Econometrics and Statistics
Part B: Statistics

CALL FOR PAPERS

Special Issue on
MIXTURE MODELS

`http://www.elsevier.com/locate/ecosta`

We are inviting submissions for a special issue of the journal *Econometrics and Statistics (Part B: Statistics)* in Mixture Models. Mixture models are very popular for classification, in the broad sense, and analyses involving latent variables; however, their use is not limited to these fields. Other uses can be found in survival analysis, smoothing, and empirical Bayes, to mention but a few areas. Over the past few years, mixture models have been intensively researched. This work is spread across theory, implementation, and application. Despite their growing popularity and the modelling flexibility that they offer, mixture model-based approaches come with a number of challenges. For one, parameter estimation is troublesome because the likelihood surface is notoriously difficult, with many singularities and local maxima. Iterative parameter estimation is almost always required, with variants of the EM algorithm remaining the most popular approaches. That said, other approaches such as variational approximations and MM algorithms are gaining traction. Determining the number of components and, more generally, model selection are also research directions of significant interest. Other uses can be found in food authenticity studies, medicine, the social sciences, nutrigenomics, and gene expression studies.

Key research areas in mixture modelling include:

- Parameter Estimation
- Hypothesis Testing
- Categorical Data Analysis
- Identifiability Problems
- Cluster-Weighted Models
- Model Selection
- Classification and Clustering
- Mixtures of (Generalized) Linear Models
- Bayesian Approaches
- Non-Gaussian Mixtures
- Mixtures of Profile Likelihoods
- Dimension Reduction

In order to be considered for publication the papers should have a significant novel component pertaining to Mixture Models. Original methodological contributions to mixture modelling inspired in applications will also be considered. Papers dealing, directly or indirectly, with theoretical, computational and technical elements are particularly encouraged. Authors who are uncertain about the suitability of their papers should contact the editors. All submissions must contain original unpublished work that is not being considered for publication elsewhere. Submissions will be refereed according to standard procedures for Econometrics and Statistics. Information about the journal can be found at http://www.elsevier.com/locate/ecosta.

The deadline for submissions is **20 March 2016**. However, papers can be submitted at any time and once they are received, they will enter the editorial system immediately.

Papers for the special issue should be submitted using the Elsevier Electronic Submission tool EES: http://ees.elsevier.com/ecosta. In the EES, please choose the special issue on *Mixture Models*.

The special issue editors:

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