



Structural Analysis and Evaluation of Rocks and Rock Masses

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Message from the Guest Editors

Dear Colleagues,

The structure of rock mass contains two basic factors: the structural plane and the body. The behavior of rock mass was determined by the properties of the rock matrix on the one hand and the presence of discontinuities on the other. The crack initiation from micro-cracks progressing to a completely damaged rock mass is a process of evolution and an accumulation of rock mass damage from fractures connecting existing cracks. Great effort is made to develop crack-propagation theories, to develop techniques to study the coalescence process of cracks or study the relationship between micro-damage development and macro-deformation. Especially with the use of high-speed video technology, SEM and CT scan techniques, the progressive failure mechanisms have been observed in detail. Similarly, various numerical studies using different techniques have been successfully used in modelling such progressive failure mechanism. Significant advances have been made in understanding the failure process of brittle rock, and a thorough understanding of the structure of rock mass and its failure processes will benefit geological engineering design and implementation.





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