NEWS
Arrigo Croce Lecture

To all members of ISSMGE

Roma, July 15th 2011

Dear members of the ISSMGE,

Since 2000 the Italian Geotechnical Society (Associazione Geotecnica Italiana – AGI) has been organising every year a series of conferences dedicated to the memory of the late Professor Arrigo Croce, who was the first professor of soil mechanics in Italy, President of AGI, vice-President for Europe of the ISSMFE and co-founder of the technical committee devoted to the geotechnical aspects of preservation of historic sites.

The first Arrigo Croce Lecture was delivered by Prof. Carlo Viggiani, followed by Prof. Michele Jamiolkowski, Prof. Ruggiero Jappelli, Prof. Giovanni Calabresi, Prof. Giovanni Barla, Prof. Beniamino D'Elia, Prof. Giuseppe Ricceri, Prof. Luciano Picarelli and Prof. Alberto Burghignoli.

Also written versions of past lectures have been published in the Rivista Italiana di Geotecnica. These papers (except the last two, not yet available on the site) can be downloaded from the website of AGI (www.associazionegeotecnica.it), following the path "RIG", "Croce Lecture".

Photograph of Prof. Arrigo Croce

Last year, the Council of AGI decided to open the event also to international people with very high qualification in the field of soil mechanics, rock mechanics and geotechnical engineering.

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Arrigo Croce Lecture (continued)

I am very happy to announce you that the next lecturer will be:

Prof. Eduardo ALONSO
Universitat Politècnica de Catalunya

who decided to give a lecture with the very stimulating title:

Crystal Growth in Geotechnics

Details of this lecture are presented below.

The Conference is scheduled on December 15th, 2011 in Rome, at 10.30 am in the Conference Room of CNR (National Research Council). After the lecture, a light buffet will be provided for exchanging greetings for the coming new year.

The lecture is free of charge and all members of ISSMGE are welcome. We ask you to fill-in the registration form attached to the present letter and send it by e-mail to the Secretariat of the Italian Geotechnical Society (agiroma@iol.it). The maximum number of 300 people will be allowed to participate; hence the rule of "first-come, first-service" will be applied.

I hope to see many of you at this occasion, to attend the interesting Lecture of Prof. Alonso and have the chance of visiting Rome, a very pleasant town also in the period before Christmas.

With my best regards,

Stefano Aversa
President of the Associazione Geotecnica Italiana

CRYSTAL GROWTH IN GEOTECHNICS
Eduardo Alonso

Prof. Eduardo Alonso

Lilla tunnel and two long viaducts (Pont de Candí and Pallaressos), all of them being parts of the high speed Madrid-Barcelona railway link, have suffered in recent years extreme swelling phenomena immediately after being built. In all of them the origin of the observed swelling is crystal growth. The concerned crystals were gypsum crystals in the case of Lilla tunnel and Pont de Candí viaduct and ettringite-thaumasite crystals in the case of Pallaressos.

Lilla tunnel, 2km long, was excavated in hard sulphate rich claystones of Eocene age by a traditional head and bench scheme using blasting and a conventional support. The tunnel floor experienced vertical displacement reaching in some sections 80 cm in a few months. As a result, the tunnel was heavily instrumented (continuous extensometers, pressure cells, floor displacement monitoring) and large diameter samples were taken for laboratory testing. In addition, alternative support systems were tested "in situ" with the purpose of

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Arrigo Croce Lecture (continued)

selecting the best design for the repair of the tunnel. A circular cross section lined with a high strength concrete ring, heavily reinforced, was eventually built at a high cost. Maximum pressures recorded so far reach 6 MPa.

Pont de Candí Viaduct is founded on large diameter piles of 20 m in length socketed on hard anhydritic claystones. It has suffered a sustained heave dating from the end of construction at a rate of 1-2 mm/month. An "active layer" was detected and monitored by continuous extensometers. It is located below pile's tip. Therefore piles and viaduct are heaving as a single unit.

In Pallaressos Viaduct the two access embankments, 18m high, have experienced severe heaving which has required a continuous levelling work of the rail tracks. The "active layer" in this case is located in the upper 8 m of the embankments. The swelling induces a longitudinal compression of the bridge and abutments resulting in severe structural damage.

The three outlined cases are rather exceptional. Expansive phenomena in tunnels around the Alps in Triassic sulphated rocks are well known. But Lilla tunnel reached extreme swelling pressures and swelling displacements. No similar phenomena have been found in the literature for the additional two cases.

The lecture will describe the fundamental observations carried out "in situ" and the attempts to reproduce the swelling phenomena in the laboratory. Models were developed to simulate the hydro-mechanical and chemical interactions, and the crystal growth as well as its application to real conditions will be also presented and compared with real observations.

The lecture will end with a description of the mitigation measures adopted to protect the damaged structures and to allow the safe operation of the high speed railway line.

Gypsum crystals growing in a discontinuity in Lilla claystone

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Arrigo Croce Lecture (continued)

Lilla tunnel. Heave of the floor

The viaduct of Pont de Candí being repaired

NEWS
Arrigo Croce Lecture (continued)

Pallaressos Viaduct and one of the access embankments affected by thaumasite crystal growth

Damage in Pallaressos structure

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Arrigo Croce Lecture (continued)

AGI
Associazione Geotecnica Italiana

X ARRIGO CROCE LECTURE

Professor **Eduardo Alonso**
Universitat Politècnica de Catalunya - Barcelona (Spain)

Crystal growth in Geotechnics

Thursday December 15th 2011, 10:30 am
CNR Conference Room (National Research Council) - Via dei Marrucini snc - Roma - Italy

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Please, fill in the registration form and send to:
AGI Secretariat: agiroma@iol.it.
A maximum number of 300 people will be allowed therefore first-come first-service will be applied.
Acceptance of registration will be sent by December 7th 2011.

REGISTRATION FORM

Name and Family name_____

Full address _____

_____

Tel _____ Fax _____

E-mail _____

Date _____ *Signature*_____

We hereby inform you that, in conformity with Italian dlgs n.196/2003, the information you provide filling in this form, will be collected in a data bank and may be processed, also making use of third parties in compliance with the above mentioned law, for the purpose of commercial information and anonymous statistical processing. Please, note that you are entitled to exercise the right specified in the above mentioned dlgs.

Date _____ *Signature*_____

NEWS
INTERNATIONAL SYMPOSIUM ON GEOTECHNICAL ENGINEERING FOR DISASTER PREVENTION AND REDUCTION

This conference took place from July 26 to 29, 2011, at Far Eastern State Transport University in Khabarovsk, Russia (Photos 1 to 2). It was organized by Professor Sergey A. Kudryavtsev, General Secretary of Organizing Committee of 4IGS under auspices of Asian Technical Committee 3 for geotechnical natural disasters (ATC3), Russian Geotechnical Society and Kazakhstan Geotechnical Society. As shown in its title, this series of conference is intended to exchange and disseminate in Far East the up-to-date knowledge and experience both internationally and domestically. The first conference was realized in 2005 in Astana of Kazakhstan by Prof. Askar Zhussupbekov (Eurasian National University, Kazakhstan) and Prof. Takaji Kokusho (Chuo University, Tokyo, Japan) under the auspices of ATC3 for geotechnical natural disasters and this frame work has been maintained during the following occasions in Yuzno-Sakhalinsk (2007, Russia) and Harbin (2009, China). This year, the Khabarovsk conference attracted more than 150 paper submissions and about 180 participants from China, Korea, Japan, India, Poland, Russia, and Kazakhstan (Photo 1).

Photo 1 Group photograph of participants

The opening ceremony was led by Prof. Boris Dynkin who is the rector of the Far Eastern State Transport University (Photo 4) and keynote lectures together with oral presentations followed. The discussed topics included earthquakes and landslides together with a special emphasis on soil freezing. Photographs below show some aspects of the conference.


Photo 2 Conference going on


Photo 3 Dinner cruise on Amur River

The main attention is given to sharing knowledge on reliable preventive geotechnical measures directed towards damage minimization when the available information is either incomplete or inconsistent.

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INTERNATIONAL SYMPOSIUM ON GEOTECHNICAL ENGINEERING FOR DISASTER PREVENTION AND REDUCTION (continued)

International experts are invited to take part in the Symposium, present keynote and special lectures, make oral and poster reports, exhibit the equipments and devices, introduce various achievements in the geotechnical engineering field, and also discuss the lessons learned from resent disasters in order to share the modern knowledge and technologies implemented into practice for damage mitigation. As a result it is expected to receive papers dealing with the improved practical approaches and engineering solutions, unified new construction, codes and regulations for the purpose of preventing and reducing the disasters before they strike again.

Photo 4 Opening ceremony of 4IGS,2011: from left to right: Dr. V.D. Kalashnikov- Vice-Chairman of Government of Khabarovsky Krai , Minister of Economic Development and Foreign Policy of Khabarovsky Krai; Prof. B.E. Dynkin-Rector of Far Easten State Transport University; Prof. Askar Zhussupbekov-VP of ISSMGE for Asia

Photo 5 Prof. Askar Zhussupbekov (VP of ISSMGE for Asia) awarded of Dr. H. Toyota (Nagaoka University of Technology, Japan) for his excellent Keynote Lecture

Photo 6 Prof. E.C. Shin (University of Incheon, Korea)-Chairman of Section 1 "Geomonitoring, monitoring the geodynamic processes, prognoses of natural phenomena awarded of Prof. Ikuo Towhata (Appointed Board Member of ISSMGE, University of Tokyo, Japan) for his excellent Special Lecture

Photo 7 Prof. H. Hazarika (Kyushu University, Fukuoka, Japan) presented his book "Soil Mechanics Fundamentals" to General Secretary of 4IGS, 2011 Prof. Sergey Kudryavtsev (for Library of Far Eastern State Transport University, Khabarovsk, Russia)

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INTERNATIONAL SYMPOSIUM ON GEOTECHNICAL ENGINEERING FOR DISASTER PREVENTION AND REDUCTION (continued)

The Organizing Committee of 4IGS invited Prof. M. Okamura (Ehime, Japan) to present a Keynote Lecture 1 "In-situ Air Injection as a Liquefaction Countermeasure." Dr. H. Toyota (Nagaoka, Japan) gave Keynote Lecture 2 (Photo 5) about "Observation of Slope Failures during Natural Disasters - Case study in the Chuetsu Area of Niigata, Japan." Dr. G. Wang (Kyoto, Japan) gave Keynote Lecture 3 "Role of Pore Fluid Pressure on the Initiation and Movement of Fluidized Landslides." Dr. A.T. Bekker (Vladivostok, Russia) gave Keynote Lecture 4 "Specificity of the Coastal Construction in the Far East." Keynote Lecture 5 was presented by Prof. I. Saharov and Prof. V. Paramonov (Saint-Petersburg, Russia) on the decision of a spatial problem of freezing and heaving for the building which have not been protected for the winter period.

The Keynote Lecture 6 "Dynamic Response Analysis of Reinforced Embankment Dam and Buried Pipe Using Kinematic Hardening Constitutive Model" was presented by Prof. T. Tanaka (The Japan Association of Rural Resource Recycling Solutions, Japan). Prof. Z. Maocai (Harbin, China) gave Keynote Lecture 7 "The Study on Key Geotechniques of Stockman Nevsky Centre Project in Saint Petersburg City." Keynote Lecture 8 "An Analysis of Frost Penetration Depth for Road Design by Field Monitoring in Korea" was delivered by Prof. E.C. Shin, J.S. Lee, and G.T. Cho (Incheon. Korea). Keynote Lecture 9 "Interaction Research between the Soil Ground and a Pile Arranged by Displacement Technology" was presented by Prof. Askar Zhussupbekov (Columbia University, New York, USA and Eurasian National University, Astana, Kazakhstan).

Prof. T. Kozlowski (Kielce University of Technology, Poland) gave Keynote Lecture 10 entitled "Characteristic Temperatures of Phase Transitions in Soil-Water Systems below 0°C." Keynote Lecture 11 "An Approach of Risk Analysis for Shallow Landslide over a Wide Area" was delivered by Prof. G. Chen (Kyushu, Japan). Keynote Lecture 12 "Towards Sustainable Countermeasure against Liquefaction – A Smart Geomaterial and Its Evaluation" was presented by Prof. H. Hazarika (Kyushu University, Fukuoka, Japan); see Photo 7.

Also Special lectures were given as what follows.

Special Lecture 1: Assessment of seismic damage extent by dynamic analysis and its application to microzonation - Prof. Ikuo Towhata (Tokyo, Japan) (Photo 6).

Special Lecture 2: Liquefaction-induced damage in the reclaimed lands along Tokyo Bay during the 2011 Tohoku-Pacific Ocean Earthquake in Japan – Prof. S. Yasuda, K. Harada (Tokyo Denki University, Japan).

Special Lecture 3: Seismic site amplification formula using average Vs instead of Vs_{30} and effect of soil nonlinearity – Prof. T. Kokusho (Tokyo, Japan).

Special Lecture 4: Standard buildings, structures, territories, acquirements of safety under tsunami impact- Dr. M. Klyachko, I. Nudner, V. Maximov, E. Peelenovsky, and V. Filkov (Original Alliance for disaster analysis and reduction ,RADAR, NPO, Saint-Petersburg, Russia).

Special lecture 5: Development of geotechnical approaches and design solutions on making slope processes stable on "Amur" road section in condition of frost degradation in foundation - Prof. S.A. Kudryavtsev, Y.B. Berestyany, E.V. Fedorenko, T.Y. Valyseva, R.G. Michailin, and E.D. Goncharova (Khabarovsk, Russia).

Several social and technical tours were also provided by the organizing committee of 4IGS in Khabarovsk (Far East Russia); see Photos 8 and 9.

The next venue of the 5th International Geotechnical Symposium on Geotechnical Engineering for Disaster Prevention and Reduction was decided to be Incheon, Korea, in May, 2013 under auspices of Korean Geotechnical Society, ATC 3 and University of Incheon. The chairman of organizing committee of 5IGS will be Prof. Eun Chul Shin, University of Incheon, South Korea.

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INTERNATIONAL SYMPOSIUM ON GEOTECHNICAL ENGINEERING FOR DISASTER PREVENTION AND REDUCTION (continued)

Photo 8 Reception at Russian Restaurant at Khabarovsk

Photo 9 Group photograph of technical tour to coastal area of Amur River

NEWS
The 4th Japan-Korea Geotechnical Engineering Workshop (Geotechnics for Human Security)

The 4th Japan-Korea Geotechnical Engineering Workshop was held in Kobe, Japan from July 6 to 7, 2011. It was organized jointly by Japanese Geotechnical Society (JGS) and Korean Geotechnical Society (KGS).

Under the success of previous workshops (the 1st Workshop in Seoul, Korea, in 1990, the 2nd Workshop in Tokyo, Japan, in 2008, and the 3rd Workshop in Ansan, Korea), the 4th Japan-Korea Geotechnical Engineering Workshop was held in Kobe, Japan, at the same venue as the JGS National Conference, with the main theme of "Geotechnics for Human Security". A total of 27 papers were submitted from JGS and KGS and the paper presentation was made in four sessions on the first day:

9:15 – 10:15 Session A
Earthquake and dynamic issues (4 papers)
10:30 – 12:00 Session B
Ground characterization, modification, and bearing capacity (6 papers)
13:00 – 15:00 Session C
Soil and rock fills, slopes, and excavations (8 papers)
15:15 – 17:30 Session D
Environmental issues (9 papers)

A technical site tour was conducted on the second day by visiting the places in the photographs.

- Miki Disaster Prevention Park
http://www.city.miki.lg.jp/english/tourist_hst_disa.html

The next workshop is planned to be held in some city in Korea, in the year of 2013. Both societies wish to continue strengthening the collaborations and friendship between members of the two societies through workshops.

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The 4th Japan-Korea Geotechnical Engineering Workshop (continued)

E-defense of Hyogo Earthquake Engineering Research Center
http://www.bosai.go.jp/hyogo/ehyogo/index.html

Hokudan Earthquake Memorial Park
http://www.nojima-danso.co.jp/index.php

Akashi Kaikyo Bridge http://www.jb-honshi.co.jp/english/bridgeworld/index.html

NEWS
TC302 OSAKA2011
International Symposium on Backwards Problem in Geotechnical Engineering

Yoshinori Iwasaki
Geo Research Institute

1. TC302 Osaka Symposium

The TC302 (Forensic Geotechnical Engineering, Chair Dr. V.V.S. RAO) had an International Symposium on Backwards Problem in Osaka from July 14 and 15, 2011 at Kensetsu-Koryu Kan in Nishi-ku, Osaka (about 150 participants from UK, USA, Ukraine, Kazakhstan, India, Korea, Taiwan, Nepal, and Japan). The Symposium was organized by a joint activity of TC302, ISSMGE (Chair V.V.S. RAO, India) and Research Committee on Forensic Geotechnical Engineering, Disaster Prevention Research Institute, Kyoto University (Chair Y .Iwasaki, Secretary M. Mimura, Japan) under the auspices of ISO Committee of JGS as well as Kansai Branch, JGS.

Photo 1 TC302 Chair Dr. V.V.S. Rao

2. Increases of Failures of Geotechnical Works

Recent geotechnical works become deeper in depth and bigger in size and tend to cause negative effects to the society as casualties of over 50 persons at Can Tho Bridge failure in Vietnam (2007/9/26). These are manmade accidents and the attitude of geotechnical engineering at present might have critical shortage in safety of the geotechnical construction. The Osaka Symposium tried to sound the reason of such failures of geo-construction and find solutions to improve the situation.

Photo 2 Group Photo TC302 OSAKA2011 July 14-15, Osaka, Japan

NEWS
TC302 OSAKA2011 (continued)

3.Papers presented in the Symposium

The Symposium started with the greeting welcome address by Dr. V.V.S. RAO, the Chair of TC302, followed by Dr. Iwasaki with the outline and objectives of the Symposium.

[Keynote Papers]
The first Keynote Lecture was given by **Prof. Malcolm Bolton**, University of Cambridge, UK, under the title of "Learning from Reality: Lessons from Centrifuge Models." He showed the slope failure that took place in Hong Kong in 1976 triggered by rainfall was not caused by seepage from surface but the increase of seepage pressure beneath the fill. Centrifugal test had clarified the mechanism of internal hydro-fractures that triggered failure.


Photo 3 Prof. M. Bolton


Photo 4 Prof. K. Ishihara

The second Keynote Lecture was given by **Prof. Kenji Ishihara**, Chuo University, Japan, under the title of "Collapse of Braced Excavation in Singapore." He pointed out the big difference of geotechnical condition between the assumed design and the reality. The field studies after the Nicoll Highway Collapse on 20 April 2004 revealed that failed part of the temporary retaining wall corresponded to an ancient narrow river that deepened thick soft marine clayey layer.

Photo 5 Prof. Y. Shioi on Can Tho Bridge


Photo 6 Prof. A. Asaoka

NEWS
TC302 OSAKA2011 (continued)

The third Keynote Lecture was delivered by **Prof. Yoshitake Shioi,** Prof. Emeritus, Hachinohe Institute of Technology, Japan, who was a committee member of Governmental Investigation for Can Tho Bridge failure on September 26, 2007 in Vietnam. He was the only committee member from Japan. Prof. Shioi showed the special characteristics of the soft clay in the region and proposed to introduce creep characteristics into the design of the bridge foundation. The accident occurred during the process of lifting PC girder from the ground to top of the piers. The vertical member to support the girder had been buckled due to the inclination of the foundation of 12mm/400m with settlement of about 35mm.

In Singapore, the construction was rather heavily instrumented but appropriate observational procedure was not performed. In Vietnam, no attention was paid to monitor the movement of the tilting of the foundation as well as settlement during the lifting of the girder.

The fourth Keynote Lecture was given by **Prof. Akira Asaoka, Prof. Emeritus, Nagoya Univ.,** who introduced the delayed consolidation caused by extreme sensitive clay that is often difficult to deal with in conventional consolidation theory.

Photo 7 Dr. K. Ito

Photo 8 Dr. R. Hwang

The last Keynote speaker was **Prof. Toshihiko Omoto**, Kyoto University, Japan, who specialized and qualified himself as an international member of board of dispute on construction. Dr. Omoto introduced the enrollments of dispute board in the international construction to avoid critical dispute of the construction as well as to secure the safety of the construction.

Two current topics of Tsunami as well as nuclear power problem were also introduced. **Dr. Masanobu Shishikura**, Geological Survey of Japan, showed historical evidence of the tsunami deposits caused an ancient huge tsunami just like the one of March 11, 2011 in the northern East region Japan.

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TC302 OSAKA2011 (continued)

Photo 9 Prof. Y. Nemchynov

Photo 10 Dr. M. Shishikura

Prof. Yuriy Nemchynov, NIISK, Kyiv, Ukraine, presented the process of covering the nuclear power plant at Chernobyl (Ukraine) to control the radioactive contamination. He also demonstrated structural and geotechnical aspects of this nuclear power plant disaster and recovering progressing of international joint project (USA, France, Ukraine) since 1986 till 2011.

[Investigation Method] Prof. Askar Zhussupbekov, Columbia University, USA, presented Remote Methods Research System and Base Foundation above Ground Building, which refers to some mysterious application of "bio-location." This interesting method came from Russian military service for obtaining submarines with this biolocation.

[Earthquake Geotechnical Engineering] Prof. Susumu Iai of Kyoto University discussed "Backwards problem for Earthquake Geotechnical Problem."

[Anchored Wall] "Failure of Anchored Wall in Korea" was presented by **Prof. Myoung-Mo Kim** and "Simulation of Failure of Anchored Wall by Centrifugal Model Test" was presented by **Dr. Kazuya Itoh**, National Institute of Occupational Safety and Health.

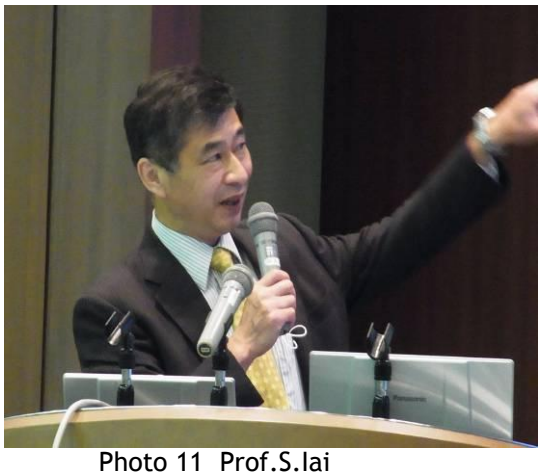

Photo 11 Prof.S.Iai

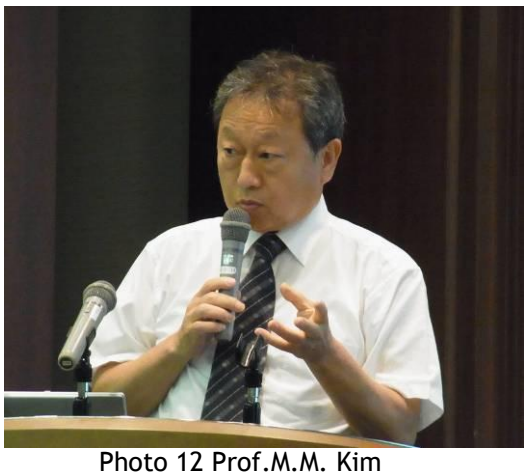

Photo 12 Prof.M.M. Kim

NEWS
TC302 OSAKA2011 (continued)

Photo 13 Prof. M. Mimura

Photo 14 Prof. B. Hsung

[Settlement] Prof. Mamoru Mimura, Kyoto University, reported the special characteristics of long term settlement at Kansai Airport, Japan.

[Excavation and Subway Construction] Case study on failure and damage to metro construction includes "Piping failure of a Metro Tunnel Construction" by **Prof. Wei Lee** of National Taiwan University of Science and Technology, "Damages to metro tunnels due to Adjacent Excavation" by **Dr. Richard Hwang**, Moh and Associates, Taiwan, "Rethink of Failure of Underground Construction" by **Prof. Benson Hsiung** of National Kaoshung University of Applied Science, "A Soil Water Coupled Finite Element Analysis of Open-Cut Excavation for Soft Clay Deposit by elasto-viscoplastic Model" by **Prof. Yosuke Higo**, Kyoto University, "Forensic Analysis of Failure of Shoring Piles" by **Dr. Santosh Rao**, Naghadi Consultants, India, and "Backwards Analysis from Retaining Wall Systems by Sheet piles based upon Lateral Wall Displacement in Soft Ground, St. Petersburg " by **Prof. Kenji Okajima**, Mie University, Tsu, Japan.

Photo 15 Prof. W. Lee

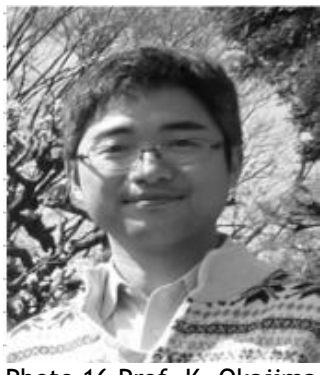

Photo 16 Prof. K. Okajima

Photo 17 Prof. Y. Higo

NEWS
TC302 OSAKA2011 (continued)


Photo 18 Prof. A. Mochizuki


Photo 19 Prof. A. Zhussupbekov

[Reinforced Soil] Prof. Satoru Shibuya, Kobe University, presented "Case Study on Causes and Countermeasures of Largely Deformed Reinforced Earth Wall with Geotextile in Hyogo, Japan." **Prof. Eun Chul Shin**, University of Incheon, Korea, presented "Case Study of Reinforced Earth Wall Failure during Extreme Rainfall."


Photo 20 Prof. E.C. Shin


Photo 21 Dr. S. Rao

[Slope Stability] Prof. Akitoshi Mochizuki, Prof. Emeritus, Tokushima University, Japan, showed that the total stress analysis provides an effective method for "A Failure of a Cut Slope and Deterioration of Shear Strength due to Weathering."

[Geo Code] Prof. Askar Zhussupbekov, Eurasian National University, Astana, Kazakhstan, introduced problems in Kazakhstan by "Forensic Issues of Adaption of Eurocodes of Geotechnical Engineering to Kazakhstan Geotechnical Norms."

NEWS
TC302 OSAKA2011 (continued)


Photo 22 Prof. T. Adachi

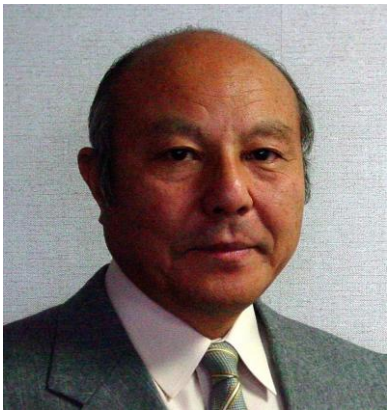
Photo 23 Dr. Y .Iwasaki


Photo 24 Prof. S. Shibuya

[Safety of Geo-Construction] Dr. Yoshinori IWASAKI, Geo Research Institute, Osaka, Japan, showed a case study how to apply Observational Method (OM) presenting "An Alternative Approach as OM Inferred from Monitored Data to Avoid the Failure of the Geotechnical Excavation in Singapore." **Prof. Toshihisa ADACHI**, Geo Research Institute, expressed his experiences as "Enrollments of Technical Committee and Geoinformatics for Geo-construction."

Failures may be divided into two groups "during construction" and "after construction." Observational method has been proposed by Terzaghi and Peck for the safety of the geotechnical works and practiced in the past.

Failures during construction have been attributed to mainly two reasons. One is the difference between the assumed failure theory and conditions in the design and the reality (Bolton, Ito, and Ishihara). Another important point is the difficult local soils (Asaoka, Lee, Mimura). The misuse and/or practice without OM during the construction cause failure of construction (R. Hwang, B. Hsiung, and Y. Iwasaki).

Failures after the construction were caused by different causes of changes of characteristics of deformations (Shibuya) and strength (Kim, Mochizuki, and Shin).


Photo 25 Prof. A. Iizuka


Photo 26 Prof. T. Omoto in discussion

4. Panel Discussions

Discussions were focused upon characteristics of local soils that may lead to critical failures and practical case study of OM for geotechnical constructions. **Dr.Tara Nidhi Lohani,** Geo Research Institute, discussed local sensitive soft clay in Osaka based upon data base of geotechnical borings in Kansai Area. **Prof.**

NEWS
TC302 OSAKA2011 (continued)

Atsushi Iizuka, Kobe Univ., Japan, reported an application of OM for highway embankment on very sensitive soft clayey ground. **Dr. Takahiro Konda**, Geo Research Institute, showed OM approach for subway shield machine in urban area in Osaka.

One of the key approaches for OM consists of some interactive design process that is continuously fed back between the predicted design and monitored reality.

Prof. Omoto, Kyoto Univ., suggested the best way to extract insurance money, if happened. Usually, owner and contractor applied for insurance separately in the past. However, the best way is that the both owner and contractor apply to united insurance.

Prof. Iizuka commented the specialty of geotechnical engineering work among other constructions within the frame work of WTO (world trade organization). WTO defines the structures neither by its shape nor its dimensions but its performance. It is commonly difficult to define "performance" before confirming the geotechnical characteristics in the field. **Prof. Iizuka** insisted that the design should be verified during the construction phase to obtain the best estimate of the expected performance in the future, which might be made easier by rather united contract of "design and built" than independent contract respectively.

Failure of Nicoll Highway

During the Symposium, special attention was focused upon the possible causes to trigger the disaster. Dr. Y. Iwasaki suggested that if the deflection of the retaining wall had been compared to appropriate failure strain of jet grouted slab under horizontal compression as well as asymmetry of the deflection, some countermeasures could have been provided to avoid the final failure.

Dr. R. Hwang pointed out the possibility of effect of the incompleteness of jet grouted slab due to the electric cable line that existed across the area to be excavated.

Dr. Hwang pointed the misuse of assumption of the bottom of installed inclination pipe as fixed point to compute the horizontal deflection along the pipe. The guide pipe for inclinometer is usually inserted into "hard layer" and assumed as "the bottom as the fixed point." This assumption has been commonly adapted in the geotechnical practice and was wrong in most cases (Hwang, Hsiung, and Higo). To avoid the wrong assumption, the displacement of the top of the guide pipe should be monitored.

Photo 27 Group photo at the Reception of TC302 Osaka 2011

NEWS
TC302 OSAKA2011 (continued)

Reception

A reception party was held in the evening of the first day of the Symposium. During the reception, Prof. Askar Zhussupbekov, the Vice President of ISSMGE for Asia, expressed his deep thanks to Dr. V.V.S. RAO, Dr. Y. IWASAKI, and Prof. M. MIMURA for their contributions to activate the interactive exchange of geotechnical engineering in Asian region.

Photo 28 Prof. Askar, Vice President of ISSMGE in Asia, expressed his gratitude to organizing TC302 Osaka.

Technical Trip

On July 17, a technical site visit was arranged to Kansai Airport, where expected settlements are more than 10m. The extensometers and countermeasures to adjust differential settlement of large structures including passengers building were very special and interesting. Technical details were explained by Mr. Yukio Nakatani, Leader, Dep. of Civil Engineering, Construction Office, Kansai Airport Company.

Next Conference (Symposium) of TC 302 will take place in Bangalore (India) in 2013.

NEWS
TC302 OSAKA2011 (continued)

Resolution

Discussions revealed that main reason of failure in geotechnical construction is the difference between assumed conditions during design stage and the real site conditions including the local special soil. The effective countermeasure to this problem is given through only "Observational Method (OM)." At present, most big projects are funded to install sensors to monitor construction performance. Conducting monitoring does not necessarily mean an OM and sometimes resulted in critical failure like as in Singapore and Vietnam. We have to create guidelines of OM in geotechnical engineering to provide the background, preparatory procedures, initial design including study of possible modes of deformation and failure, arrangement of countermeasures, selection of monitoring items and sensors, and interactive design as feeding back process based upon monitored results. The guideline is intended to be a draft of an international standard of "Observational Method in Geotechnical Works" that may be discussed in the technical session of ISO/TC182.

The Osaka International Geotechnical Symposium adapted the following resolutions.

July 15, 2011

Resolution of TC302 Osaka Symposium

TC302 conducted an International Symposium in Osaka on July 14-15, 2011 and discussed the emerging topic of forensic geotechnical engineering. The main causes which trigger failure in geotechnical constructions were recognized as differences between design assumptions and reality.

Peculiar soils like very soft sensitive clays which can exhibit prolonged settlements due to changes of load, and silty sands which can exhibit piping failure under hydraulic gradients, were discussed as important factors in embankment and excavation works respectively.

Unusual slope failure mechanisms were identified from centrifuge model tests, and the forensic examination of a variety of earth retention failures in the field indicated that ground distortion mechanisms could not always be predicted.

The Observational Method was identified as a key tool for reducing construction costs whilst maintaining safety and serviceability in geotechnical design. The installation of measuring devices for construction monitoring has become common but the monitored data are not always interpreted, and this has sometimes led to failures. This can arise when the designer does not clearly specify the expected ground deformation mechanism, or does not set appropriate alarm levels. Other possible reasons are the inadequate installation of instruments, or the lack of a capable geotechnical engineer on site during the critical stages of construction.

Since its incorrect application can result in the necessary application of Forensic Engineering, TC302 proposes to work with other interested parties to clarify and refine best practice in the use of the Observational Method in geotechnical engineering. We therefore seek to include this activity in the terms of reference of TC302, and we will invite TC 206 (Interactive Geotechnical Design) and TC304 (Engineering Practice of Risk Assessment and Management) to do likewise, so that a joint report can be produced. It is proposed that a symposium be jointly organised to disseminate findings, and to seek contributions from ISSMGE members that demonstrate the state of the art

REPORT FROM MEMBER SOCIETIES

Thai Geotechnical Society and A review of some important geotechnical works in Thailand

Background of the society

Thai Geotechnical Society, TGS, was originally formed as one of the technical committees of the Engineering Institute of Thailand, EIT, under HM The King patronage in 1993. From then on, it has played an active role in promoting technical advances and research activities in the field of geotechnical engineering in Thailand. With increasing demand in its activities, the committee decided to establish TGS in 2008 and joined the International Society for Soil Mechanics and Foundation Engineering in the same year. Currently the numbers of Thai geotechnical engineers are estimated to be around 2,000 and are working in the country and abroad.

Geotechnical engineering in Thailand

Geotechnical engineering has first been recognized as an important field in its own right in Thailand in 1960's, following the guidance of Professor Chai Mukthabhan of Chulalonkorn University, who is regarded as the Father of Soil Mechanics in Thailand (Fig. 1). Establishment of the Asian Institute of Technology (AIT) in Thailand in 1959 has also been a major impact to geotechnical engineering in Thailand. AIT has been at the forefront in introducing the subject to the country, thanks to pioneering works of such academics as Professor E.W. Brand, Professor Z.C. Moh, Professor J.D. Nelson, Professor A.S. Balasubramaniam, Professor D.T. Bergado, Professor Prinya Nutalaya, and many others. Moreover, AIT has produced many good quality researches, and has been the focal point of geotechnical education in the region. Nowadays, there are more than 30 universities in Thailand that offer graduate programs in geotechnical engineering. As part of infrastructure development in the country, geotechnical engineers have played an important role and many core members of the TGS have been actively involved in the development. Some of the major projects are described in what follows.

Fig. 1 Professor Chai Mukthabhan, Father of Soil Mechanics in Thailand

Soft Bangkok Clay and some related geotechnical problems

The city of Bangkok and surrounding area are situated over a thick deposit of soft clay. The subsoil consists of the layer of top crust underlain by the soft to very soft clay, which has the thickness of about 8 to 15 meters. The water content of the soft clay is ranged from 45 to 120 %. The liquid limit ranges from 40 to 120%. The shear strength of soft Bangkok clay is quite low, ranging from 6 to 25 kN/m^2. The soft to very soft clay layer is underlain by the medium and then stiff clay layers. Considering the difficult ground conditions, geotechnical engineering plays important roles in the construction in Bangkok and vicinity area. Many researches have been investigated in order to accurately predict the behavior of soft Bangkok clay.

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

Regarding earth retention system, conventional sheet pile with bracing system is normally used for the temporary excavation, which means the excessive lateral displacement cannot be avoided in some area. Diaphragm walls are normally used as a permanent structure for deep excavation. Barrette piles are cooperated in the diaphragm wall to increase the stability of the system and have proved to be successful. However, some failure happened and the lesson has been learnt. The collapse during construction of an inlet pumping station in 1997 brought concern to geotechnical engineers in Thailand about the design of deep excavation without adequate attention to the instrumentations and monitoring system. Due to the high demand in underground space utilization in Bangkok, there have been a relatively larger number of deep excavation projects, in the recent decades (Fig. 2).

Fig. 2 A boom in utilization of underground space in Bangkok

The post-construction excessive settlement is also the main problem of the earth structure in Bangkok area. Many highway embankments faced this problem directly which prompted numerous detailed studies to be performed to monitor and study the settlement behavior of the highway. One of the most detailed studies about consolidation behaviour of soft Bangkok clay was conducted for the Suvarnnabhumi International Airport (Fig. 3).Various methods for improvement of the soft clay have been used, such as conventional PVD preloading, soil cement columns, pile foundation, vacuum consolidation, etc. Most of the ground improvement works were successfully executed with relatively few technical obstacles. Today, prefabricated vertical drain is commonly used in highway construction. The technique has been proven to be successful in many highways. Another technique for reducing the excessive settlement is to transfer the embankment load to the firm stratum based on the pile foundation concept. In the past concrete pile has been used in highway construction but were not satisfactory due to the high construction cost. Therefore, soil-cement column technique has been studied and used in the recent highway construction because of more acceptable cost than concrete pile and shorter construction period than the vertical drain technique.

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

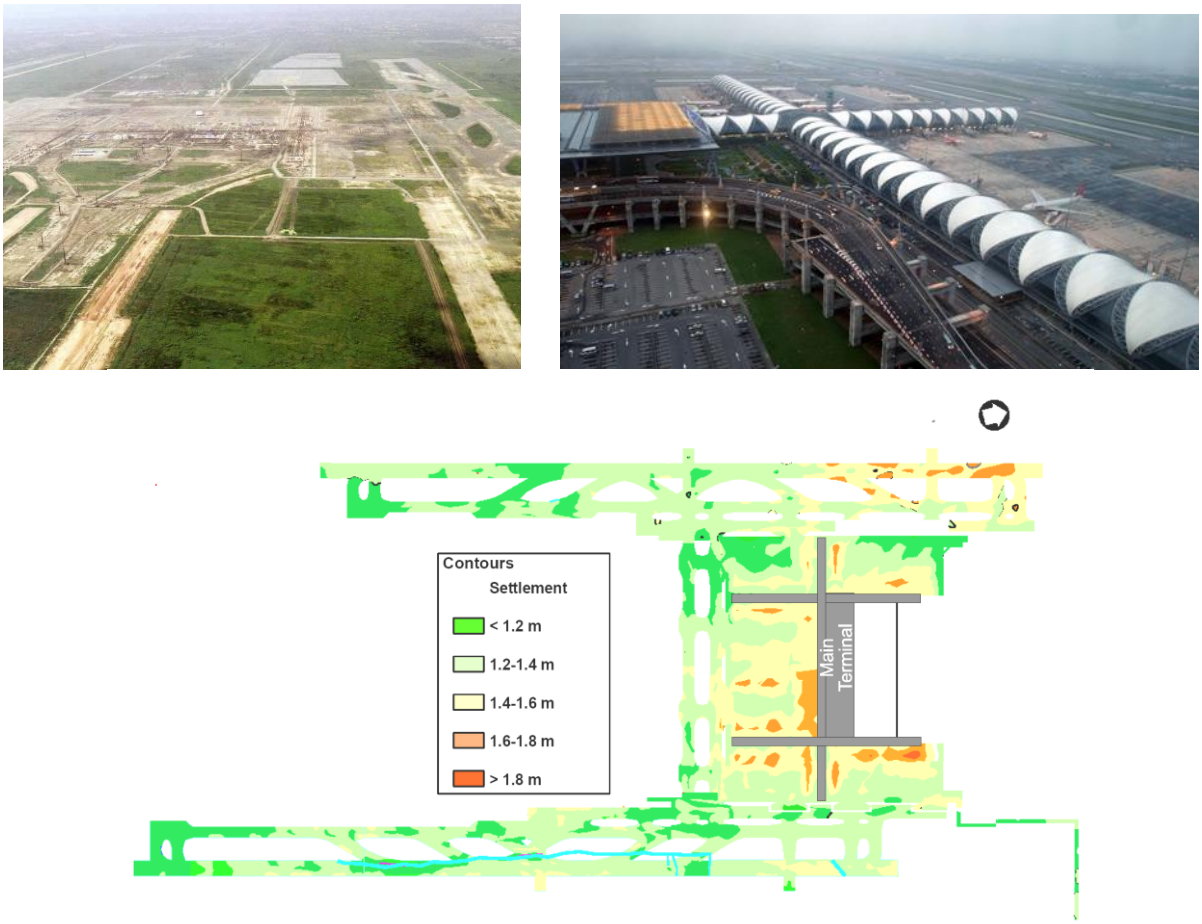

Fig 3 Suvarnabhumi International Airport and the contour of ground settlement at the end of preloading period

There are however some problems related to the use of soil-cement column as retaining structure in excavation of soft Bangkok clay and failures have been experienced in some projects (as shown in Fig. 4). These are related to two main reasons, namely 1) the variability of shear strength of the improved soils, and 2) the improved soil which is still very low in tensile strength due to presence of inherent defects. The success of the technique thus highly depends on quality control during making of cement columns. Many core members of the Thai Geotechnical Society have been active and instrumental in understanding and solving the problem (Fig. 4).

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

Fig. 4 Use of soil cement column in excavation of canal in the soft Bangkok clay, upper photo shows some related instability problem which had been solved and the lower photo shows the canal after completion

Tunneling

Tunneling activities in the soft Bangkok clay have been ongoing since 1990's. There have been numerous 3.2-m-diameter flood drain tunnels in Bangkok. In fact, the city was once the busiest place in the world in terms of the amount of pipe jacking tunneling activities. This situation has also proved very challenging in terms of tunneling-underground structure interaction (Fig. 5).

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

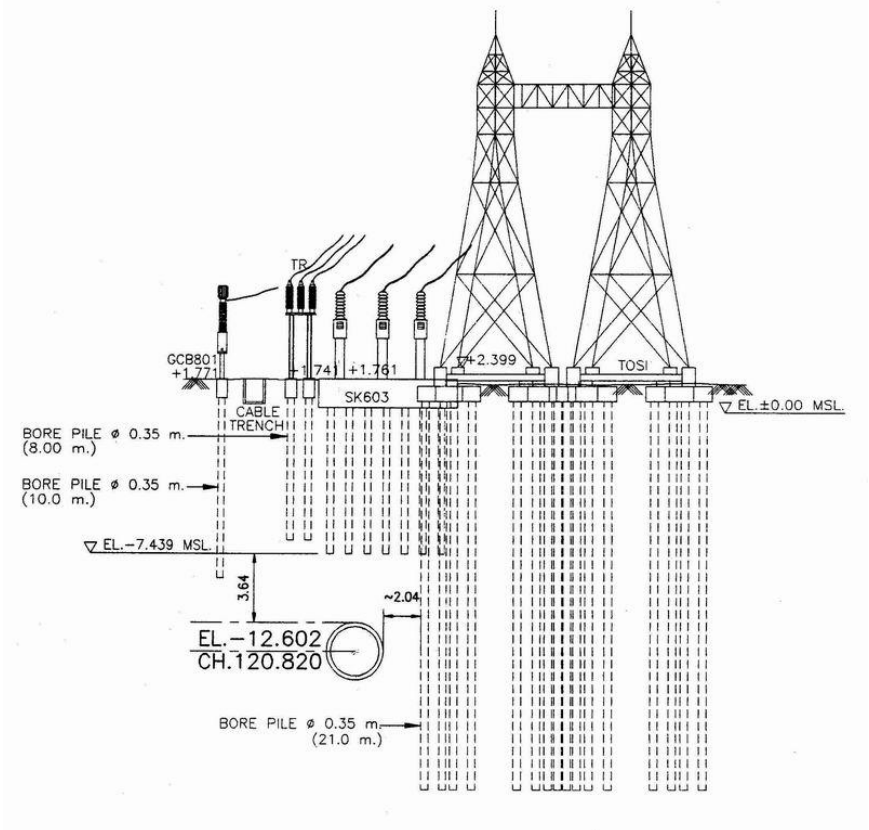

Fig. 5 Some tunneling activities and challenging situation in Bangkok

There is currently one underground railway line in Bangkok, the so-called MRTA blue line. One portion of this line is located underneath a street in the China town of Bangkok, where an underground station is also located (Fig. 6). Since this street is one of the busiest streets in Bangkok, closure of any traffic during station construction was not possible. As a result, the innovative mining method was proposed to construct the station. More underground lines are under the designing phase and are expected to operate in the coming decade (Fig. 7).

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

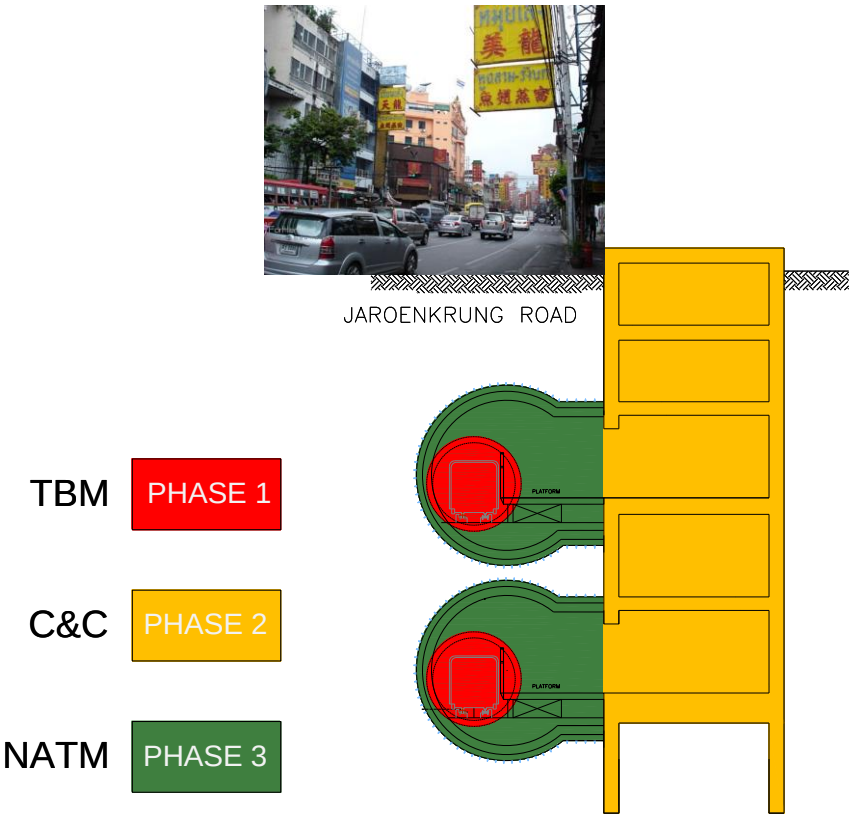

Fig. 6 Construction of a subway station in the China town of Bangkok

Fig. 7 Some tunneling activities for the MRTA system in Bangkok

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

Other tunneling projects in difficult grounds such as slaking rocks, such as siltstone & mudstones, in Thailand have been carried out successfully for the pumped storage power house project in Lamtakong as shown in Fig. 8.

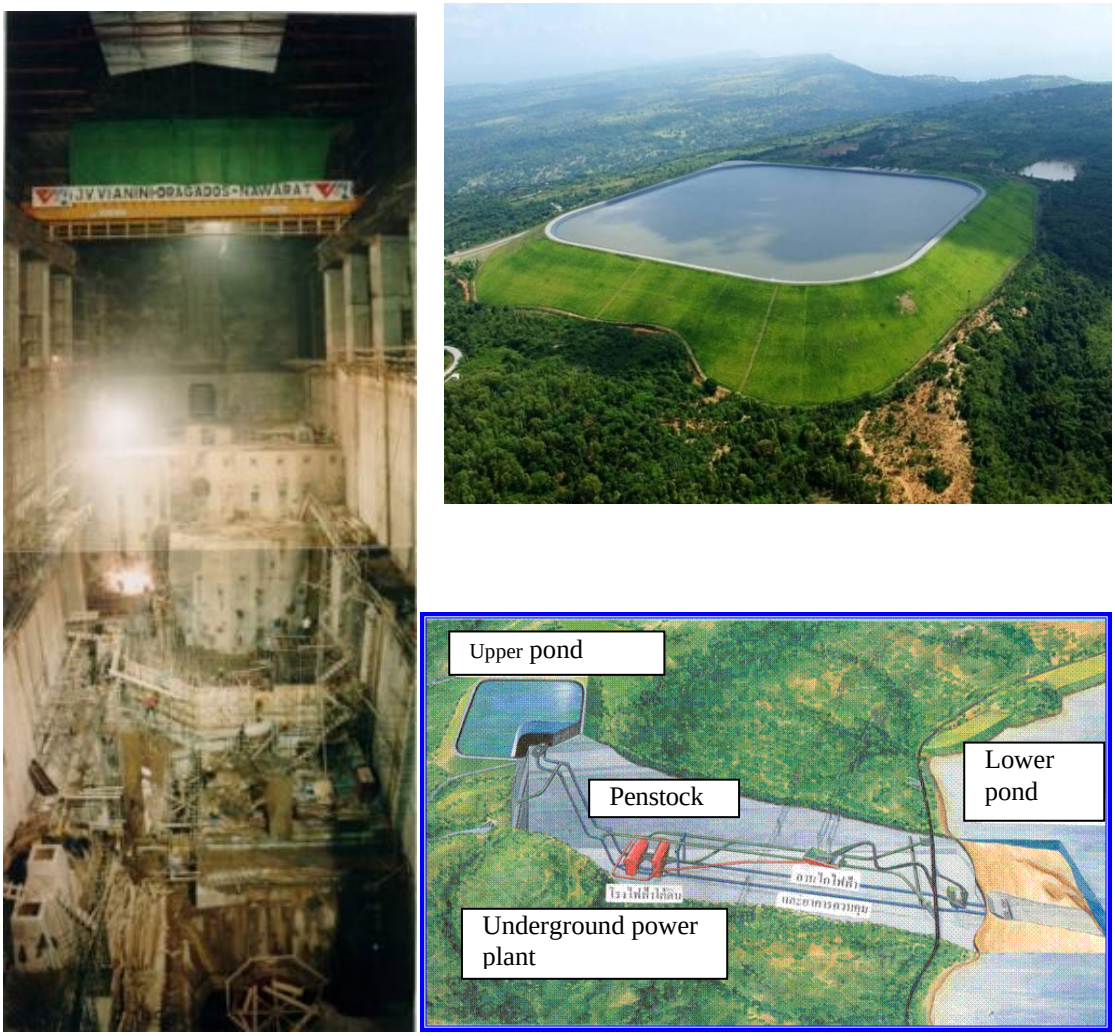

Fig. 8 Lam-ta-khong pumped storage project

Dams and the challenge

A number of large dams have been constructed in Thailand since 1960's. Thai engineers have become more confident in design, construction, evaluation and monitoring of such dams both in the country and neighboring countries such as Laos and India. For example, Thadan Dam in Nakornnayok Province, (Figs. 9 to 11) was once the largest roller-compacted concrete (RCC) dams in the world, constructed for irrigation purpose and more recently for electricity generation as well. In addition, many young Thai geotechnical engineers, researchers, and students had their opportunities to conduct various research based on real problems encountered during the construction, operation and maintenance of the dams.

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

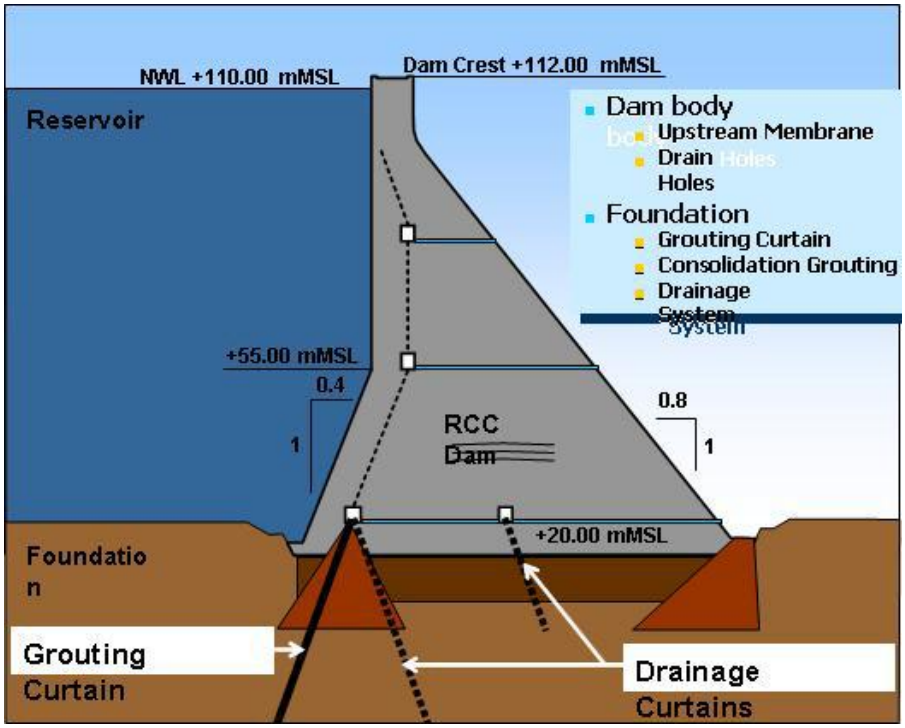

Fig. 9 Thadan dam – cross section for design

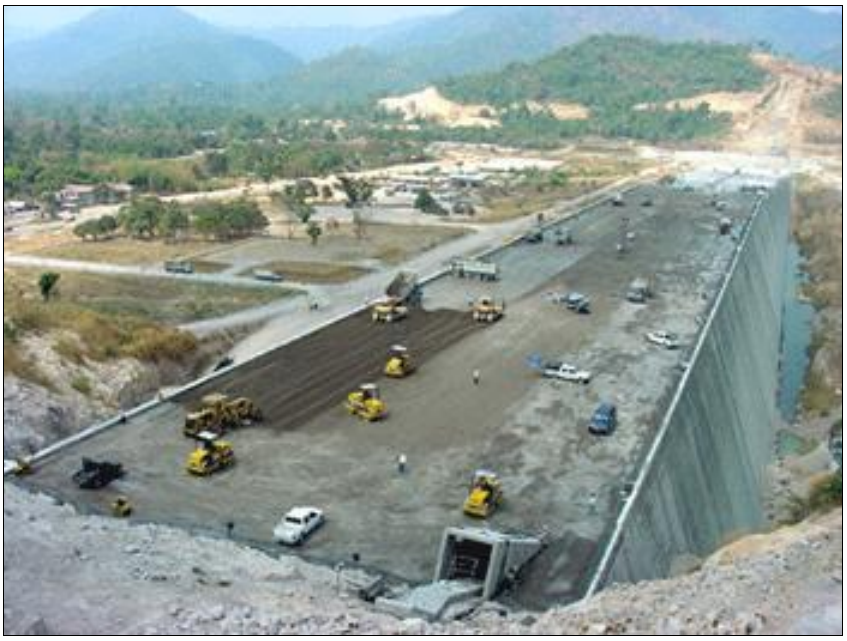

Fig. 10 Thadan dam - during construction

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

Fig. 11 Thadan dam - after completion

Landslides and other disasters

There has been a high demand of development near or on hillslopes, particularly in popular tourist resort towns such as Phuket, Samui, and Koh Chang. Thai geotechnical engineers and academics have been active in developing a safer design and construction method of foundation as well as slope stabilization method. The popular stabilization techniques include use of geosynthetics in reinforced soil slopes, soil nailing, horizontal drainage, as well as bio-stabilization such as vetiver grass utilization as well as natural geotextile (soil blanket) or limited-life geotextile (Fig. 12).

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

In addition for natural landslide such as debris flow, the geotechnical engineers are also developing the early warning as well as hazard mapping, based on geotechnical engineering method, GIS and remote sensing technique (Fig. 13).


To test the effectiveness of the soil blankets and cushions

Fig. 12 Challenging situations for slope engineering in Thailand, Construction of reinforced soil slope, vetiver grass utilization and soil blanket in slope protection

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

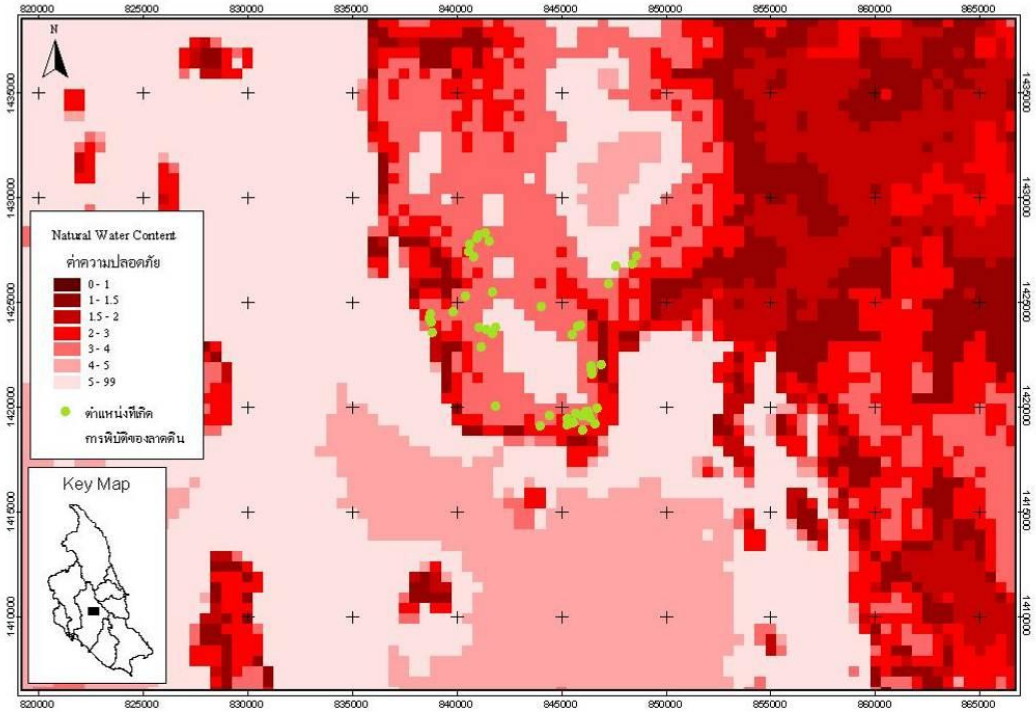

Fig. 13 Development of hazard mapping and early warning for large area landslide (contour showing Factor of Safety and its calibration with real landslide areas)

Education and international activities

TGS also encouraged a number of education and international activities such as conferences and short courses. Indeed, Research & Development has been growingly recognized as the important part of education and industry in Thailand in the recent decades. The first physical-modeling centrifuge apparatus has been manufactured in Thailand since 2005 and has been used both for research and practical work at King Mongkut's University of Technology, Thonburi (Fig. 14). Unsaturated soil mechanics has been taught in several universities in Thailand and has been gaining more practical use in analysis of soil-atmosphere interaction and landslide analysis. Several international conferences that TGS has supported include the followings.

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

Fig. 14 The first physical-modeling centrifuge apparatus manufactured in Thailand

In 2010, the Department of Highways of Thailand, with the support of TGS, organized the International Conference on Slope in Chaingmai which was very well received by many engineers from around the world.

In 2011, Geotechnical Engineering Research and Development Centre, Department of Civil Engineering at Kasetsart University, will organize the 5th Asia-Pacific Conference on Unsaturated Soils, which is supported by the Technical Committee 106 (unsaturated soils) of the ISSMGE and TGS (Fig. 15), with strong emphasis on various aspects of geotechnical practice including slopes and climate change problems. The conference will be held in Pattaya during 13-15 November 2011.

In 2012, the Thai Underground and Tunnelling Group, TUTG, of EIT will host the World Tunnel Congress, one of the most important events in the world of Tunneling, in Bangkok (Fig. 16).

Thai Geotechnical Society will continue to be proactive in collaborating with geotechnical engineers from around the world, thus contributing to the advancement of the profession both in the country and the region.

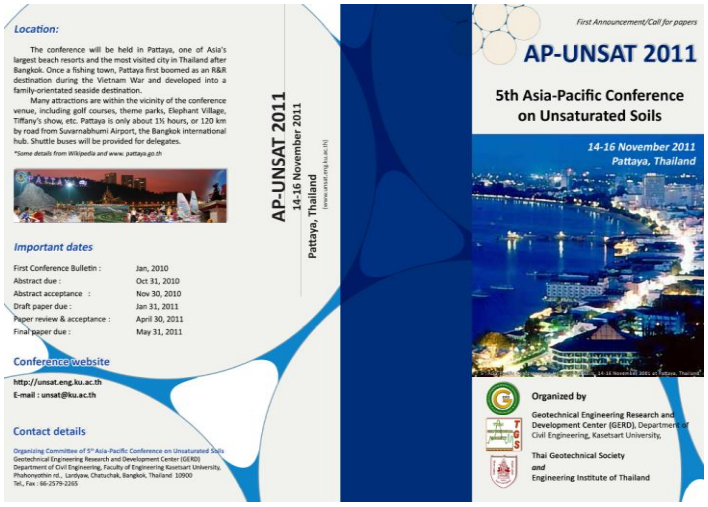

Fig. 15 AP-UNSAT 2011 conferences supported by TGS and EIT

REPORT FROM MEMBER SOCIETIES
Thai Geotechnical Society (continued)

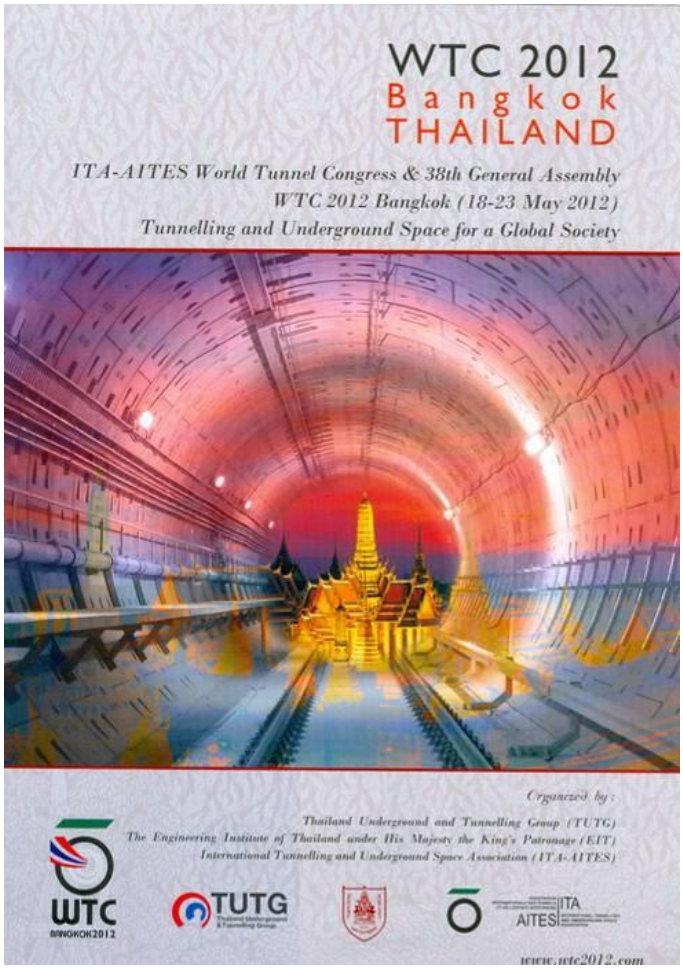

Fig. 16 WTC 2012 supported by TGS and EIT

REPORT FROM MEMBER SOCIETIES

CHINESE TAIPEI GEOTECHNICAL SOCIETY

Established in 1997, Chinese Taipei Geotechnical Society (CTGS) is a non-profit organization and has been dedicated to geotechnical researches as well as the advancement in geotechnical technology. It is currently one of the most active societies in the field of geotechnical engineering in Asia with both over 300 individual members and 24 group members that are actively participating from government, industry-related agencies, and academia.

Our missions include:

1. researches, development, and promotion of geotechnical-related science and technology,
2. collecting a rich database of geotechnical books, journals, and information,
3. taking projects from field-related agencies and offering consulting services,
4. providing the geotechnical regulatory reference and educational opinion to government,
5. maintaining the worldwide network of geotechnical society and exchanging information,
6. society publications of newsletters, journals and other related books, and
7. elevating the status of civil engineers.

We have set up 7 committees to promote our organization affairs:

- Organization Affair and Member Committee: to develop short and long term plans for the organization, member recruiting, membership assessment, and intercommunications.
- Academic Event Committee: to organize academic events and collect related information.
- Research and Development Committee: to promote the academic researches and technology development, set up regulations for geotechnical engineering, and offer consulting service.
- Education Promotion Committee: to introduce courses about geotechnical engineering, teaching materials, and new information to educational agencies.
- Technology Committee: to exchange knowledge and technology with international groups, keep records for the experiences, and demonstrate the achievements.
- Award Committee: to set up the standards for evaluation and new awards.
- Working Group on Specifications: to collect geotechnical engineering regulation-related information and participate in industrial conferences.

CTGS 8th President: Prof. San-Shyan, Lin, National Taiwan Ocean University

REPORT FROM MEMBER SOCIETIES
CHINESE TAIPEI GEOTECHNICAL SOCIETY (continued)

In order to boost exchanges of Geotechnical knowledge, CTGS issues quarterly publications and research reports in addition to hosting national and international conferences, site visits, and lectures regularly (http://www.tgs.org.tw).

From 25th to 26th, August 2011, the 14th Taiwan Geotechnical Engineering Conference & Seminar was just held at Aspire Resort, Longtan Township, Taoyuan, Taiwan. Including 8 subjects, the main theme of the conference is "Disaster Prevention & Sustainable Development". There are 240 submitted papers, presented either in oral or in postal. There were over 300 attendees from government, industry-related agencies, and academia.

Eight awardees and President Lin in the Closing Ceremony on 26th August at Aspire Resort Longtan, Taoyuan, Taiwan.
14th Taiwan Geotechnical Engineering Conference and Seminar

Except the hosting of Bi-annual National Taiwan Geotechnical Engineering Conference and Seminar, we also serve our members:

1) delivery of related field messages of lectures, seminars & conferences through Internet, E-mail and Newsletters,
2) to hold (or to co-orperate) the "hot topic" seminar and try to release these research/results as books, and
3) to coordinate the related field societies and institutions to have some professional learning tour for both teaching & interaction functions.

REPORT FROM MEMBER SOCIETIES
CHINESE TAIPEI GEOTECHNICAL SOCIETY (continued)

Jun.21, 2011 hosting a lecture, hosted by President Lin

Sub1:Tip Grouted Drilled Shafts with Full Depth Temporary Casings for Two Mississippi River Bridges. By **Dr. Steven Dapp** from Dan Brown and Associates

Sub2: Some Case Examples on Tip Grouting of Drilled Shafts in Taiwan, By **Dr. H.H. Hsieh**

Message from Corporate Associates

150 Years of HUESKER
Our Trademark – the Finest Minds

Mr Manfred Balzer, qualified engineer and Managing Director of HUESKER Synthetic GmbH in Gescher, Westphalia, proudly announces: "There are not many companies lucky enough to be able to celebrate their 150th anniversary". Thanks to the innovative orientation and potential of HUESKER's excellent staff, the company has become an international market leader since it was established 150 years ago. The slogan clearly reveals its position: "HUESKER – Engineering with Geosynthetics". The continual search for the optimal solution for HUESKER's customers has resulted in numerous patents. HUESKER's engineers are always on the scene. Today, HUESKER is considered one of the hidden champions of German medium-sized companies.

Mr Balzer sums up the company philosophy: "Our employees are our greatest asset and they continue to make all the difference. Competence, reliability and a committed search for the optimal solution – these factors form the basis of HUESKER's success". Highly qualified, motivated and experienced staff guarantee consistent outstanding product quality and functional solutions. "All our activities are focused on our customers and their requirements to which we dedicate our efforts with a high degree of flexibility and competence. Our entire expertise and experience therefore serves our customers around the globe" emphasizes Mr Balzer.

Company Development

The company HUESKER was founded as H. & J. Huesker & Co. in December 1861 in Gescher, Westphalia, as a cotton weaving mill. The following years were marked by a period of rapid industrial expansion in Germany. In 1958 the company recognised the excellent development opportunities for synthetic textiles. This began with the manufacture of filter fabric sheets and sandbags. The continual expansion of the product range resulted in the foundation of HUESKER Synthetic as an independent medium-sized company in 1973. Now it is a global player with an international sales network and numerous subsidiaries. Today, HUESKER geosynthetics are used in the construction industry. Industrial and agricultural textiles are further, rapidly expanding product ranges of the company.

Products

As individual as the requirements are, HUESKER's range of products and their different applications are just as varied. The standard product range includes synthetic textiles, geogrids, composite materials and clay sealing strips. The portfolio is rounded off with nonwovens, drainage mats and erosion protective mats (see table opposite). In addition to this standard range, HUESKER develops individual solutions for various structural engineering applications using a high degree of technical expertise and the company works together closely with customers, engineering companies, research and testing institutes. In this context geosynthetics bear a functional responsibility and therefore require long development and test phases which involve extensive approval and certification procedures. Certification of HUESKER's products is consistently verified. External and internal quality controlling and monitoring in HUESKER's own accredited laboratory guarantee a consistently high product quality.

Thus HUESKER offers the most diverse structural engineering solutions all over the world. For example, implementation of projects ranging from earthworks and foundation engineering, road, railway and airport construction projects to hydraulic engineering, landfill construction, redevelopment of industrial and contaminated soils as well as asphalt reinforcement.

Message from Corporate Associates

Tensar International Limited

Tensar is a worldwide leader in the manufacture and provision of soil reinforcement and ground stabilisation products and systems. Our expertise and experience has been accumulated over several decades of successful collaboration in projects internationally. Our service team, comprising many qualified civil engineers, provides practical and best value advice and design to support the use of Tensar products and systems in your application.

Tensar mechanical stabilisation of a temporary causeway over tidal mud flats, Australia

TensarTech TW1 Earth Retaining System uses site-won fill for walls up to 8m high and 200m long, UK

Tensar geogrid provides cost savings of 20% and increases bearing capacity of the ground by 40%, China

SierraScape® System utilises non-corrodible geogrid reinforcement that allows a wide variety of backfills, USA

Contact person: Mrs Chaido Doulala-Rigby (Yuli), MICE CEng
Chief Civil Engineer

Address: Tensar International Limited, Cunningham Court
Shadsworth Business Park, Blackburn BB1 2QX, UK
Tel: +44 (0)1254 266809 Fax: +44 (0)1254 266873
crigby@tensar.co.uk www.tensar-international.com

Event Diary

ISSMGE SPONSORED EVENTS

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

2011

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

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

The Second Italian Workshop on Landslides - Large slow active slope movements and risk management
Date: 28 - 30 September 2011
Location: Cloister of SS. Marcellino & Festo, Naples, Italy
Language: English
Organizer: CIRIAM and DIGA
• Contact person: B. Avolio; G. Carrieri, A. Parente (Technical Secretary); A.M. Rinaldi (Administrative aspects)
• Address: Via Roma, 29
81031 Aversa (CE)
Italy
• Phone: 39 081 5010341-5010262 (Tech.); 081 5010381 (Adm.)
• Fax: 39 081 5010382
• E-mail: info@iwl.unina2.it (Tech.); ciriam@unina2.it (Adm.); alfonsomaria.rinaldi@unina2.it (Adm.)
Website: iwl.unina2.it/

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

TC207 workshop on Soil-structure Interaction and Retaining Walls
Date: 5 - 8 October 2011
Location: Valamar President Hotel , Dubrovnik, Croatia (Hrvatska)
Language: English
Organizer: TC207, Croatian Geotech Societ
• Contact person: Dr. Igor Sokolic;
• Address: Dept. Civil Engineering,
University of Zagreb,
Kaciceva 26,
HR-10000 Zagreb
CROATIA
• Phone: 385 1 4639 618
• E-mail: isokolic@grad.hr
Website: www.georec.spb.ru/tc207/2011-Croatia/

Event Diary (continued)

2012

Second International Conference on Performance-Based Design in Earthquake Geotechnical Engineering
Date: 28 - 30 May 2012
Location: Conference Center , Taormina, Italy
Language: English
Organizer: ISSMGE TC-203
• Contact person: Dr. Claudio Soccodato
• Address: Associazione Geotecnica Italiana (AGI), viale dell'Università, 11
00185 Roma
Italy
• Phone: 39 064465569
• Fax: 39 0644361035
• E-mail: agiroma@iol.it
Website: www.associazionegeotecnica.it/novita

TC 211 International Symposium & Short Courses "Recent Research, Advances & Execution Aspects of GROUND IMPROVEMENT WORKS"
Date: 30 May - 1 June 2012
Location: IS: Crowne Plaza Brussels , Brussels, Belgium
Language: English
Organizer: TC 211 Ground Improvement
• Contact person: BBRI - Carine Godard
• Address: Avenue P. Holoffe 21
B-1342 Limelette
Belgium
• Phone: 32 2 655 77 11
• Fax: 32 2 653 07 29
• E-mail: carine.godard@bbri.be
Website: www.bbri.be/go/IS-GI-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

Shaking the Foundations of Geo-engineering Education (SFGE) 2012
Date: 4 - 6 July 2012
Location: NUI Galway , Galway, Ireland
Language: English
Organizer: ISSMGE
• Contact person: Dr. Bryan McCabe
• Address: Civil Engineering, National University of Ireland, Galway (NUI Galway)
Galway
Ireland
• Phone: 353 91 492021
• Fax: 353 91 494507
• E-mail: bryan.mccabe@nuigalway.ie
Website: www.sfge2012.com

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
Location: Ecole Spéciale des Travaux Pub , Paris, France
Language:
Organizer:
• E-mail: contact@icse-6.com
Website: www.icse-6.com

Event Diary (continued)

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

7th International Conference in Offshore Site Investigation and Geotechnics: Integrated Geotechnologies, Present and Future (12-14 September)
Date: 12 - 14 September 2012
Location: Royal Geographical Society , London, United Kingdom
Language: English
Organizer: TC209, SUT - OSIG
• Contact person: Peter Allan
• Address: Geomarine Ltd, A2 Grainger Prestwick Park
NE20 9SJ NEWCASTLE UPON TYNE
England
• Phone: 44 (0) 191 4537900
• E-mail: peter.allan@geomarine.co.uk; zenon@tamu.edu

The Seventh Asian Young Geotechnical Engineers Conference (7AYGEC)
Date: 12 - 14 September 2012
Location: The University of Tokushima , Tokushima, Tokushima, Japan
Language: English
Organizer: Japanese Geotechnical Society
• Contact person: Prof. Ryosuke Uzuoka
• Address: Dept. of Civil and Environmental Engineering, The University of Tokushima
2-1 Minamijyousanjima-cho
770-8506 Tokushima
Tokushima
JAPAN
• Phone: 81-88-656-7345
• E-mail: uzuoka@ce.tokushima-u.ac.jp
Website: sites.google.com/site/7aygec/

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, 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
. Website: www.icgiwollongong.com
. Deadline for Abstract submission: 1 July 2011

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/

2014

8th European Conference on Numerical Methods in Geotechnical Engineering (NUMGE14)
Date: 18 - 20 June 2014
Location: Delft University of Technology, Delft, Netherlands, The
Language: English
Organizer: Prof. Michael Hicks
• Contact person: Mrs. Hannie Zwiers
• Address: Delft University of Technology,
Faculty of Civil Engineering & Geosciences
Stevinweg 1
2628 CN Delft
The Netherlands
• Phone: +31 15 2788100
• E-mail: info@numge2014.org
Website: www.numge2014.org

NON-ISSMGE SPONSORED EVENTS

2011

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 "Geotechnics for Sustainable Development" - GEOTEC HANOI 2011 -
Date: 6 - 7 October 2011
Location: Fortuna Hotel , Hanoi, Vietnam
Language: English
Organizer: FECON JSC, VSSMGE and GCMM
• Contact person: Mr. Ta Xuan Hien
• Address: 15th Floor,
CEO Tower,
Pham Hung Road,
Tu Liem District
Hanoi
Vietnam
• Phone: 84462690481
• Fax: 84462690484
• E-mail: secretariat@geotechn2011.vn

Young Geotechnical Engineers Conference 2011 - South Africa
Date: 31 October - 2 November 2011
Location: Berg and Dal Conference Centre , Kruger National Park, Limpopo, South Africa
Language: English
Organizer: SAICE Geotechnical division
• Contact person: RCA Conference organisers - Yolandé Oosthuizen
• Phone: 27117288173
• E-mail: register@rca.co.za

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

Event Diary (continued)

• 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 (SCEIGA)
Date: 16 - 18 November 2011
Location: Universidad de Guayaquil , Guayaquil, Guayas, Ecuador
Language: Español
Organizer: SEMSIR
• Contact person: Maria Jose Avecillas Andrade
• Address: Laboratorio Ruffilli – Universidad de Guayaquil,
Av. Kennedy.
9176 Guayaquil
Guayas
Ecuador
• Phone: 59384862808
• Fax: 59342286290
• E-mail: aniversariosemsir50@gmail.com
Website: semsir.blogspot.com

GEOMAT 2011-MIE, JAPAN
Date: 21 - 23 November 2011
Language: English
Organizer: Glorious International GEOMAT
• Contact person: Dr. Zakaria Hossain
• Address: Assoc. Prof., Graduate School of Bioresources,
Mie University
514-8507 Tsu
Mie
Japan
• Phone: 81592319578
• Fax: 81592319591
• E-mail: zakaria@bio.mie-u.ac.jp
Website: gipremi.webs.com/

Geotechnical Engineering Conferences of Torino (XXIII Edition) / Conferenze di Geotecnica di Torino (XXIII CICLO)
Date: 23 - 24 November 2011
Location: Politecnico di Torino , Torino, Italy
Language: Italian / English
Organizer: Politecnico di Torino
• Contact person: AXEA Conferences and Events
• Address: Via Caboto 44
10129 Torino
Italy
• Phone: 39011591871
• Fax: 39011590833
• E-mail: info@cgttorino.org
Website: www.cgttorino.org/

International Symposium on Sustainable Geosynthetics & Green Technology for Climate Change (SGCC2011)
Date: 7 - 8 December 2011
Location: Grand Centara Convention Hotel , Bangkok, Thailand
Language: English
Organizer: ACSIG, SEAGS
• Contact person: SGCC2011 Secretariat
• Address: c/o Asian Center for Soil Improvement and Geosynthetics (ACSIG); GTE/SET,
Asian Insitute of Technology
PO Box 4,
Klong Luang,
Pathumthani 12120
Thailand
• Phone: 66-2 524 5523
• Fax: 66-2 524 6050
• E-mail: climatechange@ait.ac.th or igs-thailand@ait.ac.th
Website: www.set.ait.ac.th/acsig/sgcc2011/home.htm

Event Diary (continued)

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

Geo-Congress 2012
Date: 22 - 25 March 2012
Location: Oakland, California, United States
Language: English
Organizer: Geo-Institute of ASCE
• Contact person: Rob Schweinfurth
• Address: 1801 Alexander Bell Drive
Reston, VA 20191
United States
• Phone: 1.703.295.6015
• E-mail: rschweinfurth@asce.org
Website: www.geocongress2012.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 & 2nd North American Symposium on Landslides
Date: 3 - 8 June 2012
Location: Fairmont Banff Springs Hotel , Banff, Alberta, Canada
Language:
Organizer: CGS, AEG, JTC1
• Contact person: Wayne Gibson, P.Eng. Conference Manager
• Address: c/o Gibson Group Association Management,
8828 Pigott Road,
V7A 2C4 Richmond
BC
Canada
• Phone: 1 (604) 241-1297
• Fax: 1 (604) 241-1399
• E-mail: info@isl-nasl2012.ca
Website: www.isl-nasl2012.ca/index.php?lang=en

34th International Geological Congress (34th IGC)
Date: 5 - 10 August 2012
Location: Convention and Exhibition Ctr , Brisbane, Queensland, Australia
Language: English
Organizer: IUGS
• Contact person: For full contact details see - http://www.34igc.org/congress-manager.php
• Address: 34th IGC, PO Box 177
Redhill
Queensland 4059
Australia
• Phone: 61 7 3368 2644
• Fax: 61 7 3369 3731
• E-mail: info@34igc.org
Website: www.34igc.org/index.php

IS-Kanazawa 2012, The 9th International Conference on Testing and Design Methods for Deep Foundations
Date: 18 - 20 September 2012
Location: Kanazawa Bunka Hall , Kanazawa, Ishikawa, Japan
Language: English
Organizer: Japanese Geotechnical Society
: • Contact person: Associate Prof. Shun-ichi Kobayashi

Event Diary (continued)

• Address: Kanazawa University
920-1192 Kanazawa
Ishikawa
Japan
• E-mail: office@is-kanazawa2012.jp
Website: is-kanazawa2012.jp

GA2012 - Geosynthetics Asia 2012 - 5th Asian Regional Conference on Geosynthetics
Date: 10 - 14 December 2012
Location: Centara Grand, Bangkok Conv Ct , Bangkok, Thailand
Language: English
Organizer: IGS-Thailand

• Contact person: GA2012 Secretariat
• Phone: +66-2-524-5523
• Fax: +66-2-524-6050
• E-mail: igs-thailand@ait.ac.th or acsig@ait.ac.th
Website: www.set.ait.ac.th/acsig/GA2012/

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

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Germany

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Istanbul, 34794 TURKEY

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Kaiserleistrasse10
63067 Offenbach
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Brazil

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São Paulo / SP
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AECOM Asia Company Ltd
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138 Shatin Rural Committee Road
Shatin, NT
Hong Kong

Novatecna Consolidações e Construções S/A
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Brasil

Foundation Donors

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

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    http://www.jiban.or.jp/
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    http://civil.yonsei.ac.kr
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    www.kgshome.or.kr
  - e. CalGeo – The California Geotechnical Engineering Association
    www.calgeo.org

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f. Prof. Ikuo Towhata  http://geotle.t.u-tokyo.ac.jp/ towhata@geot.t.u-tokyo.ac.jp

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http://www.issmge.org/web/page.aspx?refid=563

fill it, and send it to the ISSMGE Secretary General Professor Neil Taylor at secretary.general@issmge.org. A request for a grant above $2000 is unlikely to be successful. Smaller requests especially with indication of cost sharing have the best chance. Please note deadlines for submission of applications (1st January, and 1 July), for decisions by the Committee by February 1 and August 1 of each year. Applicants will be notified at that time.