Geo-Institute Graduate Student Organization student chapter at The University of Michigan is proud to present

Wednesday, January 15, 2013
4:00 pm, 2355 G.G. Brown

Lessons Learned from Full-Scale Measurements of Soil-Structure Interaction for Municipal Infrastructure Repair and Renewal

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ABSTRACT

Soil-structure interactions dominate an interesting class of geotechnical problems where the soil provides both loading to and support for the buried structure. Three examples are presented where full-scale physical experiments have been used to: quantify the three-dimensional ground displacements induced by a trenchless pipe installation technique called pipe bursting; evaluate the ultimate limit state of 10-m-span, deep-corrugated metal box culvert; and assess the long-term performance of buried polymer structures. With a practical focus on the measured soil and structure behaviour, the talk illustrates the useful role of carefully conducted full-scale experiments to resolve important buried municipal infrastructure issues.

BIOGRAPHY

Dr. Brachman is a Professor of Civil Engineering at Queen’s University. The phrase ‘buried but not forgotten’ captures his unique expertise on measuring the physical response of buried structures (e.g., pipes, culverts) and landfill geosynthetics (e.g., geomembranes, geosynthetic clay liners) using innovative large-scale experiments, field studies and numerical analysis. His unique scholarly contributions are related to determining the effects of stress, temperature, chemicals and time on soil-structure interactions that directly impacts how well, and how long, these important components of our buried infrastructure perform their function. He has received four Best Paper Awards for works published in the Canadian Geotechnical Journal, Geotextiles and Geomembranes, and Geosynthetics International. His achievements have also been recognized with the Geosynthetics Award and the Canadian Geotechnical Colloquium from the Canadian Geotechnical Society.

** Everyone is invited - Light refreshments will be served **
For more information on this lecture series, visit http://www.umich.edu/~geotech/lecture.html
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