Special Issue

3D Scene Reconstruction, Generation and Understanding: Latest Advances and Prospects

Message from the Guest Editors

Areas to be covered in this Special Issue may include recent and novel research trends related, but not limited, to the following:

- Novel algorithms for 3D scene reconstruction from single-/multi-modal data (e.g., RGB images, LiDAR, depth maps).
- 3D reconstruction algorithms for the challenges in low-quality data, such as occlusions, dynamic scenes.
- Efficient methods for large-scale and real-time 3D scene reconstruction.
- Semantic-aware 3D reconstruction techniques integrating object detection/segmentation.
- Neural network-based 3D scene generation, including conditional (text, sketches, etc.) and unconditional generation.
- Procedural and hybrid approaches for generating complex 3D scenes.
- Deep learning models for 3D scene understanding, such as object recognition, pose estimation, and relationship reasoning.
- Context-aware 3D scene parsing and semantic segmentation.
- Cross-modal understanding of 3D scenes (e.g., aligning 3D scenes with text).
- Benchmarks and evaluation metrics for 3D scene reconstruction, generation, and understanding.
- Applications of 3D scene technologies in specific domains.

Guest Editors

Dr. Qiankun Liu

School of Computer & Communication Engineering, University of Science and Technology Beijing, Beijing 100083, China

Dr. Junbao Zhuo

School of Computer & Communication Engineering, University of Science and Technology Beijing, Beijing 10083, China

Deadline for manuscript submissions

15 March 2026

Electronics

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 6.1

mdpi.com/si/251963

Electronics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
electronics@mdpi.com

mdpi.com/journal/electronics

Electronics

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 6.1

mdpi.com/journal/electronics

About the Journal

Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

Editor-in-Chief

Prof. Dr. Flavio Canavero
Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), CAPlus / SciFinder, Inspec, Ei Compendex and other databases.

Journal Rank:

JCR - Q2 (Engineering, Electrical and Electronic) / CiteScore - Q1 (Electrical and Electronic Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).

MDPI