



Vancouver Geotechnical Society

A Local Section of the
Canadian Geotechnical
Society

www.v-g-s.ca

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NOTICE OF UPCOMING TECHNICAL PRESENTATION

Tuesday, May 16, 2017

SUBJECT: SANICLAY and SANISAND Plasticity Models: Recent Advances and Applications

SPEAKER: Mahdi Taiebat, Ph.D., P.Eng. – *University of British Columbia*

Dr. Taiebat is an Associate Professor of Civil Engineering at the University of British Columbia (UBC). He received his Ph.D. degree in Civil Engineering from University of California at Davis, and his M.Sc. and B.Sc. degrees in Civil Engineering from Sharif University. His involvements in geotechnical research, professional practice, and education are primarily in the areas of theoretical and computational geomechanics, with focus on constitutive modeling and applications in geotechnical and earthquake engineering. He leads the Theoretical & Applied Geomechanics (TAG) research group at UBC, has co-authored over 70 scientific papers, and serves in the ASCE Soil Dynamics and Earthquake Engineering committee, and the Editorial Board of the Soils and Foundations Journal. He has spent a postdoctoral year at NGI in 2008-09, and a sabbatical year at MIT in 2015-16. He has received the UC Davis excellence in geotechnical engineering award (2007), UBC civil engineering professor appreciation award (2011), ASCE Norman medal (2012), and Canada NSERC-DAS award (2015).

CONTENT: Simplicity of structure and presentation versus sophistication of performance are the characteristics of constitutive models that must be properly balanced in order to achieve eventually being useful in practice. This can be accomplished without sacrificing the rigor of correct mechanics, and one of the simplest ways, is to present first the main building blocks of a model from the perspective of great simplicity. SANICLAY and SANISAND are families of Simple ANIsotropic CLAY and SAND plasticity models, developed over the last several years for application in geotechnical and earthquake engineering. They are within the useful framework of critical state soil mechanics, formulated based on bounding surface plasticity, and built on familiar foundations of Modified Cam-Clay and Drucker-Prager, respectively. The models in both class include anisotropy as one of their important ingredients for addressing monotonic and cyclic loading, and include multiaxial tensorial formulation. The contributions on these models over the years include various constitutive ingredients in the form of simple add-ons features that can be activated depending on the availability of data and needs of application. This presentation includes a general introduction to the basic features of these two families of soil plasticity models, and briefly reviews selected add-on features. Some examples of model validation and application will also be presented and discussed.

DETAILS: **Location:** Executive Inn, 4201 Lougheed Highway, Burnaby, BC, V5C 3Y6
Social Hour: 5:30 to 6:30 pm (drinks available at the hotel bar)
Technical Presentation: 6:30 to 7:30 pm (No need to RSVP)
Dinner: 8:00 pm (\$20 will be charged for dinner)

If you would like to stay for dinner, please RSVP to Aran Thurairajah via email or at the door aran_thurairajah@golder.com