CALL FOR SESSIONS

GEO-HYDROLOGICAL RISK MAPPING AND MONITORING THROUGH INNOVATIVE TECHNOLOGIES AND SOLUTIONS

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ABSTRACT SESSION

The ever-increasing impact of geo-hydrological phenomena, such as landslides, debris flow, glacier instability or flooding, on urbanized areas, a source of extensive damage and casualties worldwide, is of great interest to scientists and administrators. Active geo-processes mapping and monitoring are key elements in assessing geo-hydrological behaviour, specifically to support emergency management and identify areas with the highest damage.
Monitoring and mapping technology currently represent a functional means to detect, correctly map and track the processing over time. These are central stages for reconstructing and forecasting phenomena evolution, defining early-warning procedures and planning correct risk management and mitigation.
The state-of-the-art monitoring technologies allow to investigate the evolution of several types of geo-hydrological processes passing through traditional high-frequency on-site measurements, suitable for local scale analysis, till remote sensing acquisitions by satellites and aerial platforms, valid for extensive spatial coverage investigation.
Exploiting multi-sensors and multi-platform, with a diverse range of spatial/temporal resolutions, can lead to countless applications for better understanding these phenomena.
This session promotes cost-effective and open-source innovative technologies for mapping and monitoring diverse geo-hydrological processes aimed at Civil Protection purposes to guarantee effective risk management and human life safety.