Special Issue

Multimodal Sensory Intelligence

Message from the Guest Editors

For decades, research and development have aimed to convert data to information (what, when, where, and who), to knowledge (how), and to insight (why). Current AI models mainly focus on training and testing with massive data, which is an oversimplified model of learning. In nature, multimodal sensing is a part of intelligence fundamental to all creatures. It is the capacity to sense a target, be aware of the situation, and adapt to changes. The basic algorithms include sensor fusion, signal registration, visualization, interaction, and reasoning. Multimodal sensory intelligence is a missing piece of the puzzle in today's generative AI and deep learning paradigms that has a broader impact on autonomous systems, human-robot interaction, and cyber-physical systems. We anticipate that sensory intelligence will require less data, be faster in execution, adapt to changes, and be simpler in algorithms, with reasoning in qualitative physics and semantic or visual explanations. And overall, it will be able to solve the problems that prevailing data science cannot.

Guest Editors

Yang Cai

Mel Siegel

Scott Ledgerwood

Deadline for manuscript submissions

30 September 2025

AI Sensors

an Open Access Journal by MDPI

mdpi.com/si/233702

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

mdpi.com/journal/aisens

MDPI

AI Sensors

an Open Access Journal by MDPI

mdpi.com/journal/aisens

MDPI

About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Dr. Chengkuo Lee
Department of Electrical and Computer Engineering, National University of Singapore, Singapore 117576, Singapore

Author Benefits

Open Access:

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

Rapid Publication:

first decisions in 19 days; acceptance to publication in 4 days (median values for MDPI journals in the first half of 2025).

Recognition of Reviewers:

reviewers who provide timely, thorough peer-review reports receive vouchers entitling them to a discount on the APC of their next publication in any MDPI journal, in appreciation of the work done.