Special Issue

Bioimpedance Sensors: Instrumentation, Models, and Applications

Message from the Guest Editor

The scientific approach to electrical impedance of chemical and biological environments has been explored. We successfully implement the bioimpedance-based sensing technology in rate adaptive cardiac pacemakers, cardiopulmonary analyzers and lung tomography devices, cell counters and analyzers. Unfortunately, the implementation has slowed down, as we do not know enough about the aspects below: first, the distribution of electrical current in living tissues with variable parameters changing due to breathing, heart beating, blood oxygenation and circulation; second, the spectral and spatial distribution of permittivity in living structures and the capacitive characteristics; third, the role of magnetic properties of tissues on electrical impedance. We need more efficient configurations of sensing electrodes and materials, especially for microelectrodes. Contactless sensing methods and circuits are of interest. The deeper developed signal processing, data handling methods and artificial intelligence algorithms can give impressive results when obtaining new data and information about living organisms. Above highlighted and other theoretical and experimental developments are welcome.

Guest Editor

Prof. Dr. Mart Min Thomas Johann Seebeck, Department of Electronics, Tallinn University of Technology, 19086 Tallinn, Estonia

Deadline for manuscript submissions

closed (10 November 2021)



Sensors

an Open Access Journal by MDPI

Impact Factor 3.5 CiteScore 8.2 Indexed in PubMed



mdpi.com/si/60891

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



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)