



# EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

**Freitag, 13. Juni 2014, 14 Uhr c.t.**

im Raum W2 1-143 der Universität Oldenburg  
und Raum H28 / R 2.31 des Med. Campus Magdeburg  
(per Videoübertragung)

***“Simultaneous TMS, EEG, & fMRI to investigate  
functional network accounts of visual cognition“***

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Cognitive neuroscience knows several tools of non-invasive brain imaging and stimulation, among which functional magnetic resonance imaging (fMRI), electroencephalography (EEG), and transcranial magnetic stimulation (TMS). Previous work showed that combining these methods in various ways can lead to fascinating and important insights that go beyond results obtainable with individual methods. I will present various research examples of such concurrent TMS & fMRI as well as TMS & EEG combinations in the context of studying visual cognition. Recently, we could also demonstrate that simultaneously combining all three methods is feasible in terms of signal quality, artifact control, and safety/comfort. I will outline the technical challenges of such concurrent TMS, fMRI, and EEG measurements, and describe first human subject data and possible future opportunities that arise from such a three-way combination for cognitive neuroscience and clinical applications.