INCORPORATING FREQUENCY WARPING INTO SPARSE COMPONENT ANALYSIS (ThuAmOR9)

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Abstract :

Frequency warping using short−time Laguerre transform (STLT) has been employed here as an effective tool in increasing the efficiency of the sparse component analysis (SCA) for underdetermined blind source separation systems. An attempt has been made to maximise a measure of sparseness. There are three major advantages for such an application; 1. The psycho−acoustic features such as fundamental harmonics are well separated in frequency domain, 2. The permutation problem as the most troublesome effect in frequency domain blind source separation (FDBSS), is mitigated, and 3. In SCA the sparseness measured based on l0−norm, increases and hence the performance of the SCA methods is improved.

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