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IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing

Special Issue on
"Remote Sensing for Monitoring Fluvial Geomorphic Changes and Disaster Risk Reduction Planning"

Remote sensing is a powerful technique for enhancing natural hazard management, particularly in monitoring fluvial geomorphic changes and aiding disaster risk reduction. It involves detecting and monitoring an area's physical properties using reflected and emitted radiation, typically via satellite or aerial imagery. A key application is analyzing and mapping river landforms and floodplain features, such as using aerial photography to map floodplain features and assess river morphology changes over time. Remote sensing provides high-resolution temporal data to quantify river channel changes, sediment deposition, and erosion patterns, crucial for understanding fluvial dynamics and mitigating hazards. Remote sensing data, particularly from satellites is invaluable for disaster management, offering essential information for pre-disaster risk assessment, immediate post-disaster response, and long-term recovery planning. For example, post-flood remote sensing assesses inundation extent, monitors floodwater progression, and evaluates infrastructure and landscape damage, aiding relief efforts and resource allocation. Integrating remote sensing data with Geographic Information Systems (GIS) enhances its utility by organizing, analyzing, and visualizing spatial data, identifying priority intervention areas, and informing disaster risk reduction and urban planning strategies.

Beyond disaster management, remote sensing is used in agriculture to monitor crop health, in urban planning to assess land use changes, and in environmental conservation to track biodiversity and ecosystem changes. This special issue aims to highlight innovative applications, advance methodologies, foster collaboration, inform policy, address challenges, and promote education and capacity building. It emphasizes remote sensing's role in disaster risk reduction, sustainable development goals, climate change adaptation, natural resource management, and resilient infrastructure planning, encouraging integration with other technologies and interdisciplinary collaboration.

The broad topics include (but are not limited to):

- GIS and Remote Sensing for Disaster Risk Reduction and Evaluation of Natural Hazards.
- Using Google Earth Engine to Identify Changes in River Channels for Fluvial Geomorphology.
- Remote Sensing Methods for Analyzing Channel Dynamics and Geomorphic Effects of Floods.
- Vegetation Coverage and Planform Morphology for River Management Applications.
- Geographic Information Systems and Remote Sensing for Managing Natural Disasters.
- Tracking the Evolution of River Channels Using GIS and Remote Sensing.
- An Integrated Approach to Studying River Flooding and Urban Expansion to Reduce Hydrogeomorphic Risk.
- Evaluating the Geomorphic Response of River Systems to Holocene Climate Changes Using Remote Sensing.

Schedule
01 Oct 2024, Submission system opening
31 March 2025, Submission system closing

Format
All submissions will be peer reviewed according to the IEEE Geoscience and Remote Sensing Society guidelines. Submitted articles should not have been published or be under review elsewhere. Submit your manuscript on http://mc.manuscriptcentral.com/jstars, using the Manuscript Central interface and select the "Remote Sensing for Monitoring Fluvial Geomorphic Changes and Disaster Risk Reduction Planning" special issue manuscript type. Prospective authors should consult the site https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9082768 for guidelines and information on paper submission. All submissions must be formatted using the IEEE standard format (double column, single spaced). Please visit http://www.ieee.org/publications_standards/publications/authors/author_templates.html to download a template for transactions. Please note that since Jan. 1, 2024, IEEE J-STARS, as a fully open-access journal, is charging a flat publication fee $1,496 per paper.

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