Special Issue

Advances in Rock Mechanics: Theory, Method, and Application

Message from the Guest Editors

Rock mechanics has made remarkable progress over recent decades. Classical theories and methods, including constitutive modelling, damage and fracture mechanics, seepage analysis, multi-field coupling, and numerical simulations, have laid a solid foundation for understanding the physical behaviours of rocks. These advances have been successfully applied in engineering projects, significantly contributing to infrastructure development and societal safety. Traditional approaches in rock mechanics are expected to be further enhanced through the integration of emerging technologies. In particular, artificial intelligence, machine learning, big data analysis, and digital twin techniques.

Contributions are welcome on theoretical developments, methodological innovations, and engineering applications that advance the understanding of rock behaviour and support sustainable solutions in underground engineering, energy development, geohazard mitigation, and other rock mechanics-related fields.

Guest Editors

Dr. Luyu Wang

Dr. Qing Ma

Dr. Tuo Wang

Dr. Jinpeng Zhao

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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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

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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