



sensors



an Open Access Journal by MDPI

UAV and Sensors Applications for Navigation and Positioning

Guest Editors:

Dr. Yongbo Zhang

School of Aeronautic Science and Engineering, Beihang University, Beijing 100191, China

Prof. Dr. Yuhang Li

Institute of Solid Mechanics, Beihang University (BUAA), Beijing 100191, China

Deadline for manuscript submissions:

10 April 2025

Message from the Guest Editors

Unmanned aerial vehicles (UAV) are widely used, from military to civilian and commercial, such as military reconnaissance, power inspection, security inspection and other special tasks. However, the prerequisite for UAV to complete the task is to achieve high-precision navigation and positioning, that is, the UAV should know where it is in real time.

Benefiting from the development of microelectro mechanical systems (MEMS), a variety of sensors can be carried on UAVs, and the navigation and positioning technology based on the fusion of multi-sensor data has become a research hotspot. The vigorous development of cluster technology, machine learning, simultaneous localization and mapping (SLAM) brings more possibilities for UAV navigation and positioning methods.

Topics covered in the Special Issue include but are not limited to:

- Navigation and positioning method in GNSS-denied environment
- Multi-sensor data fusion method for UAV navigation and positioning
- Cooperative navigation and positioning method for multi-UAV
- SLAM
- Vision-based navigation and positioning method
- Applications of machine learning in UAV navigation and positioning



mdpi.com/si/157612

Special Issue



sensors



an Open Access Journal by MDPI

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

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.

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 (*Chemistry, Analytical*) / CiteScore - Q1 (Instrumentation)

Contact Us

Sensors Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/sensors
sensors@mdpi.com
[X@Sensors_MDPI](#)