

# **3<sup>rd</sup> International Conference on New Developments in Soil Mechanics and Geotechnical Engineering**

**Atatürk Cultural and Congress Center  
Near East University, Lefkoşa, North Cyprus  
June 28 – 30, 2012**

## **Conference Programme**

**28 June 2012 Thursday**

08.30 – 09.30 Registration

09.30 – 10.15 Opening Ceremony

10.15 – 10.30 Coffee Break

10.30 – 11.10 **Keynote Lecture : Professor Jean-Louis BRIAUD,**  
President of ISSMGE  
Professor and Holder of the Buchanan Chair  
Zachry Department of Civil Engineering, Texas A&M University, USA

*Pressuremeter and foundation design: some contributions*

11.10 – 11.50 **Keynote Lecture :** Professor Pedro Sêco e Pinto, Immediate Past President of ISSMGE, University of Coimbra, National Laboratory of Civil Engineering, PORTUGAL

*Kilamba building foundation: A new challenge*

11.50 – 13.00 **SESSION 1: Foundation and slope stability**

Lateral displacement of temporary retaining wall as jet grouting pile installation in Singapore  
*Shin, E.C., Park, Y.J. & Park, J.J*

Study of permeability and unconfined compressive strength of GGBS-Cement-Lime mixtures modified by further Bentonite  
*Talefirouz, D., Cokca, E.*

Junction Properties Interpretation of Textile Geogrids Using Multi-Junction Clamp  
*Han-Yong Jeon, Yuan Chun Jin, Jungjo Yuu*

Numerical analysis of embankment reinforced by geosynthetics on sabkha soil  
*Berrabah, F. & Benmebarek S.*

Verification of New Seismic Site Characterization System in Korean Historical Areas  
*Kim, D.S., Park, H.J. & Lee, S.H.*

## 11.50 – 13.00 **SESSION 1: Soil characterization**

Monitoring and instrumentation of the barrette  
*Koçak, B., Akçakal, Ö., Sezer, Y., Özerdoğan, B. & Durgunoğlu, T.*

Evaluation of resilient modulus properties of Iraqi soil using standard laboratory test for load cyclic triaxial strength  
*Ibrahim, S.F.*

Use of lime and cement treated soils with rigid inclusions  
*Okyay, U.S., & Dias, D.*

Effect of sand mixing on consolidation characteristics of Kala Shah Kaku campus UET, Lahore  
*Sohail, S. & Aadil, N.*

Settlement of lime treated sand bentonite mixtures  
*İncesu, A.N., & Teymur B.*

## 11.50 – 13.00 **SESSION 1: Earthquake geotechnical engineering**

What is Static Liquefaction Failure of Loose Fill Slopes?  
*Ng, Charles W.W.*

Soil improvement applications using reinforced granular fills on earthquake zones  
*Yalcin Dayioglu, A., Incecik, M.*

Recent Development of Quantitative Determination of Kinematic Hardening Sub-Yield Surface Limits  
*Mukabi, J.N.*

Influence of Soil Conditions on Stochastic Response of Dams to Spatially Varying Ground Motions  
*Hacıfendioğlu, K., Saracoğlu G.*

The influences of a liquid storage tanks and soil characteristics under seismic loads  
*Naeini, S.A, Valaei, A, Hossen Zade, M.*

Earthquake Hazard of the Historical Peninsula of Istanbul  
*Gökçe Çiçek İnce*

13.00 – 14.00 Lunch

14.00 – 14.40 **Keynote Lecture : Professor Ivan Vaníček**  
Vice-president ISSMGE for Europe  
Czech Technical University in Prague  
Geotechnical Department, Prague, CZECH REPUBLIC

### ***Risk associated with geotechnical engineering***

14.40 – 15.20 **Keynote Lecture : Professor Yeon-Soo Jang**  
President of Korean Geotechnical Society,  
Department of Civil & Environmental Engineering  
Dongguk University, Seoul, KOREA

***Development of geotechnical LRFDCode for ground improvement methods in Korea***

15.20 – 16.35 Coffee Break

**16.35 - 16.45 SESSION 2: Foundation and slope stability**

Effect of surrounding soil on elasto-plastic dynamic response of underground structures to near-fault ground motions

*Hacıfendioğlu, K. & Saraçoğlu, G.*

Numerical analysis of cross-walls effectiveness in reducing ground movements associated to deep excavations

*Erbì, E. & Soccodato, F. M.*

Parametric studies of buried pipes using finite element analysis

*Bildik, S., Laman M. & Suleiman M.T.*

Settlement observations of industrial structures founded on soft soils: case of the harbour zone of Bejaia city

*Bahar, R., Khiatine M., Belhassani O. & Sadaoui O.*

Load-displacement behavior of passive piles in cohesive soils

*Kahyaoğlu, M.R., İmançlı, G. & Kayalar, A.Ş.*

**16.35 - 16.45 SESSION 2: Soil characterization**

Effect of the sand layer thickness on the CBR values of two layered subgrade

*Moayed, R.Z., Allahyari, F. & Nazari, M*

Geotechnical characteristics of granular pumice soils in Nevşehir region

*Yıldız, M., & Soğançlı A.S.*

Effects of fibre reinforcement in the shrinkage behaviour of compacted clay.

*Ekinci, A., Ferreira, P.M.V.*

Experimental study on shear resistance of Babolsar sand under anisotropic consolidation

*Jafarian, Y., Ghorbani, A., & Salamatpoor, S.*

The geotechnical improvement of Talesh peat soil with cement

*Nikookar, M., Karimi pashaki, M., Nikookar, H. & Arabani, M.*

Effect of granular waste glass on soil properties

*Başarı E.*

**16.35 - 16.45 SESSION 2: Earthquake geotechnical engineering**

A Model Study on Earthquake Behaviour of Breakwaters

*Selçuk, M. E., Ozaydın, K., Berilgen, M.*

Numerical Modeling of the Seismic Behavior of Pile Group in Soil Slopes

*Naeini, S, A., Hamidpourzare, M.*

Excess Pore Water Pressure Generation under Anisotropic Conditions

*Ulaş, K., Yang, H.J., Norris, G.*

Effects of Soil-Pile-Structure Interaction on Seismic Response of Moment Resisting Buildings on Soft Soil

*Hokmabadi A.S., Fatahi B., Tabatabaiefar H.R., & Samali B.*

Pore Pressure Generation of Non plastic Silt-Sand Mixtures  
*Karakan, E., Altun, S.*

Likelihood estimation for ranking of attenuation equation  
*Güllü, H.*

### 16.45 – 18.00 **SESSION 3: Foundation and slope stability**

Determination of subgrade reaction modulus of two layered soil  
*Ziaie Moayed, R., & Ali Bolandi, M.*

Shear Strength Behavior of Sand Stabilized with Cement  
*Naeini, S. A., MALEK AVRZAMANI, H.*

Analysis of ring footings using field test results  
*Demir, A., Örnek, M., Laman, M. & Yıldız, A.*

Laboratory investigation of the uplift behavior of belled piles in reinforced sand  
*Javadi, S., Moghaddas Tafreshi, N.*

Value of partial factors for EC 7 slope stability analysis: solved “mystery”?  
*Papić, Dimitrievski, & Prolović*

### 16.45 – 18.00 **SESSION 3: Soil characterization**

Analysis of the time–shrinkage evolution for an expansive clayey soil  
*Ejjaouani, H., Magnan, J.P., Shakhirev, V., & Bensallam, S.*

Freeze-thaw behavior of fine grained soils subjected to surcharge loads  
*Zaimoğlu, A.Ş., Hattatoğlu F., Akbulut, R.K. & Yetimoğlu T.*

Improvement of clay soil has high plasticity index  
*Tarek, N. & Ninouh, A.*

Effect of lime and gypsum on stabilization of high plasticity clay, Ankara, TURKEY  
*Küçükali, Ö., Kılıç, R., Ulaş, K.*

Evaluating undrained behavior of Babolsar sand using strain-controlled triaxial tests  
*Jafarian, Y., Ghorbani, A., & Salamatpoor, S.*

Evaluation of the relationships between Schmidt rebound number and strength of rocks  
*Aksoy, H.S. & Yılmaz, U.*

### 16.45 – 18.00 **SESSION 1: New methods in geotechnical engineering**

Engineering properties of various graded medium to fine sand grouted with Ultrafin 12 cement  
*Mollamahmutoğlu, M., Avci, E. & Özarlan, M.*

Numerical evaluation of the bearing capacity factor  $N^*$  of ring footings for associated soils  
*Benmebarek S., Remadna M.S., Benmebarek N & Belounar L.*

Sulfate Expansion of Lime-Stabilized Expansive Soil  
*Celik, E. & Nalbantoglu, Z.*

Predictions of friction pile group response using embedded piles in PLAXIS  
*Sheil B. & McCabe B*

Effect of steel slag used with sea water upon the strength of uzunciftlik clay  
*Bilgen G., Kavak A. & Capar O.F.*

Evaluation on grain size distribution of railway ballast with and without sands by image analyses

*Kumara, J.J., Ogiwara, K., Hoshi, S. & Hayano, K.*

Numerical analysis of Sunshine Motorway Trial Embankment on soft clay deposit with and without PVD improvement

*Uysal, F., Yildiz, A.A., & Mekik, Z.*

19.30 – 21.00 Welcome Reception

### **29 June 2012 Friday**

09.00 – 09.40 **Keynote Lecture : Professor Braja M. Das**  
Dean Emeritus, California State University, Sacramento, USA

***Maximum and minimum void ratio of granular soils and median grain size – their importance and applications***

09.40 – 10.20 **Keynote Lecture : Professor Ergün Toğrol**  
Honourary President, Turkish National Committee for ISSMGE  
İstanbul Technical University & İstanbul University, İstanbul, TURKEY

***Purpose and function of sonic cross-hole tests***

10.20 – 10.35 Coffee Break

10.35 – 11.45 **SESSION 4: Foundation and slope stability**

Effect of reinforcement type and number on the load-settlement behavior of strip footings

*Cicek, E., Guler E. & Yetimoglu T.*

Numerical back-analysis of a deep excavation consisting of multipropped retaining wall

*Houhou, M. N., Emeriault, F. & Kastner, R*

Settlement analysis of Shahid Kalantari highway embankment and assessment of the effect of geotextile reinforcement layer

*R. Emami, K. Badv*

Slope stability analysis on river embankments constructed by improved dredged clay

*Kumara, J.J.*

Optimization of piled-raft foundation compound system by evaluation of the effect of pile length variation on performance this system

*Amir mahmoudzadeh, heydar dashti naserabadi*

#### 10.35 – 11.45 **SESSION 4: Soil characterization**

Effect of leaching on the dissolution of Al Doar gypseous soil  
*Al-Saoudi, N., & Al- Banna, L.*

Investigation of soil behavior in construction of rammed aggregate piers  
*Ataman Ş., Berilgen, S.A., Akgüner C., & Berilgen M.M*

Soil abrasiveness for TBM along Tabriz metro tunnel line 2, Iran  
*Asghari, E., Babazadeh, M. & Heydari, B.*

Comparative study of soil water characteristic curve prediction methods  
*Ahmadi-adli, M., Huvaj, N., Toker, N. K. & Kurkcu M.G.*

Effect of RHA and RHP on Expensive soil  
*Aziz, O. A. & Canakci H.*

Use of In-situ Tests for Evaluation of Shear Modulus for Hard Clays in Sudan  
*Ali E. M., Osman M. A. & Abuelhassan M. B.*

#### 10.35 – 11.45 **SESSION 2: New methods in geotechnical engineering**

Bearing Capacity of Geosynthetic Reinforced Foundation Beds on Compressible Clay  
*K. Rajyalakshmi., Madhira R. Madhav. & K. Ramu.*

Theory and Application of Geothermal Energy  
*Arslan U. & Huber H*

Ground improvement to reduce the liquefaction potential around pile foundations  
*Wehr & Keil*

Monitoring and numerical investigations of rigid inclusion reinforced concrete water tanks  
*Okay U.S & Briançon L.*

Properties of Stabilized Clayey Soils by Liquid Ionic Stabilizer  
*Arabani, M., Haghi, A.K., Hashemi, S., Karami, M., Nikookar, M. & Bahari, M.*

Determination of Vertical Displacements behind the Excavation Support Systems  
*Çetin, Z., Onur, M.İ., Tuncan, M., & Tuncan, A.*

Investigation on the influence of water to soil  
*Katzenbach, R., Bergmann, C.*

#### 11.45 – 13.00 **SESSION 5: Foundation and slope stability**

Experimental investigation on behavior of footings on contaminated deltaic soils  
*Shahien, M. & Farouk A.*

Dynamic Behavior of Geogrid Reinforced Segmental Block Walls under Earthquake Loads  
*Guler E., Alexiew D., & Basbug E*

Deep excavation and stabilization of excavation walls of central branch of KarAfarin bank  
*Rajabi, M.Sh., Nikookar, M., & Kalantary, F.*

Experimental Investigation of Stress Behavior of Square Footings on the Sandy and Clayey Soils..  
*Bağrıaçık, B., Laman, M. & Demir, A.*

Performance of Piles in Liquefiable Soils using Numerical Analysis  
*Jiryaei Sharahi, M.*

#### 11.45 – 13.00 **SESSION 5: Soil characterization**

Logistic Regression Approach for Estimating the Groutability of Granular Soils with Cement-Based Grouts  
*Tekin, E., & Akbas, S.O.*

Finite element modeling of stone columns in alluvial soils under an embankment  
*Mirsalehi S. & Bilsel H.*

Hydraulic conductivity of granular materials  
*Al- Saoudi, N.& Hassan, K.*

Small strain behavior of Northern İzmir (Turkey) soils  
*Eskişar T. & Altun S.*

An experimental examination of some factors affecting frost heave under freezing-thawing cycles  
*Kamiloğlu, H. A., Yılmaz F. & Şadoğlu E.*

Correlation between compressibility of gravely deposits and dynamic cone penetration tests  
*Shahien, M. & Farouk, A.*

#### 11.45 – 13.00 **SESSION 3: New methods in geotechnical engineering**

Characterization of polyurethane-stabilized ballast  
*Keene,A.K., Edil,T.B., Tinjum,J.M., & Brown,R.W.*

Laboratory study on the molding techniques for QC/QA process of a Deep Mixing work  
*Danisi C., Grisolia M., Leder E.& Marzano I.P.*

Use of fly ash- lime mixtures in stabilization of a sand  
*Akbulut N. & Çabalar, A.F.*

Comparison of formulae and testing methods for shear strength of unsaturated soils  
*Hassan Zehtab, K., Toker N.K. & Ahmadi Adli M.*

3D numerical modeling of a landslide in landfill site at Mila in Algeria  
*Khelifa, T., Benmebarek,S.*

Comparison of Safety Factors Obtained from Limit Equilibrium Methods and Finite Element Analyses  
*Toker, N. K., Engin, V.*

Verification of New Seismic Site Characterization System in Korean Historical Areas  
*Kim, D.S., Park, H.J. & Lee, S.H.*

13.00 – 14.00 Lunch

**14.00 – 14.40 Keynote Lecture : Professor Askar Zhussupbekov**

Vice-president ISSMGE for Asia,  
President of Kazakhstan Geotechnical Society,  
L.N. Gumilyov Eurasian National University,  
Geotechnical Institute, Astana, KAZAKHSTAN

***Geotechnical issues of piling technologies in problematical soil ground of Kazakhstan***

**14.40 – 15.20 Keynote Lecture : Professor S. Feyza Çinicioğlu**

President, Turkish National Committee for ISSMGE  
Chair, Civil Engineering Department,  
İstanbul University, İstanbul, TURKEY

***Real-time use of observational method in geotechnical engineering***

15.20 – 15.35 Coffee Break

**15.35 – 16.45 SESSION 6: Foundation and slope stability**

Nonlinear analysis of laterally loaded piles

*Ejjaouani & Shakhirev*

Comparison of load tests done on stone columns and rammed aggregate piers

*Kurt, E., & Teymur B.*

Influence of urban planning over the effective utilization of retaining structures

*Hamova M., Zayakova Hr.*

An experimental study on the perf. of eccentrically-loaded footings on cohesionless soil reinforced w. nonsymmetrical geogrid layers

*Gel, A.C., Akbas S.O. & Anil O.*

A study on the improvement of connection for segment tunnel lining using prestressed steel cable

*Sang-Joon, Ma., Dong-Min, KimB. & Hujeong Gil.*

**15.35 – 16.45 SESSION 6: Soil characterization**

Volume change measurement in triaxial testing of unsaturated soils

*Ahmadi-Naghadeh, & R., Toker, N. K.*

Volume Change Behavior of Sand-bentonite Liner and the Effect of Cement Enhancement

*Iravanian, A., Bilsel, H. & Eren, Ö.*

A study on the suction characteristics of compacted zeolite-bentonite mixtures

*Durukan, S., & Yukselen-Aksoy, Y.*

A Comprehensive Soil Characteristics Study and Finite Element Modeling of Soil-Structure Behavior in Tuzla Area

*Lakayan, D. & Bilsel, H.*

Comprehensive geotechnical monitoring of the landslide processes and the retaining structures in the city of Sochi

*Matsiy S. I., & Lyubarsky N. N.*



## 15.35 – 16.45 **SESSION 4: New methods in geotechnical engineering**

Preliminary results from a small geotechnical centrifuge for consolidation tests  
*Kayabali, Balci & Başer*

High geogrid reinforced walls in a mountainous seismic region in Bulgaria  
*Alexiew, D.*

Oedometer and direct shear tests to the study of sands with various viscosity pore fluids  
*Hasan, R.A. & Çabalar, A.F.*

Application of Microorganisms for Improvement of Liquefiable Sands  
*Khodadadi T., H. & Bilsel, H.*

Improvement of engineering properties of soils by biopolymer additives  
*Taytak, B., Pulat H.F. & Yukselen-Aksoy Y.*

Initial stress condition of saturated soil grounds  
*A.S.Zhakulin, A.A.Zhakulina, D.O.Adamovich*

16.45 – 17.00 Coffee Break

17.00 – 17.30 **Closing Ceremony**

19.30 – 21.30 Gala Dinner

**30 June 2012 Saturday**

09.00 – 18.00 Technical Visit