

IEEE JOURNAL ON EMERGING AND SELECTED TOPICS IN CIRCUITS AND SYSTEMS

Call for Papers: Special Issue on Wireless Sensing Circuits and Systems for Healthcare and Biomedical Applications

Guest Editors

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Scope and Purpose

Because of the rapid advancement of radiofrequency, infrared, and optical technologies, many wireless sensing applications have emerged and enabled novel biomedical applications, such as diagnosis of diseases, telemedicine, implantable medical devices, characterization of biological materials, wireless neural prostheses, and remote-human-motion classification. Some of these applications entered human daily life shortly after their invention, significantly improving the productivity and life quality in our society. With solutions ranging from sensor-on-chip to bench top implementations, the driving forces behind these revolutions are largely based on circuits and systems tools, micro- and nano- fabrication processes, semiconductor technology, and embedded systems.

This Special Issue aims to highlight recently-emerging radiofrequency, infrared, and optical techniques that enable human-centered IoT based on wireless sensing and control of parameters including but not limited to: vital signs, temperature, activity data, location, gesture, and gait information. Applications should directly interact with animals, human subjects, or biological materials. The achievements made by both industrial and academic researchers will be featured. Promising applications in high-impact areas, such as telemedicine, human tracking, biometrics, wireless neural interface, and human machine-interface will be presented.

Topics of Interests

Interested authors are encouraged to submit original contributions in the following areas:

- Implantable devices and their biomedical applications
- Radiofrequency interaction with humans, such as biomedical radars
- Wireless neural interfacing and neuroprostheses
- Non-contact characterization of biomedical materials using advanced circuits and systems
- Contactless photoplethysmogram (PPG)
- Circuits and systems for remote diagnosis of diseases
- Other non-contact sensing and control circuits and systems for biomedical applications

Important Dates

Initial paper submission: September 15, 2017
First round of reviews completed: December 1, 2017
Revised manuscripts due: January 15, 2018
Second round of review completed: February 15, 2018
Final manuscripts due date: April 15, 2018
Special Issue official print date: June 1, 2018

Request for Information

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