

**IEEE Internet of Things Journal Special Issue on
“Towards Intelligent Internet of Medical Things and Its COVID-19 Applications and Beyond”**

The Internet of Medical Things (IoMT) is an extension and specialization of that original Internet of Things (IoT) concept, and applies to the interconnectedness of devices, software applications, and data which are specific to the medical industry. IoMT can add smart technologies to medical devices to monitor the progression of a disease away from the doctor's office and learn things that could impact future care guidelines and patients. It can also provide a better way to care for our elderly by tracking vitals and heart performance, glucose and other body systems, and activity and sleeping levels. During outbreak of pandemic (e.g. COVID-19), IoMT can even be used to detect main symptoms ubiquitously using intelligent sensors and trace the origin of outbreak based on aggregated IoT data (e.g., geographic mobile data, purchase history). Although most of contemporary IoMT systems can measure risks, make decisions and take actions automatically, the lack of Emotion-Aware abilities will be an obstacle to more harmonious human-machine interaction and more efficient medical process. Besides, mental disorders, such as depression, schizophrenia and anxiety, have become a more noticeable cause of suffering. The integration of Emotion-Aware abilities into IoMT can also contribute to monitor emotional dysregulation continuously in subjects with mental disorders or undergoing serious pandemic such as COVID-19, and give these patients personalized therapy recommendations. Research on Affective computing has defined a framework to recognize, interpret and process human affects, but more research is needed to investigate its application to biomedical applications, especially “in the wild” and over extended periods of time, and how to integrate Emotion-Aware abilities into IoMT organically is still an open question. This special issue aims to create a platform for researchers, developers and practitioners from both academia and industry to disseminate the state-of-the-art results and to advance the Emotion-Aware Ubiquitous Computing in IoMT.

IEEE ComSoc e-health committee endorsed the special issue.

Topics of interest include, but are not limited to:

- IoMT for pandemic detection, contact tracing and monitoring (incl. COVID-19)
- IoMT for mental state assessment during an pandemic (incl. COVID-19)
- Wearable sensor and device for IoMT
- Multimodal data pre-processing technique for IoMT
- User personalization with IoMT
- Mobile, tangible and virtual/augmented affective interface for IoMT
- Hybrid human and machine intelligence in IoMT
- Multimodal data-driven Emotion-Aware technique in IoMT
- Emotion-Aware IoMT for Mental Health
- Affective databases and annotation tools for IoMT
- Security, privacy, integrity of multimodal data in IoMT
- Novel Emotion-Aware application in IoMT
- Human-centred interaction design for IoMT
- Ethical issues in IoMT

Important Dates:

Submission Deadline: October 15, 2020 First Review Due: December 30, 2020
Revision Due: February 15, 2021 Sec. Reviews Due/Notification: March 15, 2021
Final Manuscript Due: March 31, 2021 Publication Date: 2021

Submission Guidelines:

All original manuscripts or revisions to the IEEE IoT Journal must be submitted electronically through IEEE Manuscript Central, <http://mc.manuscriptcentral.com/iot>. Solicited original submissions must not be currently under consideration for publication in other venues. Author guidelines and submission information can be found at <http://ieee-iotj.org/guidelines-for-authors/>.

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