Abstract

In recent years, speech development has become an interesting area in the field of signal processing especially in the applications of hearing aids. In hearing aid applications, the speech enhancement technique has been employed mainly for dipping the additive background noise. During the speech enhancement process, high background noise occurs due to the rapture nature of the speech. In order to overcome this problem, various methods have been employed for increasing the speech quality of hearing aid application. This paper provides an outlook of the speech enhancement techniques in a detailed manner with various speech enhancement algorithms such as Wiener filtering, beamformer, generalized singular value decomposition, transformations, and spectral subtraction technique. These methods have been designed with the main aim of reducing background noise. This paper discussed the merits and demerits of all speech enhancement algorithms with their unique characteristic features. The performance of the algorithm has been evaluated with the help of parameter metrics such as PSEQ and SNR.
- Young Woo Lee, Sang Min Lee, Yoon Sang Ji, Jong Shill Lee 2007, Young Joon Chee, Sung Hwa Hong, Sun I. Kim, “An Efficient Speech Enhancement Algorithm for Digital Hearing Aids Based on Modified Spectral Subtraction and
A Thorough Investigation on Speech Enhancement Techniques for Hearing Aids


Index Terms

Computer Science  Signal Processing

Keywords
Speech enhancement  Hearing Aids  Wiener filter  Spectral subtraction technique