



EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

Freitag, 16. December 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)

***"Modulation of cortical frequency selectivity by
adaptation and attention"***

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Adaptation, the reduction in neural responses to repeated stimuli, is a ubiquitous phenomenon throughout human and animal sensory systems and is an important aspect of sensory neural coding. While its mechanisms are not yet fully understood it has been suggested it acts as an efficient coding strategy, reducing redundancy and inter-neural correlations and effectively providing neurons with a short term sensory memory. This plasticity of neural coding helps condition the neurons to the statistics of an adapting stimulus and in the auditory system it has previously been suggested this could alter the neural representation of frequency over time. We have investigated this phenomenon through EEG experiments and computational modelling to discover the effects of adaptation on frequency selectivity in human auditory cortex and help suggest the underlying mechanisms. This is also built on by using an attentional modulation to investigate the combined effects of adaptation and attention on frequency tuning in the cortex.