

## Special Issue

# New Advances in Rock Fractures and Landslide Forecasting

### Message from the Guest Editors

Rock fractures play a fundamental role in the initiation, evolution, and failure of rock slopes and landslides by controlling mechanical strength, deformation behavior, and fluid transport within rock masses. External drivers such as rainfall infiltration, groundwater fluctuations, and seismic loading can significantly accelerate landslide initiation through coupled hydro-mechanical and dynamic effects.

Recent advances in monitoring technologies, numerical modeling, and data-driven methods have created new opportunities for landslide forecasting based on fracture-related precursory signals. This Special Issue aims to present new advances that link rock fracture processes with hydrological and seismic drivers. This Special Issue will publish high-quality, original research papers in the following overlapping fields:

- Rock fracture mechanics and fracture propagation in slopes;
- Non-Darcian flow and fluid transport in fractured rock masses;
- Hydro-mechanical coupling processes in slope failure;
- Rainfall-induced, groundwater-driven landslides;
- Seismic and dynamic loading effects on fractured rock slopes;
- Monitoring technologies for fracture and slope deformation;

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### Guest Editors

Dr. Zihao Sun

Dr. Qinwen Tan

Dr. Luqi Wang

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### Deadline for manuscript submissions

30 September 2026



## Applied Sciences

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## 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.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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