

Special Issue

Hydrological Impacts on Geological Hazards: Mechanisms, Modeling, and Early Warning

Message from the Guest Editors

This Special Issue aims to gather innovative research that explores the hydrological mechanisms underlying geological hazards, advances in modeling and monitoring technologies, and applications of data-driven or coupled hydro-mechanical approaches for hazard forecasting and mitigation. Contributions combining field observations, laboratory experiments, remote sensing, and numerical simulations are particularly encouraged. Topics of Interest include, but are not limited to, the following:

- Hydrological triggers and thresholds of rainfall-induced landslides and debris flows;
- Coupled hydro-mechanical modeling of slope instability;
- Impacts of permafrost thaw and freeze-thaw processes on geohazards;
- Groundwater and pore pressure dynamics in hazard-prone terrains;
- Data assimilation and machine learning applications in hydro-geohazard prediction;
- Multi-scale monitoring of soil moisture, infiltration, and subsurface flow;
- Impacts of climate change on hydrology-driven geological hazards;
- Development of integrated hydrological-geotechnical early-warning systems.

Guest Editors

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Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

Dr. Jean-Luc PROBST

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