



EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

Freitag, 1. Februar 2013, 14 Uhr c.t.

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

***“Moving Sound: Electrophysiological Correlates
of Auditory Motion Perception”***

Stephan Getzmann

Ruhr-Universität Bochum

The detection of a change in space is an essential prerequisite of adequate responding to dynamic aspects of our environment. While visual motion perception is well understood, the neural mechanisms of auditory motion processing are still quite unclear. In a series of EEG experiments, we investigated auditory motion perception using a delayed motion paradigm, in which participants attended to a free-field sound stimulus that, after an initial stationary phase in a central position, started to move in a horizontal direction. The onset of motion typically elicited a characteristic sequence of auditory evoked potentials, the so-called motion-onset response (MOR). Here, three recent experiments are presented that focussed on (a) the effect of auditory pre-stimulation on auditory motion perception, (b) the motion-specificity of MOR, and (c) the effect of congruent and incongruent visual motion on the auditory MOR. The results suggested the MOR to be an electrophysiological correlate of change processing in auditory space. It is shown that motion processing is enhanced by a preceding adaptation of a stationary sound, and that early auditory motion processing is impaired by incongruent visual motion. The results are discussed within the framework of the “opponent channel model”, assuming that auditory motion information is represented by a gradual change of activation in two broadly-tuned, opposite hemispheric spatial channels.