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IEEE Internet of Things Journal Special Issue on
Internet of Things for Smart Health and Emotion Care

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As an information carrier, the Internet of Things (IoT) based on the Internet and sensing equipment makes all physical objects form an interconnected network. The 5th generation mobile networks (5G) technology has many advantages, such as high data rates, reduced latency, energy savings, reduced costs, increased system capacity and large-scale device connectivity, realize the real-time data collection, transmission, analysis, management and application in the era of global Internet of everything. In order to quickly respond to people's daily requirements and provide the smart application based on artificial intelligence technology in various scenarios, the number of IoT devices will further increase. The integration of mobile edge computing (MEC) and IoT is imperative, especially in industries needing real-time data computing such as smart home, public security, automobile transportation, smart health, emotion care, etc. As a new form of IoT terminal combining 5G and MEC, wearable device based on intelligent fabrics plays an important role in smart health and emotion care, which is one of the potential development directions of the next generation of intelligent medical and rehabilitation systems.

Wearable sensors can collect multimodal data, such as physiological data of human body and psychological data closely related to emotion, including ECG, EEG, blood pressure, blood oxygen, voice and expression data. Combining with conventional sensor data, such as video, audio and speech text data, significant health characteristics can be obtained using deep learning technology. With the help of professional medical knowledge, the medical knowledge graph and corresponding inference algorithms positioning different scenes will be constructed. In real application scenarios, patients' symptoms are extracted from the data collected by the IoT, and corresponding treatment plans are provided to serve smart health. For patients with mental illness, emotion care can be achieved through sentiment analysis.

This special issue aims to research the state-of-the-art developments, new architecture and novel algorithms of the IoT for smart health and emotion care applications. The special issue will provide opportunities for smart medical practitioners to make innovative contributions to the next generation of IoT research, including network architecture design of wearable IoT, multimodal data processing and analysis, allocation and optimization of communication resources, etc. Potential topics include but not limited to:

- High-performance computing architectures/algorithms/models for smart IoT
- Modeling and optimization in 5G-enabled edge and IoT for smart health
- Wearable computing, robotics for smart health and emotion care
- Network architecture design of smart health and emotion care system
- Multimodal data processing and analysis for smart health and emotion care
- Machine learning models for smart health and emotion care
- Deep and reinforcement learning for smart health and emotion care
- Knowledge graph for smart health and emotion care

Important Dates:

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Revision Due: December 30, 2020   Sec. Reviews Due/Notification: February 1, 2020
Final Manuscript Due: February 15, 2021   Publication Date: 2021

Submission Instructions:

Prospective authors should prepare their submissions in accordance with the rules specified in the Information for Authors of the IEEE Internet of Things Journal guidelines (https://ieee-iotj.org/guidelines-for-authors/). Authors should submit a PDF version of manuscript to https://mc.manuscriptcentral.com/iot

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