

# The Vancouver Geotechnical Society A Local Section of

The Canadian  
Geotechnical Society



La Société canadienne  
de géotechnique

Visit: [www.v-g-s.ca](http://www.v-g-s.ca)

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## **SOIL LIQUEFACTION SHORT COURSE** **Saturday, December 5, 2009**

### **SYNOPSIS**

Update your grasp of the assessment of soil liquefaction hazards during earthquakes and learn how to estimate the potential for triggering liquefaction and its consequences. This one-day short course will be given by I.M. Idriss and R.W. Boulanger, authors of the monograph recently published by EERI, *Soil Liquefaction During Earthquakes*.

The monograph is provided in the course and contains an update of progress in the study of soil liquefaction since 1982. The course program will include a panel session where the participants can discuss with the authors selected topics of particular interest to the local geotechnical community.

### **INSTRUCTORS**

**I.M. Idriss** is Professor Emeritus at the University of California at Davis, having joined the faculty in 1989 after 20 years at Woodward-Clyde Consultants, where he was a Senior Principal. He has been heavily involved in research, development, and application of engineering procedures in geotechnical engineering since 1964. He continues to serve on several consulting or review boards for U.S. and international companies and for state and federal agencies. He has received many awards and honors over the past 40 years, including the first H. Bolton Seed Medal from ASCE in 1995, the Distinguished Scholarly Public Service award from UC Davis in 1999, and election to the U.S. National Academy of Engineering in 1989, Honorary Membership in the Japanese Geotechnical Society in 2005, and Distinguished Membership in ASCE in 2008.

**R.W. Boulanger** has been Professor at the University of California at Davis since 1992. His research emphases are on soil liquefaction and its remediation, seismic soil-pile-structure interaction, and seismic response of earth structures. He serves as a technical specialist on several dam safety and seismic remediation projects for private, state, and federal organizations. His honors and awards include the Norman Medal, the Walter L. Huber Civil Engineering Research Prize, and the Arthur Casagrande Professional Development Award from ASCE.

### **CONTENT**

**Fundamentals of Soil Liquefaction Behavior:** Fundamental aspects that are important in understanding the development and limitations of engineering procedures covered in the monograph.

**Triggering of Soil Liquefaction:** Procedures used to evaluate liquefaction triggering, including discussion of geologic considerations, the analysis framework, in-situ testing, liquefaction triggering considerations, and examples.

**Residual Shear Strength of Liquefied Soils:** Procedures used to evaluate, and mechanisms affecting, the in-situ residual shear strength of liquefied soils, as required for evaluating the potential for slope instability.

**Lateral Spreading and Post-Liquefaction Settlement:** Procedures used to evaluate the lateral spreading of mildly sloping ground and one-dimensional settlement caused by reconsolidation of the liquefied soils.

**Cyclic Softening of Clays and Plastic Silts:** Procedures used to evaluate the potential for cyclic softening and associated ground deformations in clays and plastic silts, and the soil characteristics that can guide the selection of appropriate engineering procedures.

**Panel Discussion:** Applicability of observations from previous earthquakes at other sites to local seismic hazards and ground conditions. Simplified soil liquefaction assessment method versus site specific response analysis and risks involved with each approach. Depth of soil liquefaction assessment. Simplified methods to estimate post-seismic deformations in non-level ground such as embankments, dams, landfills, and natural slopes. Other local concerns and considerations.

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**SOIL LIQUEFACTION SHORT COURSE  
REGISTRATION FORM**

**Date:** Saturday, December 5, 2009  
**Time:** 8:00 am to 5:30 pm  
**Location:** Executive Hotel and Conference Centre  
4201 Lougheed Highway, Burnaby, B.C.  
Phone: 604-298-2010

Lunch will be provided as well as beverages during morning and afternoon breaks.

Space is limited to 100 participants and deadline for acceptance of registrations is **November 16, 2009**.

Please **MAIL** your completed registration form before the above deadline to:

The Vancouver Geotechnical Society  
c/o Marc Bossé, Trow Associates Inc.  
7025 Greenwood Street, Burnaby, BC  
V5A 1X7

Please enclose your registration cheque payable to: **The Vancouver Geotechnical Society**.

No other forms of registration will be accepted. Registration will be considered valid only when this form and the cheque for the appropriate registration sum has been received and cleared.

Name: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

- Cheque enclosed:**
- CAD\$350 for VGS or CGS non-members.
  - CAD\$300 for VGS or CGS members.
  - CAD\$150 for Full-time student (includes new VGS membership).

**Proof of society membership or student status will be required at the door.**

**Registration fee includes: Course notes, EERI monograph, lunch and beverages during breaks.**

**Cancellation of registration will not be accepted after November 27, 2009.**