

# FUNDAMENTALS OF FEM FOR GEOTECHNICAL ENGINEERING

(EC06042018)

## OVERVIEW

This course introduces finite element method (FEM) for the analysis of geotechnical problems. It aims to bridge the gap between practice and theory of finite element method. Steady-state condition is considered. Element properties, convergence requirements and modelling errors are discussed. FEM and solution procedures for linear and nonlinear analyses are presented. The basic linear theory behind the FEM combined with numerical calculations leads to the key variables such as displacements, strains and stresses in various structures and the soil medium. By emphasizing on modelling technique, and by illustration with case studies, the objective is to provide the concepts and techniques of applying FEM to solve practical problems. Limitations and pitfalls of FEM will be elaborated. This course is designed for engineering managers and engineers who would be using the FEM for design analysis, design validation, strength and integrity assessment.

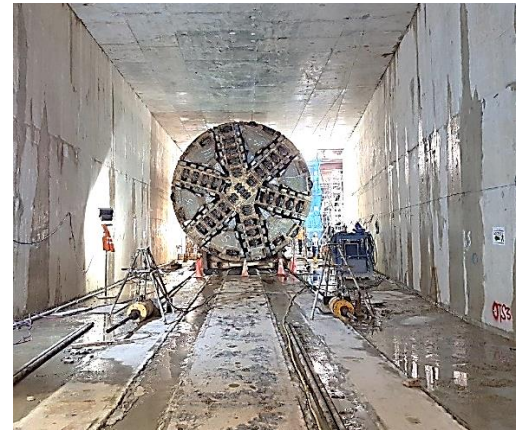
## SPEAKER

Hong Sze Han is the Director and Principal programmer in Geosoft Pte Ltd and an Associate of Tritech Consultants Pte Ltd, to provide finite element solutions in geotechnical engineering domain. He obtained his PhD in Civil Engineering from NUS in 2004 on a postgraduate study of deep excavation using FEM technique.

Some of the major finite element projects completed were Common Services Tunnel, Marina Boulevard Business and Financial Centre, Vertical Shaft and Mined Tunnels Advance Work Contract under Centennial Suite, Sculptura Ardmore in Singapore and Stormwater Management and Road Tunnels in Malaysia.

## SCHEDULE

- Finite element theory for linear materials
- Real soil behaviour
- Constitutive Models
- Non linearity in finite element theory
- Benchmarking, restrictions and pitfalls
- Analyses of deep Excavation & Tunnel



## DATE

06 April 2018

## TIME

9.00am – 5.00pm

## VENUE

Carlton Hotel Singapore

## FEE

Public : S\$550

GeoSS : S\$400

(incl of GST)

2 Tea breaks and Lunch will be provided

## CPD POINTS

PEB: 6 PDU's

## CERTIFICATE

Certificate of Attendance (COA) will be awarded to participants who meet the attendance requirement.

Supported by:

