

IEEE JOURNAL OF BIOMEDICAL AND HEALTH INFORMATICS

J-BHI Special Issue on “Advanced Wearable Sensors for Smart Monitoring and Disease Prediction”

The seamless integration of sensor technologies with the smart healthcare infrastructure has leveraged the sensing and communication capabilities to monitor patient's health parameters remotely through various wearable/medical sensors. Advanced sensor technologies enable various types of smart healthcare applications, including diagnosing the symptomatic/asymptomatic patients' health condition, health symptoms forecasting, disease prediction and analysis, and ontology-based recommendation. Advancements in wearable sensors and communication technologies (6G/5G-and-beyond) enable the design of smart healthcare frameworks and efficiently analysing the sensing parameters. Besides that, advanced AI-enabled technologies, including machine learning and deep learning algorithms, come into play to analyse the sensed data at remote computing devices for disease prediction and diagnosis.

This special issue focus on discussions and insights into the latest advancements and technologies pertaining to *Advanced Wearable Sensors for Smart Sensing and Disease Prediction*, specifically on **design, theory, modelling, manufacturing, fabrication, data analysis, analytics, and applications of advanced wearable sensors used in disease prediction, forecasting, or monitoring the health symptoms**. Another important aspect of this issue is to investigate the latest AI-enabled frameworks and with advanced wearable sensors and the application of machine learning and deep learning techniques to handle the enormous amount of sensed data received from multiple wearable sensors.

Topics of interest include, but are not limited to, the following:

- Design, manufacturing, and fabrication of advanced sensors for healthcare applications
- AI-enabled and agent-based healthcare framework with wearable sensors
- Wearable sensors with anomaly detection, trustworthy evaluation, and security management
- Design, implementation, and test of novel sensing principles and multi-modal sensing
- Machine learning/deep learning techniques for real-time wearable sensor data analytics
- Distributed and connected sensing using wearable sensors with sensing synchronization
- Remote health symptoms monitoring with wearable sensors and diagnosis
- Signal Processing and Data Collection through wearable sensors
- Algorithms and Tools for sensing and disease prediction with advanced wearable sensors
- Edge/Fog/cloud-enabled healthcare framework for data analytics with wearable sensors
- Evaluate symptom detection/forecasting using advanced AI-enabled techniques
- Medical data transmission, acquisition, and integration with wearable sensors
- Trust, privacy, and security of healthcare framework with wearable sensors

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