

The role of physiological signals in human-machine interaction

Angelika Peer^{1,*}

¹NOI Techpark - Bruno-Buozzi-Straße 1 - via Bruno Buozzi, 1 - Italy - 39100, Bozen-Bolzano

Abstract

Novel human-machine interfaces not only consider verbal and touch interactions or interactions via gestures and facial expressions, but also exploit physiological signals. Physiological signals combined with contextual information, allow not only for the prediction of intentions related to what a person may intend to do, but also the how. In this talk, I will describe how physiological signals like heart rate, respiration rate, skin conductance, and electroencephalogram can be exploited to build brain and body computer interfaces and how recognized intentions and emotions can be mapped to real world adaptive actions.

Keywords

Human-machine interfaces, Contextual information, Heart rate, Respiration rate, Skin conductance, Electroencephalogram

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*Corresponding author.

✉ Angelika.Peer@unibz.it (A. Peer)



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