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Education

PhD, Neuroscience, Ludwig Maximilian University, Munich

Key Interests

Social Robotics | Human-Machine Interaction | Social Neuroscience | Mind Perception | Human-Robot Teaming | Social Brain Network

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SELECT PUBLICATIONS

- › E. Wiese *et al.*, I see what you mean: how attentional selection is shaped by ascribing intentions to others. *PLoS One* 7(9), e45391 (2012).
- › E. Wiese *et al.*, Robots as intentional agents: using neuroscientific methods to make robots appear more social. *Front Psychol* 8, 1663 (2017).
- › E. Wiese *et al.*, Seeing minds in others: mind perception modulates low-level social-cognitive performance and relates to ventromedial prefrontal structures. *Cogn Affect Behav Neurosci* 18(5), 837-856 (2018).
- › E. Wiese *et al.*, Implicit mind perception alters vigilance performance because of cognitive conflict processing. *J Exp Psychol Appl.* (2018, in print).

Research Focus

The SCI Lab examines how humans interact with human and nonhuman agents, such as robots or avatars. We use neurophysiological measures like EEG and fMRI to examine the behavioral and neuronal bases of human-human and human-machine interactions and try to understand how interacting with humans differs from interacting with machines, both socially and cognitively.

The main research focus is on investigating the causes and effects of mind perception in the context of human-robot interactions. The goal is to unravel what physical and behavioral features robotic agents need to have in order to be perceived as having a mind, and what effects 'having a mind' has on affect, behavior and cognitive processing in social interactions. The second research focus is on examining embodied cognition, in particular to what extent humans incorporate their environment when solving problems together with others. The goal is to investigate whether humans make effective use of their internal and external resources, and to identify under which conditions humans benefit from incorporating their social and nonsocial environment into cognitive processing.

Current Projects

- Identifying physical and behavioral factors that trigger mind perception and activate social brain areas in human-robot interaction
- Using neurophysiological measures to examine the effects of mind perception in realistic ("online") interactions between human and robots
- Identifying parameters that positively affect social bonding and performance in long-term human-robot interactions
- Examining the effect of metacognition on cognitive offloading in human-technology interactions