



3D and Semantic Reconstruction of the Urban Environment Using Multi-Modal and Multi-Resolution Remote Sensing Data

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Message from the Guest Editors

Photogrammetry and remote sensing techniques are utilized to produce 3D models of urban scenes using satellite, aerial, and terrestrial data with varying levels of automation, accuracy, and replicability. This Special Issue seeks to address the latest developments in remote sensing-based 3D urban scene reconstruction—from innovative methods and new benchmark datasets to relevant application examples.

The topics of this Special Issue include, but are not limited to:

- Weakly or self-supervised methods for extracting 3D semantic information of the urban environment;
- Multimodal approaches for combining different sensing technologies (e.g., multispectral, LiDAR, and SAR);
- Multiplatform (satellite, aerial, and terrestrial) and multiresolution data fusion approaches for 3D urban scene reconstruction;
- Automatic 3D urban object identification and change detection methods from imagery, point clouds, and meshes;
- End-to-end approaches for the automatic generation of high-level semantic objects (e.g., LoD and BIM);
- Methods for efficient storage, processing, and visualization of 3D urban objects with a high level of detail and semantic attributes.





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Message from the Editor-in-Chief

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