

Special Issue

Nuclear Radiation Detectors and Sensors

Message from the Guest Editor

This Special Issue focuses on recent advances in nuclear radiation detectors and sensors, with particular emphasis on innovations in environmental applications, data analysis, and smart system integration. As radiation monitoring evolves beyond laboratory settings, new challenges and opportunities arise in the real-time detection and interpretation of radiometric data.

We welcome contributions exploring environmental radiation monitoring, the design and deployment of portable nuclear detectors, and improvements in detector calibration techniques. This Special Issue will also highlight developments in energy spectra analysis, including the use of deep learning algorithms for signal processing, which are redefining how radiation signatures are classified and understood. Potential topics include but are not limited to:

- environmental radiation monitoring
- energy spectra analysis
- deep learning algorithms for signal processing
- portable nuclear radiation detectors
- detector calibration
- real-time data analysis
- IoT-integrated sensing systems
- smart sensors network
- proximal and remote sensing for radiation mapping
- radiological risk assessment

Guest Editor

Dr. Virginia Strati

1. Department of Physics and Earth Sciences, University of Ferrara, Via G. Saragat 1, 44122 Ferrara, Italy
2. INFN Ferrara Section, Via G. Saragat 1, 44122 Ferrara, Italy

Deadline for manuscript submissions

31 July 2026



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/244105

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)