J-BHI Special Issue on "Pervasive Sensing and Machine Learning for Mental Health"

Mental health is one of the major global health issues affecting substantially more people than other non-communicable diseases. In the US, one in five adults have a mental health condition, and nearly one in twenty five adults has a serious mental illness. With the largest population in the world, China accounts for 17% of global mental, neurological and substance use cases. It was estimated that there are more than 40 million people suffering from major depressive disorder in China and 49 million people in India in 2013. In Europe, mental and behavioral disorders accounted for 183,000 deaths in 2014, and at least 1 in 20 deaths in Sweden, Denmark and Luxembourg were caused by the disorders. Given this international societal impact and significant care cost, governments around the world have honed in on tackling mental health issues and promoting mental wellbeing in the population. With the increasing awareness of mental health issues and the recent initiatives launched by research councils and funding bodies, much research has been focused on developing novel technologies for tackling this global health challenge.

Recent advances in imaging and sensing have facilitated the acquisition of detailed neurological signals and imaging techniques for better understanding of the disorder. In addition, new wearable technologies have enabled continuous sensing of neurological, physiological, and behavioral information of the users. These technologies have led to new insights into mental illnesses providing the needed data to improve the diagnosis, identify triggers of episodes, and enable preventative interventions with diverse machine learning approaches.

This special issue is in cooperation with the 2018 Researcher Links workshop on Mental Health Technologies (http://uslab.ujn.edu.cn/workshop/index.html) and also beyond it. It is dedicated to cover the related topics on technological advancements for mental health care and diagnosis with focus on pervasive sensing and machine learning. Only original research contributions will be considered.

Topics of interest include, but are not limited to, the following:
- Clinical challenges in mental health
- Pervasive sensing for mental health
- Computational methods for assessing cognitive impairment
- Machine learning for episode detection and early intervention
- Healthcare information system for managing mental health
- Wearable technologies for real-time and long-term monitoring of mental conditions
- Assistive technologies for self-management of mental diseases
- Data security and privacy for care support systems
- Decentralisation of mental health care systems using Blockchain and DLTs for mental health
- Innovative technologies for non-pharmaceutical mental health treatment

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Key Dates
Extended deadline for Submission: 31 Dec, 2018
First Reviews Due: 30 Mar, 2019 Revised
Manuscript Due: 30 May, 2019
Final Decision: 30 June, 2019