

Call for Papers

WSEAS TRANSACTIONS on SIGNAL PROCESSING

Special Issue on Multi-Microphone Speech Enhancement and Source Separation

Editor:

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Aim: Propose an efficient multi-channel speech enhancement approach, based on the idea of adding a pre-treatment preceding the speech enhancement via a multi-channel method. This approach consists at first step in applying mono-channel speech enhancement method to process each noisy speech signal independently and then applying a multi-channel method based on the delay estimation and the blind Speech Separation in order to obtain the enhanced speech. Our idea is to apply a different class of mono-channel method in order to compare between them and to find the best combination that can remove a maximum noise without introducing artifacts. We resort the use of two classes of algorithms: the spectral subtraction and the statistical model based methods. In order to evaluate our proposed approach, we have compared it with our multi-channel speech enhancement method without a preprocessing. Our evaluation that was performed on a number of records corrupted by different types of noise like white, Car and babble shows that our proposed approach provides a higher noise reduction and a lower signal distortion.

Topics:

Speech enhancement, Mono-channel Speech Separation, Multi-channel Speech Separation, Delay Estimation, Spectral Subtraction, Statistical Model Based Methods

Submission Deadline: December 31, 2016

Submission Rules: Manuscripts should be prepared according to the formatting instructions. Manuscripts submitted to the Special Issue on Heat Transfer and Thermo-mechanical Wear in High Temperature Systems and Industry are to be submitted following the standard submission process. All submitted manuscripts will be reviewed using the standard procedure that is followed for regular submissions.