



# EINLADUNG

zum Vortrag im Rahmen des Seminars des SFB/TRR 31

**Freitag, 15. Januar 2010, 14 Uhr c.t.**

im Raum W2 1-143, Universität Oldenburg  
und  
im Raum G26.1 – 010, Rechenzentrum  
der Universität Magdeburg (per Videoübertragung)

***"Binaural hearing with cochlear implants"***

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Cochlear implants (CIs) are increasingly supplied at both ears to provide implantees with the advantages of binaural hearing. However, the access to binaural cues, particularly to interaural time differences (ITDs), is limited with current CI systems. One problem is that the sensitivity to fine timing ITD decreases dramatically for pulse rates exceeding a few hundred pulses per second, while such high rates are required for encoding speech. I will present an approach to improve the perception of ITDs at high pulse rates, namely the introduction of binaurally-synchronized jitter in the stimulation timing.

In the second part I will present the results of an experiment with CI listeners, where binaural cues (either ITD or interaural level difference) are presented simultaneously at an apical and a basal electrode pair. Five out of six listeners showed binaural interference, i.e. the lateralization of a target sound was reduced by the presence of an interferer sound, at least in one stimulus configuration. We tested the hypothesis that embedding the interferer sound into a sequence of identical sounds reduces the interference effect. All listeners showing interference also showed some amount of release from interference, which is interpreted as an objective measure of stream segregation.