

## An Efficient Separation for Convolutional Mixtures

**Authors :** Salah Al-Din I. Badran, Samad Ahmadi, Dylan Menzies, Ismail Shahin

**Abstract :** This paper describes a new efficient blind source separation method; in this method we use a non-uniform filter bank and a new structure with different sub-bands. This method provides a reduced permutation and increased convergence speed comparing to the full-band algorithm. Recently, some structures have been suggested to deal with two problems: reducing permutation and increasing the speed of convergence of the adaptive algorithm for correlated input signals. The permutation problem is avoided with the use of adaptive filters of orders less than the full-band adaptive filter, which operate at a sampling rate lower than the sampling rate of the input signal. The decomposed signals by analysis bank filter are less correlated in each sub-band than the input signal at full-band, and can promote better rates of convergence.

**Keywords :** Blind source separation, estimates, full-band, mixtures, sub-band

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