

Special Issue

Advances in the Principles and Technologies for the Physical and Mechanical Behaviors of Deep Rock

Message from the Guest Editors

With the continuous advancement of earth exploration, there is an ever-growing demand for operations in extreme and challenging environments. These geological conditions—such as high geo-pressure, elevated temperatures, and intense in situ stress—present significant challenges to resource extraction efficiency, engineering safety, and frontier scientific discovery. The emerging principles and technologies hold transformative potential to address these challenges. By leveraging computer-aided engineering, data-driven modeling, and artificial intelligence, we may have the opportunity to enhance both the efficiency and safety of engineering operations in deep environments. Beyond improving industrial performance, these innovations could also contribute to sustainable development goals and open new frontiers in earth sciences and resource engineering.

Guest Editors

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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.

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