Call For Papers
Multimedia Tools and Applications (Springer)

Special Issue on Multimodal Data Understanding and Analysis

Summary and Scope:
In real applications, one usually uses multimodal features to characterize the diversity of objects. For example, one may employ image, video, and text to explain the images or videos in multimedia domain, and combine structural magnetic resonance imaging (MRI), fluorodeoxyglucose positron emission tomography (FDG-PET), and Cerebrospinal fluid (CSF) biomarkers for diagnosis and prognosis in medical imaging analysis. Learning multimodal data is an extraordinary potential multi-disciplinary field (including machine learning, mathematics and statistics), with the goal of constructing models that can fuse information from multiple modalities. Early research on multimodal data learning focused on first concatenating the features from all modalities into a long vector and then building models with the methods on single modal learning. This has been demonstrated and manifested to easily lead to the issues of cures of dimensionality and heterogeneity. Hence, it will be interesting and challengeable to learn multimodal data for addressing aforementioned issues.

The main aim of this special issue is bridging the gap between all kinds of learning methods and the practical applications. The list of possible topics includes, but not limited to:

- Multimodal transaction data understanding and analysis
  - Data clean (e.g., missing value fill-in and feature extraction)
  - Association rule mining (e.g., merging pattern and frequent pattern mining)
  - Noise/Outlier detection (e.g., generative methods, and discriminative methods)
  - Multimodal transaction tools and applications
- Multimodal multimedia data understanding and analysis
• Feature representation on multimedia data (e.g., deep learning methods, local methods, and global methods)
• Big multimedia tools and applications (e.g. ranking, hashing, and retrieval)
• Multimodal multimedia understanding and analysis (e.g., zero shot learning, transfer learning, and unsupervised/supervised/semi-supervised learning)
• Multimodal imaging data understanding and analysis
  • Computer-aided imaging detection/diagnosis (e.g., disease identification, clinical score prediction)
  • Multimodal brain imaging registration and segmentation (e.g., random forest methods and sparse methods)
  • Multimodal medical understanding and analysis

**Submission Guideline**

Authors should prepare their manuscript according to the Guide for Authors available from the online submission page of the Multimedia Tools and Applications at [https://www.editorialmanager.com/mtap/default.aspx](https://www.editorialmanager.com/mtap/default.aspx). All the papers will be peer-reviewed following the Multimedia Tools and Applications reviewing procedures.

**Important Dates:**

- Paper submission due: May. 15, 2016
- First notification: Aug. 15, 2016
- Revision: Oct. 15, 2016
- Final decision: Dec. 15, 2016

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