

Special Issue

AI for Emerging Image-Based Sensor Applications

Message from the Guest Editors

Recent advancements in imaging technologies and sensor systems have led to an explosion of visual data across diverse domains, including autonomous systems, healthcare diagnostics, environmental monitoring, industrial automation, and smart cities. To unlock the full potential of this data, artificial intelligence (AI), particularly machine learning and deep learning techniques, has become indispensable for efficient processing, analysis, and interpretation. **Topics of interest include the following:**

- Deep learning models for image sensor data processing (e.g., CNNs, Transformers, and GANs).
- AI-driven image enhancement, restoration, and super-resolution.
- Real-time AI inference on edge devices with image sensors.
- AI for hyperspectral, multispectral, thermal, or 3D imaging sensors.
- Machine learning for event-based (neuromorphic) vision sensors.
- AI-powered computer vision applications in robotics, surveillance, or medical imaging.
- Efficient AI algorithms for low-power and resource-constrained sensor platforms.
- Explainable AI (XAI) and robustness in image-based sensor systems.
- Fusion of image sensor data with other modalities using AI.

Guest Editors

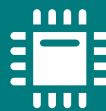
Prof. Dr. Sheng Huang

Dr. Shizheng Zhang

Dr. Yi Zhang

Deadline for manuscript submissions

1 July 2026



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/252659

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)