Special Issue on

Processing Reverberant Speech: Methodologies and Applications

for the IEEE Transactions on Audio, Speech and Language Processing

This is a call for papers for a special issue on "Processing Reverberant Speech: Methodologies and Applications" to be published in mid 2010 in the IEEE Transactions on Audio, Speech and Language Processing.

This special issue will focus on the recent trends in techniques designed to handle reverberant speech directed at both humans and computers, including speech dereverberation and automatic speech recognition (ASR) in reverberant environments. When a speech signal is captured by a distant microphone in a room, reverberation components are detrimental to the quality of the observed speech and often cause serious degradation in various speech processing applications, including speech recognition, teleconferencing, hearing aids, human-computer dialogue systems, and meeting recordings. To extend the applicability of such systems in real acoustical environments, researchers have been tackling the reverberation problem, and useful techniques have recently been reported in a variety of technological areas.

We invite papers describing various aspects of signal processing techniques for processing reverberant speech. Submissions must not have been previously published, with the exception that substantial extensions of conference papers will be considered. Specific topics of interest include:

- Microphone array signal processing-based speech dereverberation, and monaural speech enhancement techniques for reducing reverberation effects
- Robust ASR techniques in the presence of reverberation
- Applications of reverberant speech processing techniques to voice recording, teleconferencing, hearing aids, human-computer dialogue systems, meeting recognition, and others
- Methods for evaluating reverberant and dereverberated speech quality
- Integration of reverberant speech processing techniques with other signal processing techniques
- Computational auditory scene analysis in reverberant environments
- Techniques for the modeling and analysis of reverberant speech

Schedule:
First announcement: 23 April 2009 (during ICASSP 2009)
Submission deadline: 15 November 2009
Notification of acceptance: 22 May 2010
Final manuscript due: 22 July 2010
Tentative publication date: October 2010

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