Joint Technical Meeting
HKIE Geotechnical Division, Hong Kong Geotechnical Society and
American Society of Civil Engineers (Hong Kong) Section

Computer Modelling Applied to Geotechnical Design

by Brian Simpson PhD, FICE, FRAE

Date, Time & Venue

Date: 4 May 2004 (Tuesday)
Time: 5:30 pm for 6:00 pm
Venue: Exhibition Hall, Hong Kong Productivity Centre, 78 Tat Chee Avenue (Adjacent to Festival Walk), Kowloon Tong, Kowloon.

(Tea, coffee and cookie will be provided before the talk from 5:30pm-6:00pm)

Programme Highlights

Many geotechnical processes cause displacement of the ground and distortion of adjacent structures. Apart from some notable exceptions, the displacements are rarely large enough to cause collapses, but damage can be serious and disruptive, so prediction of structural distortions is an important goal. This is often done on the basis of empirical correlations, but there is an opportunity to gain greater insight by using finite element modelling, particularly when this can operate in three dimensions.

This presentation will review recent developments in computer modelling methods and how these can be applied to tunnelling and other geotechnical engineering problems. Examples of how variation in the tunnelling construction techniques can greatly affect the amount of ground and structure distortion will be shown. Applications of finite element computer modelling to explore pile group behaviour, slope stability, consolidation and effects of deep excavations will also be shown.

Speaker

Ir Dr Brian Simpson is a director of Ove Arup & Partners and is based in London, UK. In 1992 he presented the British Geotechnical Society's Rankine Lecture on the subject "Retaining structures - displacement and design". Since the early 1980's, he has been involved in the development of Eurocode 7 (Geotechnical Design) and in 2003 he received an OBE 'for services to the development of Eurocode Design Standards'. He was an author of the recent CIRIA publication "Embedded retaining walls - guidance for economic design" and Editor of the journal Géotechnique from 2000 to 2002. Brian has worked on a wide range of geotechnical and ground-structure interaction problems, with particular interests in numerical modelling, retaining structures and tunnels. Current project involvements include King's Cross station foundations excavations and tunnels, offshore projects and investigations of embankment, retaining wall and foundation failures.

Registration & Enquiries

No prior registration is required. For enquiries please contact:

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Attendance Certificate will be provided.