

Special Issue

Innovative Remote Sensing Approaches: 3D Reconstruction, UAV Photogrammetry, and BIM in Cultural Heritage and Infrastructure

Message from the Guest Editors

This Special Issue is dedicated to showcasing cutting-edge research that bridges the gap between raw spatial data acquisition and advanced semantic modeling frameworks. We seek contributions that move beyond simple visualization, focusing on the integration of data acquisition techniques with information management systems, primarily building information modeling (BIM), and its heritage-specific adaptation, HBIM (Heritage BIM). We invite original contributions that explore novel methodologies, algorithms, and applications related to the Special Issue's core topics. Suggested themes include, but are not limited to, the following: (1) BIM-based modeling from 3D point clouds for existing structures (Scan-to-BIM/HBIM); (2) development of automated feature extraction and semantic enrichment algorithms; (3) data fusion techniques and advanced data models for managing heterogeneous information (e.g., combining LiDAR, UAV photogrammetry); (4) remote sensing for damage detection, deformation analysis, and structural health monitoring (SHM) of civil infrastructure; and (5) novel visualization methods and immersive technologies (AR/VR) for documented assets.

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About the Journal

Message from the Editor-in-Chief

Geomatics is the modern adaptation of traditional surveying, mapping, and their related skills. In geomatics, Information and Communication Technology (ICT) and digitization play a focal role. Geomatics is the discipline that integrates the tasks of gathering, storing, processing, modeling, analyzing, and delivering georeferenced information. Geomatics produces, validates, and represents georeferenced data that helps to provide services that meet the needs of society.

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