

IGSN - SYMPOSIUM

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Brain Computer Interfaces and their application in motor rehabilitation

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The use of EEG-based Brain-Computer Interfaces and VR for Neurorehabilitation

Rehabilitation for stroke patients with severe motor impairments (e.g., inability to perform wrist or finger extension on the affected side) is burdensome and difficult because most current rehabilitation options require some volitional movement to retrain the affected side. However, although these patients participate in therapy requiring volitional movement, previous research has shown that they may receive modest benefits from action observation, virtual reality (VR), and brain-computer interfaces (BCIs). These approaches have shown some success in strengthening key motor pathways thought to support motor recovery after stroke, in the absence of volitional movement. In this presentation, I will be talking about the part of my research that is related to the integration of VR training in BCI's for neurorehabilitation, pilot studies with stroke survivors, and future work trajectory towards more robust restorative brain-computer interaction.

Host:

MARITA METZLER

Department of Neurotechnology, University Hospital Knappschaftskrankenhaus Bochum GmbH, Ruhr Universität Bochum

Virtual guests are welcome!

