

Symposium on

Hong Kong Soils and Rocks

27 March 2004 (Sat)

Hong Kong Convention & Exhibition Centre



Centre for Research & Professional Development The Institute of Materials, Minerals & Mining
專業發展技術研究中心



(Hong Kong Branch)



The
Geological
Society

Hong Kong Regional Group

香港分部

Symposium on Hong Kong Soils and Rocks

Co-organisers : The Institute of Materials, Minerals and Mining –HK Branch
HK Regional Group of the Geological Society of London
27 March 2004 (Saturday)
Theatre II, Hong Kong Convention & Exhibition Centre
1 Expo Drive, Wanchai, Hong Kong

Theme

The symposium aims to provide an opportunity for practising geotechnical professionals to update their knowledge of geological and geotechnical properties of soils and rocks in Hong Kong. It will cover the latest developments in geological knowledge and classification, what to look for in ground investigations, active processes (weathering and erosion) in rock masses, methods of characterising rock materials and masses in terms of engineering behaviour, laboratory testing and determination of key properties for different rock/soil groups, and how to cope with analysing large geotechnical datasets in investigation and design. The symposium should be of interest and value to geotechnical engineers, engineering geologists and other professionals involved in local geotechnical work.

Speakers

Morning Session – Geological Aspects

Dr Diarmad Campbell

Dr Diarmad Campbell is a mapping geologist who has been attached, since 1995, to the Hong Kong Geological Survey, GEO, CED. While in Hong Kong, he has co-authored memoirs on the geology of Hong Kong and contributed to various landslide-related and other geological studies. Previously, he worked for the British Geological Survey for 13 years, engaged in regional geological surveying, particularly of areas of ancient volcanic rocks, and thematic geological mapping. He spent four of these years in southern Africa, exploring for gold on regional and mine scales. Consequently, he is yet to make much use of his Ph.D training in palaeontology.

Dr Chris Fletcher

Dr Chris Fletcher has worked in Hong Kong for nine years, first as head of the Hong Kong Geological Survey (GEO) and then as Director of the Applied Geoscience Centre, HKU. He is currently Director of Arrow Geoscience Ltd that specialises in detailed geological investigations for engineering purposes. In Hong Kong, he has been involved with numerous geological studies related to natural terrain and forensic landslides, bridge and building foundations, cut slopes and tunnels. He has also organised many CPD courses that focus on the importance of geology in engineering investigations, and initiated corelogging courses for engineers and geologists.

Prof Steve Hencher

Prof Steve Hencher is a Director of Halcrow China Ltd. He first came to work in Hong Kong in 1980 and has carried out fundamental studies on weathering and shear strength of rocks and rock joints.

Mr John Tattersall

John Tattersall is an engineering geologist and Associate of Maunsell Geotechnical Services Ltd. He is a specialist in the investigation and design of large surface and subsurface excavations for civil engineering purposes and has 25 years practical experience. He has had the privilege of working in the diverse geological environments of Hong Kong, China, Oman, Turkey and the UK which has left him in no doubt as to the engineering importance of geological history, discontinuities and the heterogeneous nature of most soils and rocks. He has worked in Hong Kong for over 15 years and is currently engaged in producing the "Guidance Document on Engineering Geological Practice in Hong Kong".

Afternoon Session – Geotechnical Aspects

Prof Robert Lo

Prof Lo graduated from the University of Hong Kong in mid 70s, and worked on a number of milestone structural and geotechnical projects in Hong Kong. He took up a lectureship with the University of New South Wales in 1986, and is currently an Associate Professor. His current research interests include: liquefaction, weakly cemented soil, cyclic loading, soft soil engineering, and reinforced soil structures. Prof Lo has been working hard on bridging academic research and industry. He has been a consultant on soil engineering project works in both Hong Kong and Australia. Prof Lo is also a member of TC9 and TC23. He has published over 80 refereed papers in international journals and conference proceedings.

Dr Alan Kwong

Dr Alan Kwong is a full time Senior Teaching Consultant at the University of Hong Kong, teaching MSc Courses in the area of Foundation Engineering, Rock Mechanics and Tunnelling. Dr Kwong was the Principal Geotechnical Engineer of Montgomery Watson Harza (1999–2002) and Associate Director of Golder Associates Hong Kong Ltd. (1995–1999).

Prof Jian–Hua Yin

Dr Jian–Hua Yin is a Professor in Department of Civil & Structural Engineering, Academic–in–Charge of Soil Mechanics Laboratory, and Director of Centre for Ground Engineering and Technology, The Hong Kong Polytechnic University. He received a B.Eng. from Chongqing Jianzhu University, China in 1983, an M.Sc. from The Institute of Rock & Soil Mechanics, The Chinese Academy of Sciences in 1984, and a Ph.D. in Geotechnical Engineering from The University of Manitoba, Winnipeg, Canada in 1990. He moved to Hong Kong from Canada in 1994.

Dr Victor Li

Dr Li graduated from the HKU and later obtained his PhD in geotechnical engineering from the University of New South Wales. He set up his consulting firm Victor Li & Associates Ltd in 1996 and the Centre for Research & Professional Development in 2001. He has an ongoing interest in the research on the use and misuse of numerical and statistical techniques in the analysis of geotechnical data.

Registration Fee

CRPD / IMMMHK / HKRGGSL Member : HK\$400 ; Non–Member : HK\$600

(The fee will include a copy of Symposium notes and coffee breaks. Lunch is not included.)

Registration Procedure

Please complete the registration form and return it together with the registration fee by visa card or by a crossed cheque made payable to “Centre for Research & Professional Development”. A week before the function starts, a letter of confirmation which contains the receipt of payment, and details of the function will be sent to you. Please keep this confirmation letter for your future tax or reimbursement record as no other receipts will be issued. A charge of \$30 will be charged for request of a duplicate copy.

Cancellation Policy

Cancellation will be accepted only by written form with signature via email or fax, no later than two weeks before the function commences, and only 50% of registration fee will be refunded.

Remarks

- The Symposium is designed for 1 CPD day. Attendance certificate will be issued after the event.
- The Symposium will be conducted in English.
- The Organisers reserve the right to cancel or reschedule the Symposium at its discretion.

Programme

8:50–9:05am	Registration
Session I – Geological Aspects	
9:05–9:10am	Introductory Remarks Dr Dick Martin, Chief Geotechnical Engineer Lands Department, HKSAR Government
9:10–9:50am	Classification and Distribution of Rocks and Superficial Deposits Dr Diarmad Campbell, Senior Mapping Geologist Hong Kong Geological Survey, Geotechnical Engineering Office Civil Engineering Department, HKSAR Government <ul style="list-style-type: none"> - Classification and distribution of Hong Kong's rocks and superficial deposits (e.g. including advances in dating rocks and landslide deposits, etc.) - Relevance of current geological knowledge to regional and site-scale geological models (e.g. areas of deep weathering, complex geology, etc.) - Planned updating of geological maps: improved access to geological data
9:50–10:30am	Recognition of Rocks and Soils in Ground Investigations Dr Chris Fletcher, Director, Arrow Geoscience Ltd <ul style="list-style-type: none"> - Characteristic features of Hong Kong rocks and soils in borehole samples - Geological structures in borehole samples: joints, foliations, faults and folds - Weathering features in granites, and volcanic and sedimentary rocks - Significance of hydrothermal alteration - Solution phenomena in marble
10:30–11:00am	Coffee Break
11:00–11:40am	Weathering and Erosion Processes in Rocks – Implications for Engineering Properties Prof Steve Hencher, Director, Halcrow China Ltd <ul style="list-style-type: none"> - Processes of weathering at a materials scale - Changes in physical and chemical properties; consequent changes in engineering behaviour (especially compressive and shear strength) - Changes at a mass scale, especially growth of joints and voids - Changes in engineering parameters
11:40– 12:20pm	Approach to Characterisation of Material and Mass Properties of Soils and Rocks Mr John Tattersall, Associate, Maunsell Geotechnical Services Ltd <ul style="list-style-type: none"> - Engineering significance and difference between material and mass properties - Engineering geological model concept and importance of perspective - Approaches to and practical difficulties of mass property characterisation - Application to Hong Kong geological conditions - Case history examples illustrating concepts and adverse conditions
12:20 – 12:40pm	Discussion
12:40 – 2:00pm	Lunch

Session II – Geotechnical Aspects

2:00 –2:45pm	<p>Soils in Hong Kong –Testing and Geotechnical Properties Prof Robert Lo, Associate Professor University of New South Wales, ADFA campus, Canberra</p> <ul style="list-style-type: none">- Summary of geotechnical properties of Hong Kong residual soils- Measurement of strength measurements with standard tests: shear box, triaxial CD, triaxial UU, triaxial CU- Specifying test conditions and your design assumptions- What would affect test results; nonlinear failure envelope- To test or not to test
2:45–3:30pm	<p>Rocks in Hong Kong – Testing and Geotechnical Properties Dr Alan Kwong, Senior Teaching Consultant Department of Civil Engineering, The University of Hong Kong</p> <ul style="list-style-type: none">- Rock testing for engineering design of slopes and underground openings.- Shear strength of sheeting joints at Tuen Mun Highway.- Recent advances in the use of photogrammetry and laser scanning for rock slope mapping
3:30–4:00pm	Coffee Break
4:00–4:30pm	<p>Advanced/Special Soil Testing Systems and the Properties and Behavior of Hong Kong Marine Soils Prof J H Yin Department of Civil & Structural Engineering The Hong Kong Polytechnic University</p> <ul style="list-style-type: none">- Types of soil tests and advanced/special soil testing systems- Measurement of stress–strain–strength of Hong Kong marine soils in different stress states- General properties and behaviour of Hong Kong marine soils and empirical correlations
4:30–5:00pm	<p>Analysis of Geotechnical Data – Interpretation and Common Pitfalls Dr Victor Li, Director, Victor Li & Associates Ltd</p> <ul style="list-style-type: none">- Common pitfalls in interpreting soil test data- Common pitfalls in establishing empirical correlations- Tips for avoiding misinterpretation of soil data- Some useful statistical techniques for analysing soil data
5:00 – 5:30pm	Discussion

Registration Form

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Name : (Prof/Dr/Mr/Ms) _____

(First Name)

(Surname)

CRPD / IMMMHK / HKRGGSL Membership No (if applicable) _____

Company : _____

Position : _____

Correspondence Address : _____

Tel : _____ Fax : _____

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Registration Fee

	Registration Fee	Registration (please "√" as appropriate)
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Non- Member	\$600	[]

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