

## Special Issue

# Intelligent Processing of 3D Point Clouds for Scene Understanding and Modelling

### Message from the Guest Editors

In this Special Issue, we aim to highlight the latest research in intelligent methods for LiDAR point cloud processing, including the integration of deep learning and artificial intelligence techniques, to address the challenges associated with 3D scene understanding and digital surface modelling. This Special Issue seeks to feature cutting-edge solutions that focus on the effective and efficient extraction of meaningful information from point clouds, such as semantic segmentation, object recognition, and the modelling of urban, natural and planetary environments. We invite submissions on a variety of topics, including, but not limited to, the following:

- Semantic/Instance segmentation of 3D point clouds;
- AI-driven 3D object/geometric primitive detection;
- Multi-sensor/Multi-platform data integration;
- Point cloud registration;
- Intelligent applications of point clouds in urban modelling/forest inventory/environmental monitoring/planetary exploration;
- 3D visual grounding;
- Advanced SLAM (Simultaneous Localization and Mapping) with LiDAR;
- Deep learning algorithms for large-scale space-borne LiDAR processing;
- Generative 3D modelling based on point clouds.

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### Guest Editors

Dr. Yuan Li

Dr. Rong Huang

Dr. Shuhang Zhang

Dr. Linfu Xie

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### Deadline for manuscript submissions

31 December 2025



## Remote Sensing

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*Remote Sensing*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[remotesensing@mdpi.com](mailto:remotesensing@mdpi.com)

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### Message from the Editor-in-Chief

*Remote Sensing* is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peer-review process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend *Remote Sensing* for your best research publications for a fast dissemination of your research.

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### Editor-in-Chief

Dr. Prasad S. Thenkabail

Senior Scientist (ST), U. S. Geological Survey (USGS), USGS Western Geographic Science Center (WGSC), 2255, N. Gemini Dr., Flagstaff, AZ 86001, USA

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