

# IEEE Transactions on Consumer Electronics

## Call for Papers

### Special Section on “Leveraging Sensors, Actuators, and Biosensors for the Development of Consumer Electronic Devices in Healthcare”

#### Theme:

Consumer electronic devices have witnessed significant advancements in recent years, particularly in the healthcare domain. The integration of sensors, actuators, and biosensors has revolutionized the capabilities of these devices, enabling personalized and efficient healthcare solutions. Sensors and biosensors play a crucial role in designing consumer electronics devices to collect accurate and real-time data, providing valuable insights and enhancing the functionality and effectiveness of the devices. Also, in wearable consumer electronics it plays a crucial role to collect various types of data from the user's body or the surrounding environment. These devices can monitor vital signs, activity levels, environmental conditions, and other relevant parameters. In the past some years, especially after Covid-19 appearance, the dependency and use of the sensors and biosensors raised a lot in commercial market. Nowadays these sensor equipped devices is found to be useful in many application areas of healthcare like monitoring vital signs, Health and Fitness Tracking, Disease Management, Remote Patient Monitoring, Emergency Response and Safety, Mental Health and Well-being, Personalized Healthcare, and Early Detection. This special issue aims to explore the latest research and developments in leveraging these technologies for the development of consumer electronic devices in healthcare.

#### Topics of interest in this Special Section include (but are not limited to):

- Novel sensor technologies for healthcare monitoring in consumer electronic devices
- Advancements in biosensors and their integration in wearable healthcare devices
- Actuators and their role in consumer electronic devices in healthcare
- Design and development of healthcare-focused consumer electronic devices using sensors and biosensors
- Data analytics, machine learning, and artificial intelligence techniques for extracting meaningful insights from sensor data in healthcare devices
- Personalized healthcare applications leveraging sensors, actuators, and biosensors
- User experience and usability studies related to healthcare consumer electronic devices
- Integration of sensor data with electronic health records and telemedicine systems
- Security and privacy considerations in healthcare consumer electronic devices
- Regulatory and ethical aspects of sensor-enabled consumer electronic devices in healthcare
- Sensor based diagnosis of patients suffering from GAIT abnormality
- New design and development of Biosensors for early detection of abnormalities
- Clinical finding and reports using sensor/biosensor based analysis for various healthcare applications

#### Important dates:

- Submission Start: February 2024
- End of submission of Manuscripts: May 30, 2024
- Tentative Publication Date: 2nd quarter 2025

#### Guest Editors:

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#### Instructions for authors:

Manuscripts should be prepared following guidelines at: <https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html> and must be submitted online following the IEEE Transactions on Consumer Electronics instructions: <https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html>. During submission, the Special Section on “Sensors for Healthcare” should be selected.

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