Special Issue on Big Media Data: Understanding, Search, and Mining
IEEE Transactions on Big Data

The explosion of images, videos and other media data in the Internet, mobile devices, and desktops has attracted more and more interest in the Big Media research area. Big media opens great unprecedented opportunities to address many challenging computing problems, offering a promising possibility for in-depth media understanding, as well as exploring the very big scale media data to bridge the well-known semantic gap between high-level semantic and low-level features. Big media provides richer information, ranging from social relations to context information associated to rich media data of diverse modalities. It also provides us the opportunity to mine reliable and helpful knowledge from Big media for a wide variety of applications.

Big media is big in terms of various aspects, such as the number of media items, the dimension of the representation, and the number of concepts, and thus entails a lot of research challenges and opportunities. For example, how does the traditional machine learning algorithms, which have been proven efficient and effective in thousands of data points, scale up to the web-scale big media data with millions and even billions of items? Seeking the answer motivates us to design parallel and distributed machine learning platforms, exploiting GPUs as well as developing practical algorithms to fit in restricted storage limits and accelerate the algorithms with the ever-growing size of the database and the dimension. Moreover, how is the big media data organized and how can it be managed to enable efficient browsing and retrieval? The research interests in this direction produced many hashing, indexing and clustering algorithms for high-dimensional data. Besides, it is also important to construct benchmark data to facilitate and validate the newly-developed big-media algorithms.

This special issue targets the researchers and practitioners from both the industry and the academia, and provides a forum to publish recent state-of-the-art achievements in the Big Media research area. Topics of interest include, but are not limited to:

- Image annotation and classification with Big Image Data
- Video understanding with Big Video Data
- Machine learning platform for Big Media Data
- Machine learning algorithms with practical optimization algorithms for Big Data
- Large scale clustering for Big Media Data
- Large scale neighborhood graph construction for Big Media Data
- Browsing and Summarizing the Big Media Data
- Hashing algorithms for Big Media Data
- Indexing algorithms for Big Media Data
- Compact coding for Big Media Data
- Benchmark data
- Knowledge mining from Big Media Data
- Algorithms and applications with Big social media
- Business analytics for Big Media data
- Other applications of Big Media Data

Submission Instructions

Before submitting your manuscript, please ensure you have carefully read the Instructions for Authors for IEEE Transactions on Big Data (TBD). The complete manuscript should be submitted through TBD's submission system. To ensure that you submit to the correct special issue, please select the appropriate section in the drop-down menu upon submission. In your cover letter, please also clearly mention the title of the SI.

Important Dates

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