

## Thursday July 20, 2000

7:30am - 9:00am	Registration
9:00am - 10:00am	Opening- <b>Planetary Keynote Speaker, President Lahoud's Representative</b>
10:00am - 10:15am	BREAK
10:15am - 11:00am	<b>Nabil Hourani, PE</b> , Mass Highway, Massachusetts, <b>USA</b> <i>"Application of Ground Improvement Techniques in the Northeastern United States"</i>
11:00am - 11:45am	<b>Dr. Antoine Hobeika*</b> , Tammam Nakkash, Ph.D., Jamal El-Zarif, and Linda Katran, TEAM Int'l, <b>Lebanon</b> , *Virginia Tech, Virginia, <b>USA</b> <i>"Evaluating Transportation Investments in Beirut, Lebanon"</i>
12:00am - 1:15pm	LUNCH
1:15pm - 2:00pm	<b>Philippe Bousader, PE</b> and Dr. Walid Salim Najjar, PE, CHAS. H. SELLS, INC, New York, <b>USA</b> <i>"Retrofitting Old Bridge Structures to Meet Current Standards"</i>
2:00pm - 2:45pm	<b>Dr. Walid Salim Najjar, PE</b> and Philippe Bousader, PE, CHAS. H. SELLS, INC, New York, <b>USA</b> <i>"The Art and Science of Bridge Load Rating"</i>
2:45pm - 3:00pm	BREAK
3:00pm - 3:45pm	V. J. Murphy, P.B. Hubbard, E.Rostosky, and <b>Dr. Alfredo Urzua*</b> , Weston Geophysical Corp, *Prototype Engineering, Massachusetts, <b>USA</b> <i>"Non-Destructive (NDT) Verification for Soil-Mix and Concrete"</i>
3:45pm - 4:30pm	<b>Dr. Yehia Anis Daou</b> , Beirut Arab University, <b>Lebanon</b> <i>"The Adequacy of the Minimum Shear Reinforcement Provision in High Strength Concrete"</i>
4:30pm -5:15pm	<b>Dr. Mahmoud Ghazavi</b> , Isfahan University of Technology, Isfahan, <b>IRAN</b> <i>"Vertical Vibration of Deep Foundations in Layered Deposits"</i>
5:30pm - 7:00pm	<b>ALES BOARD MEETING</b>

## Friday July 21, 2000

7:30am - 8:30am	Registration
8:30am - 9:15am	<b>Keynote Speaker: Dr. Osman Shinaishin</b> , Senior Program Manager North Africa, Near East and South Asia, National Science Foundation, Virginia, <b>USA</b>
9:15am - 10:00am	<b>Dr. A. Al-Hajj</b> , Dr. A. Whyte, and Dr. G. Aouad, The Robert Gordon University, Aberdeen, <b>UK</b> <i>"The Development of the Framework for Life Cycle Costing for Integration at the Design Phase for Use in Object Oriented and VR Technologies"</i>
10:00am - 10:15am	BREAK
10:15am - 11:00am	<b>Dr. Abdallah. Sfeir</b> , Lebanese American University, <b>Lebanon</b> <i>"Computer Algebra in Engineering Concepts and Methods"</i>
11:00am - 11:45am	<b>Dr. Milad A. Shaheen</b> , Kaiser Electroprecision, California, <b>USA</b> <i>"Computer Aided Design (CAD) and Computer Aided Engineering (CAE) in the New Millennium"</i>
12:00am - 1:15pm	LUNCH
1:15pm - 2:00pm	<b>Dr. Paul Boulos</b> , Zheng.Y. Wu, J.Erick Health, and Paul M. Hauffen, MW Soft Inc., California, <b>USA</b> <i>"Optimal Design and Rehabilitation of Water Distribution Piping Systems"</i>
2:00pm - 2:45pm	<b>Dr. Dada Najjar Jabbour</b> , Dept. of Public Health, City of Waterbury, Connecticut, <b>USA</b> <i>"Municipal Management of Environmental Issues"</i>
2:45pm - 3:00pm	BREAK
3:00pm - 3:20pm	<b>Dr. Nelly M. Abboud</b> , and Philippe Bousader, PE, University of Connecticut, Connecticut, <b>USA</b> <i>"Recycled Wastewater and its Positive Impact on the Environment in Lebanon"</i>
3:20pm - 3:45pm	<b>Rana Louis Kobrossi</b> , American University of Beirut, <b>LEBANON</b> <i>"Health Effects of Air Pollution in the Regions of Koura, Batroun and Jbeil in Lebanon"</i>
3:45pm - 4:30pm	<b>Dr. Rabi Mohtar</b> , and M. Benner, Purdue University, IN, <b>USA</b> <i>"Analysis of Air Sparging Systems for Soil and Groundwater Remediation"</i>
7:00pm -	<b>DINNER BANQUET / AWARDS</b>

**Saturday July 22, 2000**

**Interactive Workshops**

9:00am - 11:45am

**Dr. Paul F. Boulos**, MW Soft Inc., California, USA  
President and Chief of operating Officer  
*"How to Apply Genetic Algorithm Technology to Optimize Water Distribution Systems"*

This workshop will provide the opportunity to learn more about the recent advances in genetic algorithm technology and its direct applications to water distribution system optimization. Applications and case studies will be presented using the H2ONET Utility Suite software package, an extended version of the EPANET water distribution modeling software. The applications will demonstrate the efficacy, flexibility, and versatility of genetic algorithm technology to effectively solve a wide range of real-life network modeling problems including:

- **Network model calibration**
- **Network rehabilitation**
- **Network design and expansion**
- **Pump scheduling**

You will have this workshop with the knowledge to apply Genetic Algorithm technology to other areas of distribution management including:

- **Leakage minimization**
- **Identifying locations for water quality sampling and booster chlorination stations**
- **Improving hydraulic network redundancy**

Dr. Boulos has written over 100 technical papers and engineering reports and has contributed to the development and enhancement to several widely used computer software packages for water distribution modeling including KYPIPED, EPANET and H2ONET. He is a world expert in water distribution engineering and has won many prestigious honors including technical awards from the American Society of Civil Engineers and the US Environmental Protection Agency.

1:15pm - 5:00pm

**Dr. Alfredo Urzua**, Prototype Engineering Inc., Mass (USA)  
*"Reliability Analyses and Computer Applications in Geotechnical Engineering"*

This workshop will provide the opportunity to learn more about recent advances in reliability analysis and computer analysis in geotechnical engineering. The workshop will cover the following:

- **Basic introduction to the use of computers in Geotechnical engineering. (1/2 hour).**
- **1-D Dynamic amplification/soil response. Determination of soil properties, empirical correlation, non-linear effects. Hands on with the computer program UFSHAKE. Examples for typical soil profiles, different ground motions, etc. (2 hours)**
- **Development of site specific response spectra. Example of bridge structure. (1 hour).**
- **Level ground liquefaction assessment. Equations, theory, computer program LIQFAC, and how to combine it with UFSHAKE for better analysis. Example problems and some ideas about remediation. (1 1/2 hours).**

Dr. Urzua received his MS and Ph.D. from MIT. He is a civil engineer specializing in Geomechanics, Geotechnical, Earthquake Engineering, Reliability Analyses and Computer Applications in Engineering. He is proficient in the application of Finite Element and Finite Difference methods for dynamic soil response, groundwater modeling flow, seepage analysis, and soil structure interaction. Recent experience includes developing and implementing a GIS system for the organization of subsurface data for a major highway department, installation and management of geotechnical and strong motion instrumentation for dams, slopes and other constructed facilities, seismic analysis and dynamic soil response for bridges and dams; seismic hazard assessments; regional groundwater modeling and development of flow nets and seepage patterns; developing computer aided design procedures for liquefaction evaluation, and geotechnical productivity tools for major government agencies. He has been an invited lecturer and provided short courses at several national and international conferences which include MIT, RPI, U.S. Corps of Engineers, Boston Society of Civil Engineers, Naval Facilities Command, Bureau of Reclamation, Colombia, Ecuador, Chile, Mexico, Dominican Republic, Venezuela, Taiwan and Jordan. Dr. Urzua is the co-author of the book [Productivity Tools for Geotechnical Engineers, Vol.I.](#)