

Special Issue

Advances in Vision-Based UAV Navigation: Innovations and Applications

Message from the Guest Editors

This Special Issue focuses on the recent advancements and emerging trends in vision-based navigation for unmanned aerial vehicles (UAVs). We seek original research articles, review papers, and case studies that highlight theoretical developments, novel algorithms, sensor fusion techniques, and practical implementations that enhance the performance, robustness, and autonomy of UAVs. Topics of interest include, but are not limited to, visual simultaneous localization and mapping (VSLAM), real-time obstacle detection and avoidance, machine learning for environmental perception, sensor integration, and energy-efficient navigation. We also encourage submissions that explore the application of vision-based navigation in diverse fields such as urban environments, agriculture, surveillance, and disaster response.

Guest Editors

Dr. Bo Li

Dr. Shaoyi Li

Dr. Shun Zhang

Deadline for manuscript submissions

15 September 2025



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/223193

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

[mdpi.com/journal/
sensors](https://mdpi.com/journal/sensors)





Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



[mdpi.com/journal/
sensors](https://mdpi.com/journal/sensors)



About the Journal

Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro

Dipartimento di Ingegneria Elettrica e dell'Informazione (Department of Electrical and Information Engineering), Politecnico di Bari, Via Edoardo Orabona n. 4, 70125 Bari, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Ei Compendex, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Instrumentation)