

Special Issue

Cross-Scale Cracks in Rock Mass Under Multi-Phase and Multi-Field Coupling

Message from the Guest Editor

In geology, cross-scale cracks are essential for understanding the mechanical behavior of rocks. They affect the permeability and porosity of rocks and therefore influence fluid flow. Meanwhile, they play a crucial role in the fragmentation of rocks during natural processes like erosion, weathering, and faulting. In civil and mining engineering, knowledge of cross-scale cracks is vital for assessing the stability of rock masses in construction projects, tunnels, and mining operations. The presence of these cracks can significantly impact the strength and deformation characteristics of rocks, which can have safety and economic implications. Understanding how these cracks respond to multi-phase and multi-field coupling actions is important for predicting rock behavior under diverse conditions. This Special Issue aims to gather cutting-edge research and recent advances concerning the formation and evolution of cross-scale cracks within rock masses, and to promote their practical implications in fields like geotechnical engineering, reservoir engineering, and hazard assessment. Both original research papers and review articles are welcome.

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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