

Special Issue

The Role of Artificial Intelligence Technologies in Health

Message from the Guest Editors

This Special Issue focuses on recent advances in AI applications for biomedical image and signal analyses, with particular emphasis on model explainability and the emerging paradigm of digital twins. We invite submissions that explore supervised, unsupervised, and self-supervised methods for segmentation, classification, and prediction in clinical domains such as radiology, neurology, cardiology, and oncology. Contributions addressing explainable AI (XAI) are especially encouraged, including interpretable deep learning architectures, attention mechanisms, and post hoc explanation techniques, aimed at improving trust in clinical settings. Furthermore, we seek research on AI-enabled digital twins and virtual patient-specific models that integrate real-time physiological data and computational simulations to support personalized diagnostics, treatment planning, and disease progression monitoring in the paradigm of precision medicine. By bridging algorithmic innovation with translational medicine, this Special Issue aims to highlight interdisciplinary research that could enable the adoption of AI technologies in real-world healthcare scenarios.

Guest Editors

Dr. Antonio Brunetti

Department of Electrical and Information Engineering (DEI), Polytechnic University of Bari, 70126 Bari, Italy

Dr. Elena Sibilano

Department of Electrical and Information Engineering, Polytechnic University of Bari, 70126 Bari, Italy

Deadline for manuscript submissions

20 November 2025



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/242923

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

mdpi.com/journal/applsci





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, 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), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)