



Sonderforschungsbereich/Transregio 31 "Das aktive Gehör"

EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

Freitag, 28. Januar 2011, 14 Uhr c.t.

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

***"The neurobiology of auditory plasticity in
musicians"***

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"Hearing" as a professional activity, for example in musicians or sound engineers can be considered as an excellent model of neuroplasticity. Specialised perception is reflected in specific adaptations of auditory brain networks and brain structures. These adaptations reflect not only auditory attention per se, but also specific auditory skills, such as sound source localisation in conductors or identification and processing of specific instrument timbres in violinists, or mental imagination of melodies.

Interestingly, maladaptive changes in sensorimotor-auditory networks can also be observed in musicians suffering from a movement disorder, called focal dystonia. Here, one can demonstrate impressingly how movement is co-represented in auditory patterns. This co-representation in turn can be utilized to improve motor rehabilitation in stroke patients using auditory stimulation.

In my lecture I will introduce these fascinating topics and extend the discussion towards further perspectives of auditory-sensory-motor coupling and real-time sonification of movements.