

CERAMAH TEKNIK TECHNICAL TALK

Distinct element modelling in rock engineering

Boon Chia Weng

Date: 19 February 2022

Platform: Zoom / Facebook Live GSM

The above talk was delivered by Dr Boon Chia Weng (Gamuda) on 19th February 2022, via Zoom/Facebook Live. Some 25 members participated. An abstract of the talk is provided below:

Abstract: The use of the distinct element method is increasingly becoming more widespread in civil engineering projects. The theory and algorithms of the distinct element method were explained in the first half of the presentation. Subsequently, the use of distinct element method (DEM) for jointed rock analysis was being demonstrated. The presentation placed emphasis on capturing the key geological structure of the rock, so that the failure mechanisms could be reflected correctly in the models. Examples were drawn from underground openings and slopes. The presentation included a discussion of the circumstances for which the geological structure could influence the rock bolt forces and reinforcement mechanisms around underground openings. Similarly, for slopes, the presentation showcased how the joint orientation, joint shear strength and boundary conditions of a slope could influence its kinematics.

We thank Dr Boon for his support and contribution to the Society's activities.

Tan Boon Kong

Chairman, Working Group on Engineering Geology

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