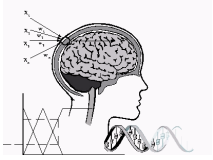
International
Innovation in Knowledge Based and Intelligent Engineering Systems



INVITED SESSION SUMMARY

Title of Session:
Physiological and knowledge-based engineering for social innovation

Name of Chair:
Atsuko K. Yamazaki (Digital Hollywood University, Graduate School, Japan)
Co-chairs:
Hiroshi Hasegawa (Shibaura Institute of Technology, Japan)
Tsukasa Yamanaka (Ritsumeikan University, Japan)

Details of Session:

Physiological information has been increasingly used over recent years to enhance the framework of knowledge-based engineering systems that are intended to contribute to social innovation for health and well-being. This information is also important to assess how effective the system is and has been utilized to bring about an innovative digital system. Due to rapid changes in technology and through the experiences of the COVID-19 pandemic, digital systems are now expected to play a much greater role in every aspect of the society, in particular as platforms to induce desirable social innovation. By using the analysis of both knowledge-based and physiological factors, the outcomes of a digital system can be assessed more accurately, its quality can be improved and its contribution to the society can be more clarified.

This invited session focuses on and invites studies related to system development and improvement by utilizing knowledge-based methodologies and/or physiological measurement data, such as a heartbeat rate, blood pressure, brain signals through electroencephalography (EEG), and hemodynamic signals through near infrared spectroscopy (fNIRS). The session also invites studies on system development and designing that attempt to contribute to the well-being of the society by inducing social innovation.

Website URL (if any):

Email & Contact Details:

Atsuko K. Yamazaki: atsuko_yamazaki@dhw.ac.jp
Hiroshi Hasegawa: h-hase@shibaura-it.ac.jp
Tsukasa Yamanaka: yaman@fc.ritsumei.ac.jp