The Centre for Sustainable Infrastructure seminar will be held on Thursday 14 May 2015.

All Civil and Construction Group research students are expected to attend as part of their course requirements and all CSI staff and students are encouraged to attend.

CSI Research Seminar

Date: Thursday 14 May

Time: 12.30 – 1.30pm

Location: ATC 205, level 2, Advanced Technology Centre
Swinburne University of Technology, Hawthorn campus

A light lunch will be provided

Probabilistic Methods in Geotechnical Engineering

Dr Pathmanathan Rajeev (Senior Lecturer, CSI)

Working with uncertainty is an essential aspect in geotechnical design – the larger the uncertainty and the closer to critical, the greater the need for evaluating its effect(s) on the results. The engineer tries to deal with the uncertainties by choosing reasonably conservative parameters for the deterministic evaluation. This approach, however, fails to address the problem of properly and consistently dealing with uncertainties. This presentation will cover the recent developments in probabilistic methods to uncertainty analysis in Geotechnical Engineering.

Micro-scale Behaviour of Recycled Construction and Demolition Material: Discrete Element Method Simulations and Physical Testing

Tabassom Afshar (Full-time PhD Candidate – commenced September 2013)

Previous laboratory and field experiments have proven the viability of application of Construction and Demolition (C&D) materials in embankments and road construction. This research studies the rich particle scale information provided in the Discrete Element Method (DEM) simulation to develop further understanding of particle shape and breakage roles. In addition, a set of laboratory tests have been performed to compare the numerical and experimental results in terms of macro-
mechanical responses.

**Volumetric Constitutive Behaviour of Stabilized Melbourne Expansive Clay Using Lime**

Asmaa Yahya (Full-time PhD Candidate - August 2014)

The aim of this research is to extend the understanding of volumetric behaviour of unsaturated soil after stabilisation through using common saturated soil variables such as net stress, void ratio and water content without the need for soil suction. This research is based on the framework initially developed by Kodikara (Monash Uni). As this research is focused on stabilized soils, it is expected that this new framework will have the most impact on compacted soils.

We look forward to seeing you there.

Yours sincerely,

Prof Jay Sanjayan  
Director, Centre for Sustainable Infrastructure  
Swinburne University of Technology

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