Arbeitsgruppe: Auditory Signal Processing
Ansprechpartner: Volker Hohmann

Forschungsschwerpunkte und Interessen:

- Models for the signal processing in the human auditory system
- Application of auditory models to signal processing in hearing aids and related applications (e.g., speech recognition)
- Mechanisms and models of auditory scene analysis
- Sound localization in humans

Methoden:

- Pychoacoustic and audiological measurements in normal hearing and hearing impaired subjects
- Computer simulations of auditory models
- Real time signal processing
- Virtual Acoustics

Ausgewählte Publikationen der letzten fünf Jahre

1. Dietz, M., Ewert, S., Hohmann, V. (2011). "Model-based direction estimation of concurrent speakers from a binaural signal." Speech Communication 53: 592-605.
2. Klein-Hennig, M., Dietz, M., Hohmann, V., Ewert, S. D. (2011). "The influence of different segments of the ongoing envelope on sensitivity to interaural time delays." J. Acoust. Soc. Am. 129(6): 3856-3872.
3. Neher, T., G. Grimm, Hohmann, V. (2014) Perceptual Consequences of Different Signal Changes Due to Binaural Noise Reduction: Do Hearing Loss and Working Memory Capacity Play a Role? 35: e213-e227 10.1097/AUD.0000000000000054.
4. Chen, Z. Chen; Hohmann, V. (2015) "Online Monaural Speech Enhancement Based on Periodicity Analysis and A Priori SNR Estimation," in Audio, Speech, and Language Processing, IEEE/ACM Transactions on , vol.23, no.11, pp.1904-1916, Nov. 2015 doi: 10.1109/TASLP.2015.2456423
5. Grimm, Giso and Ewert, Stephan and Hohmann, Volker (2015). Evaluation of Spatial Audio Reproduction Schemes for Application in Hearing Aid Research, Acta Acustica united with Acustica 101(4), 842-854, doi:10.3813/AAA.918878

(Angestrebte) Kooperationen/Projekte:

Projects on the topic of Auditory Scene Analysis