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IEEE Internet of Things Journal Special Issue on
Wearable Sensor Based Big Data Analysis for Smart Health

The integration knowledge of wearable sensors, wireless communications and artificial intelligence have brought forth the smart health systems, which empower the consumer's to make a difference to their wellbeing by connecting data to personalized analysis to timely insights. Therefore, the real-time data obtained directly reflects the personal status of interest and can be used in a variety of healthcare applications in the Internet of Things, from preventive treatment to diagnostics and rehabilitation, as well as in virtual and augmented reality environments. However, this consumer-centric journey for smart health is presenting big challenges and opportunities for wearable sensor based big data analysis research. Traditional algorithms do not offer flexibility to handle such large volumes of diverse data and that creates a need for proper mechanisms for data analysis to be able to keep up with the managing, processing and response requirements along with the data reliability. Big efforts from both academia and industry have been devoted recently to generate novel technologies, whether in integrating and developing machine learning algorithms for heterogeneous and longitudinal data or developing novel systems or developing new user experience frameworks, and doing all this while ensuring privacy and security of user data.

This special issue focuses on bringing together researchers and practitioners in machine learning, mobile computing and biomedical to showcase the progress, algorithms, and applications of analyzing and extracting knowledge from large-scale datasets for smart health systems. Topics of interest include but are not limited to:

- Store and retrieve ever growing dataset from wearable sensors
- New approach to tackle large-scale bioinformatics classification problems
- Feature dimensionality reduction for high dimensional biomedical data
- Cloud computing and mobile database management for wearable sensor based big data
- Machine learning frameworks designed for biomedical big data mining
- Predictive models gaining valuable knowledge from wearable sensor based big data
- Large stream data mining techniques on users' historical biomedical data
- Biomedical big data privacy preservation in IoT environment
- Machine learning, with emphasis on deep learning, for health and biomedical applications
- Novel applications and case studies for smart health based on group wearable sensors.

Important dates:

Manuscript submission due: January 15, 2018	Second review due: June 1, 2018
First review due: April 1, 2018	**Final Manuscript Due: July 1, 2018**
Revision due: May 1, 2018	Publication: 2018

Submission:

Submissions must not be currently under consideration for publication in other venues. All manuscripts will be peer reviewed and must follow the standard guidelines for manuscript preparation and submission available at: http://ieee-iotj.org/guidelines-for-authors/. All original manuscripts or revisions must be submitted through the IEEE Manuscript Central, https://mc.manuscriptcentral.com/iot. Please select the 'Wearable Sensor Based Big Data Analysis for Smart Health' special issue, rather than 'regular issue', when uploading your manuscript.

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