

# One-day Seminar on Eurocode 7 – Implications for Geotechnical Design and Rock Engineering

**Friday, 24 January 2014 @ Orchard Hotel, Singapore**  
**9:00 AM – 5:45 PM**

## Overview

BCA started accepting the Singapore version of the Eurocodes from 1 April 2013. Structural Eurocodes will be the only prescribed structural design standards from 1 April 2015.

To prepare the industry for migration to the structural Eurocodes, the Society for Rock Mechanics and Engineering Geology (SRMEG) is organising a one-day seminar on the implications of Eurocode 7 on geotechnical design and rock engineering. This seminar will prepare geotechnical engineering practitioners for the adoption of the Eurocode 7 in various geotechnical and foundation designs.

## After attending the seminar, participants will be able to:

- Appreciate the geotechnical design approach based on SS EN 1997 (EC7) and Singapore National Annexes
- Apply EC7 for design of pile foundations
- Apply EC7 for ERSS design with numerical methods
- Apply EC7 for design of rock caverns
- Apply EC7 for slope stability and embankment design

## Organised by:



## Supported by:



**SRMEG/GeoSS**

**Members:**

**\$240**

**Non-Members:**

**\$290**

**6 PDU**

**STU: TBA**

## FEATURING 10 SPEAKERS:

**Er. Kiefer CHIAM, BCA** – Discussion on Ground Investigation using EC7 • **Prof. Anthony GOH Teck Chee, NTU** – Compression Pile Design Using EC7 • **Prof. LEONG Eng Choon, NTU** – Overview of EC7 • **Prof. LOW Bak Kong, NTU** – EC7 Applied to Slopes • **Dr. LI Guojun** – Challenges in the Application of EC7 • **Prof. LU Ming, NTU** – EC7 in the Design of Rock Caverns from North European Experiences • **Mr. Nick OSBORNE, Mott MacDonald** – Design Implications Resulting from the Application of EC7 • **Prof. Harry TAN Siew Ann, NUS** – A Rational and Practical Approach of the Application of EC7 Partial Factors in FEM Based Design • **Dr. ZHOU Yingxin, DSTA** – EC7: What Does it Mean for Rock Engineering • **Arup Singapore** – The Practicalities of Applying EC7 in Singapore: A Consultant's Viewpoint

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## **Presentations** (order is subject to change)

### **Welcome Addresses by Guests of Honour**

- **Prof. Yong Kwet Yew**, Vice President, NUS
- **Er. Chew Keat Chuan**, Group Director, Building Engineering Group, BCA
- **Er. Chua Tong Seng**, Immediate Past President, GeoSS

### **“Overview of EC7”**

- **Prof. Leong Eng Choon**, NTU

*This presentation will provide an overview of Eurocode 7 - current status, guiding principles, terminology, features, challenges and problems, and future development.*

### **“Compression Pile Design Using EC7”**

- **Prof. Anthony Goh Teck Chee**, NTU

*This presentation will give an overview of the design of compression piles using EC7. Some comparative examples will be presented using EC7 and current design methods.*

### **“A Rational and Practical Approach of the Application of EC7 Partial Factors in FEM Based Design”**

- **Prof. Harry Tan Siew Ann**, NUS

*This presentation will discuss the issues involved, and how one can use EC7 in FEM analysis for practical and rational design. It will also touch on how such an approach will differ from current design practice, but can still achieve a cost effective solution without drastic changes from what we are doing in current practice.*

### **“Discussion on Ground Investigation Using EC7”**

- **Er. Kiefer Chiam**, BCA

*This presentation will focus on aspects of EC7 that affect site investigation works carried out locally. A brief summary of the key changes, especially relating to the way in which soil and rocks are to be described will be discussed and compared with the current practice of BS 5930.*

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## **Presentations** (continued from previous page)

### **“Norwegian Experience in Rock Cavern Design and Influence of Eurocode 7”**

**- Prof. Lu Ming, NTU**

*This presentation will discuss the basic principles of rock cavern design in Norway, rock support in adverse geological conditions, and the potential impact of EC7.*

### **“The Practicalities of Applying EC7 in Singapore: A Consultant’s Viewpoint”**

**- Arup Singapore**

*This presentation will discuss some of the practical issues and decisions made in designing substructure works to EC7 in Singapore.*

### **“Design Implications Resulting from the Application of EC7”**

**- Mr. Nick Osborne, Mott MacDonald Singapore**

*Eurocode has been the primary design code in the UK for several years and is now being used to design projects in Singapore. It is only by actively using Eurocode that a full understanding of its benefits and limitations can be appreciated. Through the use of EC7 in the UK and Singapore the challenges of actively implementing these new codes to Singapore will be discussed.*

### **“EC7 Applied to Slopes”**

**- Prof. Low Bak Kong, NTU**

*Eurocode 7 will be studied in the context of soil and rock slope analysis and design. Probabilistic slope reliability analysis with spatially autocorrelated soil properties will also be presented. The links between Eurocode 7 and reliability analysis and the possible complementary role that reliability analysis can play to Eurocode 7 will be discussed.*

### **“Challenges in the Application of EC7”**

**- Dr. Li Guojun**

*This presentation will discuss the challenges in the selection of characteristic soil parameters, fundamental principles of EC7, choosing of partial factors etc. in the application of EC7.*

### **“EC7: What Does it Mean for Rock Engineering”**

**- Dr. Zhou Yingxin, DSTA**

*This presentation will discuss the applicability of EC7 for rock engineering based on a broad review of the current design approach, support mechanism, main failure modes and geological hazards in underground rock excavation.*