



# EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

**Freitag, 9. Mai 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)

***"How musical rhythm entrains the human brain,  
explored with scalp and intracerebral EEG"***

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Getting entrained to music, and to musical rhythm and meter, is an extremely common human activity, shared by humans of all cultures. One of the major goals of our work is to explore the link between this entrainment behavior to musical rhythms on the one hand, and neurophysiological evidence of neural entrainment on the other hand. Specifically, we investigate whether the perception of temporal regularities induced by musical rhythms (i.e. the meter) could entrain neural activities at frequencies corresponding to these perceived regularities. To this aim, using scalp and intracerebral electroencephalography (EEG) in humans, we developed an approach to capture this processing of neural entrainment to musical rhythm and meter in the form of steady-state evoked potentials identified in the EEG spectrum. I will present several experiments conducted to test our approach within various contexts (e.g. complex rhythms, mental imagery of meter, sensorimotor synchronization). Taken together, these studies show how studying the neural entrainment to musical rhythm can give us a unique gateway to explore fundamental neural mechanisms such as sensorimotor integration.

Sylvie Nozaradan (<http://sylvienozaradan.webnode.com/>), MD PhD, is currently post-doctorate research fellow at the Institute of Neuroscience (UCL, Belgium). She conducted her PhD on the neural entrainment to musical rhythms both at UCL (Belgium) and the Brains (UdeM, Montreal, Canada), under the co-supervision of Drs. André Mouraux and Isabelle Peretz. She has a double background, in music (B.Sc. and M.Sc. in Music performance and music writing, CrB, Belgium) and science (medical doctor degree, neurology, UCL).