Special Issue

Multiphysics Simulation and Design of Antennas and Devices for Next-Gen Wireless Sensor Networks

Message from the Guest Editors

This Special Issue aims to explore the integration of multiphysics simulation frameworks with advanced design methodologies to address emerging challenges in next-generation wireless sensor networks (WSNs). Topics of interest include, but are not limited to, the following: (1) Multiphysics Modeling: High-fidelity simulation algorithms of electromagnetic-thermalmechanical interactions in antennas and microwave devices. (2) Optimization-Driven Design: AI/MLenhanced inverse design strategies for miniaturized, tunable antennas and devices. (3) High-Frequency Applications: Development of terahertz (THz) and millimeter-wave (mmWave) systems. (4) Material Innovation: Integration of low-dimensional materials (e.g., graphene, metasurfaces) and phase-change materials to enhance device efficiency and reconfigurability.

Guest Editors

Prof. Dr. Bian Wu

Dr. Huanhuan Zhang School of Electronic Engineering, Xidian University, Xi'an, China

School of Electronic Engineering, Xidian University, Xi'an 710055, China

Deadline for manuscript submissions

closed (15 October 2025)



Sensors

an Open Access Journal by MDPI

Impact Factor 3.5 CiteScore 8.2 Indexed in PubMed



mdpi.com/si/233515

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

mdpi.com/journal/ sensors





Sensors

an Open Access Journal by MDPI

Impact Factor 3.5 CiteScore 8.2 Indexed in PubMed



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)

