GeoMEEast 2017
International Congress and Exhibition

15 ~ 19 July 2017, Sharm El-Sheikh, Egypt
Under the Auspices of

The Cabinet of Egypt: The Prime Minister

Ministry of Housing, Utilities and Urban Development
Ministry of Transport
Ministry of Foreign Affairs

Main Organizer

Soil-Structure Interaction Group in Egypt (SSIGE)

Host Organizations

Housing and Building Research Center, HBRC
Geo-Institute of HBRC
Egyptian Geotechnical Society (EGS)
Egyptian Tunneling Society (ETS)

Supporting Organizations
Partners

APAGEO

LIEBHERR

Geosynthetics Technologies Company Ltd.

ATARFIL MIDDLE EAST FZE

Plaxis bv

Maccaferri Middle East

Benar NATPET

Mattex Geosynthetics

ATARFIL MIDDLE EAST FZE

Feicheng Lianyi Engineering Plastics

TechFab India Industries Ltd.

GeoBrugg AG.

Machina-TST

Ace Geosynthetics

Geobrugg AG.

Concrete Canvas Ltd.

Datgel

TechFab India Industries Ltd.
I am delighted to welcome you to the GeoMEast 2017 International Congress and Exhibition in Sharm El-Sheikh. This is the first of a long and distinguished line of such conferences to be held in Middle East’s great cities. The first edition of the GeoMEast series is hosted by Egypt in Sharm El-Sheikh, the city of peace, at the International Congress Center, one of the best venues in the Middle East.

Our conference theme, Sustainable Civil Infrastructures: Innovative Infrastructure Geotechnology, is broad and inclusive. We believe that this presents a multitude of opportunities for all parts of the industry (including consultants, contractors, materials and equipment manufacturers, as well as academics) and at all career stages to attend and to present papers.

I wish you an excellent visit and hope that you enjoy both the technical and social aspects of the conference and that you could find time to explore our wonderful country.

Hany Farouk Shehata
CEO & Founder of SSIGE
Welcome Message

Welcome to the GeoMEast 2017 International Congress and Exhibition «Sustainable Civil Infrastructures: Innovative Infrastructure Geotechnology»

On behalf of the Organizing Committee, we are pleased to welcoming you to attend the GeoMEast 2017 International Congress and Exhibition to be held in Sharm El-Sheikh, Egypt from July 15 to July 19, 2017. The GeoMEast is the official conference series of the soil-structure interaction group in Egypt (SSIGE) and is supported by a number of leading international professional organizations.

Recent rapid construction in Egypt and the Middle East has provided great opportunities for bridge, pavement, geotechnical, geological, tunnel and all engineers to use their knowledge and talents to solve many challenging problems involving highways, bridge structures, pavements, materials, ground improvements, slopes, excavations, dams, canals and tunnels with innovative solutions and cutting-edge technologies.

GeoMEast 2017 provides a showcase for recent developments and advancements in design, construction, and safety inspections of transportation Infrastructures and offers a forum to discuss and debate future directions for the 21st century. Conference topics cover a broad array of contemporary issues for professionals involved in bridge, pavement, geomechanics, geo-environmental, geotechnical, geosciences, geophysics, tunnel, water structures, railway and emerging techniques for safety inspections. You will have the opportunity to meet colleagues from all over the world for technical, scientific, and commercial discussions.

The proceedings of GeoMEast 2017 are published in 15 Edited Books by Springer Nature, which will be indexed in EI and submitted for inclusion in ISI «Thomson Reuters».

In addition, 6 journal special issues will be published in some prestigious journals of selected best papers of the conference; 1- Innovative Infrastructure Solutions, Springer 2- Environmental Geotechnics, ICE 3- International Journal of Geosynthetics and Ground Engineering, Springer 4- Arabian Journal of Geosciences, Springer 5- Journal of Materials in Civil Engineering, ASCE 6- ASTM International - Advances in Civil Engineering

The program includes Podium Presentations, Poster Presentations, Main Lectures, Workshops, Courses, Awards, Technical Meetings, and Technical and Social Tours.

Welcome to Sharm El-Sheikh – one of Middle East’s truly great cities!

Prof. Khalid M. ElZahaby  
Dr. Mohamed F. Shehata

Prof. Hisham Kamal Amin  
Dr. Hany Farouk Shehata

Chairmen of the Conference Organizing Committee
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<td>02.00 PM</td>
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<td>Lecture 1: Some aspects of research and practice for pile design in France, Khaled Sobhan</td>
<td>Lecture 1: Some aspects of research and practice for pile design in France, Khaled Sobhan, Khaled Sobhan</td>
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<td>Lecture 2: Geosynthetics in Tunnel Drainage and Waterproofing, Chungsik Yoo</td>
<td>Lecture 2: Geosynthetics in Tunnel Drainage and Waterproofing, Chungsik Yoo, Chungsik Yoo</td>
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<td>Lecture 3: MINIMIZING USE OF CONCRETE IN TUNNELS AND CAVERNS, Imad Al Nashai</td>
<td>Lecture 3: MINIMIZING USE OF CONCRETE IN TUNNELS AND CAVERNS, Imad Al Nashai, Imad Al Nashai</td>
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<td>Lecture 4: Distributing Computing Model for Interacting Soil and Structural Systems under Dynamic Loading, Daniel Perraton, Calvin Carlton-Carew</td>
<td>Lecture 4: Distributing Computing Model for Interacting Soil and Structural Systems under Dynamic Loading, Daniel Perraton, Calvin Carlton-Carew, Daniel Perraton, Calvin Carlton-Carew</td>
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<td>Lecture 5: MINIMIZING USE OF CONCRETE IN TUNNELS AND CAVERNS, Imad Al Nashai</td>
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<td>Lecture 7: Challenges due to Problematic Soils - A Case Study at the Crossroads of Geotechnology and Sustainable Pavement Solutions, Sarang, Lekha B M, and Ravi Sarang</td>
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<td>Lecture 9: Engineering geology for the conservation of UNESCO heritage sites, Louay Mohammed</td>
<td>Lecture 9: Engineering geology for the conservation of UNESCO heritage sites, Louay Mohammed, Louay Mohammed</td>
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<td>Lecture 10: Recent Advances in Physical Modeling &amp; Remote sensing of Civil Infrastructure Systems, Jie Han</td>
<td>Lecture 10: Recent Advances in Physical Modeling &amp; Remote sensing of Civil Infrastructure Systems, Jie Han, Jie Han</td>
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<td>Lecture 11: Geosynthetic-Reinforced Pile-Supported Embankments: Load Transfer Mechanisms, Tarek Abdoun</td>
<td>Lecture 11: Geosynthetic-Reinforced Pile-Supported Embankments: Load Transfer Mechanisms, Tarek Abdoun, Tarek Abdoun</td>
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<td>Lecture 12: Some aspects of research and practice for pile design in France, Khaled Sobhan</td>
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**Day 2: Monday, 07.00 AM - 08.00 AM**

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**Day 4: Wednesday, 07.00 AM - 08.00 AM**

**Day 5: Thursday, 07.00 AM - 08.00 AM**

**Day 6: Friday, 07.00 AM - 08.00 AM**

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**Day 8: Sunday, 07.00 AM - 08.00 AM**

**Day 9: Monday, 07.00 AM - 08.00 AM**

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**Day 13: Friday, 07.00 AM - 08.00 AM**

**Day 14: Saturday, 07.00 AM - 08.00 AM**

**Day 15: Sunday, 07.00 AM - 08.00 AM**
Short Courses

Description

Polymer-Materials

Rami El-Sherbiny

of using Asphalt Rubber Mixtures

High Geogrid-reinforced Retaining Wall

TAWHED, M. R. ELSHAHAT and Izzaldin Almohd, Dimiter Alexiew and Aboelkasim Diab and Zhanping You

Analysis and Design of Piled Geogrid-Mixture and Construction Control

Study on Mixing Proportion for AC-13C Asphalt

Impact of a Poly-olefin Based Additive on Bitumen in North Dakota

Laboratory Compaction Rate on Stiffness and loaded strip footing on reinforced sand by B M Das, Chittaranjan Patra, N Shukla

Numerical Modeling of Heat Production for a Snow-Melting System Using Geothermal Energy

Swelling and Shrinkage Behaviour of Expansive Soil Blended with Lime and Fibres

Mechanical behavior of hydraulic concrete to extreme service temperatures: the influence of the

Determination of Indirect Tensile Strength of Bituminous Concrete Mix Prepared Using Stone

Stress -Strain Behaviour of Sand with Disc tests and other experiments

Influence of Asphalt Mixture Ageing and Lowered Bituminous Content on CBR

Impact of materials and paved surface condition on tire adherence, FWD tests and interpretation of data from inclined plane with static and dynamic Devices

Road Performance Prediction Model for the Libyan Road Network

Side Resistance Assessment of Drilled Shafts Socketed into Rocks: Empirical Versus Artificial Intelligence Approaches

Reliability of Load-Transfer Approach in the Design of Large Diameter Bored Piles

Experimental Study on Ultimate Capacity of Large Screw Piles in Beijing

Theoretical Verification for Full Scale Tests of Piled Raft Foundation

Environmental Aging Effect & Geotechnical Stabilization of Organic Waste on Soil

Correlations between sediment characteristics from Tunisian harbors

Effect of Temperature on Strength and Microstructure of Lime Stabilized Flyash

Prediction of Ultimate Bearing Capacity of Eccentrically Loaded Rectangular Foundations using ANN

Dredged marine sediments as raw materials in civil engineering applications

Correlation between sediment and environmental characteristics of the Gulf of Tunisian harbors

Reliability of Elastic Foundation Models for Foundations on Soft Soils

Environmental behavior and geotechnical stability of organic waste on soil...
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<td>09:00 AM</td>
<td><strong>Opening of the Conference</strong></td>
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<td><strong>Keynote Lecture</strong></td>
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<td>11:30 AM</td>
<td><strong>Geology Engineering for Sustainable Infrastructure (I)</strong></td>
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<td>02:00 PM</td>
<td><strong>Lunch &amp; Refreshment</strong></td>
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<td>03:00 PM</td>
<td><strong>Parallel Sessions</strong></td>
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<td>06:00 PM</td>
<td><strong>Geology Engineering for Sustainable Infrastructure (II)</strong></td>
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<td>07:00 PM</td>
<td><strong>Closing Ceremony</strong></td>
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**Parallel Sessions**

- **Geological Hazard Risk Evaluation for Railway**
  - **Presiding Officers:** Imad Al Qadi and Sherif Ishak
  - **Presenter:** Smail Gabi

- **Assessing the Suitability of Compacted Bentonite-Pond Ash Mixes as a Landfill Liner**
  - **Presenter:** Janusz Wasowki

- **Application of ICT Solutions**
  - **Presenter:** Andrey Khachay, Oleg Khachay

- **Influence of Asymmetrical Topology on Structural Behaviors of Bearers and Sleepers in Turnouts**
  - **Presenter:** Ayodeji Oke, Clinton Aigbavboa, and Looyen Edward

- **Study of Benchmark Stability in the Phosphate Mine (Kef-Essenoun - Tebessa), Algeria**
  - **Presenter:** Anis Beiranvand Pour, Mazlan Hashim, and Yongcheol Park

- **Geoenvironmental Engineering and Waste Management (I)**
  - **Presenter:** Michael Menacer, M. Fredj, R. Nekache, and H. Menacer

- **Study of the New Hail Economic City, Hail Region**
  - **Presenter:** Abdul-Hamid El-Shater, Ahmed M. Youssef, and Mohamed El-Khashab

- **Evaluation of Railroad Ballast Field Degradation**
  - **Presenter:** Abdel-Hamid El-Shater, Ahmed M. Youssef, Bosy El-Haddad, and Mohamed El-Khashab

- **Influence of Subgrade Differential Settlement on the Riding Performance of High-Speed Train**
  - **Presenter:** Yanmei Cao and Jiting Qu

- **Pressure during the Installation of Auger Pressure Grouted Displacement Piles in Downtown Orlando**
  - **Presenter:** Sara Rowaimi, and S. Sherlin Nishold

- **The Sustainable Use of Fine Marble Waste**
  - **Presenter:** Shirong Xiao

- **Modeling and Interpretation Wave Fields in Clays**
  - **Presenter:** Harishankar Jeevan Dash and Sarat Das

- **Comparative Analysis of the Behavior of Piled Raft and Corresponding Pile Groups**
  - **Presenter:** Murad Abu-Farsakh

- **Stability Analysis of Souk-Tleta Earth Dam, North Algeria**
  - **Presenters:** Khalid Abdel-Rahman and Martin Achmus

- **Influence of Asymmetrical Topology on Structural Behaviors of Bearers and Sleepers in Turnouts**
  - **Presenter:** Ayodeji Oke, Clinton Aigbavboa, and Looyen Edward

- **Prediction of Metro Train-Induced Vibrations on a Historic Building: the Case of the Round City and Chengguang Hall in Beijing**
  - **Presenter:** Alex Remennikov, Sakdirat Kaewunruen, and Serdar Dindar

- **Influence of Subgrade Differential Settlement on the Riding Performance of High-Speed Train**
  - **Presenter:** Yanmei Cao and Jiting Qu

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<td>Lecture 18: Sustainable Applications of Recycled and Large-sized Aggregates and Quarry Waste Fines,</td>
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<td>Lecture 19: Concepts and technologies for friction-based isolation of buildings, Sherif W. Agaiby and Piergiorgio Grasso</td>
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<td>09.50 AM</td>
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<td>Lecture 20: Geotechnical construction and testing of piling foundations of Megastructures on problematical soil ground of Kazakhstan, Beshoy Shokry, Salem Azzam and Babak Hamidi, Serge Varaksin</td>
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<td>Lecture 21: Risk-Reduction Driven Design in Tunnelling, R.B. Jishnu and Ramanathan AYOTHIRAMAN</td>
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<td>Lecture 22: From Failure To Success - Lessons From Geotechnical Failures, Sherif W. Agaiby and Piergiorgio Grasso</td>
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<td>12.20 AM</td>
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<td>Lecture 23: Applications of Sustainable Post-Tensioned Concrete Slabs, Binu Sharma, Malaya Chetia and Noorjahan Begum</td>
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<td>Lecture 24: Mitigating Foundation Settlement Induced by Tunnel Construction and slope stabilization methods, Cross Training and Performance Management, Mohammad Etezad</td>
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<td>Lecture 25: Effect of Using TBM Tunneling in Granular Soils on Performance of an Existing Raft Foundation, Shailendra Kumar</td>
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<td>Lecture 26: Surface due to the Construction of East-West Metro Tunnels in Kolkata, India, Shailendra Kumar, Priya Sudevan and Chaudhary, S.</td>
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<td>Lecture 27: Early Applications of DMT in Arabian Gulf Area - Three Case Studies, Shailendra Kumar, Priya Sudevan and Chaudhary, S.</td>
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<td>Lecture 28: Densification and stiffening effects of stone approach soils and Kamel Filali</td>
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<td>Lecture 29: Dynamic impedance functions of a square foundation estimated with an equivalent linear approach, Nabil H. ElAshkar, Abdelrahman Beshoy Shokry, S.</td>
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<td>Lecture 30: Load-Settlement Response of Shallow Foundations Resting on Granular Soil, TOWARD THE INTEGRATION OF BIM ENERGY SAVING CONCEPTS, Muthukkumaran K and Sivaraman K, R.B. Jishnu and Ramanathan AYOTHIRAMAN</td>
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<td>Lecture 31: Effect of geofoam inclusion on deformation and strength enhancement of slope stabilization methods, Shailendra Kumar, Priya Sudevan and Chaudhary, S.</td>
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<td>Lecture 32: Load-Settlement Response of Shallow Foundations Resting on Granular Soil, TOWARD THE INTEGRATION OF BIM ENERGY SAVING CONCEPTS, Muthukkumaran K and Sivaraman K, R.B. Jishnu and Ramanathan AYOTHIRAMAN</td>
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**Workshops**

- **Soil Structure Interaction (I)**
- **Tunneling & Sustainable Infrastructures**
- **Displacement and Ground Settlement**
- **Diaphragm Walls**
- **Surface due to the Construction of East-West Metro Tunnels in Kolkata, India**
- **Densification and stiffening effects of stone approach soils and Kamel Filali**
- **Dynamic impedance functions of a square foundation estimated with an equivalent linear approach, Nabil H. ElAshkar, Abdelrahman Beshoy Shokry, S.**
- **Load-Settlement Response of Shallow Foundations Resting on Granular Soil, TOWARD THE INTEGRATION OF BIM ENERGY SAVING CONCEPTS, Muthukkumaran K and Sivaraman K, R.B. Jishnu and Ramanathan AYOTHIRAMAN**
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**Social Event (at the Accommodation)**

- **Registration**
- **Tours**
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<td>08:30 AM :</td>
<td>Short Course (6) - (Day 2) „Including Breaks and Lunch“</td>
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<td>Short Course (4) „Including Breaks and Lunch“</td>
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<td>One-Day Cairo (Program: Same as 19/7)</td>
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Important Complicated Question:
Some Geotechnical works and infrastructures were constructed without taking into consideration several factors; such as the soil-structure interaction and impact of earthquakes and others, and some of them were constructed without respect to any standards, however, these projects are still alive and didn’t fall. So why is the study of these effects? Why is the need of the standards?

Simple Answer:
Same reason people get sick .. and not all patients die!
Such structures are considered sick .. and not all sick structures fall!
We design all structures to be Healthy Non-Patients, so we must take all the considerations during the design of any structure.
People’s lives are not a game in order to put them at risk!

• A very warm welcome is given to all the attendees of the GeoMEast2017, the Official International Congress of the SSIGE!

SSIGE Mission:
To aid the Middle East’s overall growth through focused Geotechnical and infrastructure research, education and policies.

SSIGE Vision:
1- To provide a unique group within M.E for the interchange of ideas among Geotechnical and infrastructure researchers, educators, managers, and policymakers from the M.E and all over the world, with the intention of covering all modes and sectors, and having a special intention to cover all the soil-structure interaction topics.
2- To serve as a research and development group to guide and focus Geotechnical and infrastructure research, education, and policies in the M.E towards satisfying the countries’ needs and to assist in their overall growth.

Doctrines of the Group:
• SSIGE works to provide a unique group within the Middle East for the interchange of ideas among Geotechnical and Infrastructure Researchers, Educators, Managers and Policy Makers from the Middle East and all over the world.
• We believe that, the design of any structure is considered a soil-structure interaction problem. So, civil engineers of the different disciplines should work together in analyzing and designing the different structures. The study of soil-structure interaction is not only a problem for Geotechnical engineers, but also for Geoscience, Geological, Structural, Transportation, and all Civil Engineers.
• Our belief is that the global climate-change studies and its effects on the infrastructures are now very important and will be critical in the near future. “The world is now experiencing unprecedented challenges … Climate change is fast happening, much, much faster than one would have expected … Climate and ecosystems are under growing strain.” – Ban Ki-Moon, Associated Press interview prior to the World Economic Forum, Jan. 21, 2013.
• We also believe that the sustainable design of all structures is a must in the 21th century, which requires the cooperation between the different engineering disciplines; such as: Architecture, Geological, Civil, Urban planning, Energy and Chemical Engineering. The built environment assists as a dynamic interface through which the human society and the ecosystem interrelate and influence each other. Understanding this interdependence is a key to understanding sustainability. There is a rising consensus that delivers a sustainably built environment starts with integrating sustainability throughout the planning, design and construction stages of a project.

Would you like to participate or collaborate with us, please don’t hesitate to send us your thoughts on [info@ssige.org]
We are waiting your email!
There is always a proper way to have a fruitful collaboration with each other!
The Housing and Building National Research Center «HBRC»
Belongs to the Ministry of Housing, Utilities and Urban Communities
Responsible for issuing the different Egyptian and Arabian Codes of Practice and Standards

History:
On 21 June, 1954, a cooperation agreement on the establishment of the Institute for building researches in cooperation with the Department of Foreign Affairs of the United States of America’s Government was signed. Act No. 495 was issued on 23 September 1954 to establish the Institute for building researches in Egypt as an independent organization.

At the end of the year 1956, The U.S. government suspended its contribution to support the Institute yet the Egyptian government kept presenting it.

In 1964 the Institute was considered a qualitative institute for Building Research subjected to the Financial and management Regulations of the National Research Center. Several organizational amendments were made and remained affiliated with the Ministry of Scientific Research.

In 1971, decision number 1871 was issued from the Prime Minister stating the affiliation of the Institute to the Ministry of Housing, Utilities and Urban Development.

In 1977, presidential decree number 46 for the year was issued to establish the general organization of the Housing, Building, and Urban Planning Center and its Head quarter in Cairo affiliated to the Minister of Housing and subjected to Act No. 46 for the year 1973.

On 16 February 2005, two presidential decrees No. 63 and No. 64 for the year were issued to reorganize the Housing and Building Center and its name become Housing and Building National Research Center affiliated to the Minister of Housing, Utilities and Urban Development. Besides, its headquarter in Cairo and the Chairman of HBRC has the right to establish other branches in governorates and new cities.

It consists of 11 institutes for different engineering disciplines, which include the Geotechnical Engineering Laboratory (GEL).

Objectives:
HBRC aims at developing a policy and general plan of research, studies and their implementation in the field of construction within the framework of the priorities that respond to community needs with particular attention to the national problems in HBRC work fields, HBRC considers what it needs for putting standards and criteria as well as for design and terms of construction and building works implementation regarding the building materials specifications. Moreover, HBRC assists the Engineering Sector with scientific systems which achieves better performance, low cost, more safety measures and environment protection.

More details could be found on: http://hbrc.edu.eg/a/index.html
GeoStudio is composed of eight software products that enable everything from simple to complex analyses. When integrated, the products offer a broader analytical environment that offers significantly more power and capabilities.

GEO-SLOPE has been developing geo-engineering software since 1977. Our products are used in over 100 countries worldwide. We stand behind your investment in our software.
GeoStudio is composed of eight software products that enable everything from simple to complex analyses. When integrated, the products offer a broader analytical environment that offers significantly more power and capabilities.

**SLOPE/W**
SLOPE/W is the leading slope stability software for computing the factor of safety of earth and rock slopes. SLOPE/W can effectively analyze both simple and complex problems for a variety of slip surface shapes, pore-water pressure conditions, soil properties, analysis methods, and loading conditions.

**SEEP/W**
SEEP/W analyzes groundwater flow within porous materials such as soil and rock. Its formulation enables analyses ranging from simple saturated steady-state problems to sophisticated saturated/unsaturated time-dependent problems.

**SIGMA/W**
SIGMA/W performs stress and deformation analyses of geotechnical, civil and mining works. It can perform a simple linear elastic deformation analysis or a highly sophisticated soil-structure interaction analysis with non-linear material models and coupling to seepage analysis.

**QUAKE/W**
QUAKE/W enables dynamic analysis of earth structures subjected to earthquake shaking, or point dynamic forces from a blast or a sudden impact load. It determines the motion and excess pore-water pressures that arise due to shaking.

**TEMP/W**
TEMP/W enables analysis of thermal changes in the ground due to environmental factors or the construction of facilities such as buildings or pipelines. TEMP/W can be applied to the geothermal analysis and design of geotechnical, civil, and mining engineering projects.

**CTTRAN/W**
CTTRAN/W models the movement of contaminants through porous materials such as soil and rock. CTRAN/W can be used to model simple diffusion-dominated systems through to complex advection-dispersion systems with first-order reactions.

**AIR/W**
AIR/W analyzes groundwater-air interaction problems within porous materials such as soil and rock. It enables analyses ranging from simple, single-phase air-transfer analyses to complex coupled air-water systems.

**VADOSE/W**
VADOSE/W analyzes the ground surface to determine environmental impacts on water movement through the unsaturated vadose zone into the local groundwater regime. Considerations include infiltration, root transpiration, gas diffusion, surface runoff, evaporation and ponding.
A broad range of engineering use cases

Dams and Levees
Reinforced Walls and Slopes
Excavation and Open Pit Mines
Roads, Bridges and Embankments
Environmental Protection
Groundwater
Ground Freezing and Climate Change
Earthquake Deformations

Intuitive modeling workflow

Combine analyses in a single, integrated project
GeoStudio enables you to combine analyses using different products into a single modeling project, using the results from one as the starting point for another.

Define geometry by using tools or importing CAD files
GeoStudio provides the tools to define model domain including coordinate import, copy-paste geometric items, length and angle feedback, region merge & split, and direct data entry.

Efficient, parallel solving of project analyses
GeoStudio runs each analysis solver in parallel, allowing multiple analyses to be solved efficiently on computers with modern, multi-core processors.

Interpret results with visualization & graphics
GeoStudio provides powerful visualization tools, including graphing, contour plots, isolines, animations, interactive data queries and data exports to spreadsheets for further analysis.
Seamless integration between software

The integrated GeoStudio software suite enables you to combine multiple analyses using different products into a single modeling project. Use this approach to model construction sequences, establish initial conditions, perform sensitivity analyses, model complex time sequences, or simply decompose a complex problem into a number of smaller, more manageable analyses.

Increased capability using an integrated workflow

Analyze slope stability using piezometric lines
Use SLOPE/W to do a simple global stability analysis using a piezometric line to model pore-water pressures and the water surcharge load of a reservoir.

Improve PWP definition with seepage analysis
Use SEEP/W to do a steady-state seepage analysis and use the pore-water pressures directly in the SLOPE/W stability analysis. This provides a more realistic understanding of the stability due to the PWP conditions.

Model external loads with stress-strain analysis
Use SIGMA/W to model the application or removal of loads on the system and then use these stresses directly in the SLOPE/W analysis, along with the finite element pore-water pressures, to determine the safety factor of the earth structure.

See PWP & stress changes with consolidation
Use a coupled stress and pore-water pressure analysis to simultaneously model the effect of loading on the pore-water pressures and stresses. Then use the computed stresses and pore-water pressures directly in a SLOPE/W analysis.

Model effects of an earthquake
Use QUAK/E/W to consider dynamic loading due to an earthquake. QUAK/E/W can begin with the initial stress and PWP profile computed by SIGMA/W and SEEP/W, and then apply earthquake accelerations to model the resulting stress changes. A Newmark analysis can be conducted in SLOPE/W to determine the cumulative displacement along the critical slip surface.

Model deformation and structure stability
Use SIGMA/W to redistribute the QUAK/E/W-computed stresses generated by the earthquake, revealing the settlement that will occur in the earth structure. Use the final stresses and pore-water pressures in SLOPE/W to analyse the stability at the end of shaking.
Papers published in 2016 and 2017 - and that could include your paper - will be permanently freely available online!

A source for studies exploring geotechnical, geological, geosynthetics and structural engineering, and sustainable civil infrastructures, with a focus on mitigating and adapting to climate change.

For more information, please visit [http://www.springer.com/41062]
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GeoMEast 2017
Floor Plan of the Convention Center

Please check your ID card for accessibility details.
Saturday 15th July

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<th>Time Allotted</th>
<th>Description</th>
<th>Venue</th>
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<tr>
<td>07.00 AM : 05.00 PM</td>
<td>Registration</td>
<td>Registration</td>
</tr>
<tr>
<td>09.00 AM : 10.00 AM</td>
<td>Opening Ceremony</td>
<td>Summit Hall</td>
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<tr>
<td>10.00 AM : 10.30 AM</td>
<td>Refreshments &amp; Coffee Break</td>
<td>Main lobby</td>
</tr>
<tr>
<td>10.30 AM : 01.00 PM</td>
<td>Opening Official Remarks: General Secretary, Chairmen, Ministries, High</td>
<td>Summit Hall</td>
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<td>Officials, ASCE President and DFI</td>
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<tr>
<td>01.00 PM : 02.00 PM</td>
<td><strong>Lunch &amp; Refreshments</strong></td>
<td>Restaurant</td>
</tr>
<tr>
<td>02.00 PM : 02.45 PM</td>
<td>Lecture 1: Some aspects of research and practice for pile design in France,</td>
<td>Summit Hall</td>
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<tr>
<td></td>
<td>Roger Frank</td>
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<tr>
<td>02.45 PM : 03.30 PM</td>
<td>Lecture 2: Geosynthetics in Tunnel Drainage and Waterproofing, Chungsik</td>
<td>Summit Hall</td>
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<tr>
<td></td>
<td>Yao</td>
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<tr>
<td>03.30 PM : 04.00 PM</td>
<td><strong>Refreshments &amp; Coffee Break</strong></td>
<td>Main lobby</td>
</tr>
<tr>
<td>04.00 PM : 04.45 PM</td>
<td>Lecture 3: Transportation Sustainability - Looking Forward, Imad Al-Qadi</td>
<td>Summit Hall</td>
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<td></td>
<td>Lecture 4: Distributing Computing Model for Interacting Soil and Structural</td>
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<td></td>
<td>Systems under Dynamic Loading, Amr El-Nashai</td>
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<td></td>
<td>Lecture 6: MINIMIZING USE OF CONCRETE IN TUNNELS AND CAVERNS, Nick Barton</td>
<td>Summit Hall</td>
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<tr>
<td>04.45 PM : 05.30 PM</td>
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<tr>
<td>05.30 PM : 06.15 PM</td>
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## Detailed Program

### Sunday 16th July

<table>
<thead>
<tr>
<th>Time Allotted</th>
<th>Description</th>
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<tbody>
<tr>
<td>07.30 AM : 05.00 PM</td>
<td><strong>Registration</strong></td>
<td>• Registration</td>
</tr>
<tr>
<td>08.30 AM : 09.10 AM</td>
<td>• Lecture 5: Innovative Ground Improvement Techniques for Expansive Soils, Anand Puppala</td>
<td>• Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>09.10 AM : 09.50 AM</td>
<td>• Lecture 7: Challenges due to Problematic Soils - A Case Study at the Crossroads of Geotechnology and Sustainable Pavement Solutions, Khaled Sobhan</td>
<td>• Red Sea &amp; Sinai</td>
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<tr>
<td>09.50 AM : 10.30 AM</td>
<td>• Lecture 8: Implementation of a Balanced Asphalt Mixture Design Procedure: Louisiana’s Approach, Louay Mohammed</td>
<td>• Red Sea &amp; Sinai</td>
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<tr>
<td>10.30 AM : 11.00 AM</td>
<td>• <strong>Refreshments &amp; Coffee Break</strong></td>
<td>• Mail Lobby</td>
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<tr>
<td>11.00 AM : 11.40 AM</td>
<td>• Lecture 9: Engineering geology for the conservation of UNESCO heritage sites, Claudio Margottini</td>
<td>• Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>11.40 AM : 12.20 PM</td>
<td>• Lecture 10: Recent Advances in Physical Modeling &amp; Remote sensing of Civil Infrastructure Systems, Tarek Abdoun</td>
<td>• Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>12.20 PM : 01.00 PM</td>
<td>• Lecture 11: Geosynthetic-Reinforced Pile-Supported Embankments: Load Transfer Mechanisms, Jie Han</td>
<td>• Red Sea &amp; Sinai</td>
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<tr>
<td>01.00 PM : 02.00 PM</td>
<td>• <strong>Lunch</strong></td>
<td>• Restaurant</td>
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### 1st Parallel Oral Sessions

**Red Sea Hall**

**Unsaturated Soil Mechanics & Rock Mechanics**  
**Presiding Officers: Ali Karrech, Tarek Thabet and Ali Karrech**

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<td>Thermporo-mechanics modelling of Gypsum dehydration</td>
<td>Ali Karrech, Christoph Schrank, Horiyan Fusses and Klaus Regenauer-Lieb</td>
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<td>Stabilization of an expansive soil using alkali activated fly ash based geopolymer</td>
<td>Sarat Kumar Das, Partha Sarathi Parhi, Gajamae Gajamae and Malasati Mahamaya</td>
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<td>Determination of shrinkage properties of clayey soils by the image analysis technique</td>
<td>Houcem Trabelsi and Wissem Frhiba</td>
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<td>Evaluating the Effect of Fines on Hydraulic Properties of Rammed Earth Using a Bench Scale Centriuge</td>
<td>Abdullah Golaa, Benny Matengger, Daniel Verastegui Flores, Gemmima Di Emidio, Herman Peiffer and Wim Cornelis</td>
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<tr>
<td>Active earth pressure on retaining walls with unsaturated soil backfill</td>
<td>Jagdish Sahoo and R Ganesh</td>
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<td>Strength Properties of Rock as an Index of Blastability</td>
<td>A Rachid Hanza et al</td>
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<tr>
<td>Strength and stiffness study of cement stabilized granular latentic soils</td>
<td>Dipti Biswal, Suresh Dash and Umesh Sahoo</td>
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<tr>
<td>Westing and drying compacted soil-lime mixtures</td>
<td>MAAFI Nabil, AKCHICHE Mustapha and Sara Rios</td>
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**Sustainable Materials Engineering**  
**Presiding Officers: Erol Tutumluer and Osman Adiguzel**

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<th>Title</th>
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<tr>
<td>Influence of Mix Parameters on Development of Sulfur Modified Bituminous Paving Mixes with Sand</td>
<td>Mahabir Panda, Prasanta Bhuyan and Subhashree Jena</td>
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<td>Thermal properties of base-course material containing recycled glass under dry and wet condition</td>
<td>Daniel Perraton, Michel Vaillancourt and Youness Benaha</td>
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<td>Investigation on the effect of anti stripping additives on the moisture sensitivity of bituminous concrete</td>
<td>Calvin Carlton-Carew, Goutham Sarang, Lekha B M, Ravi Shankar A U</td>
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<td>Membrane-forming Performance and Application of Emulsion Wax Curing Agent (EWCA) for Cement Concrete Curing</td>
<td>Qu Mingjie, Wang Huicong, Yao Jialiang and Yuan Jianbo</td>
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<td>Sustainable Application of Quarry Byproducts Mixed with Large Size Unconventional Aggregates for Improved Performance</td>
<td>Erol Tutumluer, Hasan Kazmee, Hasan Ozer and Issam Gambia</td>
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<td>Effect of Spray Dryer Absorber as Mix Enhancers on HMA Performance</td>
<td>Ahmed Faheem, Clayton Cloutier, Emil Bautista and Konstantin Sobolev</td>
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<td>Thermoelasticity, Superelasticity and Nanoscale Aspects of Structural Transformations in Shape Memory Alloys</td>
<td>Osman Adiguzel</td>
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**Sinai Hall**

**Sustainable Pavement Engineering (I)**  
**Presiding Officers: Louay Mohamed, A. El-Desouky and A. AbdEl Halim**

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<td>Hydraulic Conductivity of Layered Compacted Granular Materials Used as Paving Foundation</td>
<td>Khawla Shubber and Namir Al-saoudi</td>
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<td>THE USE OF WASTEWATER IN CONSTRUCTION OF BASE COURSE LAYERS IN PAVEMENT STRUCTURES</td>
<td>Farid Abed, Magdi ElEmam, Mousa Atome, Munir Nazzal and Nouar ElMessalami</td>
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<td>Potentials of using mechanically activated concrete powder in stabilized granular pavement mixtures</td>
<td>George Kana'a, Jakub Šedina, Jan Suda, Jan Valentin, Pavel Tesárek and Zdinek Prošek</td>
</tr>
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<td>Evaluation of Using Waste Road Construction Materials with Additives in Warm Mix Asphalt</td>
<td>Abdelzaher E A Mostafa, Mohamed S Ouf and Hala H. Abdel Fatah</td>
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<td>The Case of Lebanon</td>
<td>Abd El Halim Abd El Halim, Graziela Girardi and Mohammad Ramezani</td>
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<tr>
<td>Effect of Construction Induced Cracks on Tensile Strength and Bonding between Asphalt Concrete Layers of Pavement under different Temperatures</td>
<td>Rogaa Abd El-Hakim and Sherif El-Badawy</td>
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<td>Application of Artificial Neural Networks for Hot Mix Asphalt Dynamic Modulus (E'*) Prediction</td>
<td>Rakesh KUMAR, Sunny Deol Guzdarlapudi and Vinodkumar Adigopula</td>
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<tr>
<td>Structural evaluation of flexible pavement using nondestructive techniques in low volume road</td>
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<tr>
<th>Sub ID</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>SUCI-D-16-00200</td>
<td>Strength Property of Expansive Soils Treated with Bagasse Ash and Lime</td>
<td>Behzad Fatahi, Hadi Khabbaz and Hayder Hasan</td>
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<td>SUCI-D-16-00166</td>
<td>CHARACTERIZATION OF UNSATURATED SHRINK-SWELL SOILS PROPERTIES IN EGYPT</td>
<td>Beshoy Hakeem, Fayek Hassona &amp; Remon Abdelmatak</td>
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<td>SUCI-D-16-00689</td>
<td>Adfreeze Strength and Creep Behavior of Pile Foundations in Warming</td>
<td>Abdulghader Aldaeed, Mohammad Rayhani</td>
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<td>SUCI-D-16-00734</td>
<td>Prediction of Ultimate Bearing Capacity of Eccentrically Loaded Rectangular Foundations using ANN</td>
<td>B M Das, B P Sethy, Chittaranjan Patra and N Sivakugan</td>
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<td>SUCI-D-16-00323</td>
<td>Effect of Temperature on Strength and Microstructure of Lime Stabilized Flyash</td>
<td>Aparupa Puni and Suresh Prasad Singh</td>
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<td>Correlations between sediment characteristics from Tunisian harbors</td>
<td>Amal MISSAOUI, Essaieb HAMI, Imen SAID, Manwa ZELLEG &amp; Zoubier LAFHJ</td>
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<td>SUCI-D-16-00239</td>
<td>Evaluation of land subsidence based on distributed monitoring and SEM analysis</td>
<td>Bin Shi, Hongtao Jiang, Jianhua Yin, Jiayu Ma &amp; Kai Gu</td>
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<td>Dredged marine sediments as raw materials in civil engineering applications</td>
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<td>SUCI-D-16-00439</td>
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<td>SUCI-D-16-00137</td>
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<td>SUCI-D-16-00499</td>
<td>Research progress on comprehensive control technologies for abandoned coal mine hidden disasters in China</td>
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<td>SUCI-D-16-00042</td>
<td>Side Resistance Assessment of Drilled Shafts Socketed into Rocks: Empirical Versus Artificial Intelligence Approaches</td>
<td>Ahmed Sameh &amp; Aasma Mahmoud</td>
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<td>SUCI-D-16-00012</td>
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<td>Reliability of Load-Transfer Approach in the Design of Large Diameter Bored Piles</td>
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<td>SUCI-D-16-00566</td>
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<td>Road Traffic Accidents Vizo-Viz Terrorism, Pakistan's Perspective</td>
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<td>SUCI-D-16-00696</td>
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<td>Abdussalam Heba and Gabrial Assaf</td>
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<td>SUCI-D-16-00690</td>
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<td>SUCI-D-16-00444</td>
<td>Normal Fault Movement Propagation in Overlying Seabed Deposits</td>
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Red Sea Hall

**Geosynthetics Engineering**
**Presiding Officers: Sanjay SHUKLA, Erol Guler and C. Yoo**

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<td>Stress-Strain Behaviour of Sand with Disc Plate-Shaped Reinforcement</td>
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<td>Consideration of geosynthetic tension in interpretation of data from inclined plane tests</td>
<td>Atif Ben Othmen and Mourir Bouassida</td>
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<td>FEASIBILITY OF UTILIZATION OF METALIZED PLASTIC WASTE IN COHESION-LESS SOIL</td>
<td>Ankur Bhogayata, Sanjaykumar Shukla and Siddharth Shah</td>
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<td>Analysis and Design of Piled Geogrid-Reinforced Earth Embankment</td>
<td>Nasr Sheta and Rudolph Frizzi</td>
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<td>A Case Study of Efficient Solution for Very High Geogrid-reinforced Retaining Wall</td>
<td>Izzaldin Almadi, Dimitri Alexiev and Rami ElShebiny</td>
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<td>A suggested model using Quantitative and Qualitative parameters for Cost Engineering of Mechanically Stabilised Earth Walls in Egypt</td>
<td>John Erian and Joseph Meadows</td>
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Luxor Hall

**Innovative Infrastructure Materials**
**Presiding Officers: Jan Valentin and Bassem Andrawes**

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Sinai Hall

**Sustainable Pavement Engineering (II)**
**Presiding Officers: Louay Mohamed and Sherif El-Badawy**

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<td>A Bitumen-based Prototype to Predict the Workability of Asphalt Concrete Mixtures</td>
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<td>Extending the service life of bridges through proper compaction of asphalt decks</td>
<td>Abd El Halim Abd El Halim, Ahmed El-Dessouky and Amr Abd El Halim</td>
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<td>Wavelet-Spectrogram Analysis of Surface Wave Technique for Quick NDT Measurement on Surface Layer of Pavement</td>
<td>Sri Atma Rajyal</td>
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**Presiding Officers: Mona Badr and Tamer Sarour**

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<td>Analytical Fragility Curves for Reinforced Concrete Dual System Subjected to Seismic loads</td>
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<td>SUCI-D-16-00312</td>
<td>MAGNETORELOGICAL DAMPER FOR PERFORMANCE ENHANCEMENT AGAINST SEISMIC FORCES</td>
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<td>SUCI-D-16-00320</td>
<td>Experimental Investigation on Link Column frame system for Reinforced Concrete Structures</td>
<td>Youssef Rashed</td>
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<td>SUCI-D-17-00017</td>
<td>Analysis on Pastpeak and Creep Mechanical Behavior of Highly Weathered Rock</td>
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<td>DERIVATION OF THE INCREMENTAL STRESS-STRAIN RELATIONS FOR EXPANSIVE SOILS AND IMPLEMENTATION INTO THE BOUNDARY ELEMENT METHOD</td>
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<td>Numerical modeling by Plaxis software [3D], the effect of digging a tunnel on the behavior of the ground and overlying structures: Case: Subway of Algiers (Algeria)</td>
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<td>SUCI-D-16-00660</td>
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<td>SUCI-D-16-00685</td>
<td>The behaviour of shallow foundation near slope under inclined loading</td>
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<td>Implementing Tilt-up Method for Sustainable Construction</td>
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<td>SUCI-D-16-00692</td>
<td>SOLUTION MODEL FOR INFRASTRUCTURE PLANNING AND DESIGN FOR URBAN SLILAS: EGYPTIAN CASE STUDY</td>
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<td>Fuzzy Logic based modeling for pavement characterization</td>
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<td>SUCI-D-16-00246</td>
<td>3D numerical simulation of the roof due to large-scale longwall mining</td>
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06.30 PM - 10.00 PM  **Gala Dinner (Outside the Accommodation)**

Studio Hall
### Monday 17th July

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<td>08.30 AM : 09.10 AM</td>
<td>Lecture 12: GEOSYNTHETICS - A MATERIAL WHICH STARTED A NEW ERA IN GEOFENICAL ENGINEERING, Erol Guler</td>
<td>Red Sea &amp; Sinai</td>
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<td>09.10 AM : 09.50 AM</td>
<td>Lecture 13: Advanced tools and techniques to add value to soil stabilization practice, António Gomes Correia</td>
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<td>09.50 AM : 10.30 AM</td>
<td>Lecture 14: High resolution satellite multi temporal interferometry for monitoring infrastructure instability hazards, Janusz Wasowski</td>
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<td>10.30 AM : 11.00 AM</td>
<td>Refreshments &amp; Coffee Break</td>
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<td>11.40 AM : 12.20 PM</td>
<td>Lecture 16: Getting high quality samples in “sensitive” soils for advanced laboratory tests, António Viana da Fonseca</td>
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<td>12.20 PM : 01.00 PM</td>
<td>Lecture 17: In Situ Testing using the Marchetti Flat Dilatometer (DMT) and Seismic Dilatometer (SDMT), Diego Marchetti</td>
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<td>01.00 PM : 02.00 PM</td>
<td>Lunch &amp; Refreshment</td>
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02.00 till 06.00 | Workshop 2 | Red Sea Hall
02.00 till 06.00 | Short Course 2 | Luxor Hall
FLOW OF MICROBIAL SUSPENSION THROUGH POROUS MEDIA

IN-SITU CHEMICAL OXIDATION OF HYDROCARBON CONTAMINATED GROUNDWATER (A CASE STUDY OF BARIWA COMMUNITY, LAGOS, NIGERIA

REMEDIATION OF PETROLEUM HYDROCARBONS IN A TROPICAL SAND TANK MODEL

Assessing the suitability of compacted bentonite-pond ash mixes as a landfill liner

Effect of Quarry Dust on Compaction Characteristics of Clay

Strength Characteristics of Dispersive Soil by Using Industrial By-Products

THE INFLUENCE OF GEOCHEMISTRY OF GAS HYDRATES ON THE SHEAR STRENGTH AND STABILITY OF MARINE SEDIMENT MOVEMENT

Arif Mohammad, B. S. Shashank, D. N. Singh, Jeevan Joseph and Shetty Rakshit

SAMUEL OLA, OLAOLU FADUGBA and MICHEAL UDUEBOR

OLAOLU FADUGBA, SAMUEL OLA and OLUWAPELUMI OJURI

Suresh Prasad Singh, Suryaleen Rout and Banavath Ramesh

Asuri Sridharan, Malaya Chetia and Manash Baruah

Nagendra Roy, SAMAPTIKA MOHANTY and Suresh Singh

Narasimha Rao Savaram, RAJARAMAN JANJUNATHAN and Thiruvennatkataswamy Kannapiran

Study of bench stability in the phosphate mine (Kef-Essenoun -Tebessa), Algeria.

Karst induced geohazards in Egypt: Case Study Slope stability problems along some selected desert highways

Insights into Hydro/Mechanical Behavior of bentonite based seals for deep geological repositories

Detection of elastic region varied by inherent anisotropy of reconstituted Toyoura sand

Site investigation using engineering geology mapping and geological hazard evaluation. Case study of the New Hail Economic City, Hail Region

Improving Sustainable Construction Practices through Facility Management

A HAFSAOUI, A SAADOUN, K MENACER, M FREDJ, R NEKACHE, R Boulkarn and Y Khadri

Abdel-Hamid El-Shater, Ahmed M. Yousef, Bosy El-Haddad and Mohamed El-Khoshab

Agustin Guerra and Nadia Makni

Bao Le, Hirofumi Toyota and Susumu Takada

Turki E. Al-Sehly, Ahmed M. Yousef, Abdulla A. Al-Otaibi and Hassan M. Al-Harbi

Ayodeji Oke, Clinton Aigbavboa and Looyen Edward

Evaluation of Railroad Ballast Field Degradation Using an Image Analysis Approach

Performance of Polyurethane Polymer in the Transition Zones of Ballasted and Ballastless track

Geological Hazard Risk Evaluation for Railway Network of Guizhou Province in China

Prediction of Travel Time Estimation Accuracy In Connected Vehicle Environments

The Free State public transportation system: A comparison between buses and taxi services and adaptation of ICT solutions

Prediction of Metro Train-Induced Vibrations on a Historic Building: the Case of the Round City and Chengguang Hall in Beijing

Influence of asymmetrical topology on structural behaviours of bearers and sleepers in turnout switches and crossings

Influence of subgrade differential settlement on riding performance of high-speed train

Erol Tutumluer, John Hart, Maziar Moaveni & Michael McHenry

Chenghui Li and Wei Qi

Jie Ma, Rui Tang, Weidong Wang and Yanping Chen

Osama Osman and Sherif Ishak

EM Masinde, Mohamed Mostafa Hassan & Ndahkona Bashingi

Meng Ma, Weineng Liu, Xiaoqing Sun and Yanmei Cao

Alex Remennikov, Sokhirat Kaewunruen and Serdar Dindar

Yanmei Cao and Jiting Qu
Sinai Hall

STABILIZATION OF DISPERSE SOIL USING BIOPOLYMER
• Laboratory Study on the Permeability of Fresh Municipal Solid Waste
• Stabilization of Red Mud Using Ground Granulated Blast Furnace Slag by Geopolymerization Technique
• The influence of filler content on the compactness of the bituminous mixture
• CHARACTERIZATION OF DREDGED SAND FROM CHILKA LAKE AS A GEO MATERIAL WITH AND WITHOUT BIOPOLYMERS
• The sustainable use of fine marble waste powder for the stabilization of desert sand in Oman
• LANDSLIDE STUDY OF LANDS IN QUARRYS. CASE CHOUF AMAR - M'SILA, ALGERIA

Authors
• Kajal Swain, Mahashakti Mahamaya, Sarat Das, Shamshad Alam, IPSITA PANDA and R Jayabalan
• Zhang Zhenying, Zhang Lingfeng, Wu Dazhi, Ding Zhengjun, Wang Yingfeng, and Yuan Qiyuan
• Dumru Sindhuja, Subhasree Samantasinghar and Suresh Prasad Singh
• Kaouther Machta and Sami Yaich
• Harishankar Jeevan Dash and Sarat Das
• Bushra Al-Sawwafi, Maryam Al-Washahi, Mohsin Qureshi, Moza Al-Saidi, Salima Al-Badi and Noora Al-Kindi
• Abdennazak SAADOUN

Siwa Hall

HYDRODYNAMIC PERFORMANCE OF COASTAL GECOTUBE EMBANKMENT WITH AND WITHOUT GabION BOXES
• Geology and remote sensing investigations in Antarctic environments
• Aquifer Distribution and Flow Patterns of Land Jatinangor Educational Area, Sumberang Region, West Java Province
• Stability Analysis of Souk-Tleta Earth Dam, North Algeria
• Utilization of Weathered Rock Mass as the China Three Gorges Dam Foundation
• Modeling and interpretation wave fields in hierarchical heterogeneous media

Authors
• Nilanjan Saha, R Sundaravadivelu and S. Sherlin Nishold
• Amin Beiranvand Pour, Mazlan Hashim and Yongcheol Park
• Andreas Pangaribuan, Febriwan Mohammad and Muhammad Fadly
• Lynda DJERBAL, Ryma Alliri, Saida HADJ ABDERRAHMANE and Smail GABI
• Guodong Zhang, Qingjun Zuo and Shirong XIAO
• Andrey Khachay, Oleg Khachay and Olga Hachay

Citadel Hall

A FULL SCALE FIELD STUDY: EVALUATION OF THE MAGNITUDE AND EXTENT OF EXCESS PORE WATER PRESSURE DURING THE INSTALLATION OF AUGER PRESSURE GRouted Displacement Piles in Downtown Orlando
• Numerical Modeling of a Caisson Foundation Retricted with Helical Piles
• Numerical Modeling of Pile Groups Composed of two open-ended Steel Piles
• Effect of L/D ratio of pile group using equivalent pier method including interaction
• Evaluating Pile Setup using Numerical Simulation and Introducing an Elastoplastic Constitutive Model for Clays
• Comparative analysis of the behavior of piled raft and corresponding pile groups.
• Field Monitoring of Concrete Piles of an Integral Abutment Bridge
• Helical Screw Piles Performance - A Versatile Efficient Seismic Foundation Systems Alternative for Structures Rehabilitation, New Sustainable Structures Construction and Infrastructure Delivery

Authors
• Amr Sallam and Mohamed AlRowaimi
• Serhan Guner
• Khalid Abdel-Rahman and Martin Achmus
• Neelima Satyam Devarakonda and Pallavi Badry
• Carol Friedland, Firouz Rosti and Murad Abu-Farsakh
• Antonio Viana da Fonseca and Hugo Andre Pereira
• Andrew Druckrey, George Voyiadis and Khalid ALShibli
• Yasser Abdelghany

04.00 PM : 04.30 PM  Refreshments & Coffee Break
04.30 PM : 06.30 PM  4th Parallel Sessions
07.30 PM : 10.00 PM  Social Event
Tuesday 18th July

<table>
<thead>
<tr>
<th>Time Allotted</th>
<th>Description</th>
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<tbody>
<tr>
<td>07.30 AM : 05.00 PM</td>
<td>Registration</td>
<td>Registration</td>
</tr>
<tr>
<td>08.30 AM : 09.10 AM</td>
<td>Lecture 18: Sustainable Applications of Recycled and Large-sized Aggregates and Quarry Waste Fines, Erol Tutumluer</td>
<td>Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>09.10 AM : 09.50 AM</td>
<td>Lecture 19: Concepts and technologies for friction-based isolation of buildings, Gian Michele Calvi</td>
<td>Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>09.50 AM : 10.30 AM</td>
<td>Lecture 20: Geotechnical construction and testing of piling foundations of Megastructures on problematical soil ground of Kazakhstan, Askar Zhussupbekov</td>
<td>Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>10.30 AM : 11.00 AM</td>
<td>Refreshments &amp; Coffee Break</td>
<td>Main lobby</td>
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<tr>
<td>11.00 AM : 11.40 PM</td>
<td>Lecture 21: Risk-Reduction Driven Design in Tunnelling, Piergiorgio Grasso</td>
<td>Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>11.40 AM : 12.20 PM</td>
<td>Lecture 22: FROM FAILURE TO SUCCESS · LESSONS FROM GEOTECHNICAL FAILURES, Sherif W. Agaiby and Abdelsalam Salem</td>
<td>Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>12.20 AM : 01.00 PM</td>
<td>Lecture 23: APPLICATIONS OF SUSTAINABLE POST-TENSIONED CONCRETE SLABS, Amr Abd El Rahman</td>
<td>Red Sea &amp; Sinai</td>
</tr>
<tr>
<td>01.00 PM : 02.00 PM</td>
<td>Lunch</td>
<td>Restaurant</td>
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</tbody>
</table>

Workshop 5: Citadel Hall
Workshop 1: Citadel Hall
Workshop 3: Siwa Hall
Short Course 5: Luxor Hall
Detailed Program
Tuesday 18th July
Red Sea

5th Parallel Sessions

«Ground Characterization and Improvement
Presiding Officers: W. Frikha and S. Varaksin»

Title
• Ground Improvement of Tank Foundations in the Middle East
• Comparison of the CO2 record of different slope stabilization methods
• Bearing capacity of Strip foundation on soft soil reinforced with stone columns using method of slices
• 3D Modeling of EPS Geofoam Buffers behind Diaphragm Walls
• Numerical simulations of ground improvement using stone columns in “Bouregreg valley”
• Effect of geofoam inclusion on deformation behaviour of buried pipelines in cohesive soils
• Densification and stiffening effects of stone columns in liquefaction analysis
• Early Applications of DMT in Arabian Gulf Area - Three Case Studies

Authors
• Babak Hamidi, Serge Varaksin
• Armin Roduner, Dennis Gross and Susanne Kytzia
• Adel Hanna, Mahmoud Khalifa, Mohab Sabry and Mohammad Etezad
• Beshoy Shokry, Salem Azzam and Sherif AbdelSalam
• Khadija Baba, Lahcen Bahi, Latifa Ouadir and Noura Nehab
• Abhinav Mane, Ankush Bhuse and Shubham Shete
• Mounir Bouassida, Wissem Frikha and Zeineb Ben Salem
• Emad Sharif
• Sanoop G and Satyajit Patel

Sinai Hall

«Tunneling & Sustainable Infrastructures
Presiding Officers: Sherif W. Agaiby and Piergiorgio Grasso»

Title
• Computational analysis of lining stresses during mechanised tunnelling along curved alignments
• BEHAVIOUR OF URBAN METRO TWIN TUNNELS UNDER EARTHQUAKE LOADS
• The Monitoring of Segments Dislocation Deformation in Shield Tunnel based on BOFDA
• Mitigating Foundation Settlement Induced by Tunnel Construction
• Social Sustainability Assessment of Groundwater Resources in Hanoi, Vietnam by a simple AHP Approach
• TOWARD THE INTEGRATION OF BIM ENERGY SAVING CONCEPTS
• Effect of Using TBM Tunneling in Granular Soils on Performance of an Existing Raft Foundation
• Estimation of Settlement and Vibration on the Surface due to the Construction of East-West Metro Tunnels in Kolkata, India
• Soil Profile Deformation for Double-O- tube Shield Tunnelling in Taipei

Authors
• Abdullah Alsahlhy, Ahmed Marwan, Günther Meschke and Mostafa Abd Elrehim
• R.B. Jishnu and Ramanathan Ayothiraman
• Bin Shi and Xing Wang
• Mona Badr
• Akira Kawamura, Duong Bui, Hideo Arraguchi, Nuong Bui and Tu Truong
• Nabil H. ElAshkar, Abdelrahman Haddad, Wael Kamel and Hesham Bassioni
• Ahmed El Mouchi, Mohamed Ibrahim Amer and Asmaa Moddather Hassan
• Aniruddha Sengupta, Raj Banerjee and Srijit Bandyopadhyay
• Shong-Loong Chen and Chia-Hung Kuo

Sphinx Hall

«Soil Structure Interaction (I)
Presiding Officers: Abdelsalam Salem, T. Abdoun and U. ElShamy»

Title
• Micromechanical Modeling of the Seismic Response of Gravity Retaining Walls
• PROBABILISTIC ASSESSMENT OF LIQUEFACTION POTENTIAL OF GUWAHATI CITY
• Assessment of Earthquake Induced Lateral Displacements at Transpower Hayward HVDC Link Pole 3 Upgrade
• Physical modeling and analysis of site liquefaction subjected biaxial dynamic excitations
• FIELD STUDY ON RESPONSE OF LATERALLY LOADED PILE IN CLAYEY SOIL
• Dynamic impedance functions of a square foundation estimated with an equivalent linear approach
• Load-Settlement Response of Shallow Foundations Resting on Granular Soil
• Study on square footing resting on prestressed geotextile reinforced sand
• Laboratory Study of Plug Length Development and Bearing Capacity of Pipe Pile Models Embedded within Partially Satuated Cohesionless Soils

Authors
• Aliaksei Patsevich and Usama El Shamy
• Binu Sharma, Malaya Chetia and Noorjahan Begum
• Ian McPherson
• Mourad Zeghal, Omar El Shafee and Tarek Abdoun
• Muthukkumaran K and Sivaraman S
• Badreddine Sbartai, Imane Lassoui and Kamel Filali
• Sherif Elfass, Mohamed Nimeiri and Gary Norris
• Chandresh Solanki, Jignesh Patel, P. Chaudhary, Priya Sudevan and Sailendra Kumar
• Ali Al-Harbuswee, Karim Al-Helo, and M Al-Qayssi
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<tbody>
<tr>
<td>Geotechnical properties of river sediments by CPTU tests</td>
<td>Antonio Viana da Fonseca, Claver Pinheiro, Nuno Cristela, Sara Rios and Tiago Miranda</td>
</tr>
<tr>
<td>Numerical and experimental studies of sand-clay interface</td>
<td>Belgacem Jellali &amp; Wissem Frikha</td>
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<tr>
<td>Analysis of Cylindrical Cavity Expansion in Modified Cam Clay with Ke Consolidation</td>
<td>Cladette Tabib and Vincenza Silvestri</td>
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<td>Evaluation of Liquefaction potential of New Caledonian Nickel ores</td>
<td>Sami DAOUD, Imen SAID, Mounir BOUASSIDA and Samir ENNOUR</td>
</tr>
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<td>Characteristics of collapsible soil and their effects on the foundations of the Center South of Brazil</td>
<td>David Carvalho, Nelson Fonte Jr, Paulo Jose de Albuquerque and Roberto Kassouf</td>
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<td>Application of vacuum consolidation for the improvement of Tunis soft soil</td>
<td>Hima Jebali, Mounir Bouassida &amp; Wissem Frikha</td>
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<td>Considerations on the stiffness of Sensitive Soft Soils</td>
<td>Lamia Tourit and William Van Impe</td>
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<tr>
<td>LATERALLY LOADED TEST RESEARCH FOR PILE WITH UPPER SOIL GROUNTED</td>
<td>Guangming Xu, Guoshang Dui, Meite Chen and Weinming Gang</td>
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<tr>
<td>Behaviour of laterally loaded piles in soft clay on sloping ground</td>
<td>Deendaravali Rathod, Murthukumar Kanasiathan and Sifataram T. G.</td>
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<td>Effect of the variability of soil parameters in the behavior of shallow foundations</td>
<td>Tahar Messafer</td>
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<td>Health Monitoring of Civil Infrastructures Designed with Pre-Stressing Steel</td>
<td>Md. Shahidul Islam</td>
</tr>
<tr>
<td>Assessment of Response Modification Factor of Reinforced Concrete Tab Top Frames Structures Subjected to Seismic Loads</td>
<td>Giuseppe Lomiento, Jawwad Khan, Yasser Salem and Jawwad Khan</td>
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<td>µ-Synthesis Control of a Sesame Excited Building</td>
<td>Abdelelmou Moussaoui, Badreddine Sbita and Karima Chaker</td>
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<td>USA Emergency Bridge 1495</td>
<td>Bruce Shelly, Hanh Huyen, Karen Armfield and Paul Maffitt</td>
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<tr>
<td>An Analytical Study Of Improving Beam Column Joints Behavior Under Earthquakes</td>
<td>Mohamed Abad Shkaf Elmasy</td>
</tr>
<tr>
<td>Strength and Ductility of Steel Cold-Formed Section Beam to Column Bolted Connections</td>
<td>Ethab Aly, Ghaza El Mahdy &amp; Maged Hanna</td>
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<tr>
<td>Nonlinear Soil-Structure Interaction Analysis of Multi-Storey Shear Wall Buildings with Site Specific Ground Response</td>
<td>Chiamy H.K. and Jayalekshmi B.R.</td>
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<tr>
<td>Experience of Using Total Station and GNSS Technologies for Tall Building Construction Monitoring</td>
<td>Guillaume Paleszuk, Imane da Silva and Wenhao Ibaraz</td>
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<tr>
<td>Nonlinear Transient Vibration Analysis of Arbitrary Thin Plates using Superparametric Element</td>
<td>Manorayan Banik and Saleema Panda</td>
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<tr>
<td>A Time-Stepping DDBEM for 3D Anisotropic Functionally Graded Piezoelectric Structures under the Influence of Gravitational Waves</td>
<td>Mohamed Fahmy</td>
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<tr>
<td>Clustering-Based Threshold Model for Condition Assessment of Concrete Bridge Docks Using Infrared Thermography</td>
<td>Mancef Nehdi and Tarek Omar</td>
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<tr>
<td>Soil Testing ans Slope Stability</td>
<td>Wissem FRIKHA and A. Viana</td>
</tr>
<tr>
<td>Structures and Bridge Engineering</td>
<td>A. El Nashai, G. Calvi and A. Abd El Rahman</td>
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<tr>
<td>Soil Structure Interaction Studies with use of Geosynthetics in Soils beneath Footings</td>
<td>Khalid Abdelrahman, Martin Achmus and Tim Geelach</td>
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<tr>
<td>BEHAVIOR OF PIPELINES EMBEDDED IN SELF-COMPACTING MATERIALS UNDER TRAFFIC LOADS</td>
<td>B. R. Jayalekshmi, Nalini Rebello, R. Shivashankar, V. K. Sastri, B. Jayalekshmi and V. Sastri</td>
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<tr>
<td>Numerical check of the Meyerhof bearing capacity equation for shallow foundations</td>
<td>Khalid Abdelrahman, Martin Achmus and Tim Geelach</td>
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<tr>
<td>Experiences with Tip-Post Grouted Drilled Shafts in China</td>
<td>Stefan Van Baars</td>
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<tr>
<td>Comparative analysis of a deep excavation in a Clay sequence in Bogota city</td>
<td>Guangliang Lai and Zhihui WANG</td>
</tr>
<tr>
<td>Later response of socketed pile under cyclic load</td>
<td>Lucero Estevez Roy</td>
</tr>
<tr>
<td>Applied GIS to the monitoring of building work Case study: construction of 2000 houses in Ghadamarsyria</td>
<td>Murthukumar Kan, Prakash AR</td>
</tr>
<tr>
<td>Guyed monopiles foundation for offshore wind turbines</td>
<td>Mohamed BAKROUTI, Samir Medioub and SLAH BOURAOUL</td>
</tr>
<tr>
<td>Experimental Investigation on Shell Floating Models Employing High Performance Concrete</td>
<td>Ahmed ENimr, Rehman Younis and Waleed El Sekelly</td>
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<tr>
<td>Performance of Shallow Foundation Overlying Cavernous Limestone</td>
<td>R. Khalid, M. Abdelrahman, and A. Hanna</td>
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<tr>
<td>Soil-pile-structure interaction evidences from scaled 1-g model</td>
<td>Ahmed Elhady</td>
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<tr>
<td>Soil Structure Interaction Studies with use of Geosynthetics in Soils beneath Footings</td>
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# Detailed Program

## Wednesday 19th July

<table>
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<tr>
<th>Time</th>
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<tr>
<td>07.30 AM : 05.00 PM</td>
<td>Registration</td>
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<tr>
<td>08.30 AM : 09.10 AM</td>
<td>Lecture 24: Behavior of Granular Materials in Microgravity Environment: Implication for NASA Future Exploration Missions, Khalid Al Shibli</td>
</tr>
<tr>
<td>09.10 AM : 09.50 AM</td>
<td>Lecture 25: Sustainability of Civil Infrastructure using Shape Memory Technology, Bassem Andrawes</td>
</tr>
<tr>
<td>09.50 AM : 10.30 AM</td>
<td>Lecture 26: Modified Clays for Barriers, Gemmina Di Emidio</td>
</tr>
<tr>
<td>10.30 AM : 11.00 AM</td>
<td>Refreshments &amp; Coffee Break</td>
</tr>
<tr>
<td>11.00 AM : 11.40 AM</td>
<td>Lecture 27: Case Histories in Geotechnical Applications, Marc Ballouz</td>
</tr>
<tr>
<td>12.20 PM : 01.00 PM</td>
<td>Lecture 29: Transferring Innovative Research into Practical Wisdom - The Case of Grouting, Chadi Said El Mohtar</td>
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<tr>
<td>01.00 PM : 02.00 PM</td>
<td>Lunch</td>
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<tr>
<td>02.00 PM : 02.40 PM</td>
<td>Lecture 30: Innovative Precast Concrete Deck Systems for Accelerated Bridge Construction, George Morcous</td>
</tr>
<tr>
<td>02.40 PM : 03.20 PM</td>
<td>Lecture 31: Evaluation of Non-Nuclear Alternatives to Replace the Nuclear Density Gauge during Compaction Quality Control of Pavement Layers, Yusuf Mehta</td>
</tr>
<tr>
<td>03.20 PM : 03.45 PM</td>
<td>LIEBHERR LECTURE: Efficiency in piling, Roland Nastler – Product Manager</td>
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<tr>
<td>03.45 PM : 04.00 PM</td>
<td>Sponsors Closing Words</td>
</tr>
<tr>
<td>04.00 PM : 04.30 PM</td>
<td>Closing Remarks &amp; Press Conference</td>
</tr>
<tr>
<td>04.30 PM : 05.30 PM</td>
<td>Closing Ceremony &amp; Soft Drinks</td>
</tr>
<tr>
<td>8:30 AM : 04:00 PM</td>
<td>Workshop 3: Citadel Hall</td>
</tr>
<tr>
<td>8:30 AM : 4:00 PM</td>
<td>Short Course 6: Siwa Hall</td>
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<tr>
<td>8:30 AM : 1:00 PM</td>
<td>Short Course 1: Luxor Hall</td>
</tr>
<tr>
<td>02.00 PM : 4.00 PM</td>
<td>Short Course 7: Luxor Hall</td>
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## Thursday 20th July

**GeoMEast 2017 International Congress**  
Post - Conference Day

<table>
<thead>
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<tbody>
<tr>
<td>07.30 AM : 08.30 AM</td>
<td>Registration</td>
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<tr>
<td>08.30 AM : 05:30 PM</td>
<td>Short Course (4) &quot;Including Breaks and Lunch&quot; Citadel Hall</td>
</tr>
<tr>
<td>08.30 AM : 05:30 PM</td>
<td>Short Course (6) &quot;Including Breaks and Lunch&quot; Siwa Hall</td>
</tr>
<tr>
<td>08.30 AM : 05:30 PM</td>
<td>Workshop (4) &quot;Including Breaks and Lunch&quot; Luxor Hall</td>
</tr>
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</table>
Norma Jean Mattei, Ph.D., P.E. is professor and past chair at the University of New Orleans’ (UNO) Department of Civil and Environmental Engineering. She has been active in ASCE for more than 20 years in local, regional and national leadership roles.

President-Elect Mattei sits on the executive committee of ASCE’s New Orleans Branch SEI/Structures Committee. The former Region 5 Director has served on ASCE’s Committee on Diversity and Women in Civil Engineering and the Committee on Licensure and Ethics. ASCE has drawn on her expertise for a number of media relations activities, including an interview with National Public Radio’s “Morning Edition” on post-Hurricane Katrina conditions. Recently, she was spokeswoman for “Raised Floor Living,” a commercial that aired in the New Orleans’ region promoting elevation of residential structures above the flood plain.

In 2012, President Obama named Mattei one of three civilian members of the Mississippi River Commission, which researches and provides policy and work recommendations covering flood control, navigation and environmental projects. In that capacity, she helped oversee a drainage basin that covers 41 percent of the nation. The governor of Louisiana appointed her to the state’s licensing board for professional engineers, LAPELS. She also serves on the board of directors for both the Louisiana Transportation Research Center Foundation and the Louisiana Technology Council.

Before her academic career, Mattei worked for more than 10 years for various New Orleans area consulting firms as a project engineer. Those firms include Guillot-Vogt Associates Inc., Linder & Associates and Modjeski & Masters Bridge Engineers.

Mattei earned a bachelor’s degree in civil engineering in 1982 and a doctorate in 1994, both from Tulane University.
Geosynthetics in Tunnel Drainage and Waterproofing

Geosynthetics engineering has made phenomenal advances during the last decade in areas of manufacturing as well as practical applications. As a result, geosynthetics are now being recognized as essential construction materials that can be used to facilitate construction, ensure better performance of the structures and reduce the long-term maintenance in routine civil engineering works. The creative use of geosynthetics in geotechnical engineering practice is expected to continuously expand as innovative materials and products are becoming available.

In this paper, a wide variety of geosynthetic products available to geo-engineers to solve a wide range of problems are briefly presented along with their functions and possible applications. Fundamentals of geotextile filter design principles are then introduced for use in the tunnel drainage and waterproofing system. Practical applications of geosynthetics relevant for tunnel engineering are also highlighted with emphasis on the issues associated with the geotextile filter application for use in the tunnel drainage system.
Prof. Dr. Abdel-Hady Hosny

Prof. Dr. Abdel-Hady Hosny, Professor at the Structural Engineering department, Ain Shams University specialized in the design of concrete structures and construction management (2016-1929).

Prof. Hosny received his BSc and MSc degrees from Cairo University in 1950 and 1954 respectively, and his PhD degree from Leeds University, UK in 1957. He also received a Diploma in Soil Mechanics and Foundations from Cairo University in 1954. Prof. Hosny was the former Vice Dean of the Faculty of Engineering and the Chair of the Structural Engineering Department at Ain Shams University. He received the following prestigious awards:

Prof. Dr. Ahmed Abdel-Ghaffar

Ahmed M. Abdel-Ghaffar, an internationally known University of Southern California civil engineering professor specializing in the analysis and monitoring long span flexible bridges, died April 2008, at the age of 61, after a long illness.

Abdel-Ghaffar’s 1974 investigation of the dynamic characteristics of the Vincent Thomas Bridge in Los Angeles, done when he was a graduate student, led to new standards on how to collect, analyze and interpret structural dynamic measurements from complex, three-dimensional, extended structures. His investigation allowed the development of high-fidelity computational tools used to reliably design such structures to resist the action of earthquake ground motion. The California Department of Transportation (Caltrans) used Abdel-Ghaffar’s computer program when it embarked on a major retrofit of the Vincent Thomas Bridge, and he served as a consultant, determining the damping characteristics of the bridge.

Prof. Dr. BRAJA M. DAS

California State University, USA

Professor Braja Das is the Dean Emeritus of the College of Engineering and Computer Science, California State University, USA. He is a geotechnical engineering by profession and received his Ph.D. degree in 1972 from the University of Wisconsin, Madison, USA. For more than three decades, Professor Das has worked as a faculty member and in academic administration in several universities. He is a Fellow and Life Member of the American Society of Civil Engineers; Life Member of the American Society for Engineering Education; and Emeritus Member of TRB’s AFS80- Committee on Stabilization of Geomaterials and Stabilized Materials.

Prof. Dr. Harry G. Poulos

AM FAA FTSE Hon FIEAust Dist M ASCE

Professor Harry Poulos; pioneering work in pile foundation analysis and design has enabled the world’s geotechnical specialists to have a greater understanding of the way structures interact with the ground. His research has enabled a more reliable approach to be adopted for pile design, replacing procedures which previously relied purely on experience and empiricism.

Professor Poulos has applied his research to a wide range of major projects, both in Australia and overseas, including buildings, bridges, tunnels, freeways, mines, airports, offshore structures (e.g. oil rigs) and earthquake-related problems. Professor Poulos’ work includes the Emirates Twin Towers in Dubai, where his analysis and design of the piled raft foundations provided significant cost benefits for the twin
Prof. Dr. Malcolm Bolton
Emeritus Professor, Cambridge University, UK
Malcolm Bolton graduated in Engineering from Cambridge University in 1967 and took an MSc by research in structural engineering from Manchester University followed later by a PhD in soil mechanics from Cambridge. His academic career in geotechnical engineering started in Manchester where he helped to develop the UK’s first geotechnical centrifuge, but in 1980 he returned to Cambridge where he is Professor of Soil Mechanics, and Director of the Schofield Centre for Geotechnical Process and Construction Modelling.

Prof. Dr. Robert M. Koerner
Emeritus Professor of Civil Engineering at Drexel University
Director Emeritus of GSI
Dr. Robert M. Koerner’s interest in geosynthetics spans thirty-five years of teaching, research, writing and consulting. He holds his Ph.D. in Geotechnical Engineering from Duke University. He is a registered Professional Engineer, a Distinguished Member of ASCE, a Geotechnical Engineering Diplomate, and an Honorary Member of the International Geosynthetics Society and a member of the U.S. National Academy of Engineering. Dr. Koerner has authored and co-authored over 750 papers on Geosynthetics and geotechnical topics in journals and at national and international conferences. His most widely used publication is his book entitled “Designing with Geosynthetics” now in its sixth edition. Dr. Koerner is presently Emeritus Professor of Civil Engineering at Drexel University and Emeritus Director of the Geosynthetic Institute.

Prof. Dr. Silvano Marchetti
IN MEMORY OF A GREAT INVENTOR
Prof. Silvano Marchetti has been full time Professor of Soil Mechanics for over 35 years in L’Aquila University (Italy).
He had as teachers Prof. Jamiolekowski at Politecnico of Turin and Prof. Bishop, Skempton and Morgenstern at Imperial College in London.
In 1981 he was visiting Professor at University of Florida (US), where he carried out one year of research in cooperation with Prof. Schmertmann.
Prof. Marchetti developed original instruments for in situ soil investigations, in particular the Flat Dilatometer (DMT). He delivered special sessions, general reports and keynote lectures in many International Conferences and was invited as a guest speaker in numerous Universities and Institutions across the world. Three International Conferences have been entirely devoted to the DMT: Edmonton 1983, Washington D.C. 2006, Rome 2015. The instrument is currently used in over 70 countries. More than 1000 papers have been published on the DMT by researchers world-wide.
Prof. Marchetti is author of over 80 publications, mainly on practical foundation problems and concerning the use of DMT results. He carried out the determination of design parameters with the DMT in approximately 1000 construction sites. He was member of numerous Technical-Scientific Committees, among which the Technical Committee TC16 of ISSMGE on Ground Property Characterization from in S itu Testing.

Prof. Dr. William S. Hanna
IN MEMORY OF A GREAT EGYPTIAN ENGINEER
Prof. William Selim Hanna was born in Assiut, Egypt in 1896. He graduated from El-Mohandeskhana (now the Faculty of Engineering, Cairo University) in 1920. He received his PhD from Birmingham University, UK in 1926. After completing his postgraduate studies, he was appointed as a lecturer in the Structural Engineering Department at Fouad El-Awal University (now Cairo University). In 1932, he became the Director of the new Research Laboratory of Reinforced Concrete Structures.
One of the greatest achievement of Prof. Hanna is laying the foundations of the modern soil mechanics in Egypt, Africa and the Arab World. Prof. Hanna was the first Egyptian to publish a research paper in the field of soil mechanics in Stockholm in 1930. He established the Soil Mechanics Laboratories in Cairo University in 1933. This laboratory is the first soil mechanics laboratory in the Middle East and Africa, and the third worldwide. During this golden age for Cairo University, Prof. Hanna collaborated with other well-known pioneers in field of geotechnical engineering such as Prof. Karl V. Terzaghi, Prof. M. Kamal Khalifa and Prof. Gregory P. Tschebotarioff who later moved from Cairo University to Princeton University, USA as a professor of soil mechanics. Prof. Hanna headed the Laboratory since its founding in 1933 until 1952 when he became a cabinet minister. In 1973, he was awarded the State Prize of Merit becoming the first scientist in the field of Soil Mechanics and Foundations to receive this prestigious award.
Abdelsalam M. Salem, PhD, Professor

Prof. Dr. Abdelsalam Salem is the Chairman of the Egyptian Geotechnical Society and a distinguished Professor Emeritus at Cairo University. He is a member of the General Committee of the Egyptian National Code of Practice for Geotechnical Engineering and chaired the committees on Earth Retaining Structures, and on Earthworks and Dewatering Systems.

Dr. Eng. Alberto M. Scuero

Chairman & Executive President, CARPI TECH, Switzerland

A. Scuero graduated in Hydraulic Civil Engineering at Turin Polytechnic in Italy. After working for major civil engineering construction companies in Italy and Africa, in 1986 he joined CARPI, a private Dutch group that works in the field of waterproofing with geosynthetics.

Anand J. Puppala, Ph.D., Professor, PE, D.GE, F-ASCE

Distinguished University Professor - Civil Engineering & Associate Dean – Research in College of Engineering. The University of Texas at Arlington, Arlington, Texas, USA

Dr. Anand Puppala currently serves as Associate Dean - Research in College of Engineering since 2012 and is a Distinguished Teaching and Scholar Professor in the Civil Engineering department at the University of Texas at Arlington (UTA) in Texas, USA.

António Gomes Correia, Ph.D., Full Professor

Full Professor, University of Minho, Portugal

António Graduated in Civil Engineering from the Technical University of Lisbon - IST in 1977, and received a Doctor-Engineer Degree by “Ecole Nationale des Ponts et Chaussées” - Paris in 1985.

Amr Elnashai, Ph.D., Professor

Harold and Inge Marcus Dean, College of Engineering, Penn State
Emeritus Professor, University of Illinois at Urbana-Champaign
Fellow of the British Royal Academy of Engineering
Amr Elnashai is the Dean of Engineering at the Pennsylvania State University, and the Harold and Inge Marcus Endowed Chair of Engineering.

Dr. Amr Abdelrahman, PhD, Professor

Chairman of the Structural Engineering Department and Professor of Concrete Structures, Ain Shams University, Cairo, Egypt.

There are more than 100 staff member and 3500 students at the structural engineering department, Ain Shams University, which is chaired by Dr. Abdelrahman.

Diego Marchetti

Eng. Diego Marchetti worked in cooperation with Professor Silvano Marchetti since 2001 and developed the Seismic Dilatometer (SDMT) in 2004. Together they founded Studio Prof. Marchetti and started the world-wide distribution of the SDMT, which is now used in over 50 countries.

Erol Guler, Ph.D., Professor

Professor, Bogazici University, Turkey

Dr. Erol Guler is a full professor of geotechnical engineering at Bogazici University, Istanbul, Turkey since 1989.

Erol Tutumluer, Ph.D., Professor

Paul F. Kent Endowed Faculty Scholar and Director of International Programs
Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, 205 N. Mathews, Urbana, Illinois 61801, USA
Dr. Eng. Gabriella Vascetti

G. Vascetti graduated in Civil Engineering at the Torino Polytechnic in Italy. After three years as assistant teacher to practical lessons in the same University, she worked as registered professional engineer for private consultants.

Imad L. Al-Qadi

Imad L. Al-Qadi, PhD, PE, Dist.M.ASCE
Founder Professor of Engineering
Illinois Center for Transportation, Director
Advanced Transportation Research and Engineering Laboratory, Director
University of Illinois at Urbana-Champaign

Janusz Wasowski, Ph.D. in Geology

Janusz Wasowski, Ph.D. in Geology, State University of New York at Buffalo
Professor, CNR-IRPI, Italy
Dr. Janusz WASOWSKI is a research geologist at CNR-IRPI (National Research Council - Institute for Geo-hydrological Protection) in Bari, Italy.

Prof. Dr. Khaled Sobhan - Florida Atlantic University, USA

Dr. Khaled Sobhan is the associate director of the Center for Marine Structures and Geotechnic and a Professor of Civil Engineering at Florida Atlantic University. His primary research areas include ground improvement, geotechnology of soft soils, experimental soil mechanics, and geotechnical aspects of pavement engineering. He served as the Chair of the Chemical and Mechanical Stabilization committee (AFS90) of the Transportation Research Board (2011-2005), and co-authored the TRB Circular titled Evaluation of Chemical Stabilizers: State-of-the-Practice Report (E-C086).

Nick Barton, Ph.D., Imperial College

President of NB&A, Oslo, Norway
Nick Barton obtained a B.Sc. in Civil Engineering from King’s College in 1966, and a Ph.D. concerning shear strength and rock slope stability from Imperial College in 1971.

Piergiorgio GRASSO

President and Principal Engineer of Geodata, Italy
Grasso graduated from the ‘Politecnico di Torino’ of Italy in civil engineering, he began his engineering career in 1975.

Prof. Dr. Roger Frank - Ecole nationale des ponts et chaussées’ (ENPC), France

President of ISSMGE (2017-2013)

Roger Frank was born in 1949 at Roslyn, New York (USA). He was then raised in the UK, in Switzerland and in France. He received his Diploma of Engineering from ‘Ecole nationale des ponts et chaussées’ (ENPC, National School of Bridges and Highways of France) in 1972. Both his Doctor of Engineering degree (1974) and his Doctor of Science degree (1984) are from Pierre and Marie Curie University of Paris. Roger Frank has devoted his entire professional career to the Ponts et Chaussées (the French Highway Administration). He was first employed by ‘Laboratoire central des ponts et chaussées’ (LCPC), where he became Head of the Foundations Section in 1983, and Head of the Soil Mechanics and Foundations Division in 1990.

Sherif W. Agaiby, PhD, Professor

Prof. Dr. Sherif Wissa Agaiby is the Director of the Geotechnical and Heavy Civil Engineering Department at Dar Al-Handasah Consultants (Chair and Partners). Dr Agaiby earned his B.Sc. and M.Sc. degrees from Cairo University, Egypt in 1983 and 1987, respectively, and his Ph.D. from Cornell University, Ithaca, NY, USA in 1991.
António Viana Da Fonseca

Associate Professor, Department of Civil Engineering, University of Porto (FEUP), Portugal
(viana@fe.up.pt, www.fe.up.pt/si_uk/)

Tarek Abdoun, PhD, Professor

Thomas Iovino Chair Professor and Director, Rensselaer Polytechnic Institute (RPI) Geo-Centrifuge Center

Thomas Iovino Chair Professor and Director, Rensselaer Polytechnic Institute (RPI) Geo-Centrifuge Center

Gian Michele Calvi, PhD, Professor

Professor, University Institute for Advanced Studies (IUSS), Pavia.

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Associate Professor of Civil Engineering with Full Professor Habilitation, 2008.

Askar Zhussupbekov

Head and Professor of Department Civil Engineering, Eurasian National University, Astana, Kazakhstan, (2009 to Present).

Gian Michele Calvi is a Professor, Vice-Rector for Research and Director of the Centre for Research and Graduate Studies in Understanding and Managing Extremes (UME) at the University Institute for Advanced Studies (IUSS), Pavia. He is also Adjunct Professor at the North Carolina State University.

George Morcous, Ph.D., PE

Dr. George Morcous is a professor at Durham School of Architectural Engineering and Construction at the University of Nebraska-Lincoln since January 2005. He has a B.S. and M.S. degrees in Civil Engineering from Cairo University-Egypt. He earned his doctorate degree from Concordia University – Canada in 2000. He is currently a registered professional engineer in the State of Nebraska. His research and teaching interests include design and construction of precast prestressed concrete structures and bridge engineering. He has two patents and over 150 publications.

Louay Mohammad, Ph.D., Professor

Professor, Louisiana State University, USA

Dr. Louay Mohammad is a national and international expert in the area of pavement materials and sustainable asphalt construction. He is the holder of the Irma Louise Rush Stewart Distinguished Professor and the Transportation Faculty Group Coordinator at Louisiana State University (LSU).

Tarek Abdoun, PhD, Professor

Associate Dean for Research & Graduate Education, Rensselaer Polytechnic Institute (RPI) Geo-Centrifuge Center

GeoMEast 2017 Lectures
Invited Lectures
SPEAKERS

GeoMEast 2017 Lectures
Specialized Lectures

Bassem Andrawes, Ph.D.
University of Illinois at Urbana-Champaign
Bassem Andrawes holds a B.Sc. in Civil Engineering from Ain Shams University (1996), M.Sc. in Civil Engineering (Structures) from Iowa State University (2001), and Ph.D. in Civil Engineering (Structures) from Georgia Institute of Technology (2005).

Chadi Said El Mohtar, Ph.D.
THE UNIVERSITY OF TEXAS AT AUSTIN, USA
As a geotechnical scholar researching pore fluid engineering geotechnics, I have developed a research program to develop adaptive solutions for mitigating geo-challenges to existing and future infrastructures.

Claudio Margottini, Ph.D., Professor
Embassy of Italy in Cairo (Egypt) – Scientific and Technological Attaché
Claudio Margottini is Scientific and Technological Attaché at the Italian Embassy in Cairo (Egypt), vice President of the International Consortium on Landslides UNESCO Consultant and adjunct Professor at the UNESCO Chair in the University of Florence.

Emad Sharif, GTC LAB Director
Company: GTC (Geotechnical Testing Consultants) – Dubai, UAE

Gemmina Di Emidio, PhD
Ghent University, Belgium.
PhD in Civil Engineering at Ghent University (2010), MSc Civil and Environmental Engineer Politecnical University of Marche (2003), Lecturer and researcher at the Laboratory of Geotechnics, Ghent University.

Jie Han, Ph.D., PE, ASCE Fellow, Professor
Professor; Civil, Environmental, & Architectural Engineering (CEAE) Department The University of Kansas
Dr. Jie Han is a professor in geotechnical engineering at Department of Civil, Environmental, & Architectural Engineering at the University of Kansas. He received his Ph.D. degree from Georgia Tech in 1997.

Khalid Abdel-Rahman, Ph.D.
Inst. for Geotechnical Engineering, Leibniz University of Hannover, Germany. Dr. Abdel-Rahman got his Bachelor degree from Faculty of Civil Engineering - “Ain-Shams University” – Cairo – EGYPT.

Khalid Alshibli, Ph.D., Professor
Professor and Associate Department Head for Graduate Programs, Department of Civil and Environmental Engineering, University of Tennessee, Knoxville, TN, USA
Professor Khalid Alshibli is currently serving as the Associate Department Head for Graduate Programs, Department of Civil and Environmental Engineering, University of Tennessee-Knoxville (UTK), USA (http://web.utk.edu/~alshibli/).

Marc Ballouz, PhD
President & CEO, Institute for Geotechnics & Materials, IGM
Marc Ballouz was born in 1965 in Beirut Lebanon. He worked as a consultant in Houston Texas for 2 years before returning to Lebanon to start his own company, the Institute for Geotechnics & Materials, IGM in 1997.
INTRODUCTION
Vicinity of the disposal sites with uncontrollable widespread propagation. On the other hand, taking into account the material being essentially soil-based, with the primary constituents of sand, silt and clay with some larger marine debris, it is perhaps most apt to harness its inherent properties as a ‘soil’ and reuse it as a geo-material. In civil engineering and construction terms, this would involve reusing the soils as backfill materials, for creating artificial land or restoring eroded ones in near-shore areas, for instance. Indeed, reuse of the marine geowaste simultaneously addresses the short and long term disposal issues, and contributes to the favourable practice of sustainable development in general. This workshop puts the recycling and reuse of dredged marine soils into practical engineering context, with a comprehensive review of the physical, chemical, biological and mechanical fundamental characteristics of the material, giving the ‘green’ exercise an all-round consideration for beneficial second lives.

SCOPE
The workshop covers definition of the dredged marine soils from all relevant aspects, the tests and measurements involved to identify the properties and behaviour, the up-to-date test results and findings, the application process as well as effective in situ implementation via a strategic technology management framework.

DISCUSSIONS
- Sources and receptors of contaminated dredged marine soils: complexity of exposure pathway.
- Current handling / disposal of dredged marine soils: risks and uncertainties.
- Financial benefits of reuse vs. disposal.
- New treatment methods.
- Toxicology.

JUSTIFICATIONS
The advancement of dredging machinery and technology should be accompanied by similar extensive development and deployment of effective, efficient and sustainable handling of the dredged materials, which includes recycling and reuse of the material. So far, much is reported and achieved in the former, but less is said of the latter. This workshop also attempts to raise the awareness of related industrial players on the background research in this direction, to engage them in a symbiotic partnership of handling, managing and reusing the dredged materials. If nothing else, the workshop would at least have informed the participants of existing potential solutions and possibilities for giving a second life to the often forgotten clay’s cousin: fine-grained dredged marine soils.

TOPICS
- Origin and formation of dredged marine soils
- Dredging operations: mechanism and impact
- Dredged marine soils’ inherent PHYSICAL properties
- Dredged marine soils’ inherent CHEMICAL properties
- Dredged marine soils’ inherent BIOLOGICAL properties
- Dredged marine soils’ inherent MECHANICAL properties
- Treatment for improvement of engineering properties
- Field implementation and monitoring
- Strategic technology management framework for efficient reuse of the treated materials

JUSTIFICATIONS
The advancement of dredging machinery and technology should be accompanied by similar extensive development and deployment of effective, efficient and sustainable handling of the dredged materials, which includes recycling and reuse of the material. So far, much is reported and achieved in the former, but less is said of the latter. This workshop also attempts to raise the awareness of related industrial players on the background research in this direction, to engage them in a symbiotic partnership of handling, managing and reusing the dredged materials. If nothing else, the workshop would at least have informed the participants of existing potential solutions and possibilities for giving a second life to the often forgotten clay’s cousin: fine-grained dredged marine soils.

WORKSHOPS & COURSES
Workshop 1

Reusing Dredged Marine Sediments for Sustainable Civil Engineering Applications

WINNING IMAGE
Soft, ‘useless’ dredged marine soils.

Dredged marine sediments being retrieved from shallow waters with a clamshell dredger.
Evaluation of Pile Nominal Resistance from CPT Data

THEME
The cone and piezocone penetration tests (CPT and PCPT) are considered one of the most useful in situ testing for subsurface soil investigation. The tests are simple, fast, reliable, and economical tests that can provide continuous soundings of subsurface soil with depth. The CPT/PCPT measurements (qc, fs, u₁ or u₂) can be effectively used for soil identification and classification, and for the evaluation of different soil properties. Due to similarity between the cone and the pile, the CPT/PCPT data has been effectively used to estimate pile resistance. Several direct CPT methods have been proposed to estimate the nominal resistance of piles (total, tip and side) utilizing the CPT and CPTu data (e.g., Schmertmann 1978, de Ruiter, and Beringen 1979, Bustamante and Gianeeselli 1982, Eslami and Fellenius 1996, Almeida et al. 1996, Powell et al. 2001, Bloomquist et al. 2007, Lehane et al. 2013). This workshop is planned to provide the participant with an understanding of the cone and piezocone penetration tests (CPT and PCPT), present the different methods/approaches for estimating pile reissuance from CPT/PCPT data, and introduce available Pile-CPT design softwares. Each design method will be introduced with a discussion of how to assess the end bearing and side resistance separately. A set of worked examples will be presented to the participants for pile load tests in different soil conditions.

Sponsored By
ISSMGE
Deep Foundation Institute, DFI
Pile Driving Contractors Association, PDCA
Geo-Institute of ASCE

PRESIDING OFFICERS

Dr. Murad Abu-Farsakh
- Professor, Louisiana State University, USA
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Dr. Guojun Cai
- Professor, Southeast University, China
- Email: focuscai@163.com
- Website: http://tc.seu.edu.cn/2a/ce/c860a10958/page.htm
Presentation Title: Geosynthetic Reinforced wall retaining structures
Chungsik Yoo, PhD, Professor
Professor, Sungkyunkwan University in Korea

- Professor Chungsik Yoo is a Professor of Civil and Environmental Engineering at Sungkyunkwan University in Korea.
- He obtained his Ph.D. in Civil Engineering from the Pennsylvania State University in 1993.
- He worked as a Geotechnical Engineer at Mueser Rutledge Consulting Engineers in USA and subsequently became a faculty member at Sungkyunkwan University in 1994.

Presentation Title: Earthquake behavior of Geosynthetic Reinforced wall retaining structures
Erol Guler, Ph.D., Professor
Professor, Bogazici University, Turkey

- Dr. Erol Guler is a full professor of geotechnical engineering at Bogazici University, Istanbul, Turkey since 1989.
- He acted as the Director of Environmental Sciences Institute of Bogazici University between 1996 and 1999 and as the Chairman of the Civil Engineering Department between 2004 and 2010.
- He was a visiting Fulbright Professor at the University of Maryland between 1989 and 1991. Prof. Guler is the leading geosynthetic scientist in Turkey, having been an IGS Member since 1989.

Presentation Title: Geosynthetic Encapsulated Columns and piled embankments
Dr. Ing. Dimiter Alexiew
Technical Director of HUESKER; Huesker Synthetic GmbH, Gescher, Germany


Presentation Title: Geosynthetic reinforcement of paved and unpaved roads
Jie Han, Ph.D., PE, Fellow of ASCE
Professor, The University of Kansas

- Dr. Jie Han is a full professor at Department of Civil, Environmental, and Architectural Engineering at the University of Kansas in the United States.
- He received his BS and MS degrees in Geotechnical Engineering from Tsinghua University in 1986 and 1989 respectively, his Ph.D. degree in Civil Engineering from the Georgia Institute of Technology in 1997, and has been a professional engineer in Georgia since 1998.
Geosynthetics Engineering: Barrier

Sponsored By:
- Geo-Institute of ASCE
- Geosynthetics Institute (GI)
- International Geosynthetics Society, GSI
- International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)
- Transportation Research Board, USA

Presentation Title: Geomembranes - applications and regulations; a global sampling
Boyd J. Ramsey, Geosynthetics Expert, Consultant
Principal, Boyd Ramsey Consulting LLC

- Boyd Ramsey has been a leader within the geosynthetic, environmental containment and waste disposal industries for nearly 20 years. He has a long history as an employee of GSE Environmental LLC.
- He has been involved with the design and selection of containment systems at several of the world’s largest cities including New York City at the Fresh Kills facility.

Presentation Title: Comparing the performances of landfill liner systems in terms of contaminant release and groundwater impact
Mario Manassero, PhD, Professor
Professor, Politecnico di Torino, Italy

- Professor of Geotechnical Engineering at Politecnico di Torino.
- Appointed as the second Kerry Rowe lecturer by ISSMGE TC 215.

Presentation Title: Geosynthetics for nuclide contamination – Research developments and innovative applications
Takeshi Katsumi, PhD, Professor
Professor, Graduate School of Global Environmental Studies, Kyoto University, Japan

- Dr. Takeshi Katsumi graduated from the Department of Civil Engineering, Kyoto University, has been working as a university faculty member since 1991, and in 2009, he promoted to a full professor at the Kyoto University’s Graduate School of Global Environmental Studies (GSGES). He has been serving as Vice Dean of GSGES since April 2016.

Presentation Title: Problems and Solutions for GCLs used in Waste Containment Facilities
Dr. Hakki O. Ozhan

- received his B.S. degree in Civil Engineering from Istanbul Technical University (2000) and his M.Sc. (2004) and Ph.D. (2011) degrees from Bogazici University in geotechnical engineering. He worked as a researcher at Brandenburg Technical University, Geotechnical Engineering Department in Germany between 2002 and 2003.

Ismail Coksayar

- Graduated as a Civil Engineer in 1996 from Middle East Technical University, Turkey. He is the founding managing director of GEOMAS since 2008.
The Flat Dilatometer and Seismic Dilatometer

- The last decades have seen a massive migration from laboratory testing to in situ testing. The reason is that in situ tests are fast, economical, reproducible, informative, provide continuous profiles, exhibit reduced scatter and cost much less than the sequence of drilling, sampling and testing. Particularly in sand, recovering undisturbed samples is very difficult and expensive.
- The Flat Dilatometer (DMT) and the Cone Penetrometer (CPT) are the two direct-push technologies that are commonly used for everyday site investigations. Laboratory tests remain fundamental for research and high risk projects.
- The aim of this workshop is to describe the Flat Dilatometer equipment (DMT), its working principle and test procedure. The interpretation steps will be shown starting from the field readings up to the interpreted geotechnical parameters. Comparisons of the results will be shown with other investigation tools in well documented research test sites.
- The Seismic Dilatometer (SDMT) will also be described. It is a seismic add-on module for measuring the shear wave velocity VS.

The presentation will illustrate the main applications for which this test is commonly performed, including:

- Settlement predictions (comparisons of DMT-predicted with measured settlements)
- Moduli before/after soil improvement
- Estimation of the liquefaction resistance CRR
- Slip surface detection
- Kh behind diaphragm walls from MDMT
- Moduli in roads subgrade
- P-y curves for laterally loaded piles
- FEM input parameters from DMT results (ex Plaxis)
- Combining the low-strain shear modulus GO with the working strain modulus MDMT to estimate the G-Gamma decay curves
- ...

The workshop will also include the description of the most recent developments, including the Medusa DMT and the Seafloor DMT system for offshore investigations.

Speaker:
- Workshop Presenter:
  - Eng. Diego Marchetti
diego@marchetti-dmt.it
  - www.marchetti-dmt.it
INTRODUCTION

Objective

- Deep foundations, such as bored and driven piles, are more frequently used to support bridges and buildings with large structural loads. Typically, the capacity of deep foundations is initially estimated using static analysis methods, while construction control aspects are addressed via field load tests and pile integrity tests. For a selected static method, the deep foundation design may be achieved using the working (or allowable) stress design (WSD) or the limit state design that is commonly referred to as the load and resistance factor design (LRFD). At present, the regional practice for the design of deep foundations still rely on the WSD using a global factor of safety (FOS), which is subjective and cannot ensure consistent, reliable, and sustainable performance of deep foundations. This drawback of the WSD stems from ignoring various sources of uncertainties associated with loads and capacities (or resistances), causing highly conservative FOS to be used in some cases.

Participants

- Design engineers of international and local consulting firms; contractors and subcontractors specialized in foundation works, bridges and highways; and geotechnical engineers who are interested in the design and construction of deep foundations.

Outline

- LRFD philosophy
- Background and advantages
- Calibration requirements and technique
- Subsurface investigation
- Pile load test data
- LRFD resistance factors calculation
- Design example for bored and driven piles
- Regional pile database overview

Objective

- To provide the participants with adequate knowledge on the general principles and applications of the LRFD approach for design and construction of different types of deep foundations.

Credit

- 8.0 Professional Development Hours (PDH)

Objective

- Over the past few years, there was a progressive international trend towards transitioning to reliability-based pile design approaches. Consequently, LRFD guidelines were included in established geotechnical design standards such as the Eurocode 7 (2004) and the AASHTO (2007) and their updates. Currently, the regional codes are being updated to include the LRFD approach for deep foundations. The primary reason for this update is twofold; first to follow the international trend of adapting more consistent and cost-effective designs; and second to integrate the construction control techniques in the reliability-based framework.

Objective

- How to get published in a scientific journal: Tips from a Springer Nature Editor

By:

Dr. Nabil Khélifi (*)

- Writing research papers for academic journals is not easy and also very competitive. After producing data and generating ideas from your research, how do you write a clear and concise paper that attracts the attention of journal editors? How should you prepare a cover letter? How should you respond to reviewer report? A publishing editor from Springer Nature(*) in Heidelberg, Germany shares his advice during two hours on how to effectively write and structure your paper, prepare a cover page and answer to reviewer comments.

(*) Dr. Nabil, Publishing Editor, Springer’s Publishing Program MENA

(**) Springer Nature is a scientific publisher resulting from the May 2015 merger of Springer Science+Business Media and Georg von Holtzbrinck Publishing Group’s Macmillan Science and Education unit (Nature Publishing Group, Palgrave Macmillan, and Macmillan Education)
Helical Piles Design, Installation and Testing
By: Yasser Abdelghany*, Ph.D., P.Eng.

- Helical piles/anchors have been utilized in uplift forces applications for many years. More recently, they have gained popularity for bearing load applications. The speed and ease of installation, as well as low cost for new construction and repair, make them versatile for many applications.

- This course focuses, in detail, on the basic fundamentals of helical piles and the different design theories for piles subjected to axial and lateral loads. In addition, it explores the most recent advances for helical piles subjected to seismic and machine loads. Types of helical piles, installation methods, and effect of geometrical configurations on their performance and capacity are discussed. A thorough treatment of the different field testing programs (i.e. static and cyclic loading and vertical vibration tests) is provided together with a brief description on the instrumentation techniques. Most recent advances in the construction and performance of square-shaft small diameter piles as well as the circular-shaft large diameter piles are presented.

Course Objective
- To provide the participants with adequate knowledge on the general principles and theories of helical piles as a versatile piling technique, with major or mega projects. Construction, land developers, foundations contractors and sub contractors, technicians and supervisors who are interested in deep foundations.

Who should attend?
- Geotechnical and Bridge Engineers, Projects managers and engineers of national, provincial and local building construction or highways agencies and Construction contractors’ engineers and project managers who deal

Credit
- 7.5 Professional Development Hours (PDH)

Short Course 4
Quality Assurance and Quality Control (QA/QC)
Methods for Deep Foundations
By: Dr. Hazem Sarhan* / Dr. Anna Sellountou**

Dynamic pile testing (high strain dynamic testing) and interpretation techniques
- Capacity estimation
- Hammer system performance
- Pile driving stresses
- Structural integrity
- CAPWAP method

Low strain pile integrity testing
- Test description
- Advantages and limitations
- Sample results – good vs. defective piles
- Case histories and correlation of PFI vs PIR

Thermal integrity profiling
- Thermal Integrity Profiling (TIP) Background
- TIP testing configurations
- TIP testing advantages
- Case histories

Cross-hole sonic logging testing
- Testing technique
- Typical results for uniform and defective piles
- Defect resolution – SSL vs. CSL
- Case histories

Shaft quantitative inspection device [SQUID]
- Quantitative assessment of bored pile’s base
- Applications goal and use
- Data collection, typical results and interpretation
- Case histories
Introduction to Geosynthetic Engineering

By:
Dr Sanjay Kumar Shukla PhD, M Tech, BSc Eng, FIEAust, FIE(India), FIGS, MASCE, MIGS, MIRC, MISRMTT, MISTE, MCAII

Sponsored By:
- Geo-Institute of ASCE
- Geosynthetics Institute (GI)
- International Geosynthetics Society, GSI
- International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)
- Transportation Research Board, USA

Introduction

Geosynthetics are being used extensively worldwide as they offer the most efficient, cost-effective, environmentally friendly solutions to many civil, mining, agricultural and aquacultural engineering problems in a sustainable manner. Rational design methods, based on sound concepts and standardised test techniques for determining the technical properties of geosynthetics, are now available, thus placing the geosynthetics on a firm base. This interactive course provides a comprehensive introduction to geosynthetics and their field applications, called the geosynthetic engineering.

Learning objectives

Upon completion of the course, the participants will be able to:
- Differentiate between types of geosynthetics
- Analyse the functions of geosynthetics for their use in field applications
- Select the correct geosynthetics for a specific application
- Recommend the type of test on geosynthetics required in a specific field application
- Develop the general guidelines for geosynthetic installation, and
- Locate the references and resources on geosynthetics and their applications

Who should attend?

This course is ideal for those involved in the specification, analysis, design, construction, and/or study of geosynthetic-related projects. The participants may include the following from the areas of civil, mining, agricultural and aquacultural engineering:
- Senior undergraduate and postgraduate students
- Research candidates
- Practising engineers
- Specialised contractors
- Project managers
- Land developers

Official language

- English

Course outline

- Session 1: Basic description of geosynthetics, including their types, basic characteristics, raw materials and manufacturing processes
- Session 2: Functions of geosynthetics, namely reinforcement, separation, filtration, drainage, fluid barrier and protection
- Session 3: Properties of geosynthetics, namely physical properties, mechanical properties, hydraulic properties and endurance properties, and their evaluation
- Session 4: Selection of geosynthetics, basic design concepts and applications areas
- Session 5: General field application guidelines and case studies

Biographical profile

Dr Sanjay Kumar Shukla is an internationally recognised expert in the field of Civil (Geotechnical) Engineering, and has over twenty years of teaching, research and consultancy experience. He is the Founding Editor-in-Chief of International Journal of Geosynthetics and Ground Engineering. He is an Associate Professor and Program Leader of Civil and Environmental Engineering at the School of Engineering, Edith Cowan University, Perth, Australia. He is also an Adjunct Professor at VIT University, India and a Distinguished Professor at Chitkara University, India. His research interests include geosynthetics and their applications, fibre-reinforced soils, ground improvement, soil-structure interaction, soil dynamics, rock engineering, pavement engineering, and mining and environmental geotechnics. He is the author of popular ICE textbooks titled ‘Core Principles of Soil Mechanics’ and ‘Core Concepts of Geotechnical Engineering’, and has authored/co-authored/editing other 7 books and 12 book chapters. He is also the author/co-author of more than 165 research papers and technical articles, including over 105 refereed journal publications. He is a fellow of Engineers Australia, Institution of Engineers (India) and Indian Geotechnical Society, and a member of American Society of Civil Engineers (ASCE), International Geosynthetics Society, Indian Roads Congress and some other professional organisations. He is a Senior Editor of Cogent Engineering, a Scientific Editor of Journal of Mountain Science, and a Topical Editor of Mechanical Sciences. He serves on the editorial boards of International Journal of Geotechnical Engineering, Ground Improvement, Geotechnical Research, Indian Geotechnical Journal, Journal of Geotechnical and Transportation Engineering, and Advances in Civil Engineering.
Short Course 6

TWO-DAY SHORT COURSE ON “INTRODUCTION TO TUNNELLING”

By:
Dr. Manoj Verman, Tunneling & Rock Engineering Global Expert at Various Professional Companies

Sponsored By:
- Deep Foundation Institute, USA (DFI)
- International Association of Tunneling (ITA-AITES)
- International Society of Rock Mechanics (ISRM)

CONTENTS
- Day One
  - Philosophy of Tunnelling
  - Fundamentals of rock mechanics related to tunnelling
  - Geological and geotechnical factors affecting tunnelling
- Day Two
  - Constraints of urban tunnelling
  - Cut&cover metro structures
  - Planning and logistics aspects of mechanized metro tunnelling
  - Introduction to Tunnel Design
  - Numerical methods of analysis and design of tunnels

Biographical profile
- Dr. Manoj Verman was working for Geodata Engineering in India as Technical Director. He has earlier worked with Halcrow as Director (Tunnelling & Geotechnical) and with Golder Associates as Vice Chairman of the Global Tunnelling Group. He received his undergraduate education in civil engineering from Punjab Engineering College, Chandigarh, India in 1980 and obtained his Masters in Rock Mechanics from Indian Institute of Technology, Delhi, India in 1982. In 1993, he obtained his Ph.D. degree in Rock Mechanics from University of Roorkee. His research work on various aspects of tunnelling through the difficult ground conditions of the Himalayas was widely appreciated internationally. His thesis was adjudged as the best Ph.D. thesis in geotechnical engineering in India and he was awarded “Prof. Leonard’s Prize” for this in 1994. In 1995, he was awarded the Young Engineer Award for significant contribution to the field of water resources development in India.
- Dr. Verman is a specialist in tunnelling & rock caverns, rock mechanics, field instrumentation and non-destructive testing. He has been involved in planning, design and construction stages of several tunnels and rock caverns. He has also been associated with stability analysis, support design and instrumentation of rock slopes. Besides his core area of Rock Mechanics, he has worked extensively in allied fields of Geophysics, Non-Destructive Testing and Condition Assessment. He also has experience with high-end geotechnical laboratory and field testing involving advanced equipment.
- Besides his research interests, he has vast experience of working in the corporate world as a dynamic leader who effectively combines his keen business sense and strong technical skills to secure and deliver engineering services of high quality to time and budget. He has over 30 years of experience with infrastructure projects for government and private clients in India and overseas and possesses strong project management, team management and client facing skills. He is currently managing five large consultancy projects involving tunnels in the Himalayas.
- Dr. Verman has published over 70 papers. He is regularly invited to deliver technical lectures in India and overseas. He is currently the Vice President of Indian Society for Engineering Geology. He has served on technical committees of RILEM and of Bureau of Indian Standards. He has been an Executive Committee of Indian Geotechnical Society and is an Governing Council of International Society of Rock Mechanics (India) and Tunneling Association of India. Besides ISRM and IGA, he is a member of several professional societies.
- Dr. Verman is the President of a new ISRM Commission on Hard Rock Excavation.

NOTES
SHORT COURSE ON THE MÉNARD PRESSUREMETER
Wednesday 19th July 2017, from 2 pm to 5.30 pm

Coordinator: Wissem Frikha, Serge Varaksin, Vincent Brousset, operators

About the short course - Program

2.00 pm Registration and log in

Presentation of the Manual Pressuremeter and the GEOPAC® pressuremeter

Set-up of a GEOPAC® pressuremeter calibration test using a GEObOX®, and comparing the main differences with the standard pressuremeter equipment

Comparison between manual Pressuremeter and GEOPAC® calibration tickets

Placement of the pressuremeter probe and performance of two GEOPAC® automatic pressuremeter tests with comparison of the manual test procedure.

Use the GeoVISION® software to import readings from the previous tests and readily get automatic calculation of corrected pressuremeter data

Explanation and demonstration of the software GeoVISION® in various options such as NP versus ISO standard, results of slight movements of points P1 and P2, how to input lithology, submitting the test records, generating a whole log diagram, etc.

Overview on the use of the pressuremeter parameters pLM and pEM for the design of shallow or deep foundations

Answers to questions from the floor.

5.00 pm Conclusion and Q&A Session

Log-out and collection of certificate

About the presenters

Serge Varaksin was born in 1943 in Belgium. After completing his civil engineering degree he was admitted on a work-study program at Northwestern University Evanston, USA. He completed his master’s degree under Professor Jorg Crippsberg and published his research on relative density below groundwater table in the ASTM, STP 523, Book. He joined the Menard France in 1973 and since then, devoted his career in creating the present network of companies of Menard around the world, applying the ideas of Louis Menard and Jean-Marc Cognet, as Overseas Manager and later Deputy General Manager of this group. He has recently retired but continues to act as advisor of the president, expert on ground improvement projects and lecturer.

Wissem Frikha was born in 1976 in Tunisia. He is an associate Professor at National Engineering School of Tunis (ENIT) and expert in the areas of computational geomechanics, analytical modelling, ground improvement techniques, soil behaviour, laboratory and in-situ testing, etc. He has a civil engineering degree and a Master of Science in modelling of soils and structures from ENIT. He obtained a PhD degree in civil engineering from ENIT in Tunisia and Ecole Nationale des Ponts et Chaussées (ENPC) in Paris, France and a HDR in civil engineering from ENIT. He has done his Post-doctoral degree in ENPC (Paris, France). He is the Vice-President of Tunisian Society of Soil Mechanics (ATMS). General Secretary of International Committee on Pressuremeter (ICP) and Vice-Chair of Steering Committee of GeoEast International Conference 2017, Sharm El-Sheikh, Egypt.

He is Author/co-author of more than 16 articles in international journals with referees, 30 communications published in proceedings of international. Editor of 3 proceedings in international publishers. He is a Supervisor of several PhD theses and MSc theses. He is Chair of Organizing Committee of ISP7-2015 International Symposium of Pressuremeter and Third International Conference of Geotechnical Engineering, IOERE, Tunis, Tunisia, 2013. He is reviewer in several international journal in geotechnical engineering and associate editor of Innovative Infrastructure Solutions journal.
For more than 60 years, Liebherr stands for a large, continually developing range of sophisticated products and services. Exceptionally practical, seasoned and proven engineering as well as a consistent high quality level ensure customer benefit in all product areas.

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Plaxis is the name of our company and PLAXIS is our brand name. Under the PLAXIS brand we supply a range of software tools, software support services, educational services (courses, seminars, workshops), custom software development and expert services (project support, mentoring); all targeted at the world of geotechnics, geo-engineering, geomechanics and civil engineering. At Plaxis it is all about soil (ranging from soft soil to rock), software and knowledge transfer.

Our software is based on the finite element method and intended for 2-Dimensional and 3-Dimensional engineering, design and analysis of soil and rock deformation and stability, soil structure interaction and groundwater- and heat flow. PLAXIS software is applied in areas such as excavations, foundations, embankments, tunnels, mines, dredging, etc.

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We work in partnership with our clients, offering technical expertise to deliver versatile, cost effective and environmentally sound solutions. Whether you want to simply purchase our quality materials, or receive a turnkey package, we would be delighted to be of service!

Our vision is to become a leading international provider of advanced solutions to the construction market. Implementing a strategy of vertical integration, we research, design, supply and provide construction solutions within our target markets. This capability reduces client risk and management workload, as there is a single interface with one service provider, rather than several. Furthermore, being the manufacturer of the systems means that we are able to customise our proposals, combining materials in new ways to optimise the solution, saving our clients’ cost and time."
Special thanks dedicated to our organizational team, a fine group from the German University in Cairo’s best civil engineering students, and other unnamed yet crucial supporters, who put this event together. Without their efforts, this event might not have reached its current potential.
Interpreters

Ahmed ElMaraghy
Ahmed Gondia
Ibrahim ElBatran
Omar Mohsen

Ushers

Ahmed El-Sherbeeny
Ahmed Emad
Ahmed Hamza
Ahmed Medhat
Bassel Khaled
Marwan Fares
Menra Khaled
Mohamed El Zuairy
Mohamed Anwar
Mohamed Khairy
Mohamed Ossama
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In collaboration with the Housing and Building National Research Center
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