

# Geotechnical Design and Applications using Eurocode-7

## INTRODUCTION

This workshop aims to update the industry with the changes in the Eurocode-7 (EC7) standards and design requirements for foundations and earth retaining structures.

- insight into the design of Spread Foundations and Deep Foundation using EC7.
- update on the review of EC7 in Singapore.

The workshop is supported by the Association of Geotechnical Societies in South East Asia (AGSSEA)

## WHO SHOULD ATTEND

- ✓ Practicing civil/structural engineers
- ✓ Geotechnical specialists
- ✓ Academia
- ✓ Relevant government agencies
- ✓ Tertiary students

## ACCREDITED BY

PEB - pending

## SEMINAR DETAILS

**Date:** 20 July 2009, Monday

**Time:** 9am - 6pm

**Venue:** BCA Academy

**Fees:** \$203.30 (Public)

\$181.90 (GeoSS members)

*(Fee includes GST. Course materials, lunch & refreshments will be provided. Carpark is free on a first-come, first served basis)*

## WORKSHOP CONTENTS

### ➤ Introduction to Eurocode System and Basics of EN 1990 and EN 1997 *By Professor Roger Frank*

Professor Frank will be the workshop leader and he will provide an updates on the latest development in Eurocode-7. Professor Frank will also provide an introduction to the Eurocode System and the basics of EN 1990 and EN 1997, as well as sharing his insight into the design requirement for spread foundations, deep foundations and earth retaining structures.

#### **Spread Foundations**

- Requirements and provisions of Section 6 of EN 1997-1 on the design of spread foundations (shallow foundations, pads, rafts, etc.)
- Bearing resistance (through analytical, semi-empirical or prescriptive methods), sliding resistance, settlements and SLS, direct and indirect methods of verification of the limit states

#### **Deep Foundations**

- Requirements and provisions of Section 7 of EN 1997-1 on the design on pile foundations
- Specific problems for pile foundations, pile load tests, axially loaded piles (ULS compressive or tensile resistance failure from pile load test and from ground test results), transversely loaded piles, and serviceability of the supported structure

#### **Earth Retaining Structures**

- Requirements and provisions of Section 9 of EN 1997-1 on the design of retaining structures (gravity walls, embedded walls and composite retaining structures)
- Geometrical data, determination of earth pressures, water pressures, ULS, design of anchorages (link with Section 8), hydraulic failure (link with Section 10).

### ➤ Implementation and Applications of Eurocode 7 in Singapore *By SPRING Technical Committee on Civil and Geotechnical Works and Professor Roger Frank*

The committee will provide updates on the review of Eurocode 7 in Singapore. This will be followed by a forum to discuss potential issues related to the implementation of the code in Singapore.

Jointly organised by

**BCA ACADEMY**  
of the built environment



**WORKSHOP LEADER : PROFESSOR ROGER FRANK**

Prof Frank received both his Doctor of Engineering degree (1974) and his Doctor of Science degree (1984) from Pierre and Marie Curie University of Paris. He has devoted his entire professional career to 'Ponts et Chaussées' (the French Highway Administration). Prof Frank was first employed by Laboratoire Central des Ponts et Chaussées (LCPC), where he became Head of the Foundations Section in 1983, and Head of the Soil Mechanics and Foundations Division in 1990. In 1992, he was appointed as Director of CERMES (ENPC-LCPC), a teaching and research centre in soil mechanics. He stepped down from this position in 2003. In 1997, Prof Frank was promoted to the rank of Professor in geotechnical engineering at ENPC. Prof Frank's major field of expertise is in situ testing and foundation engineering. He carries out theoretical and experimental research, as well as consulting work for civil engineering projects. He has written more than 200 papers in journals and conference proceedings and he has delivered numerous invited lectures in many countries.

As a specialist in pile foundation design for bridges, Prof Frank has participated in the design of major structures such as the Evripos bridge in Greece and the Vasco de Gama bridge in Portugal.

Starting in 1989, Prof Frank has been involved in many standardisation committees in France and in Europe, particularly those linked to soil-structure interaction. From 1998 to 2004, he was the Chairman of the European committee in charge of Eurocode 7 on 'Geotechnical design'. He is also the Vice President of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) in Europe for the period 2005 to 2009.

**REGISTRATION**

|   | Participant Name | NRIC/Passport No | Designation | HP no. | Email | PEB |
|---|------------------|------------------|-------------|--------|-------|-----|
| 1 |                  |                  |             |        |       |     |
| 2 |                  |                  |             |        |       |     |

(Please ✓ accordingly)

Yes, I would like to receive course / seminar updates via email \_\_\_\_\_

GeoSS membership no.

Company Name:  Company UEN no.

Mailing Address:

**CONTACT PERSON PARTICULARS**

Name: Dr/Mr/Mrs/Ms:  Email:   
 Designation:  Hp no:   
 Telephone No:  Fax no:

**PAYMENT**

Enclosed is a cheque no. \_\_\_\_\_ (Cheque should be crossed, marked "account payee only" and payable to 'BCA Academy') for S\$ \_\_\_\_\_

OR Deduct from GIRO acc. No \_\_\_\_\_  
 (Should be the same bank account number as indicated in the Direct Debit Authorisation form submitted to BCA)

\_\_\_\_\_  
 Name/Signature (\*Company / individual applicant) Company Stamp  
(For company application)

\* Delete wherever necessary

**REPLACEMENT AND WITHDRAWAL**

90% of the course/semester/module fee paid will be refunded if the notice of withdrawal in writing is received by BCA Academy at least 2 weeks before the semester commencement date. If such notice is received by BCA Academy less than 2 weeks but more than 3 working days before the semester commencement date, 75% of the course/semester/module fee paid will be refunded. No refund will be given if the notice of withdrawal is received by BCA Academy 3 working days or less before the semester commencement date. Replacement of participants is allowed if the substitute meets all the entry requirements and the request is made at least 3 working days before the commencement of the course.

**DEFERMENT AND COURSE SWITCHING**

An administration fee of 10% of the original course/semester/module fee is chargeable if notice in writing is received by BCA Academy at least 2 weeks before the semester commencement date. An administration fee of 25% of the fee is chargeable if the notice is received by BCA Academy less than 2 weeks but more than 3 working days before the semester commencement date. Under the circumstance, the case will be treated as withdrawal unless the registered participant decides to proceed with the original course.

In the case of a successful course switching, the participant may be given a refund if the fee of the new course is lower than that of the original course. However, any refund arising from course switching shall not be more than 10% of the fee of the original course. BCA Academy reserves the right to amend the course details, revise the course/module/semester fee without prior notice, to cancel, postpone or change the venue of the course in the event of any unforeseen circumstances.

**ENQUIRIES:**

For enquiries, please call 6248-9999 / 6248-9843  
 or email [bca\\_academy@bca.gov.sg](mailto:bca_academy@bca.gov.sg)

For other seminars/courses details, please visit our website  
 @ [www.bcaa.edu.sg](http://www.bcaa.edu.sg)

**REGISTRATION:**

Seats are limited, registration is on a first-come-first-served basis. Seat will be confirmed upon the payment of the seminar fees before the commencement date.

Please fax application form to facsimile: 6258-0558

Cheques with original application should be mailed to:-

BCA Academy, 200 Braddell Road, Singapore 579700