

# MALAM GEOLOGI KEJURUTERAAN II 2011

22 September 2010, Department of Geology, University of Malaya

Malam Geologi Kejuruteraan II 2011 featured Sdr. Abdul Rasid Jaapar (Consultant) as the only speaker for the night. He presented two lectures, namely: 1) Idealisation in geotechnical engineering: An essential understanding for practicing geo-professionals in Malaysia, and 2) On offshore geohazards, geophysics and geotechnics.

Abstracts of the two lectures are attached below.

As usual, ample time was allocated for discussions at the end of each presentation, and it was fully utilized. The Chairman records his personal thanks to the speaker for his support and contribution to the Society's activities.

*Tan Boon Kong*

*Chairman,*

*W/G on Engineering Geology, Hydrogeology & Environmental Geology*

## 1. Abdul Rasid Jaapar: Idealisation in geotechnical engineering: An essential understanding for practicing geo-professionals in Malaysia

**Abstract:** This presentation will point out the importance of the understanding of idealisation (conceptualisation) process in geotechnical engineering. Any practising geotechnical engineers or engineering geologists should understand this as a prerequisite to be in the industry. Burland (1987, 2000) and Bredehoeft (2003) agreed that the idealisation is a process to simplify the complex reality into relatively simple format for analysis. The successful conceptual model should represent the key properties of the reality. The process of idealisation can introduce uncertainty into mathematical modelling, hence may carry through to uncertainty of performance of engineering structures.

There are two types of idealisations; the geological idealisation and the mechanical idealisation. This presentation will focus on the geological idealisation. It involves the simplification of geological reality into ground profile (including groundwater condition) and properties for analysis, i.e. geological and geotechnical models. Fookes (1997) and Fookes *et al.* (2000) provided an insightful on the geological modelling while Wood (2004) discussed in great details on all possible geotechnical and mechanical modelling.

## 2. Abdul Rasid Jaapar: On offshore geohazards, geophysics and geotechnics

**Abstract:** This presentation will cover; typical geohazards in offshore environments; the application of geophysical and geotechnical methods in offshore environments; and the requirements of identification and understanding the implications of geohazards for field developments. It will cover specific hazards and subsea structures and current best practice in the identification of these using geophysical and geotechnical techniques to identify the soil parameters and presence of geohazards that may need consideration for subsequent seabed infrastructure.

The conclusion of this presentation is that an interdisciplinary approach should be formalised for offshore site investigation and the implementation of mitigation measures where geohazards are foreseeable. However, getting the interpretation wrong can incur considerable expense and delays to projects.