Special Issue

Integrated Circuits for Implantable Electronics and Medical Applications

Message from the Guest Editors

The development of future medical devices inevitably involves designing innovative integrated circuits. Developments in bionics and precision medicine are closely linked to innovation in the field of implantable and wearable electronics. Advanced circuit techniques are therefore essential to ensure the reliability, miniaturization, and long-term stability of biomedical systems capable of safely interfacing with the human body. Integrated circuits for power harvesting, biopotential acquisition, and neural stimulation are just some examples of devices currently needed for the future development of medical devices. In this sense, this Special Issue aims to collect works that demonstrate innovation in the design and implementation of integrated circuits in CMOS and BiCMOS technology for medical and implantable applications.

Topics of interest but not limited to:

- Wireless Power Transfer and Energy Harvesting: Power converters, linear regulators, and rectifiers;
- Wireless Communication: Modulation and demodulation circuits;
- Analog front ends for signal acquisition: Signal conditioning and data converters;
- Nerve stimulation: Electrical stimulation circuits and sensory feedback strategies.

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Deadline for manuscript submissions

20 April 2026

Electronics

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 6.1

mdpi.com/si/255293

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Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).

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