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EEI KOLLOQUIUM

Recent Advances on Phase-Aware Speech Signal Processing: Theory and Applications

Dr. Pejman Mowlae

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Fraunhofer IIS, Tennenlohe, Am Wolfsmantel 33, Raum 0C1.05.

Speech signal processing is a key factor in mobile telephony and assistive listening devices. Large progress has been made to improve the quality of the speech technologies. Among these efforts, the Fourier spectral magnitude based speech processing methods have been successfully employed while the spectral phase has been largely neglected. In this talk, we present the historical standpoints on the phase importance beliefs. Then we focus on phase estimation fundamentals. Two speech applications are exemplified to demonstrate the usefulness of phase processing. Finally conclusions and future directions are provided. List of publications and listening files available at www.spssc.tugraz.at/PhaseLab