Special Issue

Mechanical Behavior of Critical Geo-Materials and Landslide Evolution Processes

Message from the Guest Editors

The goal of this Special Issue is to collect papers (original research articles and review papers) to give insights about the understanding of mechanical interactions within landslide-critical geo-materials (e.g., slip zones and weak interlayers) and their role in controlling landslide evolution. We seek interdisciplinary studies integrating geomechanics, hydrology, and advanced monitoring to unravel dynamic failure mechanisms and improve predictive models. This Special Issue welcomes manuscripts that link the following themes:

- Mechanical behavior of slip zones: strain softening effect, rate-dependent strength, cyclic loading effects, and microstructural evolution.
- Hydromechanical coupling: pore pressure dynamics, unsaturated seepage, and drainage control.
- Evolution stage characterization: deformation rate thresholds, acoustic emission patterns, and precursor identification.
- Multi-scale modeling: from grain-scale DEM simulations to regional risk mapping.
- Case studies: evolution analyses of reservoir, seismic, or rainfall-triggered landslides.

We look forward to receiving your original research articles and reviews.

Guest Editors

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Deadline for manuscript submissions

31 January 2026

Geosciences

an Open Access Journal by MDPI

Impact Factor 2.1
CiteScore 5.1

mdpi.com/si/237429

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Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherentset of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientificallybased political decisions.
We are committed to drive *Geosciences* to a position in which it is recognized for its high-quality, cutting-edge research and scientific influence, and strongly encourage and invite your participation and manuscripts.

Editor-in-Chief

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