

SIGNAL PROCESSING FOR HUMAN MOTION SYSTEMS

SPECIAL SESSION CHAIR : Dr. S.M.N. Arosha Senanayake

OBJECTIVE OF THE SESSION

Main objective of the proposed special session is based on state-of-the-art of inter/multidisciplinary nature of the analysis of patterns in human motion systems using sensors and vision. Based on the processing of signals obtained from sensors and vision, human movement patterns are analysed, quantified, classified and recognized. Algorithms and mechanisms used for signal processing lead development of real time complex adaptive and reprogrammable devices for many domains such as bio-engineering, sports medicine, sports biomechanics, rehabilitation, human modelling. This special session is planning to address design, implementation and prototypes development of state-of-the-art devices based on the human motion pattern systems.

SESSION OUTLINE

- Design, implementation and testing of real time complex adaptive systems based on body mounted sensors for human motion systems
- Design, implementation and testing of real time complex adaptive systems based on ground based sensors for human motion systems
- Design, implementation and testing of real time complex adaptive systems based on hybrid technology (combination of body mounted and ground based sensors) for human motion patterns.
- Design, implementation and testing of real time complex adaptive and reprogrammable devices based on tactile and vibro-tactile sensors for biofeedback in human motion patterns
- Real time therapeutics robotics devices for anomalies of human motion patterns

TOPICS OF INTEREST

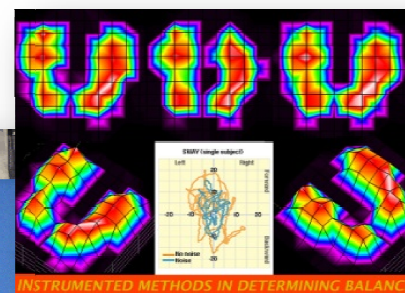
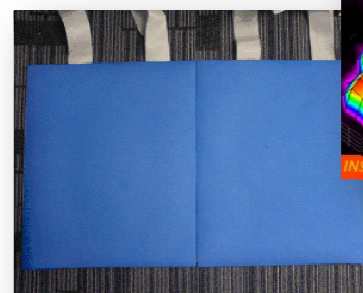
- Signal processing for rehabilitation devices.
- Signal processing for Biologically Inspired Robotics Devices (BIRD).
- Signal processing for bio-instrumentation
- Signal processing for human motion reconstruction
- Signal processing for human gait analysis

COMMITTEE MEMBERS OF THE SPECIAL SESSION

- James Goh, National University of Singapore, Singapore
- Micheal Yu Wang, Chinese University of Hong Kong, Hong Kong.
- Franz Fuss, University of Adelaide, Australia.
- Sardha Wijesoma, Nanyang Technological University, Singapore.
- Chao Chen, Monash University, Clayton Victoria, Australia.
- Denny Oetomo, The University of Melbourne, Australia
- Alex See, Ngee Ann Polytechnic, Singapore.
- Fatimah Ibrahim, University of Malaya, Malaysia.
- C. K. Loo, Multimedia University, Malaysia.
- Tan Ching Seong, University of Tunku Abdul Rahman (UTAR), Malaysia

CONTACT DETAILS

Dr. S.M.N. Arosha Senanayake, Senior Member/IEEE
Vice Chairman/IEEE RAS Chapter
School of Engineering
Monash University Sunway Campus Malaysia
Tel: +60 355146249
Mobile: +60 192145138
Email: aroshas@iecc.org



INSTRUMENTED METHODS IN DETERMINING BALANCE

