

## Special Issue

# Integrating Geomorphological and Hydrological Insights for Flood Risk Assessment

### Message from the Guest Editors

Driven by the increasing frequency and intensity of extreme weather events, land-use changes, and climate variability, flood risk is a growing global concern.

Understanding the interplay between geomorphological processes and hydrological dynamics is critical for developing effective flood risk assessments and mitigation strategies. This Special Issue seeks to highlight interdisciplinary research that integrates geomorphological and hydrological perspectives in order to enhance our understanding of flood hazards. By bridging these scientific domains, this Special Issue aims to offer a more holistic and practical framework for flood risk management, applicable across diverse geographical contexts. The following are topics of interest:

- Fluvial geomorphology and floodplain dynamics;
- Hydrological modeling and rainfall-runoff relationships;
- Sediment transport and channel morphology;
- Remote sensing and GIS applications in flood risk mapping;
- Integrated watershed and floodplain management;
- Multi-hazard risk assessment frameworks;
- Early warning systems and decision-support tools;

We look forward to your contributions.

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### Guest Editors

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### Deadline for manuscript submissions

31 January 2026



## Geosciences

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## About the Journal

### Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherent set of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based 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.

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### Editor-in-Chief

Prof. Dr. John C. Eichelberger

Alaska Center for Energy and Power, University of Alaska Fairbanks,  
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