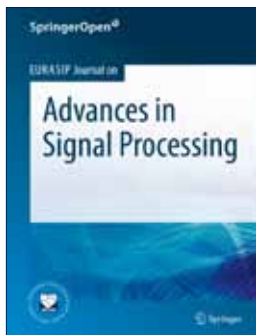


# EURASIP Journal on Advances in Signal Processing

## Special Issue on Dependent Component Analysis

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Source separation aims at finding the components that make up a signal through a mixing utilizing the information from observations over different channels. The most popular blind source separation approach has been independent component analysis, which since its introduction in the 1980s has attracted a great deal of interest and has demonstrated success in fields ranging from audio separation to biomedical signal analysis. The main assumption of independent component analysis is the statistical independence of the sources; various solutions of the problem heavily utilize this assumption e.g. by minimizing mutual information of the sources. Many developments have been made on the methodological side, and simple blind methods have been extended to Bayesian ones, instantaneous mixing models have been extended to convolutional mixtures and various applications (speech, audio, astrophysical images, etc) have been addressed.

However, researchers and practitioners have been increasingly disappointed with the non-satisfaction of the independence assumption in real-life applications. Over the last 5-10 years a number of sporadic papers have appeared on studying the more complicated problem of dependent component analysis. Methods under titles independent subspace analysis, independent vector analysis, tree-dependent component analysis, topographic component analysis, correlated component analysis have been suggested and been tested in applications such as MEG, fMRI and astrophysical images. In this special issue, following on the success of the special session on the same topic in EUSIPCO 2011 at Barcelona, we would like to present a unified platform, where new methodologies and applications of dependent component analysis are discussed, and to draw the attention of the signal processing community to this important problem and its potentials in applications. Topics include but are not limited to:

- ▶ Multidimensional component analysis
- ▶ (Independent) subspace analysis
- ▶ Vector component analysis
- ▶ Correlated component analysis
- ▶ Topographical component analysis
- ▶ Tree-dependent component analysis
- ▶ Blind dependent component analysis
- ▶ Informed (Bayesian) dependent component analysis
- ▶ and their applications

## Submission Schedule

- ▶ **Manuscript due:**  
April 1, 2012
- ▶ **First review results:**  
July 1, 2012
- ▶ **Final version:**  
October 1, 2012
- ▶ **Publication date:**  
January 1, 2013

## Submission Instructions:

Before submission authors should carefully read over the Instructions for Authors, which are located at [asp.eurasipjournals.com/authors/instructions](http://asp.eurasipjournals.com/authors/instructions). Prospective authors should submit an electronic copy of their complete manuscript through the SpringerOpen submission system at [asp.eurasipjournals.com/manuscript](http://asp.eurasipjournals.com/manuscript) according to the submission schedule. They should choose the correct Special Issue in the “sections” box upon submitting. In addition, they should specify the manuscript as a submission to the “Special Issue on Dependent Component Analysis” in the cover letter. All submissions will undergo initial screening by the Guest Editors for fit to the theme of the Special Issue and prospects for successfully negotiating the review process.

### Guest Editors

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