

IEEE JOURNAL OF BIOMEDICAL AND HEALTH INFORMATICS

J-BHI Special Issue on “Sensing Psychological Parameters and AI-enabled Emotion Care for Human Wellness and Patient Monitoring”

As the coronavirus pandemic deepens, lots of people lose their jobs and normal pace of life, resulting in lots of negative emotions, such as nervous, anxious, sleepless and depressed. There is an urgent demand to pay more attention to psychological health for human wellness by providing methods and means of sensing psychological parameters, emotion care and mental disorder patient monitoring, especially during these difficult times. With the aid of wearable computing technology and artificial intelligence, emotion and mental disorder detections are available through sensing and analyzing psychological parameters. 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, etc. Combining with conventional data, such as video, audio and speech text data, significant mental health characteristics can be obtained using deep learning technology. Though sensing psychological parameters and AI-enabled emotion care are expected to play a major role in improving human wellness, it faces a lot of challenges, such as psychological data processing and analysis, AI-based emotion monitoring and care, etc. Therefore, the main objective of this special issue is to presenting and highlighting the advances and latest novel and emergent technologies, implementations, applications concerning the sensing psychological parameters, emotion care and mental disorder patient monitoring.

We specifically seek outstanding work of AI-enabled psychological and emotion care for human wellness, including but not limited to the following topics:

- Multimodal data processing and analysis for sensing psychological parameters
- Wearable computing, robotics for sensing psychological parameters and emotion care
- AI-based solutions for emotion care and mental disorder
- Algorithms and tools for sensing psychological parameters
- Novel emotion care applications, services, and systems based on health informatics
- Advanced hardware and software for mental disorder patient monitoring
- Psychology-oriented services for quarantine at home in the pandemic
- Case studies on AI-aided emotion care and mental disorder patient monitoring
- New paradigm of health informatics for human wellness and patient monitoring

Guest Editors

Min Chen, Huazhong University of Science and Technology, China, minchen2012@hust.edu.cn

Hamid Gharavi, National Institute of Standards and Technology (NIST), Gaithersburg, USA, hamid.gharavi@nist.gov

Lin Wang, Union Hospital, Huazhong University of Science and Technology, China, lin.wang.hust@gmail.com

Victor C. M. Leung, Shenzhen University, China, vleung@ieee.org

Zhongchun Liu, Renmin Hospital of Wuhan University, China, zcliu6@whu.edu.cn

Iztok Humar, University of Ljubljana, Slovenia, iztok.humar@fe.uni-lj.si

Key Dates

Deadline for Submission: May 30, 2021

First Reviews Due: Aug 30, 2021

Revised Manuscript Due: Sep 30, 2021

Final Decision: Nov 30, 2021

