

1-day seminar

Challenges in the Design and Construction of Foundations

As the pace of urban redevelopment accelerates, new buildings will be built taller and with more complex features. Designers and builders need to have adequate knowledge in the design & construction of suitable foundations for such buildings.

This seminar aims to share experiences in foundation design analysis and methodology, discuss challenges in their construction, and provide an update on regulatory requirements for pile foundations.

Seminar Contents

- ✓ **Raft Foundations for Tall Buildings**
By Prof I H Wong, MITIC Associates
The presentation will review the geotechnical design principles of raft foundations for tall buildings. Relevant case histories will also be discussed.
- ✓ **Evaluating Risk and Uncertainty in Deep Foundations**
By John A. (Jack) Hayes, LOADTEST, inc.
Faced with the daunting risks and uncertainties associated with deep foundations many engineers fall back on code-value engineering resulting in expensive foundations. The presentation will focus on how the quality of deep foundations can be improved, while mitigating risk and lowering overall cost.
- ✓ **Response of Piles to Lateral Ground Movements**
By Prof Anthony Goh Teck Chee, Nanyang Technological University
The presentation will highlight the numerical procedures to analyse the behaviour of piles subjected to lateral soil pressures. Results of some instrumented case-studies will also be presented.
- ✓ **Behaviour of Piles due to Soil Movements**
By Prof C F Leung, National University of Singapore
The presentation will discuss the findings and practical implications of results from the extensive centrifuge models studies conducted to evaluate the behaviour of piles due to vertical and lateral soil movements.
- ✓ **Requirements of Piling Plan Submission under BC (amendment) Act 2007 and Regulations 2008**
By Dr Yet Nai Song, Building and Construction Authority
The presentation will cover submission requirements for piling layout plan and requirements for site investigation & load tests. Good practices for the design and construction of pile foundations will also be covered.
- ✓ **Foundation Design using the Reliability Approach**
By Prof Kok-Kwang Phoon, National University of Singapore.
The presentation will explain the Reliability-Based Design (RBD) approach in the design of foundations. The presentation will help to dispel the perception that RBD is 'too complicated' for general practitioners and 'too impractical' for routine designs.
- ✓ **Piling in Difficult Ground Conditions**
By Dr Ng Tiong Guan, GeoEng Consultants (S) Pte Ltd
Case histories of projects where various problems with the piling methods, ground conditions and workmanship were encountered and the remedial measures adopted to overcome these problems will be presented.



Seminar details

Date: 15 January 2009
Time: 9 am - 5 pm
Venue: BCA Academy Function Hall
Fees: \$203.30 (Public)
\$181.90 (GeoSS member)

(Fee includes GST, course material, lunch & refreshments. Carpark is free, on a first come, first served basis)

Who should attend

- Practicing structural engineers
- Geotechnical specialists
- Foundations specialists
- Soil investigation professionals
- Builders
- Government Agencies
- Construction managers
- Supervisory personnel
- Academics
- Students

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Speakers' Profile**Prof I H Wong, Principal Consultant, MITIC Associates**

Prof Wong has worked as a geotechnical consultant in many projects involving deep excavations, underpinning of old buildings, highways, mass rapid transit, wharves, waterfront structures, high-rise buildings, dams, etc. He was an Adjunct Professor in Civil Engineering at Columbia University and at a Polytechnic, both in New York. He was on the academic staff of the former University of Singapore and Nanyang Technological University. He is a Year 2000 winner of the Thomas A Middlebrooks Award from the American Society of Civil Engineers.

Mr John A. (Jack) Hayes, President, Loadtest Inc.

Mr. Hayes has more than forty-five years of geotechnical engineering consulting experience acquired in Canada, Africa and the United States. In his career, working for major engineering-construction firms and in private practice, he has carried out geotechnical investigations for over 4,000 projects. As a founder and president of Loadtest Inc., he has involved himself with all aspects of Osterberg Cell load testing. He has published numerous papers and articles relating to geotechnical engineering and deep foundation testing.

Prof Anthony Goh Teck Chee, Associate Professor, Nanyang Technological University

Prof Goh's teaching, research and professional practice have covered many aspects of geotechnical engineering including earth retaining structures, pile foundations, finite element analysis, soil-structure interaction and soil liquefaction. International recognition of Prof Goh's research achievements has come in the form of citations, invited book chapter and papers, invited scientific board memberships and reviewer for various international journals.

Prof C F Leung, Professor, National University of Singapore

Prof Leung has served as a geotechnical consultant for many projects in Singapore and overseas. He has published widely in international geotechnical journals and conferences on his research topics. He had been invited to deliver keynote/invited lectures at many international geotechnical conferences worldwide. He is currently a technical committee member of the ISO Jack-up foundation panel. He was the Chairman of ISSMGE Technical Committee TC2 on Geotechnical Physical Modelling from 2002 to 2005.

Dr Yet Nai Song, Senior Executive Geotechnical Specialist, Building and Construction Authority

Dr Yet has more than 15 years of experience in the geotechnical engineering field, in particular, in foundation engineering and earth retaining structures. His research work on piled foundation at NUS has earned him a PhD in 1998. He is both a registered professional engineer in Singapore and Malaysia. He is also a registered PE(geo) as well as an AC(geo).

Prof Kok-Kwang Phoon, Associate Professor and director of the Centre for Soft Ground Engineering, National University of Singapore.

Prof Phoon is the editor-in-chief of Georisk, chair of the ASCE Geo-Institute technical committee on Risk Assessment and Management, Scientific Advisor to the International Centre for Geohazards, and member of the Board of Directors in Civil Engineering Risk and Reliability Association. Prof Phoon is the recipient of the prestigious ASCE Norman Medal, ASTM Hogentogler Award, and IACMAG Excellent Contributions Award.

Dr Ng Tiong Guan, Executive Director, GeoEng Consultants (S) Pte Ltd

Dr Ng has more than 10 years of working experience in the field of geotechnical engineering after obtaining his PhD degree from the National University of Singapore in 1999. He has published over 10 papers in international journals and conferences on various topics. He has conducted several seminars on deep excavation, foundation engineering, geotechnical instrumentation and numerical modelling for geotechnical engineering.

Participant Name	NRIC/Passport No	Designation	HP no.	Email	PEB	BOS-SIA
					<input type="checkbox"/>	<input type="checkbox"/>

(Please ✓ accordingly)

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Reservation may be made by fax, e-mail, post or by hand. To confirm the reservation, payment will have to be made before the seminar date via cheque (made payable to "BCA"), VISA or Nets/cash. No invoice will be issued. Walk-in applicants will only be admitted on the basis of availability and full payment before attending the seminar. Please inform us in writing of any change in your registration (which is subject to administrative charges shown below). If no notice of withdrawal is received by 3 working days before the commencement date, the full seminar fee will be charged.

BCA reserves the right to amend the seminar details or cancel the seminar and fully refund the participants, should unforeseen circumstances warrant it.

Notice of Replacement and Withdrawal

- Notice of replacement, with written request must reach BCA Academy before the commencement date of the seminar: No administrative charge
- Notice of withdrawal, with written request that reaches BCA Academy at least 2 weeks before the seminar date: 90% refund of seminar fee.
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- Notice of withdrawal, with written request that reaches BCA Academy 3 working days or less before the seminar date: No refund of seminar fee.

ENQUIRIES:

For enquiries, please call 6248-9999 / 6248-9843
 or email bca_academy@bca.gov.sg

For other seminars/courses details, please visit our website
 @ www.bca.gov.sg/academy

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



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