

CERAMAH TEKNIK TECHNICAL TALK

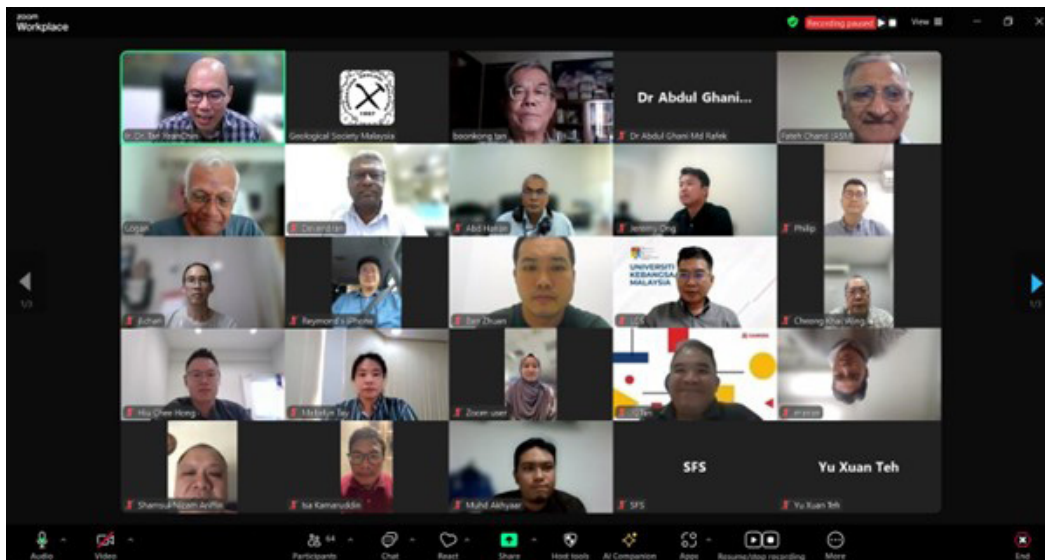
Challenges in design and construction of MRT underground stations in Kuala Lumpur Limestone

Tan Yean Chin
G&P Professionals Sdn Bhd
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Platform: Zoom

The above talk was delivered by Ir. Dr. Tan Yean Chin (G&P Professionals Sdn Bhd) on 9th October, 2024 via Zoom. Some 100 members (maximum limit) participated. An abstract of the talk is given below:

Abstract: Due to scarcity of land, especially in urban areas, the need for underground structures to optimise the use of land has resulted in the construction of deep excavation works. Deep excavation works pose great challenges to geotechnical engineers, particularly in complex ground conditions such as in limestone, which exhibits notorious karstic features with irregular bedrock profiles, variable weathering condition, cavities and slime zones. With proper geotechnical input, costly failures and delays associated with underground works such as excessive groundwater lowering, occurrences of sinkholes, excessive ground settling, etc. can be prevented. Suitable temporary earth retaining system and rock strengthening works have to be properly designed to prevent such failures. This paper presents design principles of temporary earth retaining systems together with vertical rock excavation, as well as three case studies from Mass Rapid Transport (MRT) projects, featuring various challenging geological formations found within the Klang Valley of Malaysia - Limestone, the Kenny Hill formation and alluvium with high ground water table.

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Prepared by,
Tan Boon Kong
Chairman, Working Group on Engineering Geology & Environmental Geology
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