# **Special Issue**

# 3D Reconstruction and Mobile Mapping in Urban Environments Using Remote Sensing (Second Edition)

### Message from the Guest Editors

This Special Issue focuses on the techniques for 3D reconstruction and mobile mapping in urban environments, especially for new instruments for data acquisitions in complex urban environments, scale-illumination invariant algorithms for robust feature matching, efficient image retrieval for image or LiDAR-based localization, SfM-based solutions for image orientation, SLAM-based solutions for image or LiDAR processing, and deep-learning-based network for feature detection and matching, etc. In this topic, the involved data sources are limited to the remote sensing field, including images from high-altitude satellites, aerial planes, UAVs, and MMS vehicles, and point clouds from airborne and ground scanners.

- New instruments for data acquisition in complex urban environments:
- Scale-illumination invariant algorithms for robust feature matching;
- Deep learning for feature detection and matching;
- Efficient image retrieval for image or LiDAR-based localization;
- SfM-based solutions for image orientation;
- SLAM-based solutions for image or LiDAR processing;
- Neural Radiance Field for 3D reconstruction;
- High-resolution satellite images for urban building 3D modeling.

### **Guest Editors**

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Dr. Duojie Weng

Dr. Jianchen Liu

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### Deadline for manuscript submissions

closed (31 January 2025)



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### Message from the Editor-in-Chief

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### Editor-in-Chief

### Dr. Prasad S. Thenkabail

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