

Special Issue

Sensing, Intelligent Control and Collaborative Optimization for Swarms of Unmanned Systems

Message from the Guest Editor

Recently, there has been growing interest in the sensing, intelligent control, and collaborative optimization of unmanned systems swarms. These advanced control algorithms and collaborative strategies rely on the support of cutting-edge sensors, which provide multimodal, high-resolution, and low-latency data. In comparison to traditional manned platforms, unmanned swarms equipped with these sensors exhibit superior environmental adaptability, precise control capabilities, and enhanced real-time responsiveness. Ongoing advancements in AI-driven sensor fusion, adaptive sampling, and edge-based perception are driving autonomy and coordination to unprecedented levels. These capabilities endow swarms of unmanned systems with powerful tools for a range of applications, including search-and-rescue, environmental monitoring, logistics delivery, and more. This Special Issue aims to compile original research and review articles that explore the latest advancements, technologies, solutions, applications, and emerging challenges in sensing, intelligent control, and collaborative optimization for swarms of unmanned systems.

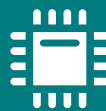
Guest Editor

Dr. Tianle Mai

School of Information and Electronics, Beijing Institute of Technology, Beijing 100081, China

Deadline for manuscript submissions

30 September 2026



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/262858

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)