



GEOTECHNICAL SEMINAR

JOINTLY ORGANIZED BETWEEN
GEOTECHNICAL SOCIETY OF SINGAPORE (GEOSS)
& CENTRE FOR SOFT GROUND ENGINEERING



NEW DEVELOPMENTS IN DESIGN METHODS OF PILE FOUNDATIONS

by **Professor PEDRO S. SÊCO E PINTO**

National Laboratory of Civil Engineering (LNEC) & University of Coimbra, Portugal

&

RECENT DEVELOPMENTS OF DEEP CEMENT MIXING (DCM) METHOD

by **Professor DENNES T. BERGADO**

Asian Institute of Technology (AIT), Bangkok



Date: Friday, 13 May 2011
Time: **6:00pm** Reception
6:30pm~8:30pm Seminar
Venue: **Engineering Auditorium**
Faculty of Engineering
National University of Singapore



SYNOPSIS OF TALK-1 by Prof Pinto

The design methods and limit states for pile design will be presented and the different methods for the verification of limit states will be described. The evaluation of geotechnical parameters for pile design, by field and laboratory tests is analysed. The foundation movements to avoid the occurrence of an ultimate limit state or a serviceability limit state are addressed. The most popular tests to assess the quality control of piles are described. Two examples of application related with the foundations design of Guadiana bridge and New Tagus bridge are presented.

SYNOPSIS OF TALK-2 by Prof Bergado

The lecture will discuss the fundamental parameters and the new economical method of deep cement mixing (DCM) method based on laboratory and full scale field tests. Also presented will be case study of field applications of the DCM method with soft clay. Furthermore, the laboratory and field tests, as well as the numerical simulations of the stiffened deep cement mixing (SDCM) method will be presented. The SDCM method is a DCM reinforced with precast reinforced concrete (RC) pile. The SDCM improved the overall performance of the DCM especially its flexural strength, as well as mitigate the variability of DCM properties.

THE SPEAKERS

Prof Pedro Pinto is the Head of a division of LNEC and Professor of Geotechnical Engineering at University of Coimbra. He was the President of ISSMGE from 2005 to 2009. He also served as the Chair of ISSMGE TC4 on Earthquake Geotechnical Engineering from 1994 to 1999, President of the Portuguese Geotechnical Society from 1996 to 2000, and Vice-President for Europe from 2001 to 2005. His consulting experience involves major projects in Dams, Power plants, Bridges, Tunnels and Quay Walls in many countries. He has presented state-of-the-art lectures and special lectures in 76 countries and received more than 50 international Awards. He is author or co-author of 350 technical and scientific reports, more than 150 papers for national and international conferences and journals and has contributed for 4 books.

Prof Dennes Bergado is the Director of Asian Centre for Soil Improvement and Geosynthetics at AIT. He was Fullbright Scholar and obtained his PhD from Utah State University, USA in 1982. He is the recipient of prestigious R.M. Quigley Award for the Best Paper in the Canadian Geotechnical Journal in 2002, Shamsheer Prakash Award in 1993, and International Geosynthetic Society (IGS) Achievements Award in 2006. He has published 122 referred journal articles, 256 conference papers, 62 invited/keynote papers and 2 books. He was the President of International Geosynthetics Society (IGS)-Thailand Chapter from 2005 to 2008 and is currently the Secretary-General of the Southeast Asian Geotechnical Society (SEAGS) since 2000.

For catering purpose, please confirm your attendance by reply e-mail to: geoss@nus.edu.sg

***** Admission is free for members of Geoss. Non-members can register as members (S\$60 per annum) on the spot *****