ROBUST FEATURES FOR NOISY SPEECH RECOGNITION BASED ON FILTERING AND SPECTRAL PEAKS IN AUTOCORRELATION DOMAIN (ThuPmOR1)

Author(s) :

Gholamreza Farahani (Amirkabir University of Technology, Iran)
Mohammad Ahadi (Amirkabir University of Technology, Iran)

Abstract :

This paper introduces a novel representation of speech for the cases where the speech signal is corrupted by additive noises. In this method, the speech features are computed by reducing additive noise effects via an initial filtering stage followed by the extraction of autocorrelation spectrum peaks. A task of speaker−independent isolated−word recognition was used to demonstrate the efficiency of these robust features. The cases of white noise and colored noise such as factory, babble and car noises were tested. Experimental results show significant improvement in comparison to the results obtained using traditional feature extraction methods.

Menu