Keynote Speaker

Brain-Computer Interfacing Embedded
in Intelligent and Affective Systems

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Abstract

In this talk we survey recent research views on non-traditional brain-computer interfaces (BCI). That is, interfaces that can process brain activity input, but that are designed for the 'general population', rather than for clinical purposes. Control of applications can be made more robust by fusing brain activity information with other information, either explicitly provided by a user (such as commands) or extracted from the user by interpreting his or her behavior (movements, posture, gaze, facial expression, nonverbal speech) or sensing (neuro-)physiological characteristics (skin conductivity, heart rate, brain activity). Traditional BCI research, guided by clinical applications and focused on patients that have no other means than their brain activity for control and communication have neglected a possible role for BCI in multimodal interaction with intelligent devices. We will emphasize such a role and will also look at some roadmaps for BCI research (2020 and beyond) and how their authors see the development of BCI for intelligent systems.