



International Society for Soil Mechanics and Geotechnical Engineering

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A Message from the Vice President

By Professor Waldemar Hachich

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This would have been the time for the message from the Vice-President for North America. My message from South America had to be put to paper ahead of schedule because of John Seychuk's misfortune of having to face some temporary strain, which ultimately led him to resign his post last August.

I cannot, therefore, refrain from saying a couple of words about John. We have worked very close for the past three years, especially as members of the Advisory Committee for the Pan-American Conference held in Venezuela in 2007. John and I have had long, enlightening discussions about the Pan-American Committee – a particularity of North and South America, the only two ISSMGE regions that have a common Regional Conference –, and proposed a revision of its statutes to make them more realistic and pragmatic, especially with respect to the choice of the Casagrande Lecturer. And John is the person to

interact with, if common sense, sound engineering judgment, and pragmatism are at issue. All our joint proposals have been approved at the Pan-American Committee meeting held in July, 2007. Interacting with "BBJ" has been both stimulating and rewarding. ISSMGE – and myself in particular – will miss his most qualified opinion here in the "New World".

Enthusiastic as ever about the geotechnical activities in the three North American member societies, John would probably have concluded his report on a high note: "the three societies in the region keep moving full steam ahead, as one can easily infer from a visit to their Web pages". Hope we continue to exchange opinions and views, John. Peace! Welcome to the group, Dennis Becker, and let us work together for a memorable Pan-American Conference in Toronto, 2011.

South American societies are also moving full speed ahead, amidst a relatively favourable prospect for many of the economies in the region. Unfortunately, however, South and Central Americans have a tendency for being excessively discreet in publicising their achievements. As an example, only about half of the member societies have active websites.

One of the societies has ISSMGE fees in arrears, a situation that we are endeavouring to see resolved before Alexandria. Perhaps even more worrisome is the lack of communication experienced for some periods of time with some of the societies, since being a member of ISSMGE should not be seen as just a matter of paying fees, but also of demonstrating engagement in the aims of ISSMGE.

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Most of the twelve member societies are not large in terms of number of members. Geotechnical communities in some countries in the region are restricted to 30 to 50 individual members. The economies of the region have always been characterised by ups and downs. During the down periods there is, in general, little geotechnical activity and therefore little incentive for involvement of our colleagues in associative affairs. When, on the other hand, there is some surge in investment for infrastructure – and we are talking about a region where a very significant portion of the population is still longing for basic infrastructure – most of them get so much involved in professional activities that writing papers and participating in meetings of Technical Committees and conferences would demand time that they could not hope to afford. In general they do, however, tackle geotechnical challenges with zest and creativity worth being widely publicised.

Uncertainties and difficulties notwithstanding, most South American Member Societies have appointed members to Technical Committees (both ISSMGE and Joint TCs), and have had their appointments endorsed by the chairmen and by President Sêco e Pinto. ABMS (Brazil), SOCHIGE (Chile) and SCG (Colombia) are the societies in the region that currently have core members in the TCs. ABMS also has two chairmen (JTC1 and TC41).

A Message from the Vice President (continued)

By Professor Waldemar Hachich

Many societies in the region hold national conferences on two-year intervals, most of them on even years. The most recent has been COBRAMSEG, the very successful Brazilian national conference, which took place in Búzios, Rio de Janeiro, last August (see report in the "Activity of Member" section). CAMSIG, the Argentinean national conference, shall take place next October, in La Plata.

SAIG (Argentina) is also organizing the 3rd South American Young Geotechnical Engineers Conference (YGEC), to take place in Córdoba in March, 2009. The Chilean society will host the 5th International Conference on Earthquake Geotechnical Engineering (5ICEGE - TC4), in 2011. The president and myself have asked ACG (Costa Rica) to host the South American Symposium on Landslides for JTC1 (probably in 2010), thus enacting a decision taken by the Pan-American Committee in July, 2007. ABMS (Brazil) will host the International Conference on Geosynthetics, in association with the International Geosynthetics Society and its Brazilian chapter, in 2010, as well as the (TC16) International Conference on Site Investigation, in 2012.

Five ISSMGE International Seminars have been organized to date in the region, thanks to the enthusiasm and incentive from Prof. Sêco e Pinto and to the hard work of each of the member societies in terms of organisation and gathering of local industry support. In Santiago (Chile) and Asunción (Paraguay), in August, 2006, support was provided by SMMS (the Mexican Society for Soil Mechanics) for the participation of Prof. Gabriel Auvinet as lecturer. In San José (Costa Rica) and San Salvador (El Salvador), in July, 2007, the GeolInstitute sponsored the participation of Prof. Braja Das. ABMS, the Brazilian Association for Soil Mechanics and Geotechnical Engineering, sponsored the participation of several lecturers in all five Seminars, including the latest one in Guayaquil (Ecuador), in August, 2008: myself, as regional vice-president, Armando Caputo, Flávio Montez and Frederico Falconi. ISSMGE has sponsored Prof. Sêco e Pinto's participation in all five events, which followed the "Guidelines for ISSMGE International Seminars" and included local as well as international lecturers, with an engaging mix of themes that ranged from routine to modern Soil Mechanics, from fundamental principles and concepts to case studies. Notes have been prepared for advance distribution to participants, in most cases in the native language. Attendance ranged between 50 and 100 in each venue. At least two more ISSMGE International Seminars are being planned for the next twelve months before Alexandria.

ABMS (Brazil) and SAIG (Argentina) have a history of over 50 years and are preparing their 60th anniversary celebrations. SVDG (Venezuela) is celebrating its 50th anniversary next November. ACG (Costa Rica) is also preparing celebrations for November, 2008 (25th anniversary). On the other side of the spectrum, ISSMGE has recently welcomed two new member societies: CTNMSIG/ UNAICC (Cuba) and SSG (El Salvador). As usual, we are not blessed by celebrations and achievements alone. We also had to confront some sad events, such as the untimely death of Issa Kort, a very dear and gentle colleague who, for many years, had been the heart and soul of SOCHIGE (Chile). But, all in all, the past three years have been quite eventful for the South and Central American region, and therefore gratifying for the regional vice-president. Better yet, the present state of affairs in the region points in the direction of an even more stimulating future.

View of Young Geotechnical Engineers

By Osamu Kusakabe and Pongsakorn Punrattanasin

Young Geotechnical Engineering Network

The young geotechnical engineering network was set up with a total number of 80 members during the ISSMGE Osaka Conference in 2005 but the group was not active in communication due to some technical reasons. The board of ISSMGE Bulletin really hopes that contributions from young members can provide good ideas to improve the ISSMGE and geotechnical society in the future. The board also hopes that young members can express, report their views and opinions as well as can report activities in the space of ISSMGE Bulletin and ISSMGE website. What ISSMGE board members discussed at the ISSMGE Board Meeting at Saint Petersburg, Russia this June about the continuation of Bulletin and the role of young members are as follows: The board needs active and voluntary young geotechnical engineers to work closely with the Vice President in their region; (1) to gather the regional information such as events, books, disaster, geotechnical achievements and to send it to the editorial board once in three months. (2) to serve as a contact person for collecting contributions such as case history and Reminiscences, and (3) to prepare the contributions from young generations in the region once in a year. The first four members who are voluntary to run the new young geotechnical network are as follows: 1) Professor Deepankar Chudhury (India), 2) Dr.Imen Said (Turnisia), 3) Makoto Namba (Brazil) and 4) Dr.Pongsakorn Punrattanasin (Thailand). The board also would like to extend an invitation to the interested young members from various countries to join the young geotech network. Interested members please kindly contact us via email to Professor Osamu Kusakabe (Kusakabe@cv.titech.ac.jp) or to Dr.Pongsakorn Punrattanasin (ppunrattanasin@gmail.com).

Reminiscences

Professor Keiichi Fujita

Interviewer: Dr. Jiro Takemura, Tokyo Institute of Technology

Date: July 28, 2008

Place: President's Room, The Japanese Geotechnical Society



His Personal History: Born in 1924 in Kunsan City Korea. Graduated from Civil Engineering Department, Tokyo Imperial University in 1946. Entered Hazama Corporation in the same year as a civil engineer. Director of R & D section and Technical Research Institute of Hazama Corporation (1976 - 1985). First appearance in ICSMFE in 1977, Tokyo, as a panelist, President of Japanese Society of Soil Mechanics and Foundation Engineering (1984 - 1985), Chair of TC18, Penetrability and Drivability of Piles (1982-1958) and Pile Driving (1986-1989), Chair of TC28, Underground Construction in Soft Ground (1988-1996). Professor at Tokyo University of Science (1987- 1998).

Q: Professor, you are going to be 84 years old pretty soon but you are still working actively participating in some academic societies. May I ask what the key to your staying healthy is, or if you have any special source of energy?

A: Well, I don't think I have been really cautious to live a healthy life. I rather have been living an unhealthy life. Actually I have gotten into dangerous situations many times. Among them, I have suffered from pneumonia twice. The first time was when I was working for Tokyo University of Science and I went to the university with an oxygen tank. When I had pneumonia two years ago for the second time, I was kind of used to it so that I even gave advice to the nurses.

Joking aside, I think I owe my longevity to my wife, who is a medical doctor. My wife, who is one year younger than I, had her own medical clinic next door and had been working as an active doctor until last year. I can not thank my wife enough because I have a genuine home doctor. If I can say I have a secret of my green old age, it's because I remain interested in various things and keep on studying.

Q: You have a 41-year-long career as an engineer in a private sector and a more than 20-year-long career as an educator and researcher in academia. In the meantime, you actively worked on academic society activities and international activities. In the first half of this interview, I would like you to talk about your engineer days, when you started your career, and in the second half, I would like you to talk about your experiences as an educator and President of the Society and about your international activities. To begin with, would you please talk about your engineer days in a private sector when you were young?

A: Although I worked for a construction company, I belonged to the Design and R&D Department and I had never been in charge of actual construction at the site. Only when a problem arose at the construction site, I went there and coped with the problem. That was my main job. In the company I was working for at that time, it was said that promotion could not be expected unless you worked at a dam construction site, but I did not care about that kind of thing. However, it was said that some hundred thousand yen could be saved if I went to the site.

Q: Could you tell me about the occasion which you can not forget possibly among them?

A: What I remember very well is, when I was working on digging a research tunnel at the site of Hatogaya dam construction in 1954, that I bumped into a weak layer, which was white and crumbled just like wheat, and did not include water. When I encountered this, I even thought I had to be resigned to die, for it might have collapsed anytime. I had no knowledge or experience about that kind of weak layer, so I seriously wondered as to how to address it, but, after studying various kinds of literature, I finally found a report as to dealing with weak layers of Shasta Dam in America, and, with that as a reference, by means of broadening the width of the dam, I succeeded in solving the problem.

Another time, I was in charge of design work for militarization of Haneda Airfield, and in the course of discussion with the person in charge in the US Army, I learned the importance of consultant business in the USA. Especially, in quotation of design business, once or twice I inflated the amount largely because I heard, if the quotation was too low, the work itself might be underappreciated. Eventually the final amount exceeded the quotation by design change and that kind of thing.

In the business with the US Army, when I constructed the Yamoto Airfield in Sendai, although there was a design condition with an instruction that "the material which might cause alkali aggregate reaction should not be used", I had no idea about that then, but I somehow studied and coped with it.

Reminiscences (continued)

Professor Keiichi Fujita

Q: Regarding your involvement in the Geotechnical Society, starting from the President from 1984 to 1985 while you were a director of Hazama Corporation, you contributed to the Japan Society of Soil Mechanics and Foundation Engineering serving as the Director of the General Affairs Department and Vice President successively. Are there any unforgettable incidents?

A: My contribution to the Society of Soil Mechanics which I am proud of is that I introduced the concept of business management to the activities of the society and I actually gained considerable amount of income. For example, in those days, when it came to estimating the publication cost, since miscellaneous expenses were not taken into account and book costs were so low, naturally it could not serve as a source of income.

Q: Do you have any special memories about the international conference which was held in Tokyo in 1977?

A: In the Tokyo Conference in 1977, the late Prof. Nakase managed the conference and I was in charge of all the miscellaneous business. Among them what was the most memorable thing was the wine that was served in the banquet. When I asked a friend of mine, Dr. Tadashi Hiroyasu (currently Professor Emeritus of Chiba University, Faculty of Horticulture) about wine, he recommended Yamanashi wine. For the reason that it had been kept and aged in a quiet environment, and that it was advantageous in terms of transportation, I selected Yamanashi wine to be served at the party, which received a very good reputation. I remember very well that the participants checked the bottle and they were surprised to find out that it was made in Japan.

Q: You are kind of a pioneer of ground anchors in Japan. Do you have any special memories?

A: At the time of the Tokyo Conference, I got acquainted with Prof. Littlejohn at the session of ground anchors, and he suggested that I should go to England by all means. So I went to Bolton, England, and I was taught by Prof. William Deppner many things about anchors. In addition, I learned about the application examples of large diameter ground anchors in foreign countries. That led me to an idea of using a ground anchor when I worked on a large scale earth excavation of over 300m in length and 100m in width in front of Nagoya Station, because the strut would shrink and cause a large deformation of the wall, and eventually I could complete the construction successfully. The president of Hazama Corporation at that time who saw it decided to establish a company specialized in anchors and I assumed the office of president of the company. I have been involved in ground anchor business longest through my career and I am still serving as an advisor for the Japan Anchor Association.



Prof. Fujita is checking the note of remembrance

Q: You have worked as chairs for the two TCs in the International Society until now. Would you tell me something about it?

A: My special involvement in the Technical Committee in the International Society was in the fields of pile foundation and tunnel. As for pile foundation, I worked as Chair of TC on Penetrability and Drivability of Piles, which was established at the proposal of the Japanese society. I had Dr. Hideaki Kishida, Tokyo Institute of Technology, work as Secretary, and we held a symposium on the day before the 11th International Conference (San Francisco Conference) in 1985. In those days Stress Wave Theory began to spread and I remember very well that we had active opinion exchanges with Prof. Gobel and other participants. I published the detailed record of opinions in this symposium. Inheriting the result, I assumed the Chair for Pile Driving (TC18), having Dr. Kishida again as Secretary. At the same time, I launched a domestic committee in the Geotechnical Society and proceeded with study of Stress Wave Theory with young people. Now those young people have grown up wonderfully. Prof. Matsumoto, Kanazawa University, is one of them.

In the 12th International Conference in 1989 (Rio Conference) held under the leadership of then President Broms, as TCs took charge of managing discussion sessions, TC18 was in charge of Discussion session 14 on Drivability of piles. I asked Prof. Randolph and Prof. Kusakabe to be discussion leaders for it, and we had reports about the current status survey on pile driving and bearing capacity, then had a panel discussion about the research issue on pile driving. I also published the detailed report of it.

In the 1989 Rio Conference, I was requested to give a special lecture on "Underground Construction, Tunnel, Underground Transportation", so I mainly explained about the Japanese advanced tunnel technology. It led to the establishment of the present TC28 "Underground Construction in Soft Ground" by the new President Morgenstern, and I

again assumed the chair. My first work for TC28 was the survey on the tunnel and bracing technology and design in each country and collection of case history, and based on the survey, I held the first symposium on the day before the 13th Conference in New Delhi. The most memorable thing is that I was presented a gift of appreciation from Secretary General Dr. Parry and Chair Prof. Mair at the banquet of TC28 symposium in London, 1996. Since then, TC28 conferences have been held every three years periodically in London, 1996, and Tokyo, 1999, in turn, centering around case history. This year we have 6th symposium. I am still working as Honorary Chairman.

Reminiscences (continued)

Professor Keiichi Fujita

Q: Moving into academia from a private sector has now become nothing new. However, I think it is still rare in Japan that an engineer like you who is well-versed in all aspects of practical business moves into academia. Would you please tell us your idea about the difference of roles between the private sector and academia, and give us some advice to your junior fellows in both sectors?

A: The difference between the private sector and academia is whether they have a sense of business management. There may be a way of thinking that that kind of thing can be learned after starting work, but I think that an important hint should be given in their student days. Not only students but also university teachers should learn business management by all means.



Prof. Fujita and Dr. Jiro Takemura

Q: When we sum up your career as an engineer, first you solved various problems, studied overseas technologies and introduced them to Japan in order to meet each requirement, and have developed a prominent sense as an engineer. Later, as an engineer, you have made a great contribution to advanced education as well as to international expansion of construction technology of Japan which made a great progress, and also to its further progress. Would you please give us some advice especially to young engineers in Japan and overseas?

A: I would like to tell them to respect your seniors including teachers. From a different perspective, you have to work really hard in order to set an example to your juniors when you become a senior or a teacher who can be relied upon. To keep a good relationship between seniors and juniors. This is a private matter, but when my own house had a fire in April this year, one of my juniors rushed to my house to help us. I feel most grateful to him.

Q: Last question. What do you like to do as a hobby?

A: I have nothing special as a hobby. It may be participating in various meetings and learning new things, I would say. I also visit disaster sites. I went to the earthquake-hit area of the 2007 Niigata Prefecture Chuetsu Offshore Earthquake.

Prof. Fujita, the past chairman of two technical committees (TC18 and Tc28) told me about large number of stories referring a notebook which contains his long personal history with detail data ranging more than 60 years. The interview went on for nearly three hours. I was thankful to his enthusiastic attitude and also astonished by his never-ending energy and challenging spirit, power of memory, and vast knowledge based on huge real experiences. The interviewer hopes that the readers enjoy reading Prof. Fujita's stories and sharing his thoughts.

Due to the page limitation, some of interesting stories had to be edited or omitted in this written version. The reviewer has full responsibility for it. Ms. Emiko Serino kindly helped me for translating from Japanese version to English.

Dr. Jiro Takemura

Case History

Geotechnical Aspects of Radès La Goulette Bridge Project (Tunisia)

By Foued Kanoun: Académie Navale Menzel Bourguiba (kanoun.foued@gnet.tn)
And Mounir Bouassida: Ecole Nationale d'Ingénieurs de Tunis (mounir.bouassida@enit.rnu.tn)

This paper briefly presents one of the very recent big Tunisian projects that is Radès La Goulette Bridge. This project is accompanied by the construction of the first cable stayed bridge of length 260 m across Tunis channel which connects Tunis City with its north suburb passing first by La Goulette County. The project groups four main lots involving the construction of bridges, highways and reclamation of lake areas. Focus is given on three items. The first one is the in situ and laboratory investigations led for soil characterization. The second item is the description of types of foundations and soil improvement techniques with specific challenges encountered and modern techniques performed during their execution. The third item is related to economical aspects of the geotechnical components which are commented and main conclusions are drawn.

1. Introduction

The owner of project is the Tunisian Ministry of Equipment, Housing and and land Regional Development. The project is managed by the Directorate-General of Highways Department. The project consists in a main bridge construction across Tunis channel for connection between North and South suburbs passing by La Goulette and Rades counties (Figure 1). The project of Rades La Goulette Bridge also includes structures and infrastructures of access toward Tunis City, and North and South suburbs. The project aims at the reduction of traffic intensity within Tunis City centre, keeping in mind that existing infrastructures by means Tunis La Goulette express route, Rades La Goulette ferry connection, the national road N°9 present serious limitations to keep a fluid circulation between La Goulette and Rades suburbs and Tunis City, [10]. The execution of Rades La Goulette bridge project comprises four separated lots: first is the main bridge, second is the south connection of 2.6 km length, third is the interchange in Tunis North Lake, and four is the north connection of 6.5 km length.

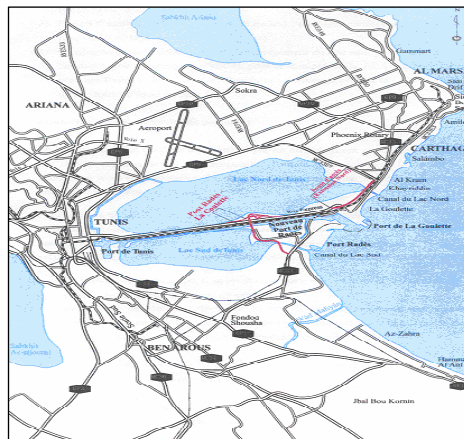


Fig.1. Location of the project “Radès-La Goulette” bridge (Red line)

Lot 1: The main bridge: its structure is characterized by a bridge of total length of 260 m, and a total breadth of 23.5 m. The released navigation gauge of the channel has 20 m in elevation and 70 m in breadth.

The bridge is composed of two ways of circulation each offers two line of 3.5 m, a 2m hard shoulder and a central full ground of 2.5m which shelters the two towers and cables. It is a cable stayed bridge an “extradossed” stay Cable Bridge composed by caissons elements made by pre stressed concrete in three continuous spans of 70m, 120m and 70m respective lengths. The pylons of 20 m in height are founded on 2m diameter deep piled foundation of 75 m length.

Lot 2: The South connection: it comprises four sub lots namely: Planning of rotary junction, the construction of two kilometres express route, two ways each with two lanes, the construction of a pre stressed concrete bridge of 180 m length on Rades channel and the construction of a pre stressed concrete bridge of approach (from south side) having 400m length.

Lot 3: The North connection: It comprises the reclamation of about 20 hectares in North Tunis Lake, the deviation of Tunis La Goulette express route along 2.4 kilometres, the construction of a pre stressed caisson bridge of approach (north side) of 720 m length and the construction of the interchange between the main bridge and the express route Tunis La Goulette. Then, these works needed the draining of North Lake for which environmental challenges should be faced, essentially the contamination of the lake’s water by finer of reclaimed zone and the sedimentation of filled material which affects the quality of water. During the reclamation it was observed the formation and migration of mud waves followed by their propagation in the lake, [3]. This problem has been tackled by the installation of geotextile barrier aided by the counter weight flotation technique. Also a reduced intensity of traffic plan was adopted.

Case History (continued)

Geotechnical Aspects of Radès La Goulette Bridge Project (Tunisia)

Lot 4: It consists in the construction of 5.5 kilometres new express route two ways each with two lanes, a bridge with 15.5 m length across Khair Eddine channel and a planning of intersection.

In the following the present paper focuses, first, on the programme of soil investigations, second the solutions of foundations with specific in situ conditions, and finally comments in brief are given about the cost and execution of Rades La Goulette Bridge.

2. Soil Investigations

A consistent geotechnical investigation programme had been carried out in two campaigns on the site of the project both on-shore and off-shore locations. The first campaign included 12 boreholes 42m to 117m deep with undisturbed sampling in clay soil, SPT in sand layers, pressuremeter tests, laboratory tests, [8]. The second campaign included additional bore holes, SPT, pressuremeter tests and the conduction of piezocone tests and vane tests, [9]. The consistency of the geotechnical programs is given by table 1.

Table 1. Geotechnical investigations carried out for Rades La Goulette bridge project.

Investigation type	Depth (from surface ground)	Number
Bore holes	Between 0 m to 117 m	56
Undisturbed samples	Between 14 m to 105 m	161
Pressuremeter tests	Between 37 m to 115 m	40
Piezocone & CPT tests	Between 14 m to 37 m	20
Vane tests	Between 3 m to 10 m	20

The second geotechnical campaign was much more consistent, it included 1514 lineal meters of pressuremeter borings, 1290 lineal meters of coring, 300 lineal meters piezocone test and 156 lineal meters cone penetration, [9].

Tables 2 & 3 summarize the conducted on-shore and off-shore in situ tests and laboratory tests.

Table 2. In situ geotechnical investigation (depth in meters). CB = Cored borings; PB = Pressuremeter boring; PZC = Piezocone tests; US = Undisturbed samples; VST = Vane shear test

Survey	On-shore	Off-shore
Lot number		
Lot 1	- 2 CB (115 m); 16 US & 10 SPT. - 2 PB (115 m) + 3 (26.1 m).	- 2 CB (115 m); 17 US & 3 SPT. - 2 PB (115 m) & 1 PZC (22.7 m)
Lot 2	- 7 CB (10 m) & 9 US - 8 CB (40 m): 24 US; 33 SPT & 9 PB (40 m). - 2 PZC (max 25 m). - 6 SPT (max 28 m). - 11 VST	- 1 CB (40 m): 4 US & 4 SPT + 3 PC (40 m).
Lot 3	- 1 CB (80 m): 6 US & 3 SPT) - 1 VST (6 m). - 3 PB (37 to 40 m) + 1 PZC (37.3 m).	- 9 CB (25 to 40 m); 30 US & 30 SPT - 5 VST (3 to 6 m). - 13 PB (35 to 40 m) - 5 PZC (max 27 m), with pore pressure dissipation.
Lot 4	- 2 CB (34 to 35 m) & 4 US. - 2 PZC (31.7 m). - 1 SPT (29.4 m).	

Table 3. Laboratory investigation, [6].

Lot 1	Lot 2	Lot 3
16 Grain size distribution 4 Triaxial CU+ u tests 3 Triaxial UU + u tests	24 Grain size distribution 11 Oedometer tests 4 Triaxial CU+ u tests 6 Direct shear tests 7 Proctor & CBR tests	33 Grain size distribution 19 Oedometer tests 7 Triaxial CU+ u tests 3 Creep tests

Case History (continued)

Geotechnical Aspects of Radès La Goulette Bridge Project (Tunisia)

The geotechnical soil conditions consist in a succession of silty clay and sand layers over the 35 first meters depth. Underneath, the soil is essentially silty clay with sand and shell laminated lenses. A marl stratum is encountered between 103 and 110 m below the ground level. Globally the soil profile can be subdivided into 6 main strata which are described below:

- Layer A: Very compressible peat
- Layer B: Yellowish fine sand
- Layer C: Greyish silty clay
- Layer D: Yellowish fine sand
- Layer E: Greyish silty clay
- Layer F: Marl-greenish and yellow greyish compact clay
- Layer G: Compact marl

A soil profile with the geotechnical properties under the main bridge is given by figure 2.

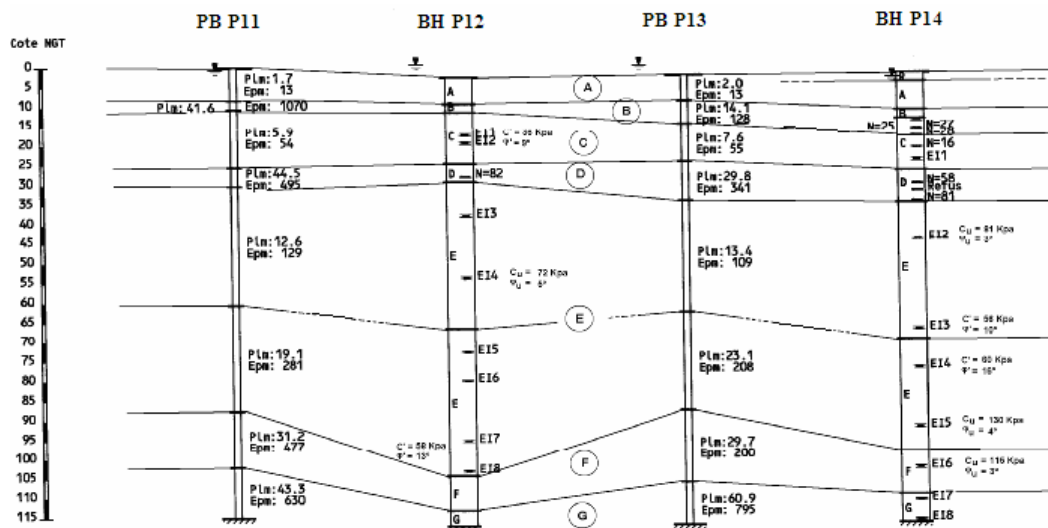


Figure 2. Typical soil profile, [6].

3. Specific geotechnical problems

The high compressibility of the top peat layer (layer A) and its very low shear strength did not allow considering a shallow foundation system for the cable stayed bridge and its approaching bridges. Moreover, the approaching embankments could not be raised more than 1 m above the ground level without soil treatment, [2]. Excessive settlements are expected under the approaching embankments, such settlements are essentially due to the compressibility of top peat layer and that of the deeper clay layers.

It was then decided to adopt bored piles 2 m in diameter and 75 m deep as foundations for the cable stayed bridge and driven piles embedded in the sand layer located between 25 and 30 m (Layer D) below the soil surface for the approaching bridges. For the approaching embankments, an improvement soil solution using the preloading technique associated with vertical geodrains is used to increase the bearing capacity of the soil support and to reduce the settlements to an allowable limit. Each of these solutions will be detailed below.

3.1 Foundations of the cable stayed bridge

The deck of the cable stayed bridge is supported by two central pylons at the ends of the central span and two piers at the ends of the deck. Each of the two central pylons of the cable stayed bridge is founded on 9 bored piles 2m in diameter and 75 m deep. Each of the two piers is founded on 12 bored piles 1.5 m in diameter and 60 m deep. The allowable piles capacities are calculated using the rules of the "Fascicule 62 Titre V" a French standard for pile load capacity determination, [4].

Case History (continued)

Geotechnical Aspects of Radès La Goulette Bridge Project (Tunisia)

In order to confirm the theoretical load capacity of a single pile, two pile tests each using a different technique had been carried out. In the first test, the pile subjected to the test is 1.5 m in diameter and 60 m long. An Osterberg cell had been inserted into the reinforcement cage at the bottom third of the pile separating the pile into two segments and cast within the pile. The loads are applied by the Osterberg cell simultaneously to the lower and the upper segments of the pile pushing down the lower segment and up the upper segment so the two segments of the pile are tested against each other (figure 3). The pile is equipped with strain gauges and LVDT transducer for deformation and displacement measurements at specific locations along the pile. From strain gauges records with those of the pressure applied to the Osterberg cell and the pile head settlements, the equivalent load applied on the pile head is calculated and the corresponding settlement-load curve is drawn. Figure 4 gives the pile head settlement versus the equivalent applied load.

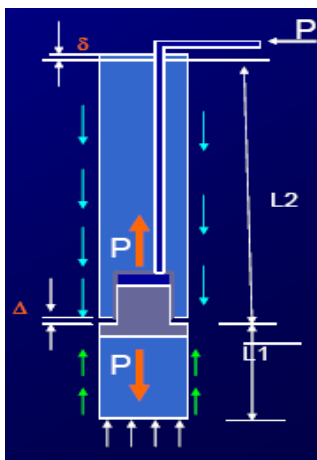


Figure 3. Osterberg pile test system

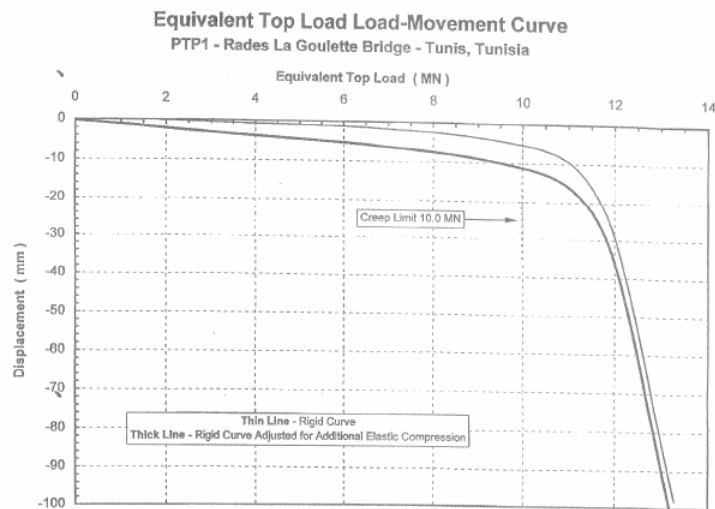


Figure 4. Equivalent Top load-movement curve (Osterberg test)

The second test pile is of a conventional type in which the load is applied on the pile head using jacks and reaction beam fixed to reaction piles (figure 5). The tested pile was 1 m in diameter and 75 m long. The settlement-load curve obtained from this test was found to be in good agreement with the predicted curve (figure 6) given by FOXTA software using a beam on elastic foundations model. Based on the theoretical load calculations and the piles load tests, the allowable load capacity is set to 8250 kN for a single pile under the central pylons and ??? kN for the piles under the piers, [11], [5].

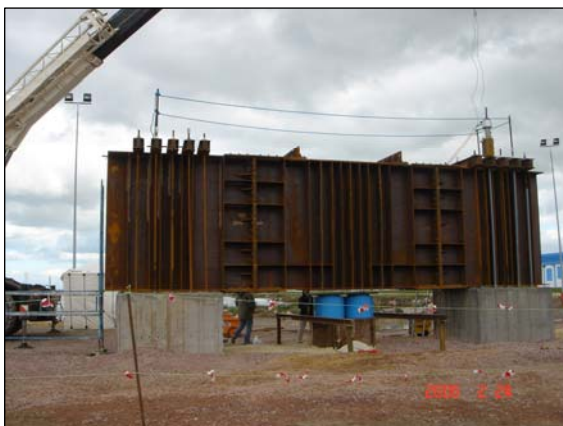


Figure 5. Pile load test

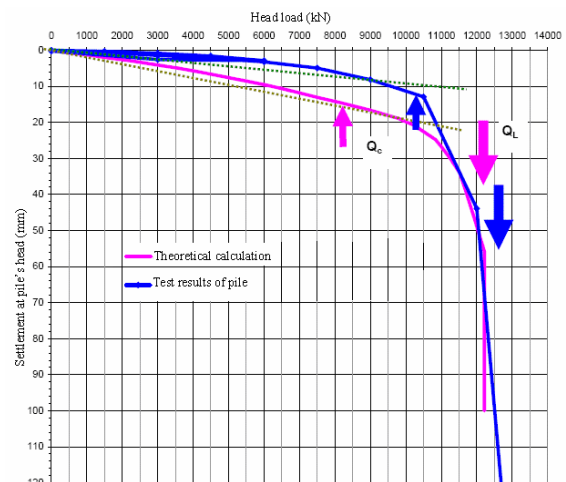


Figure 6. Pile head load-settlement

Case History (continued)

Geotechnical Aspects of Radès La Goulette Bridge Project (Tunisia)

The borings for the central pylons piles had been executed using a 2 m diameter bucket for the first 70 m and continued to the final depth using reversal circulation technique. The pile spacing was set to 3 pile diameters. Each pile had been equipped with 6 steel pipes for later controlling of the pile shaft integrity by the transparency method also called sonic coring method (figure 7).

3.2 Foundations of the approaching bridges

The approaching bridges were founded on driven precast concrete piles with 0.45m x 0.45m square section (figure 8) embedded in the yellow fine sand layer located between 25 and 30 m below the ground surface. Each pile is composed of two assembled segments each 15 m long. The allowable load capacity based on the rules of "Fascicule 62 Titre V" and 4 pile load tests was set to 800 kN for a single pile.



Figure 7. Pipes set up for shaft control



Figure 8. Driven piles at the location of approaching bridge pier

3.3 The approaching embankments

There are 4 embankments 4.5 m high to approach approaching bridges. The very low shear strength of the top peat layer makes impossible the edification of these approaching embankments without soil improvement. Furthermore, the compressibility of the underlying clay layers leads to excessive settlement and negative skin friction along the piles under the abutments of adjacent bridges. Two problems are then to be solved: the first is to have a sufficient bearing capacity to support the four approaching embankments; the second is to reduce the settlement induced in the deep layers to an allowable amount.

For the purpose of increasing the bearing capacity of the top peat layer, a preloading solution using vertical geosynthetic drains is used. The preloading consists in a 7 m high embankment edified according to a specified schedule based on the increase of shear strength of the top peat layer as soil consolidates under the preloading, [1]. The chosen geosynthetic drains are band type with 10 cm width and 5 mm thickness. The drains should be pushed down to the sand layer located at 10 m below the ground surface. The spacing between drains was set to 1.2 m near the bridges abutments and 1.8 m elsewhere. A sand blanket 1m thick had been spread over the preloaded area prior to drains installation, [2].

Slope stability analysis indicated that this sand blanket should extend over 12 m beyond the preloaded area boundaries to guarantee the stability of the embankment regarding slope failure during the first stage of the construction where the height of embankment should exceed 3 m, [7].

During the construction of the sand blanket small mud waves (figure 9) had been observed in front of the blanket as it progressed, a geotextile cover had been then lain on the sea floor which was found very effective in preventing mud waves formation (figure 10).

Prior to the embankments construction, the preloaded zone had been monitored for surface and deep settlements, pore pressure and lateral displacements measurements. The preloading embankments reached their final height (about 7 m) after one year from the beginning of the construction. 100 to 150 days after the end of the construction date, all records showed an asymptotic evolution. The maximum measured settlement was 140 cm and the measured pore water pressures correspond to the initial conditions with zero excess water pore pressure. The estimated corresponding degree of consolidation of the top peat layer was found to be about 90%. Figures 11 and 12 show up the evolution of settlement and the excess pore water as a function of time and the preloading embankment height at abutments A and B locations.

Case History (continued)

Geotechnical Aspects of Radès La Goulette Bridge Project (Tunisia)



Figure 9. Mud waves



Figure 10. Installed geosynthetic drains and marks for settlement measurement

The exceeding fill materials had been then removed to give to the embankments their final profiles and the pile driving of the approaching bridges abutments were proceed.

Theoretically, after this preloading, no residual settlement will occur in the peat top layer. However, the underlying soil is expected to undergo more settlement due to the excess of the stresses induced by the approaching embankments. In order to prevent such a settlement to occur, especially in the vicinities of the abutments, a solution of reducing the net excess of stress in the deep soil layers is used by lightening the embankment, [7]. It was proved that the net excess vertical stress induced by the approaching embankment on the top of the clay layer located between 12 to 15 m below the ground surface (layer C) should not exceed 50 kPa. For this purpose, expanded clay had been used as a fill material to substitute the existing embankment over a zone extending 20 m behind the abutments. The bulk unit weight of the used expanded clay is 3 kN/m³. At locations beyond this zone under the approaching embankments, the settlement is judged not harmful.

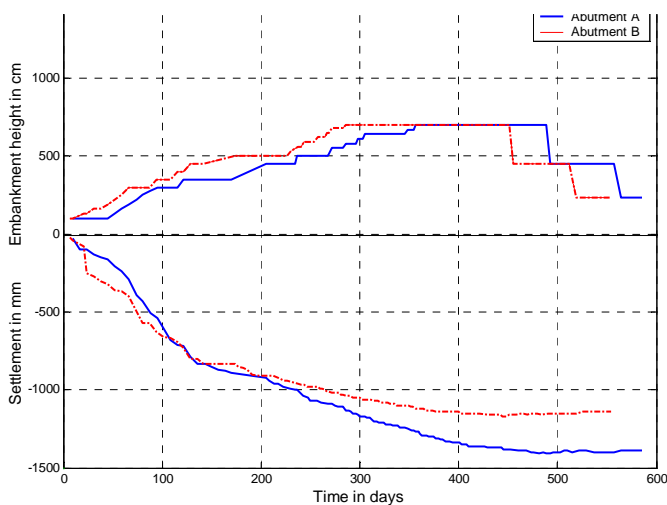


Figure 11. Embankment height and settlement evolution

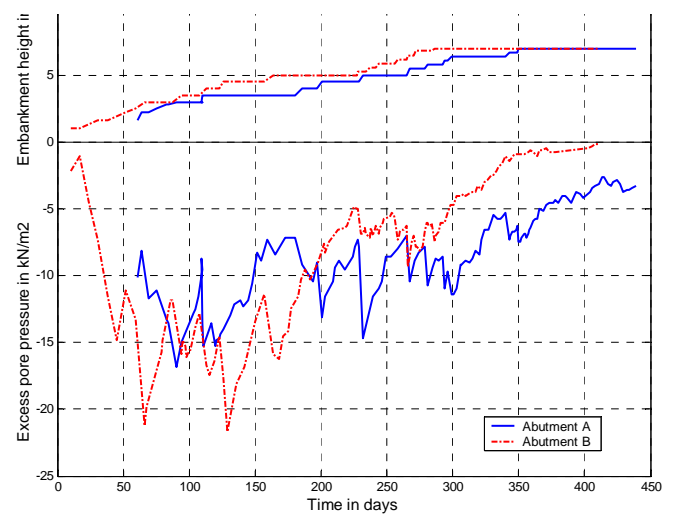


Figure 12. Embankment height and pore water pressure evolution

Case History (continued)

Geotechnical Aspects of Radès La Goulette Bridge Project (Tunisia)

4. Cost of geotechnical investigations

The total cost of geotechnical investigations and executed foundations represents by 30% to 50% of the total cost of the project which amounts by 141 Million Tunisian Dinars (The equivalent of 120 US dollars). Six Tunisian contractors and four foreign contractors participated in the construction of four lots which started by 2003 and are expected to be completed by February 2009.

5. Conclusions

The Tunisian Rades La Goulette bridge project, with first construction of cable stayed bridge, represents a well marked symbol with specific modern design. As main challenges it is worth mentioned: the construction of a cable stayed bridge of 260 m length using the technique of balanced cantilever method (by 65.000 of concrete cubic meters and 8.000 tons of steel), the installation of very deep Bored piles of 2m diameter (cumulated length is about 2550 lm) , reclamation of total area of about 25 hectares on 10 m depth of very soft soil conditions (more than a million of cubic meters filling), The installation of more then 10000 driven piles, the incorporation of the project in sensitive and specific ecosystem and difficult access to the site (installation of about 630000 m of prefabricated vertical drains).

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Acknowledgements

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TC Activity

TC 39: Geotechnical Engineering for Coastal Disaster Mitigation and Rehabilitation

Chairman: Prof. Jian Chu (Singapore) and Secretary: Dr.K.K. Phoon (Singapore)



TC39 meeting at the Conference GEDMAR08, Nanjing, China (Courtesy of Prof Hideki Ohta)

TC39 is a newly formed technical committee. It was set up in response to the increasing need to coordinate and promote activities related to coastal disaster mitigation and rehabilitation works within ISSMGE. The Chairman and Secretary of TC39 are Dr Jian Chu and Dr Kok Kwang Phoon respectively. It consists of 29 members from 20 countries. The names of the core members and members are listed on our website: <http://reliability.geoengineer.org/TC39/>.

The terms of references of TC39 include:

- 1) To conduct and coordinate research and development activities on coastal related disaster prevention, mitigation and rehabilitation works.
- 2) To work with local professional bodies and governments to provide technical supports and assistance to the planning, coordination and implementation of disaster rehabilitation and disaster mitigation works in the disaster affected regions, and to identify technical problems and potential topics that require more research and development efforts.
- 3) To develop pamphlets for public education and documents or design guides for geotechnical works related to coastal disaster prevention, mitigation and rehabilitation, such as pamphlets providing basic information on tsunami and earthquake in different languages, design guides for disaster rehabilitation and mitigation works, conducting hazard mapping, etc. and
- 4) To coordinate and provide trainings and promote international research collaborations and cooperation through conferences, workshops, short courses, special training sessions, and other activities conducted jointly with local and international communities.

Since 2006, the following major activities have been organized:

- i) Held a Special Session on Geo-hazard Mitigation at the *13th Southeast Asian Geotechnical Conference* to be held in Kuala Lumpur, Malaysia, 8-11 May 2007. The Special Session Speakers and their topics were:
 Prof Susumu Iai (Kyoto Uni): Seismic performance and assessment of coastal geotechnical structures.
 Prof Buddhima Indraratna (Wollongong Uni): Reconstruction methods for tsunami affected coastal soils with special reference to low-cost dwellings and rail tracks
 Prof Robert Lo (New South Wales Uni): Liquefaction of loose fill slopes - myth, possibility and risk mitigation.
 Dr Jack Pappin (Arup HK): Seismic hazard and site response evaluation in Hong Kong
 Prof H.D. Tjia (University of Malaya): Tsunamigenic areas in/for the Malaysian region.
- ii) Supported the *4th International Conference on Disaster Prevention and Rehabilitation* was held between 10 and 11 September 2007 in Diponegoro University, Semarang, Indonesia. The conference was chaired by Prof Ani Wardani and co-chaired by Profs. S-C R. Lo, J Chu, and K K Phoon. The conference also marked the official launching of the Research and Development Center for Disaster Prevention and Rehabilitation headed by Prof Ani Wardani. The keynote and invited speakers at this conference included Prof. M.R. Madhav (Vice President for Asia) on "Liquefaction Mitigation of Sand Deposits by Granular Piles", J Chu on "Geotechnical Consideration of Access Road Construction for Disaster Rehabilitation", Prof. Askar Zhussupbekov, President of Kazakhstan Geotechnical Society, on "Geotechnical and Geodisaster Problems in Kazakhstan", K K Phoon on "Some Numerical Consideration in Unsaturated Soil Seepage Analysis", Prof T.G. Sitharam from India on "Microzonation Studies in India: Experiments and Experiences", Mr H. R. Pamekas of Indonesia on "Environment and Disaster Risk Reduction in Aceh and Nias", Dr A. S. Moerwanto of Indonesia on "Handling the Impact of Mud Flow Disaster in Sidoarjo", and Dr A. M. Chaidir of Indonesia on "Anticipation of Disaster due to Sudden and Unpredicted Changes of Expensive Soil during Extreme Global Weather Change: Indonesia Case".
- iii) Organised a Special Session on Disaster Mitigation and Management at the *13th Asian Regional Conf on Soil Mechanics and Geotechnical Engineering*, from 10-14 Dec 2007 at Kolkata, India. The Special Session speakers were:
 Prof. S.R.Gandhi (IIT Madras) on "Case study on tsunami damages along the coastal of Andaman and Nicobar Islands and Tamilnadu Coast";
 Dr Shri Pradip Dutta (Z-Tech India Ltd, Kolkata) on "Protection of coastal areas against Tsunami/cyclones";
 Dr J Chu on "Coastal protection using geo-bag methods";
 Prof Hideki Ohta (Tokyo Inst Tech) on "A trial of public education".
- iv) Organised the *2nd International Conference on Geotechnical Engineering for Coastal Disaster Mitigation and Rehabilitation (GEDMAR08)*, Nanjing, China, May 30- June2, 2008, jointly with TC4, Chinese Institution of Soil Mechanics and Geotechnical Engineering, Chinese Society of Environmental Geotechnics, and Hohai University. The detail of this conference is reported separately in the same newsletter. The 3rd conference of this series will be held at Semarang, Indonesia in 2011.

TC Activity

TC 41: Geotechnical Infrastructure of Mega Cities and New Capitals

Chairman: Dr. Arsenio Negro Jr. (Brazil)

The second meeting of the Technical Committee 41, Geotechnical Infrastructure of Mega Cities and New Capitals, took place on the 25th and on the 26th of August 2008 in the village of Buzios, situated in an attractive peninsula, 160km northeast of Rio de Janeiro, bathed by the cold sea currents of the South Atlantic, at the Brazilian southern coast (Figure 1). The first TC41 meeting took place on the 18th of June, earlier this year in, a joint Session with TC38 “Geotechnical Challenges in Mega Cities and New Capitals”, during the International Conference Development of Urban Areas and Geotechnical Engineering, organized by TC38 Soil-Structure Interaction in Saint Petersburg, Russia.



Figure 1: Bird's view of Buzios Peninsula from the east.

the complex challenges of the urban environment. Prof. Roger Frank (France), Vice-President for Europe, discussed the reinforcement of foundations with micro-piles in urban areas, making reference to the French research project on micro-piles FOREVER. Prof Hirokazu Akagi (Japan) summarized recent underground projects in Tokyo and introduced the audience to the English translation of the book “Underground Construction Technology in Japan” published recently and available in CD format through the Japanese Geotechnical Society. Dr. Tarcisio B. Celestino (Brazil) discussed the uncertainty associated to underground construction in urban areas and the consequence for insurance.

Prof. Askar Zhussupbekov (Kazakhstan) presented the different foundation solutions used in the construction of modern high rise buildings built in Kazakhstan's new capital, Astana. The last two lectures of the Workshop by Dr. Nick Barton (Norway) and by Prof. Andre Assis (Brazil), see Figure 2, presented two distinct views of the collapse of the Pinheiros underground Metro station, which took place on January 2007, in Sao Paulo, Brazil. The station cavern was being excavated in fractured rock and the accident caused 7 fatalities. The technical investigations on the causes of collapse were completed but the legal process continues.

Professors M. Pacheco, S. Fontoura and A. Sayao, from Brazil, acted as discussion moderators. The complete set of the TC41 Workshop lectures were edited and published as a Special Lectures Volume of the COBRAMSEG Proceedings, with the help of Prof. A. L. Nunes, and are available in paper and in CD formats through www.abms.com.br. The Workshop organizers were Dr. A. Negro, TC41 Chairman, and Mr. F. Falconi, Workshop Secretary.

This second TC41 meeting was held in the format of a two half days Workshop, parallel to the 14th Brazilian Congress of Soil Mechanics and Geotechnical Engineering (COBRAMSEG) and with the support of the Brazilian Society of Soil Mechanics and Geotechnical Engineering. More than 100 participants were gathered to attend lectures given by experts of a variety of geotechnical fields, following the purpose of TC41: to become a forum for those dealing with the diversity of geotechnical problems in large urban centers.

The TC41 Workshop was opened by President Pedro Seco e Pinto who addressed his aims with the creation of TC41. He was followed by Prof. Marcio S. S. de Almeida (Brazil) who summarized the geotechnical components of lowland reclamation in Rio for residential and industrial purposes. The second speaker was Prof. P. Kulatilake (USA) who discussed steep rock slopes in urban areas in the western part of North America. Prof. Paulo Ivo Queiroz (Brazil) addressed the occupation of contaminated areas in metropolises, focusing the case of Sao Paulo City, in which the remaining stocks of land for edification are former industrial sites.

Prof. Waldemar Hachich (Brazil), Vice-President for South America, presented his views on teaching geotechnical engineering while educating future engineers to cope with



Figure 2: Dr. Barton (centre) and Prof. Assis (right) discussing Pinheiros Station accident. Prof. Sayao, who acted as Discussion Moderator, is on the left.

TC Activity

TC 1: Coastal Engineering and Dyke Technology

Chairman: Dr Meindert Van (Netherlands) and Secretary: Dr. C. Zwanenburg (Netherlands)

This contribution comprises a report of the activities of Technical Committee 1 of the ISSMGE, on the subject of coastal engineering and dike technology. The activities of the committee have been focused on defining its scope, preparation of the TC1 contribution to the 11th Baltic Sea conference, Gdansk September 2008 and start up of courses, reports and manual initiatives as stated in our Terms of Reference.

Executive Summary

In 2007, the committee was formed and the terms of reference were formulated. The start - up meeting was held at the 14th European conference on soil mechanics and geotechnical engineering at Madrid. In this meeting, a further focus in activities is established. The topics to be addressed in TC1 will be lined up with the regional research programmes running in the individual countries. The regional programmes represent the topics of local interest. Links between the different local research programmes form the basis of the focus for TC1. Regarding the regional topics of interest the main common items to focus on are:

- risk based evaluation of long geotechnical structures with a focus on impact of climate change on levees and coastline (includes sub-soil heterogeneity, safety philosophy and risk communication)
- measurement and inspection techniques of these structures
- failure mechanisms (focus on erosion, overtopping, piping and stability, plus effect of vegetation)
- building techniques (especially in built areas) of these structures

The following meeting will be held at the Baltic Sea conference in Gdansk, September 2008. In this conference, TC1 will organize one of the sessions.

Report on TC Activities 2007 - 2008

Meetings and Workshops: TC1 held its start up meeting in Madrid during the 14th European conference on soil mechanics and geotechnical engineering in Madrid. Six members were present. The Terms of Reference were officially approved and a further focus was discussed. It is agreed to focus on:

- risk based evaluation of long geotechnical structures with a focus on impact of climate change on levees and coastline (includes sub-soil heterogeneity, safety philosophy and risk communication)
- measurement and inspection techniques of these structures
- geotechnical mechanisms (focus on erosion, overtopping, piping and stability, plus effect of vegetation)
- building techniques (especially in built areas) of these structures
- land reclamation and ports

As part of the 11th Baltic Sea geotechnical conference, TC1 will organise a session. This session comprises a workshop on dike technology. Organising a session and workshop is in accordance with item 1 of our Terms of Reference. Other contributions are paper presentations with the following titles: Climate proof geotechnical innovations integrated in spatial planning and flood risk, Climate change resistant coastline by biological in-situ reinforcement of sand, Evaluation of Levee Failures in New Orleans from Hurricane Katrina, Geotechnical decision basis for sustainable coastal areas, Application of the isotache concept to long-term consolidation of Osaka Bay clay, Strength of dike clay covers during wave overtopping.

Support to ISSMGE member countries: In agreement with item 2 in the Terms of Reference TC1 supports the ijkdijk prediction competition. As part of the "IJKdijk project", in which a full scale embankment will be loaded to failure, a prediction competition is started. This competition requests the competitors to hand in a prediction on the moment of failure of the test facility. TC1 supports this competition and will present information of this competition to possible competitors.

TC1 also supports the international course understanding dike safety. Support of this course fits very well in fulfilling our Terms of Reference number 4, regarding knowledge transfer; the course provides a platform to present new research to the working field. The course will be scheduled yearly. More information on this course can be found on: <http://www.geodelftacademy.nl>

Roadmap and Milestones: As mentioned in the previous section, the first TC1 workshop will be held during the Baltic Sea Conference in Gdansk, September 15-18th, 2008. The proceedings of this workshop will then be a first milestone (kind of draft TC1-report). The Baltic Sea proceedings will be the input for the next workshop that will be held during the next ISSMGE conference held at Alexandria 2009. During the next international ISSMGE conference a proposal for a working plan for TC1 for the next 4 years will be presented to ISSMGE-board. At this moment the option for a co-operation with TC39, geotechnical engineering for coastal disaster mitigation and rehabilitation is being discussed. Concrete actions in agreement with item 3 in our Terms of Reference need to be established and will be a discussion point in our next meeting.

Final Remarks

Due to a discussion on the status of our committee, whether it should be a joint technical committee, JTC, or a technical committee, TC, the committee started late. Now, the activities of TC1 are getting momentum. At the XVII ISSMGE conference in Alexandria, Egypt, the committee will report its results.

Reported by Dr Meindert Van, Chair of TC1 and Dr. C. Zwanenburg

Activity of Member

Brazilian Geotechnical Society

The Brazilian Association for Soil Mechanics and Geotechnical Engineering (ABMS) was established in July, 1950, as a direct outcome from Terzaghi's consulting visits to Brazil in the late 40's. The first national geotechnical event was held three months later, with Terzaghi himself, as president of ISSMGE, being the speaker of honor. In that historical year, ABMS had 194 individual members and 14 corporate members. Now, approaching its 60th anniversary, ABMS has become stronger, with about 1000 members, including 250 students and 40 corporate members.

Being one of the largest member societies of the ISSMGE, ABMS is also the official representative of Brazilian Geotechnics at ISRM and ITA, through its two national committees of Rock Mechanics (CBMR) and Tunnels (CBT), respectively. ABMS is organized with an executive Board, a national Council with 62 elected members and plus the former presidents, and eight regional branches. Technical activities are also carried out by the national committees (rocks and tunnels) and eight technical commissions (environmental, foundations, geosynthetics, infrastructure, site investigations, slopes, solid waste landfills and unsaturated soils).



Photo1. Opening Ceremony of the 14th - Brazilian Geotechnical Conference (Cobramseg), with Roger Frank, Seco e Pinto, Alberto Sayao, Laura Caldeira and Waldemar Hachich in the center.

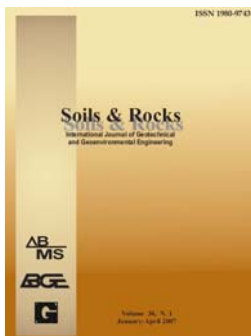


Photo 2. The new international journal: Soils and Rocks.

Cooperation with the Portuguese Society has been very active. ABMS and SPG celebrated an agreement with ABGE (Brazilian Engineering Geology Association) for publishing together their two traditional journals: in its 30th volume, Soils and Rocks became an international journal in 2007, with contributions only in English. The other journal, Geotecnia, continues to publish papers only in Portuguese and Spanish.

Another major international event co-organized by ABMS and SPG is the Victor de Mello Lecture, to be held every two years, alternately in Portugal and in Brazil. This lecture series honors the notable career of Prof. V. F. de Mello, a former president of ABMS (1964-66) and ISSMGE (1981-85). Professor John Burland, from England, was the invited 1st lecturer on April 07th, 2008. At the end, he was awarded the Victor de Mello silver medal and received a prolonged standing applause from the audience of 120 participants in Coimbra, Portugal.

Two other important lectures are also regularly organized by ABMS:

- The Pacheco Silva Lecture is a traditional biennial lecture, held at the opening ceremonies of the Brazilian Geotechnical Conferences. This year, the invited lecturer was Prof. Paulo Cruz, focusing at the high concrete face rockfill dams recently built in Brazil. The written version of this Lecture is published in Soils and Rocks (vol.31, no.2, 2008).
- The ABMS Lecture is an annual cross-country lecture, organized in all eight regional branches, usually along two consecutive weeks. This lecture series has been very successful in exposing case histories and practical details of geotechnical engineering to ABMS members and non-members. This year, the 4th ABMS Lecture was scheduled for mid-October and the invited speaker was Dr Sandro Sandroni, on the topic of Recent Developments in Soft Clay Engineering.

In this year of 2008, several national/ international meetings were organized by ABMS, with attendance surpassing 400 participants: the 4th Portuguese-Brazilian Geotechnical Congress (held biennially in cooperation with the Portuguese Geotechnical Society - SPG), the International South American Tunneling Seminar (held together with the 2nd Brazilian Tunneling Congress) and the 14th Brazilian Conference on Soil Mechanics and Geotechnical Engineering (Cobramseg), which was held in August, 2008. Three other events were also held simultaneously to the Cobramseg: the 3rd Brazilian Symposium of Young Geotechnical Engineers, the 3rd Brazilian Symposium on Site Investigations, and the International Workshop on Urban Infra-structure of Mega Cities, sponsored by ISSMGE Technical Committee 41. The event gathered more than 700 participants, including about 200 graduate geotechnical. Special lectures were delivered by the ISSMGE President, Professor Seco e Pinto, and Vice-Presidents Roger Frank and Waldemar Hachich. Professors Ricardo Oliveira, former IAEG President, Laura Caldeira, president of the Portuguese Geotechnical Society (SPG), and Claudio Olalla, chairman of the Spanish Rock Mechanics Society, were also invited lecturers. The proceedings included a book with 25 keynote lectures and a CD with a total of 309 technical papers.



Photo 3. John Burland receiving the 1st Victor de Mello Medal and the Diploma from Luis Guilherme de Mello.

News

An Geotechnical Engineering Conference “The Development of Urban Areas and Geotechnical Engineering”

An International Geotechnical Conference “Development of Urban Areas and Geotechnical Engineering” was held on the premises of St. Petersburg State Transport University, St.Petersburg on 16-19 June 2008. The conference happened to be the largest amongst similar events recently held in Russia and the most significant one for the international geotechnical community as it forestalled the 17-th International Conference on Soil Mechanics and Geotechnical Engineering to be held in Alexandria, Egypt where the leadership of ISSMGE will be re-elected following a report on its activities conducted whilst in office. The conference was organized by the North-West branch of Russian Society for Soil Mechanics, Geotechnics and Foundation Engineering (RSSMGFE), International Society for Soil Mechanics and Foundation Engineering (ISSMGE) and NPO “Georeconstruction-Fundamentproject”.



The following highlights of the conference are of particular importance:

- The Conference proved to be the one of the widest attendance amongst similar events recently held in Russia;
- The Conference was attended by 450 specialists from 45 countries of the 4 continents, including ISSMGE Board Members;
- The Conference was organized with the help of Chairmen of 4 Technical Committees of ISSMGE: TC 38 “Soil-Structure Interaction” - Professor V.M.Ulitsky (Russia), TC 41 “Geotechnical Infrastructure for Mega Cities and New Capitals” - Professor A. Negro (Brazil), TC 4 “Earthquake Geotechnical Engineering and Associated Problems” - Professor T. Kokusho (Japan) and TC 32 “Engineering Practice of Risk Assessment and Management” - Professor F. Nadim (Norway)
- The conference sessions featured 20 invited lectures;
- The 4 volumes of the conference proceedings contain 199 selected papers and lectures of authors from 42 countries;
- The Welcoming Reception and the Banquet were held in historic Yusupov Palace on Fontanka River where 200 years ago the St. Petersburg State Transport University was founded;
- The technical tour was conducted in the famous National Heritage Site “Peterhof Park”;
- The conference proceedings will be uploaded to the web database of Swedish Geotechnical Institute (SGI on-line) thus being made available to the geotechnical community throughout the world;
- During the conference Professor Pedro S. Sêco e Pinto chaired a meeting of the CAC of 17-th International Congress on Soil Mechanics and Geotechnical Engineering to be held in Alexandria, Egypt in 2009;
- Professor Vladimir Ulitsky chaired a meeting of ISSMGE TC38 “Soil-structure Interaction”;

Before the conference on 15 June 2008 the Board Meeting of ISSMGE was conducted in Renaissance Hotel St.Petersburg. The Board Members were greeted by the Chairman of the Organizing Committee Professor Vladimir Ulitsky. In his opening speech Professor Ulitsky pointed out the acute character and complicity of challenges faced by modern geotechnical engineering in historic cities and megacities, stating his confidence in the fact that participation of ISSMGE Board Members would serve further strengthening of bonds between Russian and International specialists in soil mechanics and geotechnical engineering. The ISSMGE Board proceeded to consider the issues of future development of ISSMGE in the number of problematic regions. Also, of considerable importance was the participation in the conference of leading geotechnical specialists of the world - the ISSMGE Board Members - headed by ISSMGE President Professor Pedro S. Sêco e Pinto (Portugal), the Secretary General of ISSMGE Professor Neil Taylor (UK), and F_{ed}IGS President Professor William Van Impe.

On 16 June, being the first day of the Conference, the Plenary Sessions were held chaired by V.M. Ulitsky (Russia), Pedro S. Sêco e Pinto (Portugal), W. Van Impe (Belgium) and M.B. Lisiuk (Russia) and dedicated to invited lectures. Following a celebratory opening of the Conference, the representatives of the Russian school of geotechnical engineering presented a lecture entitled “Deep underground construction adjacent to historic buildings in soft soils.” (V. M. Ulitsky, A.G. Shashkin). The lecture was presented by Director General of NPO “Georeconstruction-Fundamentproject” Dr. A. Shashkin who spoke to the audience about methods of underground construction in St.Petersburg soft clays as well as about modern computation methodologies. ISSMGE President Pedro S. Sêco e Pinto addressed the participants with the lecture “Pile foundations design of new Tagus bridge and Guadiana bridge (Portugal)”. During the second and the third days of the conference on 17 and 18 June proceedings of six sections were held. On 19 June, the fourth day of the conference, the participants were taken on a technical tour to the National Heritage Site “Peterhof Park”.

The participants noted that the International Conference “Development of Urban Areas and Geotechnical Engineering” had been organized to conform with high standards of ISSMGE conference format. We hope that the conference will become a strong impetus to development of geotechnical engineering worldwide, to which multiple responses to the Organizing Committee from the leading ISSMGE specialists testify. The organizers wish to extend their gratitude to the sponsors of the conference - ZAO “FORMA” (PO “Beregstal”), Research and Engineering Company ZAO “Geostroy”, Research and Engineering Company ZAO “Geoizol”, St. Petersburg, Russia, OAO “New Ground”, Perm, Russia, as well as to the key figures in St. Petersburg State Transport University for their help in organizing so important an event for the international geotechnical community.

Reported by Professor, Dr.Sc. V.M. Ulitsky, Dr. A.G. Shashkin and Dr. M.B. Lisyuk

News

The 1st European Conference on Unsaturated Soils (E-UNSAT 2008), Durham, United Kingdom, 2-4 July 2008



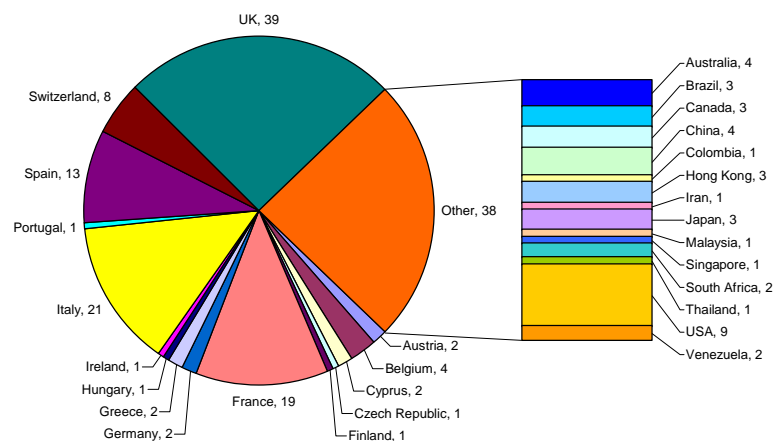
graphic) and so combined European advances in geo-engineering together with an international state-of-the-art perspective on unsaturated soils.

The First European Conference on Unsaturated Soils was held at Durham University, United Kingdom in July 2008 under the auspices of ISSMGE Technical Committee TC6. It was organised by Dr David Toll and Dr Charles Augarde of the School of Engineering, Durham University and Dr Domenico Gallipoli and Professor Simon Wheeler of the Department of Civil Engineering, University of Glasgow. This European conference series adds to the existing international conference series on Unsaturated Soils (started in Paris 1995) and the Asia-Pacific series (started in Singapore 2000). It reflects a resurgence of interest in unsaturated soil research within Europe in recent years that has led to major advances in the field.

The conference attracted 155 delegates from 29 countries (see

The Proceedings¹, published by CRC Press/Balkema (an imprint of Taylor and Francis), contain 136 papers from leading international researchers and practitioners addressing five topics in the field of unsaturated soils: Advances in testing techniques, Engineering behaviour, Constitutive modelling, Numerical modelling and Case histories. The areas of application include slope stability, foundations, dams, contaminated land, landfill and nuclear waste repositories.

Keynote lectures were given by Professors Eduardo Alonso (Spain), Pierre Delage (France), Antonio Gens (Spain) and Lyesse Laloui (Switzerland). There is no doubt that their keynote papers published in the Proceedings will be seen as landmark contributions in unsaturated soil research.



Geographic distribution of delegates to the E-UNSAT 2008 conference

The motivation for organising this First

European Conference on Unsaturated Soils grew from the MUSE project (*Mechanics of Unsaturated Soils for Engineering*: <http://muse.dur.ac.uk>) funded by the European Community. The conference organizers, Durham University and the University of Glasgow, are both partners of the MUSE network. Moreover, members of the MUSE network from Ecole Nationale des Ponts et Chaussées in France; Universitat Politècnica de Catalunya in Spain; Università degli Studi di Trento and Università degli Studi di Napoli Federico II in Italy contributed as members of the Technical Advisory Committee, together with other international researchers.

After three sunny days in the historic UNESCO world heritage city of Durham, the conference concluded with a controversial discussion session on "The Gulfs between Theory and Practice in Unsaturated Soils Mechanics" with contributions by Professor Geoffrey Blight, Professor John Burland, Professor Sandra Houston, Dr Andrew Ridley and Mr Wilf Wrigley. The conference banquet held in Durham Castle concluded the social programme.



Dr Michael Bardanis took the initiative of collecting signatures from delegates as a memento of the first in what promises to be a highly successful conference series.

¹ Toll, D.G., Augarde, C.E., Gallipoli, D. & Wheeler, S.J. (eds) (2008) *Unsaturated Soils. Advances in Geo-Engineering*, Proc. 1st European Conference on Unsaturated soils, ISBN: 9780415476928, Leiden: CRC Press/Balkema, 1006 pp.

News

The 2nd International Conference on Geotechnical Engineering for Disaster Mitigation and Rehabilitation (GEDMAR08), May 30 to June 2 2008, Nanjing, China



The 2nd International Conference on Geotechnical Engineering for Disaster Mitigation and Rehabilitation (GEDMAR08) was held under the auspices of TC39 and TC4 of ISSMGE and the Joint Working Group on Geotechnical Engineering for Disaster Mitigation and Rehabilitation (JWG-DMR). GEDMAR08 was jointly organized by Hohai University (China), Chinese Institute of Soil Mechanics and Geotechnical Engineering (CISMGE, CCES), and Chinese Society of Environmental Geotechnics (CSEG, CSRME).

One Qian Jia-Huan Lecture, 9 keynote lectures, 4 special sessions, 5 parallel sessions, 1 practitioners' forum, 1 poster session and 1 technical tour were scheduled in the 4-day conference. Over 70 oral and poster presentations were delivered or exhibited. One hundred and forty-four papers in English were published in the Proceedings, which were prepared reflecting the most advanced scientific and technological developments in the fields of

mitigation and rehabilitation for various geo-disasters, e.g., earthquakes, tsunamis, landslides, flooding and debris flows, etc.

Qian Jia-Huan Lecture and keynote lectures were delivered in sequences:

1. "Flow slides of underwater sand deposits in Jamuna river bed", Qian Jia-Huan Lecture by Prof. K. Ishihara (Japan)
2. "Geohazards in China and its mitigations" by Prof. CHEN Zu-Yu (China)
3. "Liquefaction mitigation of sand deposits by granular piles- an overview" by Prof. M.R. Madhav (India)
4. "Interaction between Eurocode 7 - Geotechnical Design and Eurocode 8- Design for Earthquake Resistance of Foundations" by Prof. P. S. Pinto (Portugal)
5. "Seismic performance evaluation of geotechnical structures" by Prof. S. Iai (Japan)
6. "Strategies for tsunami risk assessment and mitigation" by Director K. Karlsrud (Norway)
7. "Some aspects of the mitigations and rehabilitations of natural disasters in Malaysia" by Dr. T.A. Ooi (Malaysia)
8. "Mitigation of seismic damage of river dikes" by Prof. Y. Sasaki (Japan)
9. "Estimation of liquefaction-induced settlement of river dikes and their effect in lowland area during earthquakes" by Prof. S. Yasuda (Japan)
10. "Advances in field measurements of nonlinear dynamic soil properties" by Prof. K.H. Stokoe, II (USA).

Besides the many impressive presentations on principles and practices of geo-disaster mitigation and rehabilitation, a special session on "Sichuan Earthquake in China", plus a gallery on this Earthquake, brought forth attendants a comprehensive perspective on the generation, demolition, loss, and aftershock rescuing efforts with respects to the disaster.

In day 4, a technical tour to the Grand Canal at Yangzhou City of China was scheduled, where global scholars and practitioners witnessed the world's oldest and longest canal. For near 2,500 years, the 1,795 km (1,114 miles) long hydraulic works has been servicing, with great success, transportations, irrigations, and drought preventions, etc.

In the closing ceremony, it was decided that the venue of the 3rd International Conference on Geotechnical Engineering for Disaster Mitigation and Rehabilitation (May 2011), would be in Semarang of Central Java, Indonesia. Also, during the closing ceremony, Prof. H. Ohta (Japan) made a summarization about the conference activities.

The conference was initiated by Prof. CHU Jian (Chair of TC39) and Prof. LIU Han-Long (Chair of GEDMAR08), and was powered diligently and efficiently by staffs of GeoHohai, in particular, Dr. DENG An. (Secretary General of GEDMAR08). Supports from National Natural Science Foundation of China and Hohai University are appreciated, which makes the conference easier to go. Members of TC39 and TC4, in particular, Prof. T. Kokusho (Chair of TC4), and members of JWG-DMR are sincerely thanked for their support to the organization of this conference. Many more people should be credited, in particular, Prof. P. S. Pinto (President of ISSMGE), Prof. M. R. Madhav (Vice-President for Asia, ISSMGE), for their support and advice, and Dr. HAN Jie of The University of Kansas, USA, for his advice and help on conference organization.

Sciencemeeting Online of China, an official organization collecting and presenting academic conference events online, recorded the conference activities throughout, and produced video playbacks of all oral presentations, which are located on the organization's web domain, (<http://www.meeting.edu.cn/webmedia/jingpin/gedmar2008/yicheng.htm>). Online playbacks are available via internet. Chinese fonts and playing programs may be required.

Reported by Dr. DENG An, Secretary General of GEDMAR08

News

The 1st International Conference on Education and Training in Geo-Engineering Sciences: Soil Mechanics and Geotechnical Engineering, Engineering Geology, Rock Mechanics

The Romanian Society for Soil Mechanics and Geotechnical Engineering (RSSMGE) organised on 2-4 June 2008 in Constantza the First International Conference on Education and Training in Geo-engineering Sciences: Soil Mechanics and Geotechnical Engineering, Engineering Geology, Rock Mechanics.

JTC3 "Education and Training in Geo-engineering Sciences" of FIGS, chaired by Prof. Luis Gonzalez de Vallejo and ETC16 "Education and Training in Geotechnical Engineering" of ISSMGE, chaired by Prof. Iacint Manoliu were involved in the preparation of the Conference.

A number of 120 participants from 6 continents and 23 countries took the opportunity to meet and discuss many challenges faced by the education and training in the field of Geo-engineering, defined as "engineering with, on or in geological materials" in a document prepared to set up a cooperation under the auspices of a Federation of International Geo-engineering Societies (FIGS) having ISSMGE, IAEG and ISRM as founding members.

The Conference has been honoured by the presence of Pedro Seco e Pinto - President of ISSMGE, Roger Frank - Vice-president for Europe of ISSMGE, Waldemar Hachich - Vice-president for South America of ISSMGE and of three former Presidents of IAEG: Dr. Niek Rengers, Prof. Ricardo Oliveira and Prof. Paul Marinos. ISRM was represented by Prof. Giovanni Barla, former Vice-president for Europe of ISRM.

Distinguished personalities of the three Sister Societies have delivered fourteen lectures: John Burland, Ricardo Oliveira, John Atkinson, Mark Jaska, Giovanni Barla, Luis Van Rooy, Niek Rengers, Trevor Orr, Ian May, Luis Gonzales de Vallejo, Keith Turner, Frans Barends, Waldemar Hachich and Mike Devrient. During the six Discussion Sessions a number of 24 papers have been presented by the authors. The Conference Scientific programme included also a Workshop on The Bologna process and geo-engineering education under auspices of the project EUCEET (European Civil Engineering Education and Training).

The Proceedings of the Conference are published by CRC Press/ Balkema in a volume of 525 pages. Editors are Prof. Iacint Manoliu and Prof. Nicoleta Radulescu.



Fig.1



Fig.2

Fig.1 shows Prof. Pedro Seco e Pinto addressing the participants of the Conference during the closing session.

Fig.2 is a group picture taken after the closing session, taken in front of the hotel Malibu, the venue of the Conference.

News

The 5th South African Young Geotechnical Engineers Conference

The 5th Young Geotechnical Engineers Conference (YGEC) to take place in South Africa was hosted at the Camelot Conference Centre in Hillcrest, Durban from 20 to 22 August 2008. The conference continues a proud tradition of Young Geotechnical Engineers Conferences organised every three or four years by the Geotechnical Division of the South African Institution of Civil Engineers. The conference was the seventh YGEC ever to take place on the African continent and was preceded by the Second African Young Geotechnical Engineers Conference which took place in Tunisia in 2007.

The YGE conferences in South Africa follow the model of the British conferences, the first of which was hosted at City University, London, in 1982 which was initiated and organised by Prof John Atkinson. The aim is to provide a less formal environment for young and first-time authors to publish and present technical papers in a conference environment. The conferences are open to engineers and engineering geologists of 35 years and younger at the time of submitting their abstracts.

South Africa is currently preparing to host of the 2010 Soccer World Cup Final which led to the theme of the conference being “2010 and Beyond”. With undoubtedly the largest ever number of mega-projects currently under construction in South African history, the current boom in the civil engineering and construction industries contributed to the high standard of the papers received. All papers were peer reviewed by young engineers serving on the organising committee and returned to the authors for corrections (if required) before publication in the conference proceedings. Papers were limited to the length of 10 A4 pages printed double spaced. The South African Civil Engineering and Construction Industries contributed generous sponsorship to subsidise the conference registration cost. The platinum sponsor was ESOR (Pty) Ltd, a leading South African Geotechnical Engineering construction company. The gold sponsors were Steffanuti & Bressan (Pty) Ltd and Sanyati Piling (Pty) Ltd. Several generous sponsorships were also received from International companies currently active in South Africa, e.g. Bauer, Naue and others.

In the tradition of the British conferences, a “godfather” figure, i.e. an imminent senior geotechnical engineer, was invited to preside over the conference in terms of presenting an opening and closing address and to give feedback to presenters in terms of the quality of presentations and aspects related thereto. The “godfather” for this conference was Mr Bernie Krone, Managing Director of ESOR (Pty) Ltd. With his informal and practical engineering approach, Bernie made an enormous contribution to the success of the conference. The conference was hosted at the Camelot Conference Centre in Hillcrest Durban. The Camelot Centre is located on a golf estate situated between rolling hills and is constructed around the theme and in the style of King Arthur’s castle. With all the houses on the estate constructed in Tudor style between large shady trees, the venue resembles England of old.

The formal proceedings of the conference comprised a total of 9 technical sessions, all chaired by Young Engineers. Each presenter had 15 minutes in which to deliver his/her presentation, followed by 5 minutes for questions. The high standard papers and presentation attracted many questions and lively discussion. The conference dinner comprised a medieval banquet in Camelot Castle and was undoubtedly one of the highlights of the conference. Bernie Krone presided as a very convincing and unforbearing king, with chairman of organising committee, Michelle Theron, as his lovely queen at his side. Every lord and lady attending the banquet was attired in a medieval costume and was issued with a bib to keep it in pristine condition! (Apparently the fork had not yet been invented at the time of Camelot and guests had to eat with knives and their hands!) The feast was hosted by the baron of the castle who explained the rules and etiquette, all of which were strictly enforced! He also led many a merry song in which every lord and lady merrily joined in. Rows of servants carrying all sorts of delectable dishes constantly entered the dining hall under trumpet fanfare. Several lord and ladies, including his grace, the lord Bishop, were caught out not adhering to every rule and whim of his majesty, King Bernie, and had to do complicated medieval dances as punishment to the satisfaction of the king! One of the highlights of the conference was the site visit to the impressive Moses Mabida stadium currently under construction in Durban for the 2010 Soccer World Cup competition. The stadium will have a seating capacity of nearly 90 000. The most prominent feature of this stadium is undoubtedly the arch spanning the entire length of the stadium, i.e. approximately 380m. The arch is supported by a single foundation abutment in the north and splits into two above the stadium, thus requiring two foundation abutments in the south. The horizontal thrust exerted onto the northern foundation is an impressive 100 000kN which posed significant challenges to the geotechnical engineers.

It has become tradition that the author of the best paper and the presenter of the best presentation, as judged by the organising committee, are sponsored by the Geotechnical Division of the South African Institution of Civil Engineers to attend the next International Young Geotechnical Engineers Conference. The next such conference will take place in parallel with the 2009 ISSMGE International Conferences to be hosted in Alexandria, Egypt. The winner for best paper was Richard Puchner of Jones & Wagener Consulting Engineers and the winner for best presentation was Trevor Green of Verdicon Consulting. Runners up were Jacobus Breyll of Jones & Wagener and Shelley Hoeben from Geosure. The conference was a great success and many attendees enquired why it is only presented every three years! We are already very much looking forward to the next Young Geotechnical Engineers Conference.

Reported by Dr SW Jacobsz Pr Eng, Chairman of SAICE Geotechnical Division

Event Diary

ISSMGE SPONSORED EVENTS 2008

IV International Conference on Scour and Erosion 2008
Date: 5-7 November 2008
Location: Chuo University, Tokyo, Japan
Contact person: Professor Sekiguchi
(sekiguch@ujigawa.mbox.media.kyoto-u.ac.jp)
Website: icse-4.kz.tsukuba.ac.jp/

6th Asian Young Geotechnical Engineers' Conference - Next Generation Geotechnics (20 - 21 December)
Date: 20 - 21 December 2008
Location: Indian Inst. Science Campus, Bangalore, India
Contact person: Prof. TG Sitharam
(sitharam@civil.iisc.ernet.in)
Website: civil.iisc.ernet.in/~igc2008/

2009

III Latin American Conference of Young Geotechnical Engineers
Date: 30 March - 1 April 2009
Location: Cordoba, Argentina
E-mail: 3cligj@efn.uncor.edu

International Symposium on Prediction and Simulation Methods for Geohazard Mitigation
Date: 25 - 27 May 2009
Location: Kyoto Internat. Conference Ctr, Kyoto, Japan
Contact person: Prof. F. Oka
E-mail: foka@mbox.kudpc.kyoto-u.ac.jp
Website: nakisuna2.kuciv.kyoto-u.ac.jp/tc34/is-kyoto/

IS-Tokyo 2009 - International Conference on Performance-Based Design in Earthquake Geotechnical Engineering - from case history to practice
Date: 15 - 17 June 2009
Contact person: Dr Y Tsukamoto (ytsoil@rs.noda.tus.ac.jp)
Website: www.rs.noda.tus.ac.jp/ytsoil/IS2009.htm

The 3rd International Geotechnical Symposium (IGS2009) on Geotechnical Engineering for Disaster Prevention and Reduction (22-25 July)
Date: 22 - 25 July 2009
Location: Harbin, China
Contact person: Professor MC Zhao,
E-mail: maocai@mail.ru, zhao_maocai@sohu.com
Website: igs2009.hit.edu.cn

XVII International Conference for Soil Mechanics and Geotechnical Engineering
Date: 5 - 9 October 2009
Location: Bibliotheca Alexandrina, Alexandria, Egypt
Website: www.2009icsmge-egypt.org/

NON-ISSMGE SPONSORED EVENTS 2008

XII International Conference of IACMAG
Date: 1 - 6 October 2008
Location: India
Contact person: Dr. D. N. Singh (dns@civil.iitb.ac.in)
Website: www.12iacmag.com

Geotechnical Engineering in Urban Areas Affected by Land Subsidence
Date: 9 October 2008
Location: Tower Engineering Institute, Mexico, D.F., Mexico
Contact person: Juan Manuel Mayoral Villa
E-mail: smms@prodigy.net.mx, Website: www.smms.org.mx

CAMSIG XIX - XIX Congreso Argentino de Mecanica de Suelos e Ingenieria Tecnica 2008 (Date: 15 - 17 Octubre 2008)
Location: Ciudad de la Plata, Argentina
Contact person: Ing. Augusto José Leoni
E-mail: leoni@speedy.com.ar
Website: www.camsig2008.frlp.utn.edu.ar/

NUCGE 08: International Conference on Numerical Computation in Geotechnical Engineering
Date: 27-29 October 2008
Location: University of Skikda, Skikda, Algeria
E-mail: larmacs@univ-skikda.dz, nucge08@gmail.com
Website: www.univ-skikda.dz

Conferencia 50 Aniversario "Estado de la Practica"
Date: 6 - 9 November 2008
Location: Aula Magna, UC Andres Bello, Caracas, Venezuela
Organizer: SVDG (svdg50@hotmail.com/civ.svdg@gmail.com)
Website: www.svdg.org.ve

XXIV National Conference of the Mexican Society of Soil Mechanics
Date: 26 - 29 November 2008
Location: Convention Centre, Aguascalientes, Mexico
Contact person: Dr. Juan M. M. Villa (smms@prodigy.net.mx)
Website: smms.org.mx

GEOAGE - Advances in Geotechnical Engineering - IGC 2008
Date: 17 - 19 December 2008
Location: Bangalore, India
Contact person: Prof. TG Sitharam
(igc2008@civil.iisc.ernet.in)
Website: civil.iisc.ernet.in/~igc 2008

Event Diary (continued)

2009

IFCEE 09: ASCE FOUNDATIONS GeoCongress with ADSC & PDCA

Date: 15 - 19 March 2009

Organizer: Geoinstitute of ASCE

Contact person: Paul W. Mayne (paul.mayne@ce.gatech.edu)

Website: www.ifcee09.org

Second International Conference on New Developments in Soil Mechanics and Geotechnical Engineering

Date: 28 - 30 May 2009

Location: Nicosia, Northern Cyprus

Contact person: Cavit Atalar

E-mail: zm2009@neu.edu.tr; catalar@neu.edu.tr

Website: <http://zm2009.neu.edu.tr>

GeoHunan International Conference: Challenges and Recent Advances in Pavement Technologies and Transportation Geotechnics

Date: 3 - 6 August 2009

Contact person: Dar Hao Chen, PhD, PE

E-mail: dchen@dot.state.tx.us

Editorial Remarks

The editorial board is pleased to send the ISSMGE members ISSMGE Bulletin Vol.2, Issue 3 in September 2008, which includes a message from the Vice President, reminiscences, case history, regional conference report and activities. Contributions from member societies and Technical Committee are very much welcome. Any comments to improve the Bulletin are also welcomes. Please contact a member of editorial board or Vice-President for the region, or directly e-mail to Osamu Kusakabe (kusakabe@cv.titech.ac.jp).

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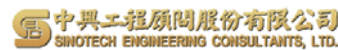
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