Elektrotechnik-Elektronik-Informationstechnik

EEI KOLLOQUIUM

**Broadband Signal Processing Using Polynomial
Eigenvalue Decomposition
with Application to Speech Enhancement**

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Diskussionsleitung: Prof. Dr.-Ing. W. Kellermann

Subspace-based approaches via eigenvalue decomposition of spatial covariance matrices are common in multichannel signal processing. In this talk, polynomial covariance matrices will be exploited as a way to capture space-time information about the signals received at a sensor (microphone) array. Polynomial eigenvalue decomposition (PEVD) diagonalizes jointly across the dimensions of space and time and leads to a family of space-time subspace-based signal processing algorithms that are particularly suited to broadband signals. An example application of PEVD applied to speech enhancement will be discussed.