

Call for Papers

Special Issue on Flexible biomedical sensors for healthcare applications

Submission date: January 20, 2023, Publication date: June 2023

Flexible electronics experience a huge growth potential in many applications ranging from wearables, smartphones, robots to entertainment, automotive, healthcare, and more. According to ReportLinker's recent report, the global flexible electronics market will reach \$22.6 billion by 2027, growing at a CAGR of 17%. This growth is further fueled by the rapid development of the Internet-of-Things, 5G, and artificial intelligence. One of the applications of flexible electronics is in healthcare, where flexible implants and wearables play an essential role in predictive, preventive, and personalized medicine. Furthermore, flexible electronics opens a new field for the circuits and systems community to apply low-power circuit techniques, design tools and methodologies, energy-efficient algorithms, and many more to tackle the challenges in making flexible sensors.

This special issue will identify novel approaches to flexible biomedical sensors, circuits and systems, which are the requirements, challenges and future directions related to the burgeoning medical technologies. It aims to report the recent progress in circuits and systems for flexible implantable/wearable biomedical sensors. Manuscripts describing original research as well as reviews of emerging directions are solicited for this Special Issue. A range of topics includes but is not limited to:

- Analog, mixed, and digital readout circuits for flexible biomedical sensors
- Energy efficient signal processing algorithms and their implementations
- Embedded AI for flexible sensors
- Wireless communications and body channel communications
- Energy harvesting devices and circuits for flexible sensors
- Wireless power transfer for flexible sensors
- Heterogeneous integration for flexible sensors
- Skin-electrode interference in flexible sensors
- Novel flexible sensors for healthcare
- Wearable/implantable devices for healthcare
- Brain machine interface
- Muscle machine interface
- Flexible sensor applications in healthcare
- Flexible sensor applications related to COVID-19

To be considered in scope, submissions to TBioCAS must demonstrate synergies between circuits and systems and medicine/biology.

Publication schedule:

Submission deadline:	Jan. 20, 2023	First decision:	Feb. 20, 2023
Revision due:	Mar. 15, 2023	Final decision:	Apr. 20, 2023
Publication:	Jun. 2023		

Guest Editors:

Yong Lian, York University, Canada

Tian-Ling Ren, Tsinghua University, China

Hadi Heidari, University of Glasgow, United Kingdom