



Future Trends of Sustainable Rock Engineering

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Message from the Guest Editors

Dear Colleagues,

In the field of sustainable rock engineering, several significant challenges arise, such as low-carbon exploitation, storage and utilization of geothermal renewable energy like shale gas and hot dry rock, as well as the design and construction of underground projects. Creating a large-scale interconnected complex network of fractures is essential for geothermal extraction from hot dry rock. Creating fractures poses significant challenges as the extraction of geothermal energy involves the coupling of multiple fields, multiple phases, and multiple processes.

Therefore, this Special Issue focuses on understanding the coupling heat transfer mechanism and mechanical behaviors of rocks under multiple fields. It investigates how to reduce the initiation pressure, enhance the scale and complexity of the fracture network, and effectively mitigate the risk of induced seismicity. In addition, it explores rock improvement technology, sealing technology in geothermal energy storage, and computational geomechanics involved in multiple fields.

In this Special Issue, original research articles and reviews are welcome.





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Message from the Editor-in-Chief

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