

Special Issue

Failure and Deformation Behavior of Underground Geo-Structures: Advances in Geomechanics

Message from the Guest Editors

Underground engineering has rapidly grown to meet the increasing societal needs and is moving towards challenging innovations. Mining and energy geomechanics is presently facing complex underground conditions related to uncertainties in the determination of rock strength and deformability, in situ stresses, and pore fluid pressure coupled with problems induced by high stresses at large depths. Furthermore, the processes related to CO₂ sequestration and storage require specific analysis of the rock geomechanical response induced by the geochemical reactions. On the other hand, the need for transport efficiency in urban areas is presently addressing the construction of tunnels at narrow distances and the underground space use requires an appropriate analysis of rock damage for safety during service. This Special Issue aims at constructing a channel for sharing knowledge on recent advances in Geomechanics to mitigate adverse events and to address challenges and potential solutions for the sustainable and resilient construction of underground geo-structures.

Guest Editors

Dr. Chiara Deangeli

Dr. Marco Barla

Dr. Donatella Valeria Sterpi

Deadline for manuscript submissions

closed (31 January 2024)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



mdpi.com/si/166595

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

[mdpi.com/journal/
appls](https://mdpi.com/journal/appls)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

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

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

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)