Special Issue

Al-Based Sensing and Imaging Applications

Message from the Guest Editor

Artificial intelligence (AI) is rapidly transforming sensing and imaging, creating new opportunities in science, engineering, and medicine. By integrating machine learning, computer vision, and deep learning with advanced sensors, AI enables systems to perceive, analyze, and interpret complex data with exceptional accuracy and speed. These developments are revolutionizing medical imaging, industrial inspection, environmental monitoring, autonomous navigation, and smart cities.

Recent AI advances allow real-time image enhancement, anomaly detection, data fusion, and automated decision-making. In healthcare, AI-powered imaging improves diagnosis, treatment planning, and patient outcomes. In industrial and environmental fields, intelligent sensing enhances safety, efficiency, and cost-effectiveness. Meanwhile, progress in hardware, cloud computing, and edge AI extends intelligent imaging to remote and resource-limited settings.

This Special Issue welcomes contributions presenting innovative algorithms, novel applications, and interdisciplinary approaches that showcase Al's role in advancing sensing, visualization, and decision-support systems.

Guest Editor

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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.

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