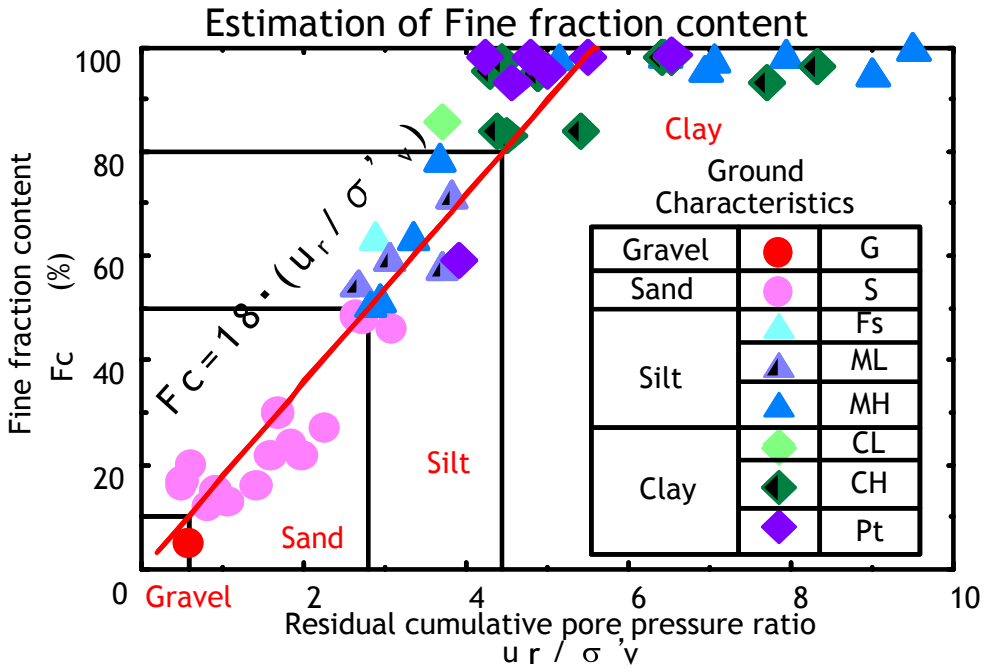


Fig. 8 Determination of fines content on the basis of pore water pressure record.

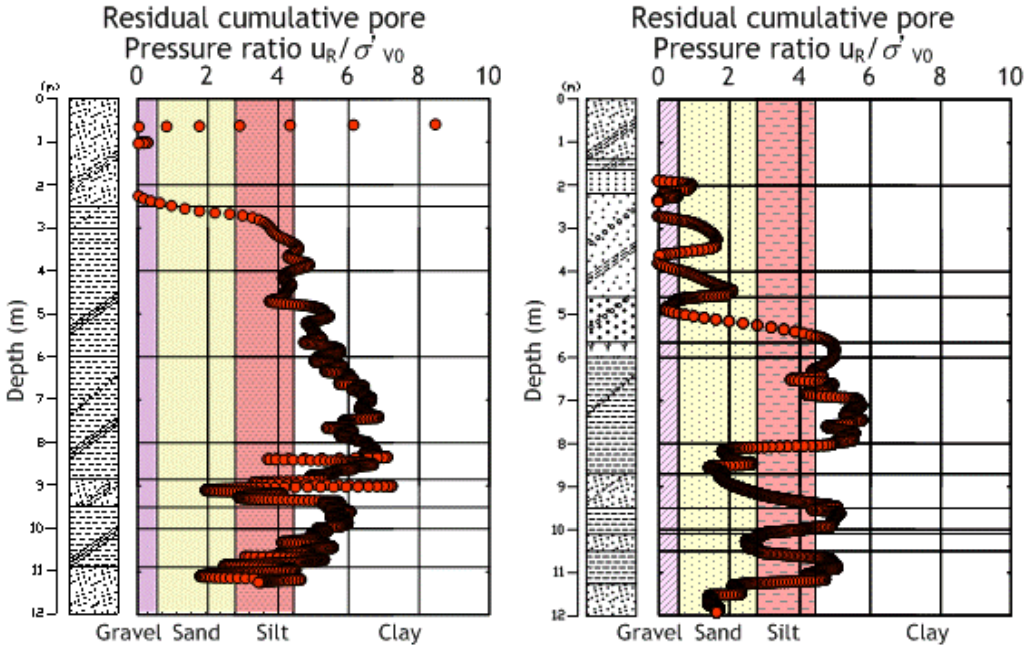


Fig. 9 Profiles of soil types determined by residual pore pressure record.

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

ASSESSMENT OF LIQUEFACTION RISKS BY NEW DYNAMIC CPT

Probability of liquefaction

The liquefaction risk is assessed in two ways. First, as widely practiced, the factor of safety, F_L, is determined. As illustrated in Fig. 10, the liquefaction resistance, R or otherwise called CRR, is determined by using the equivalent SPT-N = Nd together with the assessed fines content. The pore pressure record is further used to determine the level of the ground water table. After assessing the fines content, the unit weight of soil, □, is obtained, and if this □ is different from the initial guess, the effective vertical stress has to be modified and leads to the new cumulative pore pressure ratio and fines content. Thus, there is a provision for feed-back flow in the bottom left of Fig. 10. Two examples of assessed liquefaction risk are illustrated in Figs. 11 and 12. The new method was able to take into account locally greater penetration resistance and presented greater values of FL than the conventional SPT-N based calculation.

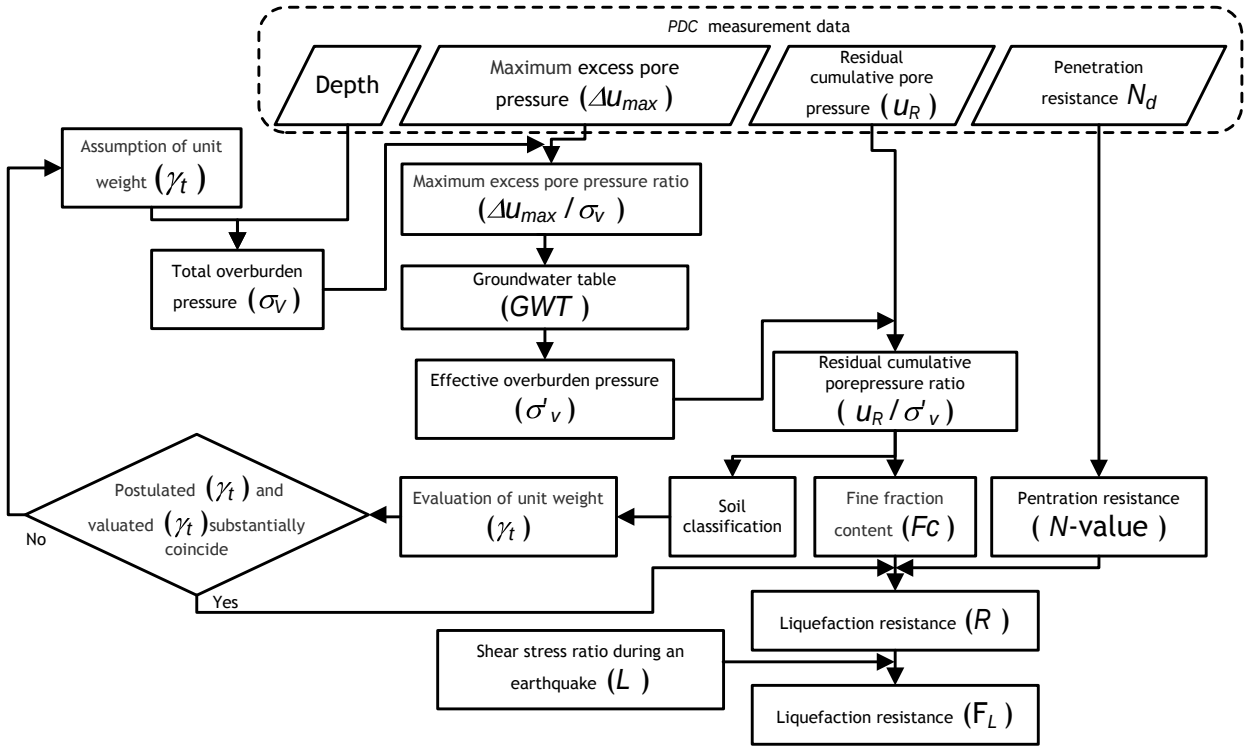


Fig. 10 Assessment of liquefaction probability from new cone penetration data.

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

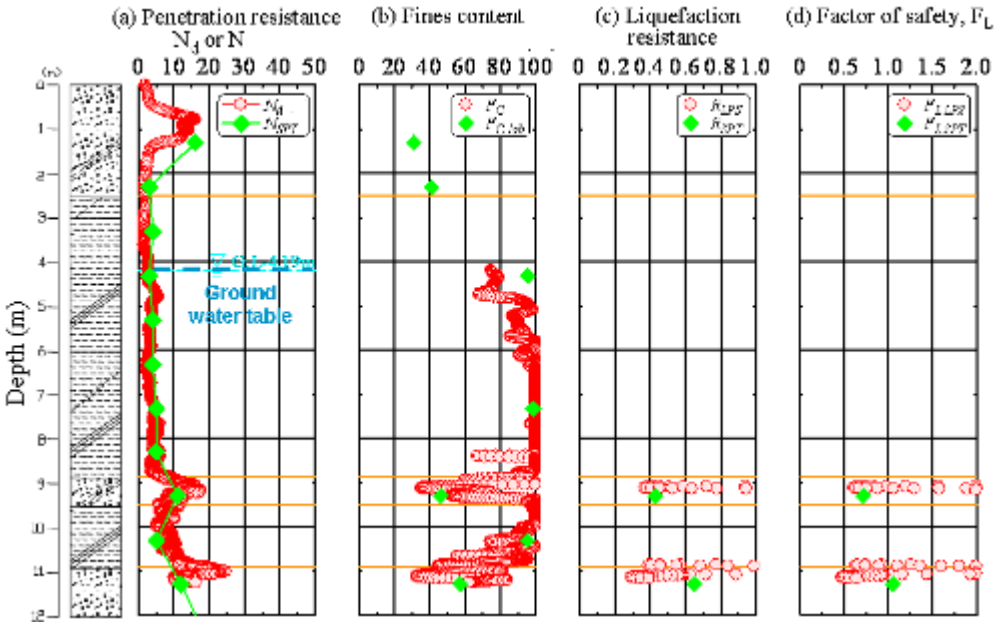


Fig.11 Example of assessed liquefaction risk (site A).

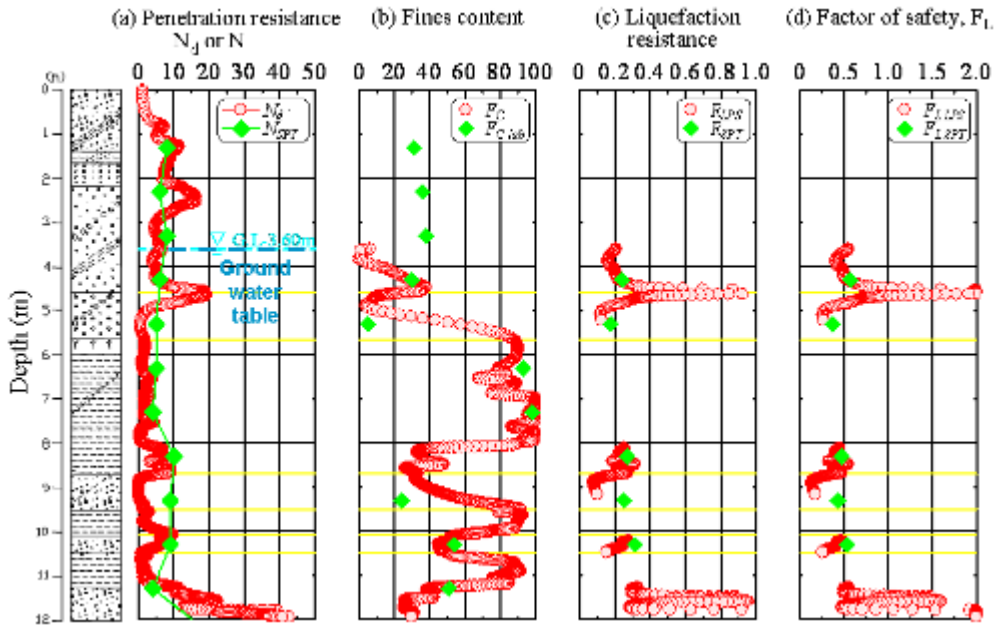


Fig.12 Example of assessed liquefaction risk (site B).

Liquefaction-induced subsidence

Another problem that is possibly caused by subsoil liquefaction is the ground subsidence which occurs after dissipation of excess pore water pressure. The procedure for evaluation of this subsidence is illustrated in Fig. 13. This methodology consists of 1) the assessment of volume contraction of clean sand after dissipation that is based on equivalent SPT-N, and 2) the modification of the clean-sand behavior by taking into account to fines content. Fig. 14 shows the assessed volumetric compression and the consequent subsidence at the ground surface at two sites in Figs. 11 and 12.

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

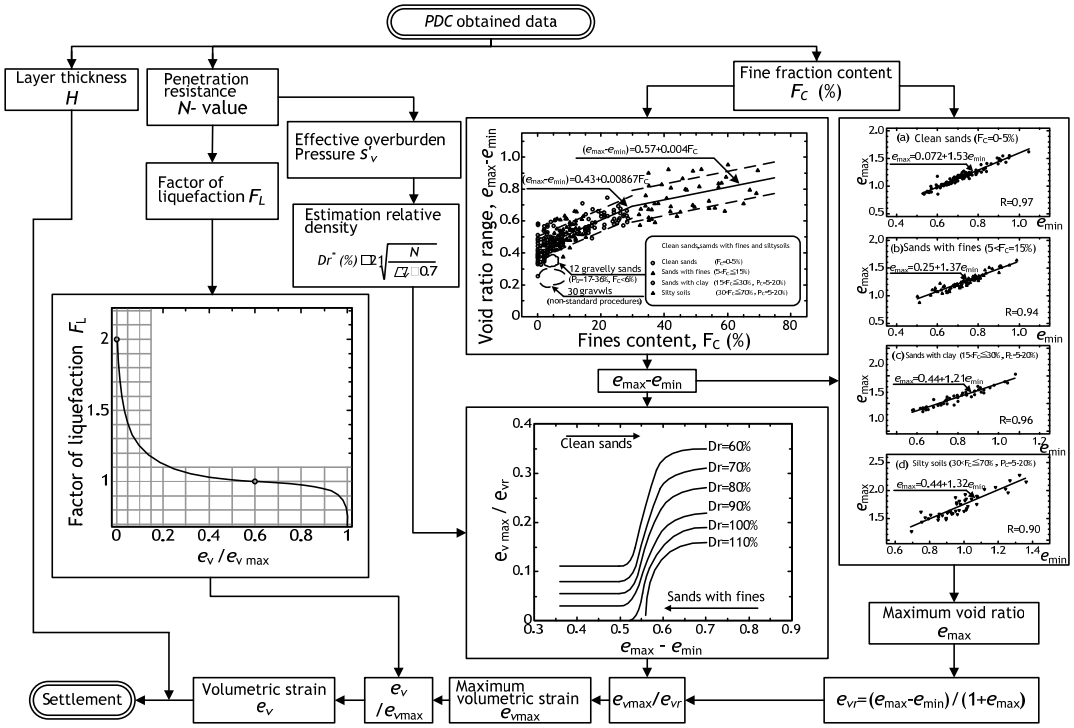


Fig. 13 Assessment of liquefaction-induced subsidence of soil by using new cone penetration data.

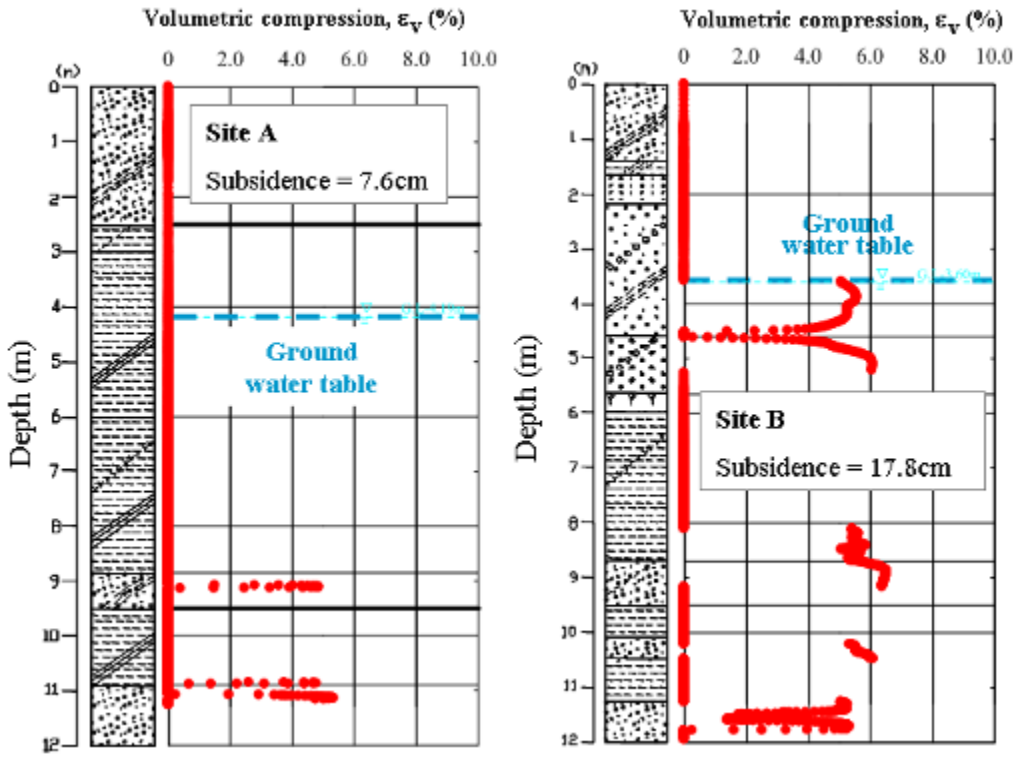


Fig. 14 Example assessments of ground subsidence at two sites.

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

APPLICATION OF NEW DYNAMIC CPT AT FIELD BLASTING SITE

The Ministry of Land, Infrastructure, Transport and Tourism, carried out a field blasting test or a large scale in Hokkaido in November, 2007 in order to validate a variety of liquefaction countermeasures. Two months prior to this test, a preliminary blasting test was conducted in a smaller scale. The present CPT device was applied to this test for the purpose of predicting liquefaction-induced subsidence at the ground surface. Fig. 15 illustrates the site. The test site consists of two areas; one with soil improvement by Compaction and Permanent Grouting Method and the other without improvement (named Area 1). The results of the new Piezo Drive Cone are going to be discussed in what follows.

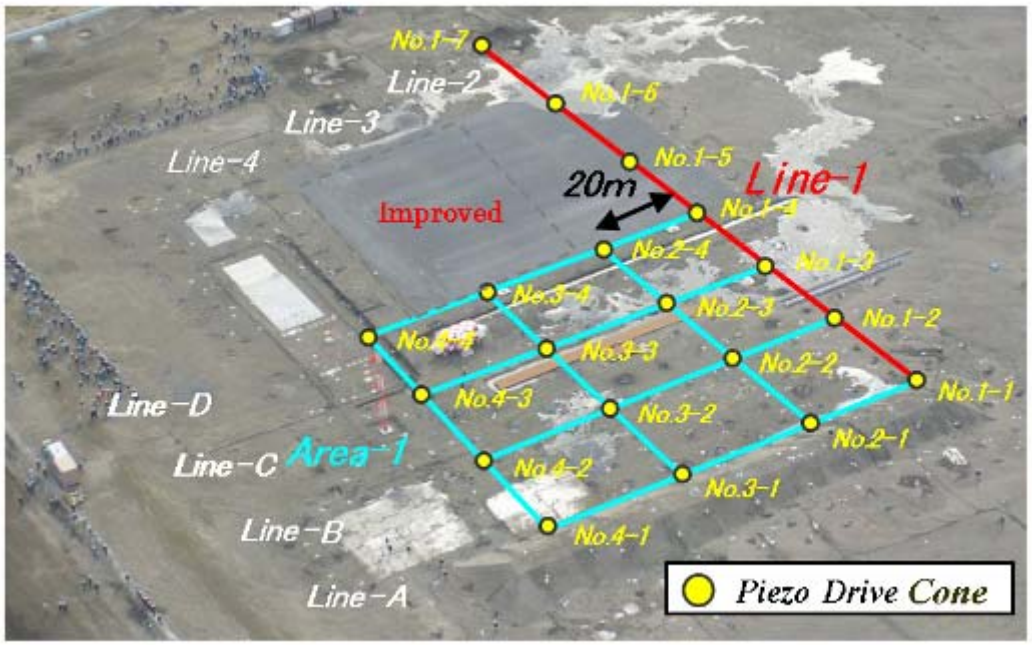


Fig. 15 Aerial view of site of preliminary field blasting.

The assessed subsidence along Line 1 in Fig. 15 is indicated in Fig. 16. The liquefaction potential was assessed by assuming that the maximum acceleration at the ground surface is 25% of gravity. There is a good consistency between measurement and calculation. Similarly, Fig. 17 indicates the distribution of subsidence over the entire study area (Area 1).

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

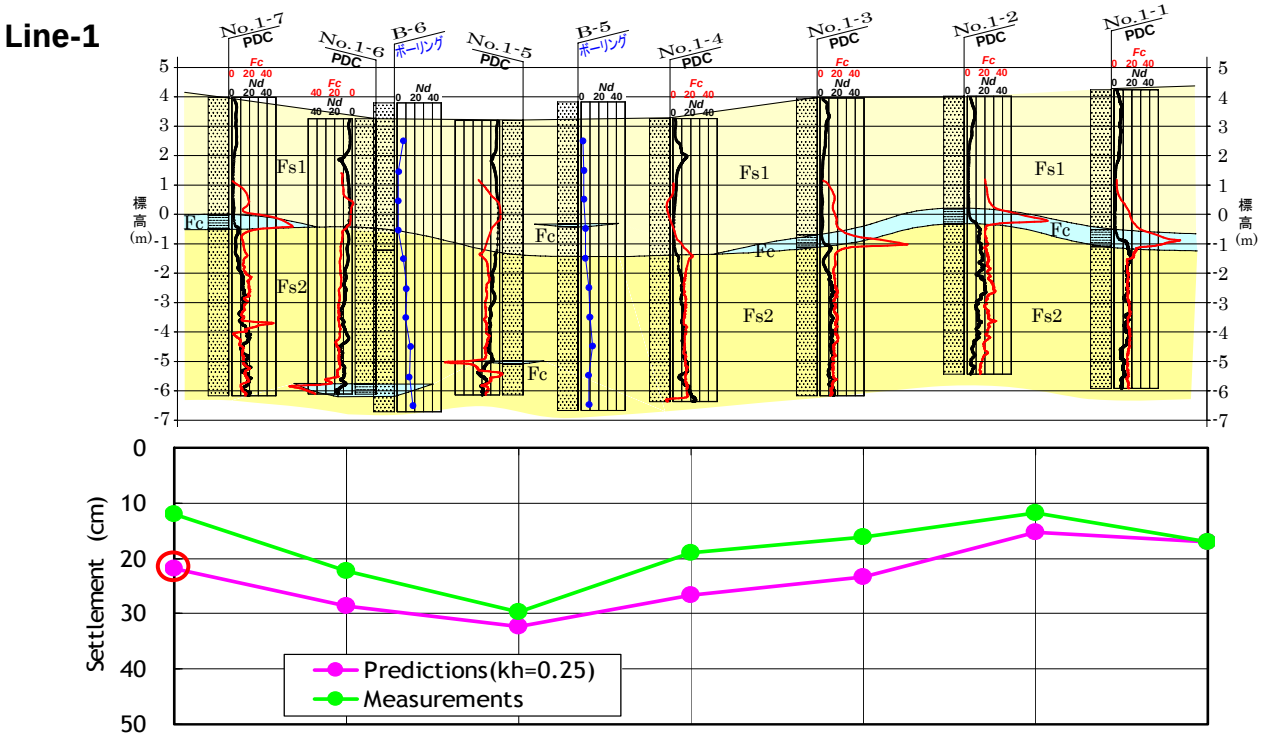


Fig. 16 Assessment of ground subsidence caused by underground blasting and liquefaction.

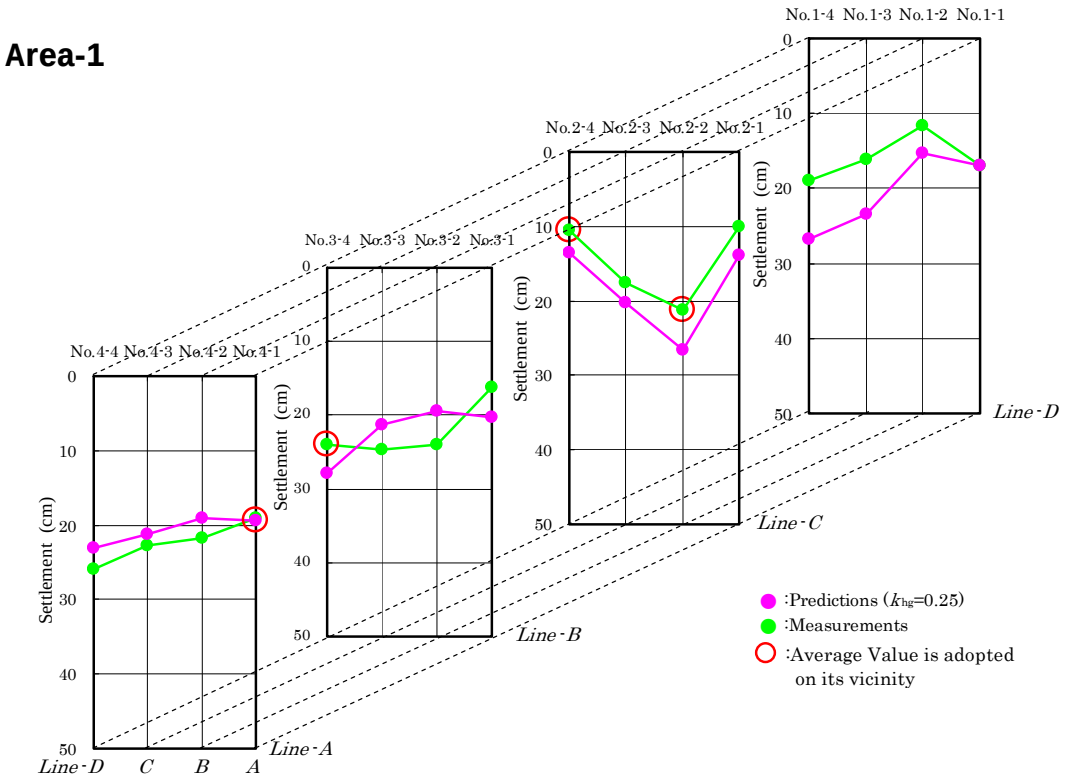


Fig. 17 Overall distribution of liquefaction-induced subsidence.

Technical News (continued)

Use of Piezo Drive Cone for evaluation of subsoil settlement induced by seismic liquefaction

CONCLUSION

This article addresses the new development of cone penetration device that is equipped with pore pressure transducers. It is shown herein that the new device, which is called the Piezo Drive Cone, is a time-efficient tool that can evaluate the liquefaction risks such as the factor of safety and ground subsidence. The time efficiency makes it possible to study a large area in a relatively short period.

News
5th International Conference on Earthquake Geotechnical Engineering

This conference took place from January 10th to 13th in Santiago, Chile with remarkable efforts by the organizing chairman, Prof. Ramon Verdugo, and his colleagues. It is the fifth occasion of the series of the conference, and the previous ones took place in Tokyo (1995), Lisbon (1999), Berkeley (2003), and Thessaloniki (2007). As implied by its title, this conference has been intended to exchange and disseminate the up-to-date knowledge and experience both internationally and domestically. This aim was well achieved after recent earthquakes in Chile and New Zealand. Some information is available for these earthquakes in recent issues of ISSMGE Bulletin (September and December Issues, 2010).

Group photo during the conference

Despite geographical difficulties, 378 participants were attracted from 35 countries to this conference, among which 138 were non-ISSMGE members and 76 were young students. Among 213 presentations, Prof. R. Dobry delivered the Ishihara Lecture on recent assessment of liquefaction potential. Moreover, three workshops on Tailings Dams, Liquefaction, and Performance Design were timely and valuable.

After the conference, 2-night 3-day post-conference tour was organized to visits damage sites of the 2010 Maule earthquake in Concepcion Area of Chile. Pictures taken by Dr. T. Kiyota, University of Tokyo, during this tour are presented below.

The next host of this series of conference in 2015 will be Dr. Misko Cubrinovski, University of Canterbury in Christchurch of New Zealand.

News

5th International Conference on Earthquake Geotechnical Engineering (continued)

Failure of coastal slope near Concepcion

Site of Tsunami damage in Dichato

Collapsed building in Concepcion

Subsidence of Tubul Bridge pier by 1 to 1.5 m because of subsoil liquefaction

The ISSMGE Foundation supplied three young fellows with financial supports that enabled them to take part in this conference. Their conference reports are presented in the following pages.

News

5th International Conference on Earthquake Geotechnical Engineering (continued)

Juan Ayala, Civil Engineering Student, Catholic University of Concepción

First of all, I would like to thank the ISSMGE Foundation for this great opportunity and initiative in helping those who cannot afford the registration fee to attend these types of events, the ISSMGE President Professor Jean-Louis Briaud, whom I had the chance to meet a day before the 5ICEE, and Professor Harry Poulos, Chair of the ISSMGE Membership, Practitioners, and Academicians Committee (MPAC) for approving my application.

For me, as a civil engineering student in the last years of an undergraduate degree, I had only the chance to go to national student congresses, so the opportunity to attend a conference with the magnitude of the 5ICEGE was something out of this world. This is because I could know a new world within the engineering that corresponds to the research area. The opportunity to meet geotechnical engineers, master degree students, geotechnical engineers with master's degrees, doctoral students, doctors in the area, people who pursue their studies of the post-doctoral degrees, and faculty reviewers of those researches was exceptional. I met geotechnical engineers “in different stages", and enjoyed the opportunity to know them during the conference which is more relaxed because everyone was disposed to talk with anybody, which is different from a classroom where you go to learn something and no to socialize.

The fact that I talked with them in that opportunity helped me know more about the geotechnical engineering work and also let me approach the research area, an activity that previously I only imagined for my teachers, and now I see it as an attainable goal. That is why I have decided to start a master-degree program in geotechnical engineering in my university this year.

After meeting the researchers, among whom I really liked those who are working with FEM, I found a huge amount of different job opportunities that I didn’t know and I really like them.

I think I took a full advantage of this conference because I really learnt a lot about geotechnical engineering and in which direction the studies are going. I really enjoyed the presentations, because it was very different from reading papers. From my point of view, it was an excellent opportunity to have the authors explain their works directly to me. I guess the only thing I felt sorry about the conference was that I could not attend the three workshops that occurred simultaneously. I particularly went to the seismic design and stability analysis of tailings disposals which I found very interesting, but I wished I could go to the three of them.

I also really liked the closing ceremony where this group of geotechnical engineers with many years of experience talked about the conference in general, and showed how their experience let them see things that for me are difficult to see. In particular, my investigation is almost only in FEM; when we work with the reality, we use this mathematical method to approximate the real behavior of our soils, but we have to be careful about other varying behaviors that FEM assumes to be constant.

There are many more things that I remember from the conference but I am not going to boring you with all the details that I remember from each one. I just like to mention that for me the conference was a really great opportunity to grow as an engineer and as a professional. It was amazing to know that ISSMGE supports people like me who cannot afford things like this conference and that the support was directly given with money in a world where almost only love and smiles are still free.

Thank you.

News

5th International Conference on Earthquake Geotechnical Engineering (continued)

Mauricio Jara Ortiz

The conference was an excellent experience and the organization was first class as well as exhibitions. It was very gratifying to have participated in an event of such high quality, although it is only public status, and is more satisfactory to see that Chile has a lot to give to the Geotechnical Engineering in the area of research. One of the clear examples was the contributions of Drs. Verdugo, Ortigoza, Ledezma, Villalobos, and others.

It goes without saying that not only Chile has something to contribute to the global geotechnical but also all countries have the obligation to share information and research projects relevant to improving the safety and geotechnical models. Sharing information is vital in this area of engineering, so on the basis of this conference, to take such a great significance is a key moment to learn from more professionals, to share knowledge, information, and career options, to consult with all this, and to grow as a person and especially as a professional.

Topics were such as liquefaction, tailings dams, design, seismic performance, etc. According to some of the exposures observed in this conference, there is no doubt that soil liquefaction is an extremely important issue for a country with Chile's seismic activity. That is why most witnessed sessions were related to the dynamics of soils, foundations and soil-structure interaction.

Another highlight was the presentation by Drs. F. Villalobos and M. Poblete, who are teachers at the master's degree in geotechnical engineering from the Catholic University of Concepción, besides the presentation of Ing. M. Navarrete belonging to the Catholic University of Concepción.

To conclude this brief report, I thank deeply that I could attend this conference, thank Prof. Jean-Louis Briaud (President of the International Society of Soil Mechanics and Geotechnical Engineering ISSMGE), Sr. Harry Poulos, Dr. Ramon Verdugo (SOCHIGE president), Ms. Paloma Peers for accommodating my request for registration.

News

5th International Conference on Earthquake Geotechnical Engineering (continued)

Pablo Gacitúa Cárcamo, UCSC student, Concepción, Chile

The conference was every bit as interesting as I could have imagined. It was not only great in its technical aspects but also allowed me to interact with fellow students, professors and scientists from all around the world. It was really interesting and exciting if you will, to attend lectures given by leading minds in the field of geotechnics such as Ricardo Dobry, Steven Kramer or Pedro Seco just to name a few.

Although I must admit that, since I am an undergraduate student, some of the lectures that were out of my reach, most of them that were very interesting along with the workshops, state of the art lectures, and theme lectures, allowed me to form a clear idea of where things are going in Geotechnical Engineering. Idea that broadens my perspective on every Geotechnical related class I take hereon.

Another aspect that I think was very beneficial to me was that I got to know first hand this whole academic world that until now to me was restricted to my faculty teachers. A world that I think is very interesting and that I now see as a possible career choice.

It also was a good way to make contacts with leading companies for a possible internship (which is mandatory in my university in order to get my degree) and, as I already mentioned, to meet fellow students from all over the world which can become fruitful contacts for any kind of investigation program at my university.

Coming back to classes in March, I and other few classmates who also attended the conference will be able, and willing, to share our experience and things learned with our fellow students and teachers.

Finally, I have nothing left to say but to thank Professor Harry Poulos, Paloma Peers, and the ISSMGE Foundation once again for granting me the registration fee and allowing me to attend the 5ICEGE.

News

6th NATIONAL CONFERENCE ON GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERING

The 6th National Conference on Geotechnical and Geoenvironmental Engineering took place at the city of Volos in Central Greece from Wednesday, September 29 until Friday, October 1, 2010. Taking into account the difficult economic conditions in the country the participation in the conference was very successful: 337-registered delegates and 47 members of the Organizing and Scientific Committees, guests, members of the Executive Committee as well as of the Civil Engineering Committee of the Technical Chamber of Greece. 226 papers were accepted and presented during the conference sessions.

The conference provided the opportunity to scientists working in the field of Geotechnical Engineering, researchers, designers, contractors, and public servants to present their results from research, the methods and technologies used to solve geotechnical problems, the experiences gained from the study, construction and supervision of small and large technical projects in our country over the past five years and generally to exchange views on matters on the general subject of Geotechnical Engineering.

At the Inaugural Meeting of the participants were welcomed by the President of the Regional Department of Magnesia of the Technical Chamber of Greece (TCG) Mr. Socrates Anagnostou, the Vice Rector of the University of Thessaly Professor Michael Zouboulis, the President of the Organizing Committee Dr. Spyros Kavounidis, and the President of the Hellenic Society for Soil Mechanics and Geotechnical Engineering Dr. Christos Tsatsanifos, who gave tribute to the deceased prominent geotechnical engineers Aris Stamatopoulos, John Vardoulakis, Stavros Christoulas, George Pavlakis, and to Sergio Scianni, who was killed in the rockfalls accident in Tempi. Finally, Hercules Droulias, member of the Executive Committee of the TCG initiated the Conference

The Opening Session continued with the presentation of the Invited Lecture by Thanos Papayannakis, Professor of the University of Texas USA, on " Pavements: From Theory to Empirical Mode Design", followed by a session on the geotechnical problems of Magnesia Prefecture. Mr. Alexandros Alexandrou, Director of Technical Services of the Prefecture of Magnesia presented the paper on the "Geotechnical Problems of Magnesia", followed by presentations of papers related to other geotechnical problems of Magnesia.

On the afternoon of September 29 and up to the end of the conference works were conducted in parallel sessions in three halls.

Session 1: Behaviour of Geomaterials, Site and Laboratory Investigations. At the beginning of the session Professor Michael Kavvadas presented the Special Lecture entitled "How Safe is (or should be) the Geotechnical Works".

Session 2A: Soil Dynamics - Soil structure interaction. At the beginning of the session Professor George Gazetas presented the Special Lecture entitled "Conditions of seismic collapse of foundation-structure systems: analysis and experiment".

Session 2B: Soil Dynamics - Effect of local conditions. At the beginning of the session Prof. Kyriazis Pitilakis presented the Special Lecture entitled "Strong Ground Motion in Real Geomorphological Conditions.

Session 3A: Slopes - Landslides. At the beginning of the session Dr. Spyros Kavounidis presented the Special Lecture "The 3rd dimension in slope stability.

News

6th NATIONAL CONFERENCE ON GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERING (continued)

Photo 1 Emeritus Professor Theodossis Tassios honored by the President of the Hellenic Society for Soil Mechanics and Geotechnical Engineering Dr. Christos Tsatsanifos

Session 3B: Slopes - Landslides. At the beginning of the session Professor George Tsiambaos presented the Special Lecture "Tempi Rockfalls: Presentation of the Report of the Technical Chamber of Greece Committee".

Session 4: Rock Mechanics. At the beginning of the session Professor Stavros Bandis presented the Special Lecture entitled "Prediction of mechanical behaviour of rock-mass in practice: Possibilities and Limitations."

Session 5: Cultural Heritage and Geotechnical Engineering. At the beginning of the session Emeritus Professor Th. Tassios presented the Special Lecture "Construction Projects and Clay in Ancient Greece" and then Dr. E. Aloupi presented the Special Lecture entitled "For the clay in ancient times". After his speech, Professor Th. Tassios was honored by the President of the Executive Committee of HSSMGE with the title of Honorary Member for his long and prosper presence in the field of Geotechnical Engineering and its contribution to support the objectives of HSSMGE.

Session 6B: Tunnels. At the beginning of the session Dr. Thalia Travasarou presented the Special Lecture entitled "Conclusions from the investigation of submerged tunnel lifting due to liquefaction of the surrounding soil".

Session 7: Reinforced Embankments. At the beginning of the session Mr. G. Constantinides presented the Special Lecture "Presentation of the guidelines of the EGNATIA ODOS S.A. for the design of reinforced embankment" and then Professor Dimitris Atmatzidis presented the Special Lecture entitled" Using EPS Geofoam in road construction".

Session 8: Goenvironmental Issues. At the beginning of the session Professor Marina Pantazidou presented the Special Lecture "Environmental Geotechnics: Prospects for application in Greece today".

Session 9B: Shallow and Deep Foundations. At the beginning of the session Dr. S. Nicolaou presented the Special Lecture entitled "Review of Foundations of Bridges on the East Coast of the United States: Past and Future".

News

6th NATIONAL CONFERENCE ON GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERING (continued)

Session 10A: Soil Improvements. At the beginning of the session Professor George Bouckovalas presented the Special Lecture entitled "Surface foundation of bridge pier on liquefiable soil with controlled soil improvement".

Session 11: Southeastern Europe - Implementation of Eurocodes / Southeastern Europe - Application of the Eurocodes. At the opening session Emeritus Professor Andreas Anagnostopoulos presented the Special Lecture entitled «Eurocode 7 - Geotechnical Design Eurocode 7 - Geotechnical Design".

Session 12A: Dams – Non-reinforced Embankments. At the beginning of the session Dr. George Dounias presented the Special Lecture entitled "Long-term behaviour of dams".

Session 13: Teaching Geotechnical Engineering: The New Blood. Professor Marina Pantazidou made her introductory speech, followed by roundtable discussion with brief presentations by new faculty members teaching Geotechnical Engineering.

Closing Session: At the beginning of the session two Special Lectures were presented. Dr. Spyros Papaspyrou presented "Experiences from the 60's" and Mr. Elias Sotiropoulos "Geotechnical geotechnical experience and adventures". Then Manolis Vouzaras, Treasurer of the HSSMGE since its inception! in 1966, was honored by the President of the Executive Committee of the HSSMGE with the title of Honorary Member for his long and prosper presence in the field of Geotechnical Engineering and its contribution to support the objectives of HSSMGE.

Finally, Dr. Christos Tsatsanifos presented the Special Lecture on "Research – Design – Supervision Issues", and made the closing of the conference.

Alongside the conference we had a Technical Exhibition from companies with geosynthetic products, field and laboratory instruments, as well as consulting companies.

Photo 2 Entrance to the Conference Centre (buildings of an old brick factory)

News

6th NATIONAL CONFERENCE ON GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERING (continued)

Photo 3 Delegates attending the conference sessions

Photo 4 Conference Secretariats

News

6th NATIONAL CONFERENCE ON GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERING (continued)

Photo 5 Delegates during coffee breaks

Photo 6 Booth of the technical exhibition

Photo 7 Welcome evening reception

News

INTERNATIONAL SOCIETY FOR HELICAL FOUNDATIONS

An international professional organization was established that is dedicated to improving the state-of-the-practice in Geotechnical Engineering related to the design and use of Screw-Piles, Helical Pier Foundations and Helical Anchors and Tiebacks. The ISHF is a professional organization consisting of Researchers, Engineers, Contractors, Manufacturers and other professionals interested in advancing the understanding and use of Screw-Piles, Helical Piers and Helical Anchors in civil engineering construction.

For more information on ISHF, contact:

Dr. Alan J. Lutenegger
Professor of Civil & Environmental Engineering
University of Massachusetts
Amherst, Ma. 01003
lutenegg@ecs.umass.edu

OBITUARY
Alexander Golli (May 17th, 1939 – February 1st, 2011)

The Russian and Kazakhstan geotechnical branches of ISSMGE are deeply saddened by the news that one of its members, Professor Alexander Golli, Ph.D., passed away on the 1st of February, 2011 in Hartford, Connecticut, USA. Born in Leningrad, USSR, on May 17th, 1939, Alexander Golli was for many years an Associate Professor in the Department of Foundations Engineering and Soil Mechanics at the Saint Petersburg State University of Architecture and Civil Engineering (SPbGASU), formerly named the Leningrad Institute of Civil Engineering (LICI).

Alexander Golli was destined by birth to be a civil engineer. His mother, Alexandra Grigorieva, was the first woman in Russia to become Vice Rector of the Leningrad Institute of Civil Engineering (LICI) and his father, Valentin Golli, was a Chief Architect of the Russian Federation and MosEngProekt (Moscow Engineering and Project Design Company, USSR).

As a child, Alexander Golli lived through the horrific siege of Leningrad (USSR) during the 2nd World War. After graduating from High School #206 in 1956, he entered the Leningrad Institute of Civil Engineering, LICI (now SPbGASU), USSR and graduated in 1961 as a specialist in Industrial and Civil Engineering. After graduation he worked as a design-engineer at the Leningrad Institute of Industrial Construction Design. Then he taught as an assistant professor in the Department of Theoretical Mechanics of the Leningrad Institute of Civil Engineering, LICI (now SPbGASU).

In 1969 he entered the Ph.D. program at the Leningrad Institute of Civil Engineering in the Department of Soil Mechanics and Foundation Engineering (directed by a great Russian scientist, Professor B. I. Dalmatov). After completing his Ph.D. dissertation in 1972, Alexander Golli worked as an associate professor in this department until his retirement in 2005.

Over the course of his many years in the department, his most important role was his teaching and research with bachelors students, doctoral Ph.D. students, fellows and attendees of the course for the Advanced Continuing Education of the Faculty (FPKP), who came not only from the countries of the former Soviet Union, but also from Vietnam, Iraq, Syria, Bulgaria, Israel, Poland, Mongolia and other countries. In addition, Alexander Golli supervised the dissertation work of more than 20 Ph.D. students, and was an official advisor to the scientific heads of other departments in the Institute in the areas of technical support of experiments, methods for measuring the stress and deformation of soils, characteristics of filtration and lateral pressure, and, in general, repeatedly developing new methods and approaches for research in the field of geotechnical engineering.

Being an extremely kind person, he greatly cared for his own students – undergraduates and Ph.D. students alike. He taught them to see the world, to think freely, to invent! Together with his Ph.D. Students, he was always creating new instruments and equipments needed in their actual work and specific research geotechnical projects. Also, being a stalwart “defender” of the scientific honor of the Department of Soil Mechanics and Foundation Engineering of the Saint Petersburg State University of Architecture and Civil Engineering, Dr. Alexander Golli always devoted much time to his foreign Ph.D. Students, helping them describe their scientific achievements in Russian.

He had the ability to lead a group of 5 - 6 doctoral students to all work together in the same experimental field site without any conflicts - yet each of them pursuing their own research projects, with their own set of geotechnical instruments, newly developed equipment, and methodology. His Ph.D. Students all defended their doctoral dissertations quite successfully and went on to distinguish themselves in their fields of scientific work.

OBITUARY (continued)
Alexander Golli (May 17th, 1939 – February 1st, 2011)

Alexander Golli had 136 scientific publications, including those published in the conference proceedings in Great Britain, Czechoslovakia, and Hungary and 40 patented inventions for which he was awarded the Medal "Inventor of Russian Federation". Also he published 19 methodological works, brochures and books for undergraduate, Ph.D. students and post-doctoral fellows of the Advanced Continuing Education of the Faculty (FPKP).

The scientific developments, methods and inventions of Professor Alexander Golli involved the completion of the foundation design work of major research geotechnical Mega projects in the Russian Federation and Kazakhstan, such as the Toliatti Automobile Factory, dams for the Saint Petersburg Flood Prevention Facility Complex and his research and implementation of pyramid-shaped pilings adapted to the problematic soil conditions of Kzyl-Orda and Karaganda regions of Kazakhstan for the construction of industrial buildings. Among his other achievements were marks with load-strain cell gauges and instruments for their placement in the soil, instruments for measuring the stress and deformations, lateral pressure, and filtration characteristics as well as more precise methods for calculation of soil settlement.

Dr. Alexander Golli also developed a method for fibrous reinforcement of the piling heads to prevent them from being destroyed during pile driving, as well as a method of improving the mechanical properties of very soft soils by reinforcing them with synthetic fibers.

By the time he retired in 2005 for health reasons, Professor Alexander Golli had made major contributions to the development of the science of soil mechanics and foundation engineering in Russia and Kazakhstan and to the integration of Russian and Kazakhstan Geotechnical Societies into the ISSMGE community. Even after he retired and had emigrated to USA with his wife, Dr. Olga Rostislavovna (an geotechnical expert in permafrost and freezing soil ground) to help their daughter, Marina, raise their grandchildren, Eric, Anna, and Andrei, Dr. A. Golli continued to think of and greatly missed his doctoral students and research work in the Department of Foundation Engineering and Soil Mechanics at SPbGASU. But in the end, it was Dr. Alexander Golli's bold approach to teaching, innovative thinking and working with his doctoral students that will stand as his most important contribution to the field of soil mechanics and geotechnical engineering.

News for Future Event

GEOCONGRESS 2012, STATE OF THE ART AND PRACTIICE IN GEOTECHNIICAL ENGINEERINNG

San Francisco Bay Area, March 25-29, 2012

Call for Sessions, Panel Discussions, Short Courses & Workshops

Submission Deadline: February 21st 2011

ABOUT THE CONFERENCCE

The "State of the Art and Practice in Geotechnical Engineering" Conference aims to provide a forum for the integration of practice, research, and education in geotechnical engineering. The emphasis on the geotechnical engineering practice, thee comprehensive technical program, the breadth of topics presented, and the outstanding State of the Art and Practice speakers is envisioned to attract unprecedented numbers of geotechnical engineers nationwide and internationally. The conference will also serve as the annual GeoCongress of the Geo--Institute off ASCE (G-I)) and will take place in the San Francisco Bay Area.

OVERVIEW OF TECHNICAL PROGRAM

An important differentiation of the technical program of this conference compared to previous G-I conferences is thee large number of keynote State of the Art (SoA) and State of the Practice (SoP) lectures that aim to summarize thee state of our profession. A total of 16 State of the Art (SoA) and 16 State of thee Practice (SoP) talks are scheduled. The SoA and SoP talks have been carefully selected to span the entire breadth of our profession. Thee mix of outstanding practitioners and researchers will provide a unique opportunity to present and document the state of our profession. The program will also include the honorary Terzaghi, Peck and Seed Lectures, technical sessions, panel discussions, short courses, workshops, student activities and an exhibit hall. The Art and Practice Conference will have a strong focus on the integration of practice, research and education.

Technical themes will crosscut all areas of practice of the profession including: Deep Foundations, Earth Retaining Structures, Earthquake Engineering and Soil Dynamics, Embankments, Dams, and Slopes, Engineering Geology and Site Characterization, Computational Geotechnics, and Geoenvironmental Engineering, Geophysical Engineering, Geosynthetics, Geotechnics of Soil Erosion, Grouting, Pavements, Risk Assessment and Management, Rock Mechanics, Shallow Foundations, Soil Improvement, Soil Properties and Modeling, Underground Construction, Offshore Geotechnics, Unsaturated Soils, Litigation/Forensics Engineering, and Business of Geotechnical Engineering.

CALL FOR PROPOSALS

The Organizing Committee is soliciting proposals for sessions, short courses, software demonstrations, and workshops dealing with topics related to these broad themes. Geo-Institute technical committees, individuals, and other government, industry, and academic organizations at the state, national and international levels are invited to submit their proposals.

News for Future Event

GEOCONGRESS 2012, STATE OF THE ART AND PRACTICE IN GEOTECHNICAL ENGINEERING (continued)

Session Proposals

Session proposals are limited to 2 pages and must include: (a) Sponsoring committee(s)/organization(s), (b) session leaders (primary session contact). A tentative list of authors and paper titles is optional. The organizing committee will work with session leaders in assigning submitted papers in the proposed sessions. Manuscripts will be reviewed according to the GSP publication policy.

Session leaders will be responsible for the review of the papers of their sessions. In addition, the organizing Committee plans to ask for the assistance of the G-I Technical Committees in reviewing abstracts/papers.

Workshop Proposals

A 2-page proposal must include: (a) Workshop title and outline, (b) Workshop objectives, (c) Learning outcomes and participation topics, (d) Presenters' names and qualifications, (e) Summary of available materials for participants, and (f) Content reflecting the themes of the conference. Workshops should be limited to six hours.

Panel Discussion Proposals

A 2-page proposal must include: (a) Panel discussion title, (b) Rationale for discussion, and (c) List of participating proponents and opponents. Discussion topics should be timely and appeal to a broad audience.

Short Course Proposals

A 2-page proposal must include: (a) Course presentation date, (b) Course title and outline, (c) Course length (up to six hours), (d) Course objectives, (e) Names and qualifications of instructors, and (f) Summary of handouts. Short course materials should be state-of-the-art and directly relevant to geotechnical engineering practice.

Software Demonstration Proposals

A 2-page proposal must include: (a) Demonstration title and outline, (b) Product/system summary, (c) Length of demonstration, (d) Learning outcome for attendees, and (e) Tentative demonstration dates.

DEADLINES

Technical Session/Workshop/Panel/Short course Proposals: February 21st 2011
Notification of Acceptance of Proposals: March 14th 2011
Submission of Paper Abstracts: April 13, 2011
Draft Papers Due: July 27, 2011
Review Decision on Draft Papers: October 10, 2011
Final Papers Due: November 16, 2011

News for Future Event

GEOCONGRESS 2012, STATE OF THE ART AND PRACTICE IN GEOTECHNICAL ENGINEERING (continued)

CONFERENCE ORGANIZING COMMITTEE

Conference Chair
Dimitrios Zekkos, Ph.D., P.E., M.ASCE, University of Michigan (zekkos@geoengineer.org)
Conference Co-Chair
Jean-Louis Briaud, Ph.D., P.E., F. ASCE, Texas A&M University (briaud@tamu.edu)
Technical Program Chair
Kyle Rollins, Ph.D., P.E., M.ASCE, Brigham Young University (rollinsk@et.byu.edu)
Technical Publication Chair
Roman Hryciw, Ph.D., P.E., M.ASCE, University of Michigan (romanh@umich.edu)
Short Courses/Workshops Chair
Russell Green, Ph.D., P.E., M. ASCE, Virginia Tech (rugreen@vt.edu)
Student Activities Chair
William Kitch, Ph.D., P.E., M.ASCE, Cal Poly Pomona (wakitch@csupomona.edu)
Software Demonstrations Chair
Thaleia Travasarou, Ph.D., P.E., M.ASCE, Fugro West (thaleiat@gmail.com)
Sponsorship Chair
Jim French, P.E., G.E., M. ASCE, AMEC Geomatrix (Jim.French@amec.com)
Research and Education Activities Chair
Ali Maher, PhD, Rutgers University (mmaher@rci.rutgers.edu)
Local Liaison Chair (G-I San Francisco Chapter)
Hong Yang, PhD, P.E., Parsons Brinckerhoff (YangH@pbworld.com)
Conference Coordination Committee Liaison
Gerald A. Miller, Ph.D., P.E., M.ASCE, University of Oklahoma (gamiller@ou.edu)
Geo-Institute of ASCE
Robert Schweinfurth, Director (rschweinfurth@asce.org)

TECHNICAL PROGRAM QUESTIONS
Contact Kyle Rollins (rollinsk@et.byu.edu) or Dimitrios Zekkos (zekkos@geoengineer.org).

News for Future Event

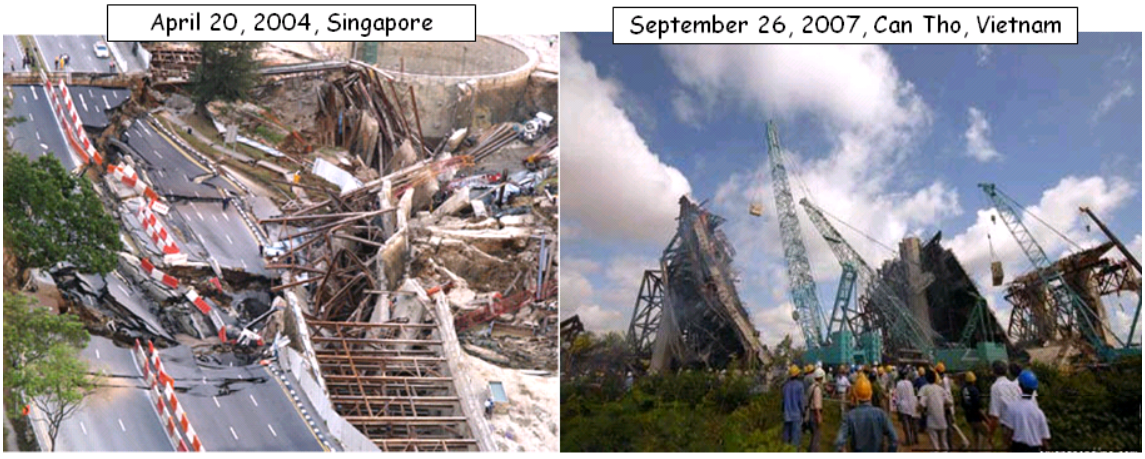
International Symposium on Backwards Problem in Geotechnical Engineering and Geotechnical Failure and Monitoring -Towards ISO on Construction Control on Geotechnical Engineering -

Organized by
TC-302 Forensic Geotechnical Engineering, ISSMGE and ISO/TC182 Working Committee in Japan
under the Auspices of Japanese Geotechnical Society and its Kansai Branch

Backwards problem in geotechnical engineering is to identify the process to the final states of geotechnical phenomenon as the most likely scenario that is explained through geotechnical fact data. Backwards problem usually consists of three steps. The first step is to identify the problem of final results of success or failure in geotechnical phenomenon as well as the initial state and condition. The second step is to assume all possible processes of scenarios from the initial state to the final result. The final step is to select the most likely scenario(s) based upon such as evidence of tests and monitoring.

Centrifugal Test System at Cambridge, U.K.

Centrifugal Experiment with monitored data provides an excellent case study for backwards Problem.
Two major geotechnical Failures of Nicoll Highway in Singapore and Fall of Can Tho Bridge Girder, Vietnam, provide important case studies of how to control construction with observational method.



Terzaghi and Peck introduced Observational Procedure in Geo-engineering construction to fill the gap between the knowledge of site conditions and the assumed design conditions. Based upon the observational procedure, most projects have been successfully completed. Recently in the past decades, however, some of the geotechnical construction sites were reported in failure even with instrumentation for monitoring the process of construction. Forensic approach is a backwards problem where the final result is the given conditions and the process to the result is the question to be answered for.

News for Future Event

International Symposium on Backwards Problem in Geotechnical Engineering and Geotechnical Failure and Monitoring -Towards ISO on Construction Control on Geotechnical Engineering – (continued)

The Symposium aims
1. to show the process of backwards problem from centrifugal experiments,
2. to identify the key factors in the failures including Nicoll Highway and Can Tho Bridge in Vietnam.
3. to overview the backwards problem of the field projects including failures,
4. to identify reasons why the instrumented geotechnical project resulted in failure,
5. to discuss the plausibility or applicability of total or effective methods to different types of the geotechnical engineering.
6. to present technical and legal systems as preventive measures against failure,
7. to give recommendations to avoid geotechnical failure, and
8. to propose to take lead for creation of an ISO standard on "Construction Control of Geotechnical Engineering."

Discussion includes such a legal system as excavation deeper than five meter to be signed by registered geotechnical engineer (Seoul), introduction of third party as technical committee of evaluation of design and instrumentation and/or Dispute Board, discussion on monitoring, standardization of monitoring procedures, and recommendation of possible countermeasures, applicability of Total and/or Effective Analysis, and others.

Date: July 14 and 15 (Th/Fri), 2011
Venue: Green Hall, 8th Floor, Osaka Kensetsu Koryu Kaikan, Nishi-ku, Osaka
Keynote Lectures by:
Prof. Malcolm Bolton, Cambridge University,
"Backwards Problem from the Perspective of Centrifuge Tests and Simple Analyses with Nicoll Highway Collapse"
Prof. Kenji Ishihara, Chuo University,
"Geotechnical Problems of Failures during Subway Construction"
Prof. Yukitake Shioi, Prof. Emeritus Hachinohe Institute of Technology
"Geotechnical Design considering deformation of Extreme Soft Clayey Ground"
Prof.Toshihiko Oh-i, Kyoto Univ.,
"Enrollment of Dispute Board and Geotechnical Construction"

Program (tentative)

July 14 (Th)
Registrations
Opening Session
Presentation Session I
Backwards Problem in Geotechnical Engineering
Total /Effective Stress Approach
Presentation Session II
Case Study on Failed Projects/Difficult Soils and Other Factors
Reception

News for Future Event

International Symposium on Backwards Problem in Geotechnical Engineering and Geotechnical Failure and Monitoring -Towards ISO on Construction Control on Geotechnical Engineering – (continued)

July 15(Fri)
Presentation Session III
Construction Control with Observational Procedure/Legal System
Presentation Session IV
Towards ISO Standard for Construction Control in Geotechnical Engineering
Panel Session with Conclusions
Summary and Adaptation of Recommendation
Closing Session

Call for Papers
Important dead lines

Abstract submission	March 30, 2011
Notice of acceptance	April 15, 2011
Full paper submission	May 30, 2011
Symposium	July 14 and 15, 2011

Session Co-Chairs Dr.Y.Iwasaki, Prof.M.Mimura, and Prof.Y.Kohata
Secretary Dr.K.Itoh, member TC302
Organizing Committee
Dr.V.V.S.Rao, Chair, TC302, NAGADI CONSULTANTS PVT LTD, India
Prof.G.L. Sivakumar Babu, Secretary, TC302
Dr. David Hight, member TC302, U.K.
Prof.Josef Mecsi, member TC302, Hungary,
Prof.Kusakabe, President, JGS, Prof. Tokyo Institute of Technology
Dr.Y.Watabe,Director, Div. of International Affairs, JGS, PARI, Japan
Dr.K.Takahashi,Director, Div. of Codes and Standard, JGS, Kiso-Jiban Consultants, Japan
Prof.Jun Ohtani, Chair, Domestic Committee on ISO , Kumamoto Univ. Japan
Prof.Y.Kohata, Chair, ISO/TC182 Muroran Institute of Technology
Prof.Y.Honjo, ISO/TC182, Gifu University
Dr.K.Matui, ISO/TC182, PWRI, Japan
Dr.K.Itoh, TC302, National Inst. of Occupational Safety and Health, Japan
Prof.M.Mimura, Kyoto Univ., Japan
Prof.A,Iizuka, Kobe University, Japan
Dr.Y.Iwasaki,Geo Research Institute, Japan

Steering Committee
Y.Iwasaki, V.V.S.RAO, M.Mimura, Y.Kohata, S.Iai, and A.Iizuka

International Advisory Committee
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Contact Y. Iwasaki at <yoshi-iw@geor,or.jp>
HP under construction

Call For Abstracts

Foundation Engineering in the Face of Uncertainty

Geotechnical Special Publication, ASCE

Sponsored by the Geo-Institute, the ASCE will be publishing a Geotechnical Special Publication (GSP) volume titled "Foundation Engineering in the Face of Uncertainty" (and subtitled “Site Heterogeneity, Property Variability, Risk, and Reliability-Based Design”) - Honoring Professor Fred H. Kulhawy, Ph.D., P.E., G.E., D.GE, Dist.M.ASCE. Mohamad H. Hussein, Kok-Kwang Phoon, and James L. Withiam will serve as Editors of this GSP. Abstracts for proposed papers dealing with topics related to the main theme, are now being sought for consideration. The following are possible topics:

- Geologic modeling for ground characterization
- Spatial variability (natural ground, modified ground)
- Test measurement errors (laboratory/field)
- Transformation uncertainties pertaining to design properties
- Soil/rock property statistics (distributions, correlations)
- Model/bias factors in design equations
- Probabilistic/reliability methods
- Random finite element methods
- Limit state design (ultimate, serviceability, economic, etc.)
- Reliability-based design (RBD)
- Simplified RBD (partial factor design, LRFD, MRFD, etc.)
- Bayesian updating (from quality control, load tests, monitoring, etc.)
- Risk assessment and management
- User-friendly design/analysis tools
- Role of field measurements and testing in improving reliability
- Case histories

Deadline for a 300 word (max.) abstract submission is June 30, 2011. Finished manuscripts are expected in July 2012, the GSP will be released at a specialty symposium during the G-I’s 2013 annual meeting. All papers will be subjected to the standard ASCE technical papers review process. Please e-mail your abstract to Mohamad H. Hussein at: MHussein@pile.com.

Call For Abstracts

SOUND GEOTECHNICAL RESEARCH TO PRACTICE

Geotechnical Special Publication, ASCE

SOUND GEOTECHNICAL RESEARCH TO PRACTICE
Geotechnical Special Publication Honoring the Contributions of Robert D. Holtz
Edited by Armin W. Stuedlein and Barry R. Christopher
In cooperation with the ASCE Seattle Section Geotechnical Group

For more than 45 years Professor Bob Holtz, P.E., D.GE., Dist. M. ASCE, has made distinguished contributions to the assessment of fundamental soil behavior, soft ground construction and improvement, geosynthetic and steel reinforced soils, and geotechnical engineering education. Through his tenure at Purdue University and the University of Washington, Dr. Holtz has made a national and international impact through service in professional organizations such as ASCE, ASFE, ASTM, IGS, ISSMGE, Geo-Institute, and TRB, as well as numerous other institutions (e.g., the Swedish Geotechnical Institute, various consulting firms, and contractors). Dr. Holtz has also made a significant impact to the professional community in the Puget Sound region, helping build the connection between industry and the University of Washington.

Sound Geotechnical Research to Practice will comprise a collection of papers honoring the contribution of Robert D. Holtz in geotechnical research and practice. This volume will contain select papers by Bob Holtz, including his **2010 Terzaghi Lecture**, papers presented in honor of Bob Holtz at the 2007 Spring Seminar hosted by the ASCE Seattle Section Geotechnical Group, and other invited and solicited papers by professors, researchers, practicing geotechnical engineers, and contractors. Selected papers will be presented with release of the *Proceedings* at **GeoCongress 2013**.

Abstracts Due May 8, 2011. For more information and abstract submission, navigate to:
http://web.engr.oregonstate.edu/~armin/index_files/HoltzGSP

Event Diary

ISSMGE SPONSORED EVENTS

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

2011

7th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground
Date: 16 - 18 May 2011
Location: Roma, Italy
Language: English
Organizer: TC28 and AGI
• Contact person: Dr. Ing. Claudio Soccodato
• Address: Associazione Geotecnica Italiana, viale dell'Università 1100185 Roma, RM, Italy
• Phone: 39064465569
• Fax: 390644361035
• E-mail: info@tc28-roma.org
Website: www.tc28-roma.org

The 3rd International Conference on Geotechnical Engineering for Disaster Mitigation and Rehabilitation 2011 (GEDMAR 2011) Combined with The 5th International Conference on Geotechnical and Highway Engineering
Date: 18 - 20 May 2011
Language: English
Organizer: JWG-DMR, Diponegoro University
• Contact person: Ir.H. Wuryanto MSc, Dr. Bagus Hario Setiadji
• Address: Indonesian Road Development Association (IRDA) of Central Java, Jl. Puri Anjasmoro Blok I.1 No 12,50144 Semarang, Central Java, Indonesia
• Phone: 62-24-7622790
• Fax: 62-24 7622785
• E-mail: hpjijateng@yahoo.co.id; geoconfina@yahoo.com
Website: reliability.geoengineer.org/GEDMAR2011/

XIV Asian Regional Conference on Soil Mechanics and Geotechnical Engineering
Date: 23 - 27 May 2011
Location: Hong Kong Poly University , Hong Kong, China
Language: English
Organizer: HKGES and CSE of HK Poly U
• Contact person: Miss Laurel Lau
• Address: Dept of Civil & Struc Eng, Hong Kong Polytechnic University, Hong Kong, China
• Phone: 852 2766 6017
• Fax: 852 2334 6389
• E-mail: 14arc.2011@polyu.edu.hk
Website: www.cse.polyu.edu.hk/14arc

3rd International Symposium on Geotechnical Safety and Risk (ISGSR2011)
Date: 2 - 3 June 2011
Location: Oskar-von-Miller-Forum, Munich, Germany
Language: English
Organizer: Zentrum Geotechnik, TU München
• Contact person: Dipl.-Ing. Gerhard Bräu
• Address: Arcisstraße 21
80290 Munich
Germany
• Phone: 49(0)89-289-27139
• Fax: 49(0)89-289-22441
• E-mail: G.Braeu@bv.tum.de
Website: www.isgsr2011.de

XV African Regional Conference on Soil Mechanics and Geotechnical Engineering - "Resources and Infrastructure Geotechnics in Africa: Putting theory into practice".
Date: 18 - 21 July 2011
Location: Maputo, Mozambique
Organizer: Soc. Moçambicana de Geotecnia
• Contact person: Prof. Carlos QUADROS, President of SMG, Dr Saturnino CHEMBEZE, Sec. Gen SMG
• Address: Mozambican Geotechnical Society, Av. 25 de Setembro nº 2526, Maputo, Mozambique
• Phone: 258 21322185
• Fax: 258 21322186
• E-mail: info@15arcsmge-maputo2011.com
Website: www.15arcsmge-maputo2011.com

Fifth International Symposium on Deformation Characteristics of Geomaterials (IS-Seoul 2011)
Date: 31 August - 3 September 2011
Location: Sheraton Grande Walkerhill , Seoul, Korea
Language: English
Organizer: ISSMGE(TC-29) and KGS
• Contact person: Prof. Dong-Soo Kim
• Address: Dept. of Civil & Environmental Eng., KAIST 305-701 Daejeon, Korea
• Phone: 82-42-350-5659
• Fax: 82-42-350-7200
• E-mail: is-seoul@kaist.ac.kr
Website: www.isseoul2011.org

21st European Young Geotechnical Engineers' Conference
Date: 4 - 7 September 2011
Location: Rotterdam, Netherlands, The
Language: English
Organizer: Netherlands Society for SMGE
• Contact person: Angelique van Tongeren
• Address: PO Box 30424, 2500GK The Hague, Netherlands
• E-mail: EYGEC2011@kiviniria.net
Website: www.kiviniria.net/EYGEC2011

International Symposium on Backwards Problem in Geotechnical Engineering and Geotechnical Failure and Monitoring (14-15 July)
Event organized under the auspices of ISSMGE
Date: 14 - 15 July 2011
Location: Green Hall, Kensetsu Koryu Kan , Osaka, Japan
Language: English
Organizer: TC302, ISSMGE
• Contact person: Yoshi Iwasaki
• Address: Geo Research Institute, 4-3-2, Itachi-bori, Nishi-ku, 550-0012 Osaka, Osaka, Japan
• Phone: 81-9-8938-1191
• Fax: 81-6-6578-6255

Event Diary (continued)

XV European Conference on Soil Mechanics and Geotechnical Engineering "Geotechnics of Hard Soils - Weak Rocks"
Date: 12 - 15 September 2011
Location: Megaron Athens Int Conf Cntr , Athens, Greece
Language: English/French
Organizer: HSSMGE
• Contact person: Secretariat XV ECSMGE – Athens 2011
• Address: PO Box 26013, 10022 Athens, Greece
• Phone: 30 210 6915926
• Fax: +30 210 6928137
• E-mail: athens2011ecsmge@hssmge.gr
Website: www. athens2011ecsmge.org

XIV Pan-Am / CGS Geotechnical Conference
Date: 2 - 6 October 2011
Location: Sheraton Centre Toronto Hotel , Toronto, Ontario, Canada
Language: English, French, Spanish
Organizer: Cdn Geotechnical Soc. & ISSMGE
• Contact person: Wayne Gibson, P.Eng.
• Address: 8828 Pigott Rd
V7A 2C4 Richmond, BC, Canada
• Phone: 00 1 604 241 1297
• Fax: 00 1 604 241 1399
• E-mail: info@panam-cgc2011.ca
Website: panam-cgc2011.ca

2012

12th Baltic Sea Geotechnical Conference
Date: 31 May - 2 June 2012
Location: Stadhalle (Town Hall) Rostock , Rostock, Germany
Language: English
Organizer: German Geotechnical Society
• Contact person: German Geotechnical Society
• Address: Gutenbergstr. 43, 45128 Essen, Germany
• Phone: 49 201 78 27 23
• Fax: 49 201 78 27 43
• E-mail: service@dggt.de
Website: www.12bsgc.de

International Conference on Geotechnical Engineering Education
Date: 4 - 6 July 2012
Location: NUI Galway , Galway, Ireland
Language: English
Organizer: ISSMGE TC - Geo-engineering Ed
• Contact person: Dr. Bryan A. McCabe (Conference Chair, Secretary of TC306)
• Address: Dept. of Civil Engineering, NUI Galway
Galway, Ireland
• Phone: 353 91 492021
• Fax: 353 91 494507
• E-mail: bryan.mccabe@nuigalway.ie

11th ANZ 2012 Geomechanics Conference
Date: 15 - 18 July 2012
Location: Crown Promenade Hotel , Melbourne, Victoria, Australia
Language: English
Organizer: Leishman Associates
• Contact person: Leishman Associates
• Address: 113 Harrington Street
7000 Hobart, Tasmania, Australia
• Phone: 61 36234 7844
• Fax: 61 6234 5958
• E-mail: nicole@leishman-associates.com.au
Website: www.anz2012.com.au

ICSE-6 - 6th International Conference on Scour and Erosion
Date: 27 - 31 August 2012
Language:
Organizer:
• E-mail: contact@icse-6.com
Website: www.icse-6.com

2nd International Conference on Transportation Geotechnics
Date: 10 - 12 September 2012
Location: Hokkaido University , Sapporo, Hokkaido, Japan
Language: English
Organizer: ISSMGE (TC202) and JGS
• Contact person: Dr. Tatsuya Ishikawa
• Address: Faculty of Engineering, Hokkaido University Kita 13, Nishi 8, Kita-ku, 060-8628 Sapporo, Hokkaido, Japan
• Phone: 81-706-6202
• Fax: 81-706-6202
• E-mail: tc3conference@eng.hokudai.ac.jp
Website:
congress.coop.hokudai.ac.jp/tc3conference/index.html

ISC'4 - 4th International Conference on Geotechnical and Geophysical Site Characterization
Date: 18 - 21 September 2012
Location: Porto de Galinhas, Pernambuco, Brazil
Language:
Organizer: TC102
• Contact person: Executive Secretary
• Address: Rua Ernesto de Paula Santos 1368, Brazil, salas 603/604, Boa Viagem; Recife - PE CEP: 51021-330, Brazil
• E-mail: isc-4@factos.com.br
Website: www.isc-4.com/index.php

International Conference on Ground Improvement and Ground Control: Transport Infrastructure Development and Natural Hazards Mitigation
Date: 30 October - 2 November 2012
Location: University of Wollongong, Wollongong, New South Wales, Australia
Language: English
• Organizer: The Centre for Geomechanics and Railway Engineering, University of Wollongong, Australia, and the Australian Geomechanics Society (AGS)
• Contact person: Dr. Jayan Vinod
• Address: Centre for Geomechanics and Railway Engineering, Faculty of Engineering, University of Wollongong, 2522 Wollongong, New South Wales, Australia.
• Phone: 61 02 4221 4089
• Fax: 61 02 4221 3238
• E-mail: icgi_2012@uow.edu.au
• Deadline for Abstract submission: 1 July 2011
Website: www.icgiwollongong.com

Event Diary (continued)

2013

18th International Conference for Soil Mechanics and Geotechnical Engineering
Date: 1 - 5 September 2013
Location: Paris International Conf. Ctr , Paris, France
Language:
Organizer:
• Contact person: Violaine Gauthier
• Address: Le Public Système, 38, rue Anatole France 92594 Levallois-Perret Cedex, France
• Phone: 33 1 70 94 65 04
• E-mail: vgauthier@lepublicsysteme.fr
Website: www.issmge2013.org/

NON-ISSMGE SPONSORED EVENTS

2011

Geo-Frontiers 2011
Date: 13 - 16 March 2011
Location: Sheraton Dallas Hotel , Dallas, Texas, United States
Language: English
Organizer: Geo-Institute
Secretary: • Contact person: Kristy Osman, Secretary General/Event Manager
• Phone: 1 651 225 6959
• E-mail: klosman@ifai.com
Website: www.geofrontiers11.com/index.cfm

5th Canadian Conference on Geotechnique and Natural Hazards
Date: 15 - 17 May 2011
Location: University of British Columbia , Kelowna, British Columbia, Canada
Organizer: Canadian Geotechnical Society
Website: www.geohazards5.ca/index.php?lang=en

Ottawa 2011 GAC-MAC-SEG-SGA
Date: 25 - 27 May 2011
Location: University of Ottawa , Ottawa, Ontario, Canada
Language: English
Organizer: Geological Assoc. of Canada
• Contact person: Simon Hanmer
• Address: 601 Booth Street, K1A 0E8 Ottawa, Ontario, Canada
• Phone: 1-613-992-4704
• E-mail: simon.hanmer@nrcan.gc.ca

4th International Geotechnical Symposium on Geotechnical Engineering for Disaster Prevention & Reduction
Date: 26 - 28 July 2011
Location: Fourth International Symposium , Khabarovsk, Russia
Language: English or Russian
Organizer: Far Eastern Transport Univ
• Contact person: Professor S.A.Kudryavtsev
• Address: Street Serishev, 47, Far Eastern State Transport University (FESTU), 680021 Kabarovsk, Russia
• Phone: 74212407540
• E-mail: its@festu.khv.ru
Website: www.igsh4.ru

7th Ukrainian Conference on "Soil Mechanics, Geotechnics and Foundation Engineering"
Date: 4 - 7 October 2011
Location: Sanatorium Complex “Magnolia” , Odessa, Ukraine
Language: Ukrainian, Russian
Organizer: UkrSSMGFE
• Contact person: Vladimir Senatorov
• Address: 5/2 Ivan Klimenko Str., 03680 Kiev, Ukraine
• Phone: (38044) 249-38-30
• Fax: (38044) 248-89-09
• E-mail: v.senatorov@ndibk.gov.ua
Website: www.niisk.com

International Conference on Advances in Geotechnical Engineering (ICAGE 2011)
Date: 7 - 9 November 2011
Location: Burswood Entertainment Complex , Perth, Western Australia, Australia
Language: English
Organizer: Curtin University
• Contact person: EEC W Pty Ltd, Australia
• Phone: 61-8-9389 1488
• Fax: 61-8-9389 1499
• E-mail: info@eecw.com.au
Website: www.icage2011.com.au

5th Asia-Pacific Conference on Unsaturated Soils
Date: 14 - 16 November 2011
Location: Pattaya , Pattaya, Thailand
Language: English
Organizer: Thai Geotechnical Society, KU
• Contact person: Apiniti Jotisankasa
• Address: Department of Civil Engineering, Kasetsart University, 10900 Jatujak, Bangkok, Thailand
• Phone: 66819043060
• Fax: 6625792265
• E-mail: fengatj@ku.ac.th
Website: www.unsat.eng.ku.ac.th

Segunda Conferencia Ecuatoriana de Ingeniería Geotécnica y Ambiental para Ingenieros Jóvenes y Estudiantes (2nd Equador Conference of Geotechnical and Environmental Engineering Conference for Young Engineers and Students)
Date: 16 - 18 November 2011
Location: Ciudad Universitaria , Guayaquil, Ecuador
Language: Español (Spanish)
Organizer: SEMSIR
• Contact person: Ing. María José Avecillas Andrade
• Address: SEMSIR. Laboratorio Ruffilli – Universidad de Guayaquil, Av. Kennedy. P. O. Box 9176, Guayaquil, Ecuador
• Phone: 5938 4862808
• Fax: 5934 2286290 – 2391129

Event Diary (continued)

• E-mail: semsir@telconet.net; aniversariosemsir50@gmail.com
Website: www.semsir.blogspot.com

2012

4th International Conference on Grouting and Deep Mixing
Date: 15 - 18 February 2012
Location: Marriott New Orleans , New Orleans, LA, United States
Language: English
Organizer: ICOG and DFI
• Contact person: Theresa Rappaport
• Address: DFI; 326 Lafayette Avenue, 07506 Hawthorne, NJ, USA
• Phone: 9734234030
• Fax: 9734234031
• E-mail: trappaport@dfi.org
Website: www.grout2012.org

NGM 2012. 16th Nordic Geotechnical Meeting
Date: 9 - 12 May 2012
Location: Tivoli Congress Center, Copenhagen, Denmark
Language: English
Organizer: Danish Geotechnical Society
• Contact person: Morten Jorgensen
• Address: Sortemosevej 2, DK-3450 Allerod, Copenhagen, Denmark
• Phone: +45 4810 4207 ; +45 4810 4207
• Fax: +45 4810 4300
• E-mail: moj@niras.dk
Website: www.ngm2012.dk

11th International Symposium on Landslides
Date: 2 - 8 June 2012
Location: Banff Springs Hotel, Banff, Alberta, Canada
Language: English
Organizer: Canadian Geotechnical Society
• Contact person: Corey Froese
• E-mail: Corey.Froese@ercb.ca
Website: www.ISL-NASL2012.ca

FOR FURTHER DETAILS, PLEASE REFER TO THE ISSMGE WEBSITE
http://addon.webforum.com/issmge/index.asp

Corporate Associates

Acciona Infraestructuras SA
Avenida de Europa 18
Parque Empresarial La Moraleja
28108 ALCOBENDAS MADRID, SPAIN

S.N. Apageo S.A.S.
ZA de Gomberville
BP 35 - 78114 MAGNY LES HAMEAUX
FRANCE

Bauer Maschinen GmbH
Wittelsbacherstr. 5
86529 Schrobenhausen
GERMANY

Fugro N.V.
PO Box 41
2260 AA Leidschendam, NETHERLANDS

Deltares
PO Box 177
2600 AB Delft, NETHERLANDS

Georeconstruction Engineering Co
Izmaylovsky Prosp. 4., of. 414
Saint Petersburg, RUSSIA

Golder Associates Inc
1000, 940-6th Avenue S.W.
Calgary, Alberta
CANADA T2P 3T1

Jan de Nul N.V.
Tragel 60, B-9308 Hofstade-Aalst
BELGIUM

Kiso-Jiban Consultants Co., Ltd.
Nittetsu ND Tower 12 Fl.
1-5-7 Kameido, Koto-ku,
Tokyo, Japan 136-8577

NAUE GmbH Co KG
Gewerbestrasse 2
32339 Espelkamp-Fiestel
GERMANY

Norwegian Geotechnical Institute
P.O. Box 3930 Ullevaal Stadion
N-0806 OSLO
NORWAY

Sinotech Engineering Consultants, Inc.
171 Nanking E. Rd., Sec. 5, Taipei 105,
TAIWAN, REPUBLIC OF CHINA

SOLETANCHE BACHY SA
133 boulevard National, 92500 Rueil-Malmaison, FRANCE

Tensar International Ltd
Cunningham Court
Shadsworth Business Park
Blackburn, BB1 2QX, UK

Terre Armée
1 bis rue du Petit Clamart
Bâtiment C BP 135 78148 Velizy CEDEX
FRANCE

Tractebel Development Engineering SA
Transportation Division
Geotechnology Section
7 Avenue Ariane B-1200, BRUSSELS
BELGIUM

Bentley Systems Inc.
Corporate Headquarters
685 Stockton Drive 7710,
Exton PA 19341, United States

Geoteknik SA
Dolapdere cad. 255, Şişli - İstanbul 80230
TURKEY

Huesker Synthetic GmbH
Fabrikstrasse 13-15
48712 Gescher
Germany

Zetas Zemin Teknolojisi AS
Merkez Mah. Resadiye Cad. No. 69/A
Alemdag, Umraniye
Istanbul, 34794 TURKEY

Siemens Energy
Kaiserleistrasse10
63067 Offenbach
GERMANY

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International I.G.M. s.a.r.l.
P.O.Box: 166129 Achrafieh
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TenCate Geosynthetics
9, rue Marcel Paul
B.P. 40080
95873 Bezons Cedex
FRANCE

Construtora Norberto Odebrecht
Av. Rebouças, 3970 - 31° andar
Pinheiros CEP-05402-600
São Paulo/SP
BRAZIL

Coffey Geotechnics
8/12 Mars Road
Lane Cove West
NSW, 2066
AUSTRALIA

Tecnogeo Engenharia e Fundações Ltda
Av. Eliseu de Almeida nº 1415 - Butantã
São Paulo/SP - 05533-000
Brazil

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APPENDIX

Earthquake Damage in Christchurch, New Zealand

Rolando Orense, University of Auckland
Suguru Yamada, University of Tokyo

An earthquake of magnitude 6.3 hit Christchurch at 12:58 PM local time on February 22nd. Because of the short distance to the city and the shallower depth of the epicenter, this earthquake caused more significant damage in the city than the one in September 2010 in spite of its smaller earthquake magnitude (energy). In addition to building collapses, liquefaction and geotechnical damage occurred in many parts of the city where soil condition was soft. Some photographs that were taken immediately after the quake are presented in what follows. Further damage investigation is going on now.

Photo 1 Big sand boil in Alard Street, Edgeware

Photo 2 Liquefaction in residential area in Edgeware

Photo 3 Repeated liquefaction near Bexley

Photo 4 Damaged road embankment in Avonside Drive

APPENDIX (continued)

Earthquake Damage in Christchurch, New Zealand

Photo 5 Pipeline damage at Avondale & Brighton on Avon River

Photo 6 Collapsed portion of Fitzgerald Avenue

Photo 7 Liquefaction adjacent to AMI Stadium. The ground under the stadium was stabilized with stone columns. Around the stadium, liquefaction was observed everywhere, but the stadium did not suffer structural damage.