



EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

Freitag, 29. April 2016, 11.00 Uhr c.t.

im Raum W30 0-33/34 der Universität Oldenburg (NeSSy)
und Raum H28 / R 2.31 des Med. Campus Magdeburg (per Videoübertragung)

"Crossmodal Plasticity in Auditory Cortex Following Deafness"

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In the absence of acoustic input, it is proposed that crossmodal reorganization in deaf auditory cortex may provide the neural substrate mediating compensatory visual functions. In support of this hypothesis we will show that deaf cats are significantly faster at learning to discriminate both human and conspecific faces compared to hearing cats. Moreover, bilateral deactivation of temporal auditory field (TAF) resulted in the elimination of the enhanced face (both conspecific and human) discrimination learning capabilities of deaf cats. Unilateral deactivation of left TAF resulted in a partial, but significant, decrease in the enhanced face learning abilities of deaf cats. These results show that enhanced visual cognition in deaf cats is caused by crossmodal reorganization within TAF of "deaf" auditory cortex. Overall, these results demonstrate a causal link between crossmodal reorganization of auditory cortex and enhanced visual abilities of the deaf, and identified the cortical regions responsible for adaptive visual cognition.