IEEE Symposium Series on Computational Intelligence
Symposium on Computational Intelligence for Human-Like Intelligence

Special Session on: Physiological and Affective Computing for Human Centred Systems

November 27 - December 1, 2017, Honolulu, Hawaii

The growth of health, wellbeing, activity monitoring and social computing continues to fuel developments in technologies such as the Internet of Things (IoT), wearable devices, sensors, actuators, mobile communication together with distributed management and information retrieval infrastructures. Through these technology mediums more user centred data can now be captured, monitored, stored and analysed to create ambient personalisation and contextualisation of services tailored to individual needs. To extend these capabilities there is a need to incorporate and utilize physiological information (e.g., as in computer-human interaction, health and fitness monitoring) together with the recognition, interpretation, processing, and modelling of human affective states in order to further enhance applications with human-like intelligence and responsiveness.

Practical applications of Affective and Physiological Computing (APC) based systems seek to enhance user context and sensitivity by monitoring, recognising and acting on our emotional states and physiological signals. Integrating these sensing modalities into intelligent and pervasive computing systems raises many new challenges for signal processing and modelling of complex high dimensional data sources such as: body signals (e.g., heart rate, brain waves, skin conductance and respiration) facial features, speech and human kinematics which also can be very noisy/uncertain and subject-dependent.

The Physiological and Affective Computing for Human Centred Systems special session is also organised through the IEEE Computational Intelligence Society's Emerging Technologies Task Force on Affective Computing. This special session aims to bring together researchers to discuss how CI techniques can be used to help solve challenging APC problems and conversely, how interpreting and modelling physiological and affect (emotion) data can inspire new approaches in CI and its applications in human centred technologies. Topics of interest for this special session include but are not limited to:

- Models of emotion and physiological information
- Classifiers for physiological information
- Applications based on/around physiological information
- Architectures for processing emotions and other affective states
- Automatic emotion recognition & synthesis from physiological signals, facial expressions, body language, speech, or neurocognitive performance

- Emotion mining from texts, images, or videos
- Affective interaction with virtual agents and robots
- Applications of affective computing in interactive learning, affective gaming, personalized robotics, virtual reality, social networking, smart environments, healthcare and behavioural informatics, assistive technology, industrial automation, distributed cognition etc.

For paper submissions and formatting guidelines please visit SSCI IEEE 2017 **submissions**. When submitting a paper please select the track for this special session.

Important Dates

Paper submission deadline: 2nd July 2017
Author notification: 27th August 2017
Deadline for final manuscript: 24th September 2017
Early registration deadline: 24th September 2017
Conference dates: 27th November – 1st December 2017

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