Introduction

Human-Computer Interaction (HCI) related development is entering a new era, which demands for new technologies to support the rapid development of Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR) applications. Current cutting edge technologies, which include brain-computer interface (BCI), image and vision computing, artificial intelligence, etc., have made the impact on HCI applications.

This special session aims to gather experts and scholars from related fields to present and share their recent research on HCI and brain informatics related applications. The purpose of this session is to provide a forum for discussion and interaction among researchers with interests in the cutting edge techniques of HCI and artificial intelligence applications, in particular, the rapid growth of AR/VR/AI applications amid COVID19 period. Participants are invited to submit papers in all areas of AI- and knowledge-based approaches, particularly in the areas of brain informatics.

Topics of Interest

Research topics of interest include, but not limited to:

- Artificial Intelligence
- AR/VR and its applications
- Big Data Analysis for HIC
- Brain Informatics
- Cloud Computing for City Brain
- Cloud-based Health Informatics
- Data Mining and Analytics
- EEG/MRI Technologies for Brain Informatics
- Knowledge Representation and Reasoning
- Metaverse and its applications
- Online Data Analysis
• Pattern Recognition and Computer Vision
• Virtual Reality for Education

Similar to the main conference of Brain Informatics 2022 (https://www.bi202w.org/), there are 2 types of paper submissions that are possible:

**Type I**: Full Paper Submissions. Papers need to have up to 10 pages in LNCS format using our online submission system. All full-length papers accepted will be published by Springer as a volume of the series of LNCS/LNAI.

**Type II**: Abstract Submissions. Abstracts have a word limit of 500 words. Experimental research is particularly welcome. Accepted abstract submissions will be included in the conference program and will be published as a single, collective proceedings volume.

Workshop and Special Session full papers will be published at the same BI'22 main conference proceedings at the Springer-Nature LNAI Brain Informatics book series (https://link.springer.com/conference/brain). Accepted full papers will be selected to publish in Brain Informatics Journal (Springer-Nature, https://braininformatics.springeropen.com/) upon significant revision.

**Special Session organizers**
• Paolo Mengoni, Hong Kong Baptist University, Hong Kong, China. Email: pmengoni@hkbu.edu.hk
• Kristen Li, Hong Kong Baptist University, Hong Kong, China. Email: csyxl@comp.hkbu.edu.hk
• Hao Lan Zhang, NIT, Zhejiang University, China. Email: haolan.zhang@nit.zju.ed cn

**Important Dates:**
28 February 2022: Paper submission deadline
15 March 2022: Abstract submission deadline
15 April 2022: Paper acceptance notification
20 April 2022: Notification of abstract acceptance
30 April 2022: Final paper and abstract submission deadline
5 May 2022: Accepted paper and abstract registration deadline
15 July 2022: Workshop (Half Day)