Elektrotechnik-Elektronik-Informationstechnik

EEI KOLLOQUIUM

Multichannel Adaptive Sound Acquisition

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Diskussionsleitung: Prof. Dr.-Ing. R. Müller

Multichannel sound acquisition uses multiple microphones and their information diversity to reconstruct cleaner sound from originally noisy or reverberant recordings. The availability of multiple microphones, however, implies many possibilities regarding the actual microphone-array configuration and in many cases uncertainty of the route to the desired signal components. This talk advocates the utility of adaptive Bayesian modeling as a means to resolve the actual acoustic configuration from the noisy signals while performing the desired sound reconstruction. Because of the simultaneous uncertainty of source, channel, and observation noise, we refer to blind adaptive signal processing. The "blind multichannel equalization and channel identification" (BENCH) approach by the author is then reported with some detail and results are presented in terms of subjective speech enhancement and automatic speech recognition performance.