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Public Seminar on **Modelling of compacted clay**

By **Prof. Jayantha Kodikara**
Monash University, Australia



No. of
PDU points
: 1

Synopsis:

The soil compaction is one of the most common activities of civil construction. It is applicable to construction of fills, dams, roads and embankments. The compacted soils can be subjected to various external and environmental loading after construction. The external loading can arise from superstructure loading, moving traffic and overburden soils. The environmental loading can come from the interaction of surficial soils with the atmosphere in forms such as wetting and drying. Under the combination of these loadings, the compacted soils display complex patterns of behaviour such as swelling, collapse, tensile cracking and swelling pressure development against buried non-yielding bodies. The seminar will present a new framework for predicting the behaviour of compacted soils under these loadings, referred to as the MPK Framework (Kodikara, 2012) and a generalised constitutive model developed following this framework. The model will cover both volumetric and shear behaviour and can reproduce most phenomenological observations on compacted clay behaviour. The potential for its application to field scenarios including soil construction in intelligent compaction and performance-based specification will be highlighted within newly developed Australian Research Council's centre for Smart Pavements – SPARC.

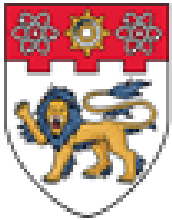
About the Speaker:

Professor Kodikara is Director of newly established ARC Smart Pavements Hub and Deputy Head of the Department with the Department of Civil Engineering, Monash University, Victoria Australia (<https://sparchub.org.au/>; <http://users.monash.edu.au/~kodikara/index.html>). Currently, he leads research on fundamental analysis of soil/atmosphere/structure interaction problems including unsaturated soil behaviour and applications to modelling of geo-infrastructure behaviour. He has specific research expertise on fundamental topics of fracture in clay during desiccation and external loading, soil compaction, piled foundations and rock joint behaviour. On field applications, he leads research on water and gas pipe failure prediction (www.criticalpipes.com) and road pavements affected by climate and reactive soils. He has published about 300 journal and conference publications on a diverse range of topics, and is a Fellow of Engineers Australia.

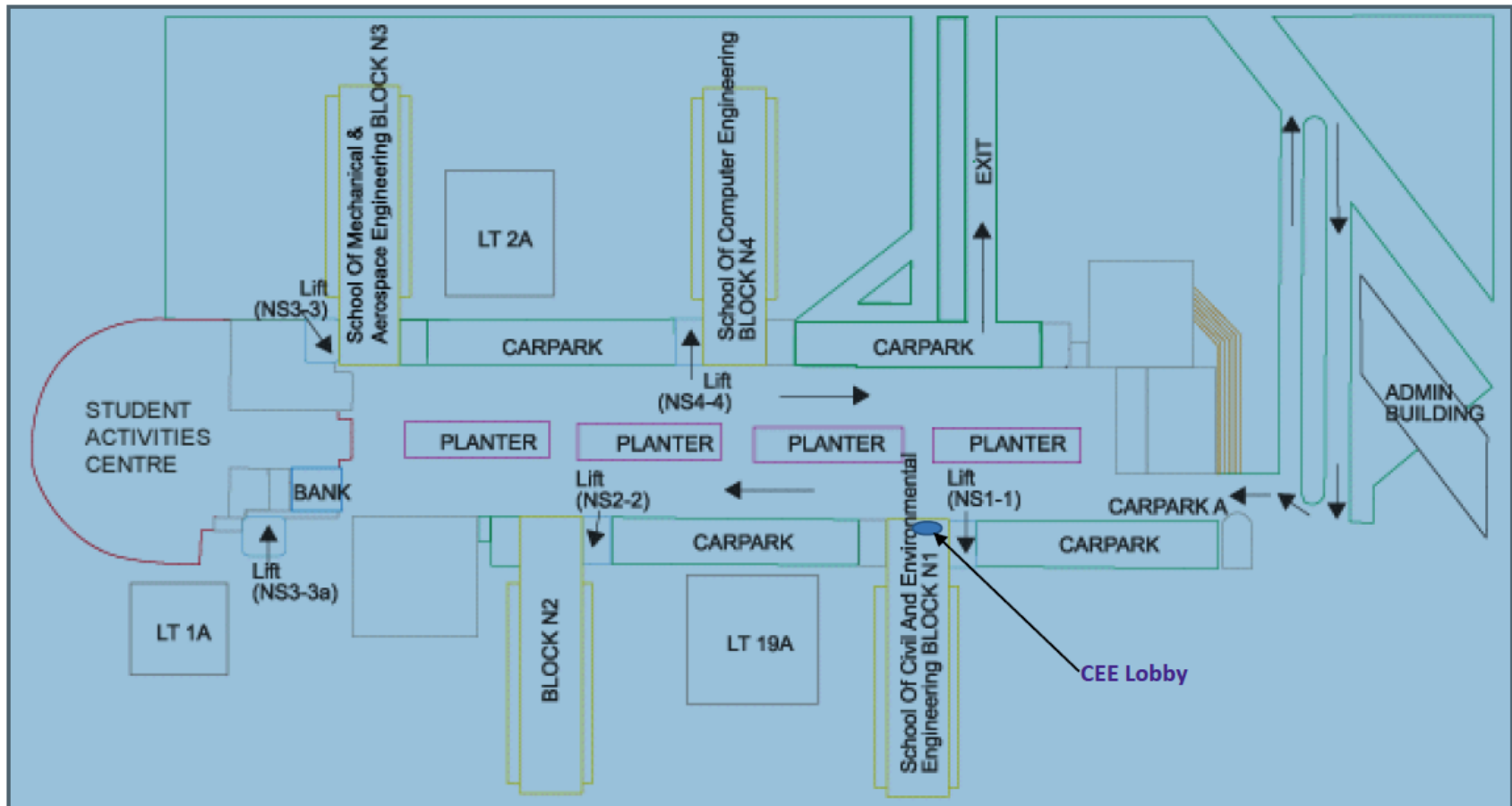
Date: 16 September 2019 (Monday)

Time: 10:00am – 11:00am (*Registration starts at 9:45am*)

Venue: CEE Seminar Room A, Block N1, Level B1, N1-B1B-06 (see [map](#))
School of CEE, Nanyang Technological University



Seminar Room A



From CEE Lobby, walk till end of aisle and take the first passenger lift to Basement 1. Enter from ICRM entrance to Seminar Room A.

Floorplan - N1_B1_B

