Special Issue

Energy Harvesting Systems for Autonomous Wireless Sensor Networks

Message from the Guest Editors

Wireless Sensor Networks (WSNs) collect useful data in a plethora of applications. Because they are expected to operate autonomously for long periods of time, the energy supplied to the WSN nodes remains a critical limitation. Access to mains power is infeasible in many scenarios, whereas the supply generated solely by batteries restricts the energy available. Instead, energy harvesting has the ability to extend the available energy and lifetime of WSNs without necessitating a fixed infrastructure. This Special Issue (SI) aims to collect articles that present recent advances within the field for autonomous wireless sensor networks. The scope of this Special Issue includes:

- The development and optimization of energy harvesting transducers.
- Power management circuits for the efficient power conversion of ambient energy sources.
- Energy harvesting systems powered using ambient energy sources and wireless power transfer.
- Algorithms and protocols optimized for energy harvesting and energy-aware operation.
- The application of energy harvesting systems.

Guest Editors

Dr. Sebastian Bader
Department of Computer and Electrical Engineering, Mid Sweden University, Sundsvall, Sweden

Dr. Domenico Balsamo
School of Engineering, Newcastle University, Newcastle upon Tyne, UK

Deadline for manuscript submissions

30 September 2025

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/si/219796

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

mdpi.com/journal/sensors

MDPI

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)