Society for Rock Mechanics & Engineering Geology (Singapore)

Engineering Alumni Singapore (EAS)

Graz University of Technology, Austria

Introduction to Rock Mechanics and Tunnelling
24 – 25 October 2011

12 PDU

Workshop Details:
Date: 24 – 25 October 2011

Venue: Seminar Room 1,
NUS Shaw Foundation Alumni House,
11 Kent Ridge Drive
Singapore 119244

Time: 0900hrs – 1700hrs

(Limited to 60 attendees only)

Synopsis: While this two-day short course is intended as an introduction to rock mechanics and tunnelling, it is also suitable for engineers and practitioners with some tunnelling experience but would like to upgrade their knowledge. It will cover both the fundamentals of rock mechanics as well the practical engineering aspects of rock tunnelling, including site investigations methods, rock mass classification, stability analysis, rock support design, instrumentation and monitoring, as well as geotechnical project work flow. Some basic concepts of NATM will also be introduced.

Lecturers:

- **Prof Wulf Schubert**
  Graz University of Technology, Austria
- **Prof Kurt Klima**
  Graz University of Technology, Austria

Organised by:

Society for Rock Mechanics & Engineering Geology (Singapore)

Engineering Alumni Singapore (EAS)

Graz University of Technology, Austria

Registration Fee

SRMEG & EAS Members: $ 650.00
Non-Members: $700.00
PDUs: 12
STUs: 6

Prof / Dr / Mr / Mrs / Ms: Title and Full Name (underline Surname / Family Name):		Member of SRMEG/EAS: YES NO
Organisation: Address:		
Office Phone:	Mobile:	Fax:
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Method of Payment

- By bank Draft / Cheque in Singapore Dollars drawn on a bank in Singapore and made payable to:
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Please send the Registration Form and Payment to the SRMEG Secretariat
1 Liang Seah Street #02-12 Liang Seah Place, Singapore 189022
Tel: +65 6336 2328, Fax: +65 6336 2583
Email: srmeg@cma.sg

Programme

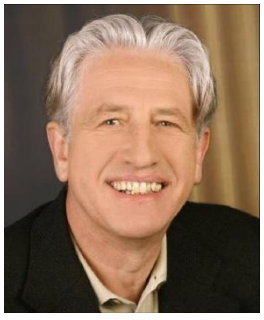
Monday, October 24th		
9:00	Introduction	Course organization
9:30	Project organization	Geotechnical project work flow
10:00	**Tea Break**	
10:30	Rocks and discontinuities	Rock: types, characteristics, properties and classification; Discontinuities: genesis, types, properties, classification, typical block shapes
12:30	**Lunch break**	
14:00	Rock Mass	Determination of rock mass properties, influence of rock structure on strength and deformation Failure mechanisms in blocky rock masses
15:30	**Tea Break**	
16:00	Geology	Investigation methods; field mapping, boreholes, borehole tests, geophysical methods, geological modelling
17:00	End of lecture	

Tuesday, October 25th		
9:00	Rock Mechanics	Classification in rock mass types, criteria and practical application
10:30	**Tea Break**	
11:00	Geology	Faults and fault zones
12:30	**Lunch break**	
14:00	Tunnelling	Influence of excavation on stresses and displacements Basic ground behaviour types
15:30	**Tea Break**	
16:00	Excavation and support	Determination of excavation and support methods based on ground behaviour
17:00	End of lecture	

About the Speakers

Prof Wulf Schubert. Wulf has 30 years of professional experience in tunnelling. After working for GEOCONSULT mainly on tunnel projects around the world for more than 12 years, he was appointed full professor at the Graz University of Technology for Rock Mechanics and Tunnelling in 1992. His focus in research during the last 15 years was on tunnelling in poor ground. In this time he produced more than 100 publications. Parallel to the research and teaching, he has continued with consulting to keep up with the day to day problems, having been involved in design, construction supervision, and consulting for underground projects in Austria, Germany, Italy, Spain, Greece, Turkey, Iran, Slovenia, Korea, Taiwan, Thailand, Hong Kong, China, Nigeria, Pakistan, Venezuela, USA, Brasil, Argentina, Chile, Bolivia (total approx. 1.200 km tunnels). He is senior partner in the engineering company Gruppe Geotechnik Graz.

He has served as Vice President for the ISRM, is active in various working groups in the ISRM and ITA, and currently president of the Austrian Society for Gomechanics and editor of the journal FELSBAU.



Kurt was born in 1950 in Salzburg, and studied Geology at Graz University. He finished his studies with the degree of "Dr.phil." in 1980. Since 1979 he has been with the Institute of Applied Geosciences at Graz University of Technology, and since 1992 in the position as Assistant Professor. The main fields of research are faults and the wide field of rock mass characterisation. Since 1999 he is Professional Engineer and senior partner in the 3G Gruppe Geotechnik Graz ZT GmbH geotechnical consulting company. Besides the research activities, Kurt Klima was involved in many tunnelling and hydropower projects in Austria and abroad (mainly in China and South America).