



1. Scope

With the rapid development of computer storage and network technologies, an explosive growing number of multimedia data are generated and shared each single day. A variety of social websites, such as Youtube, Flickr, Picasa and Facebook, provide us a plenty of multimedia data, bringing along both challenges and opportunities to deal with the problems in large-scale multimedia understanding and management. Research on inferring the compact and accurate representations for different media types brings profound impacts to the traditional multimedia search and recognition technologies and enables a wide variety of applications and services, such as indexing, recommendation, advertising, and personalization. The study on multimedia representation has attracted extensive research interests over last decades. In the web 2.0 era, many new research issues are rising. For example, web multimedia data are always accompanied with Meta data, including tag, web-links, user ratings, etc. It therefore turns to a great challenge to properly combine the different sources to obtain a good multimedia and cross media representation. While machine learning has been shown effective for multimedia representation, the computation efficiency of the algorithms is particularly important when the size of the multimedia databases keeps growing. In this special issue, we target at bringing together research breakthroughs on learning multimedia representation for large scale multimedia database and the related applications. Novel learning algorithms for scalable multimedia representation and related interesting application are highly encouraged. Discussion on new technologies that will be potentially impactful with primary results is welcomed too. This special issue targets the researchers and practitioners from both the industry and academia. Topics of interest include but not limited to:

- Feature-oriented scalable multimedia representation
 - Multimedia feature design
 - Semantic feature extraction
 - Feature selection
 - Spatial-temporal contextual feature for video representation
 - Multi-view learning for feature fusion
 - Combining content feature and metadata such as web links and tags for multimedia and cross media representation
- Dimension reduction, matrix factorization and indexing techniques for scalable multimedia representation
 - Supervised/Semi-supervised learning for multimedia semantic representation

- Kernel methods for multimedia representation
- Scalable manifold learning
- Sparse representation
- Multimedia hashing and indexing
- Semantic indexing
- Learning for cross media representation
- Related applications
 - Classification/recognition /tagging/retrieval of Web multimedia
 - Large-scale multimedia copy detection and near-duplication retrieval
 - Relevance feedback in multimedia representation
 - Personalized representation for retrieval, query suggestion and recommendation
 - Large scale cross-media retrieval and new media type retrieval

2. Submission Guideline

Authors should prepare their manuscript (6-15 pages in the Neurocomputing publishing format) according to the Guide for Authors available from the online submission page of the Neurocomputing at <http://ees.elsevier.com/neucom/>. All the papers will be peer-reviewed following the Neurocomputing reviewing procedures.

Notes: when submitting your manuscript, at the step of “Selecting an Article Type is Required for Submission”, please indicate: “Special Issue: LSMR”.

Important Dates:

- Paper submission due: Nov. 1, 2011
- First notification: Jan. 30, 2012
- Revision: Mar. 15, 2012
- Final decision: May.1, 2012
- Publication date: Fall 2012 (Tentative)

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