

# Transfer Learning for Multimedia Applications (MTAP SI 1140T)

Special Issue on Multimedia Tools and Applications

## 1 Summary and Scope

Multimedia applications naturally involve heterogeneous domain data, e.g., text, image, audio and video. Data from heterogeneous domains tend to have different marginal and conditional distributions. However, conventional machine learning approaches assume that the training data and the test data are from the same data distribution. Thus, there is an unavoidable obstacle in the multimedia applications—how to mitigate the domain shifts in cross-modal algorithms? Unfortunately, a majority of existing approaches in the multimedia community ignored the problem or just left it for the future research. Recently, transfer learning has been proven to be effective to handle the domain shift problem and transfer knowledge from one domain to the other related domains. Now it is the time to face the problem in multimedia and investigate it with transfer learning!

This special issue is devoted to the publication of high-quality research papers on transfer learning for various multimedia applications, such as, multimedia retrieval, classification, recommendation, multi-modal data mining, etc. The special issue will seek for original contribution of works, which address the key challenges and problems.

### Potential topics of interest include but are not limited to the following

- Transfer learning for image/video/music/audio retrieval
- Transfer learning for recommendation/multimedia database
- Transfer learning for multimedia security
- Transfer learning for mobile-based multimedia applications
- Domain adaptation with deep/traditional models
- Multi-source domain adaptation for multimedia applications
- Heterogeneous domain adaptation for multimedia application
- Zero-shot learning and its applications for multimedia
- Multi-view learning and its applications for multimedia
- Fine-grained multimedia management with transfer learning
- Robust transfer learning algorithms for noisy multimedia data
- Distributed transfer learning for distributed multimedia data
- Binary transfer learning algorithms for large-scale multimedia analysis
- New multimedia applications of transfer learning
- Survey papers with regards of transfer learning for multimedia applications
- New multimedia datasets for transfer learning
- New transfer learning tools for multimedia analysis

## 2 Submission Guideline

Submitted papers should present original, unpublished work, relevant to one of the topics of the Special Issue. All submitted papers will be evaluated on the basis of relevance, significance of contribution, technical quality, scholarship, and quality of presentation, by at least three independent reviewers. It is the policy of the journal that no submission, or substantially overlapping submission, be published or be under review at another journal or conference at any time during the review process.

Authors should prepare their manuscripts according to the online submission requirements of Multimedia Tools and Applications (MTAP) at <https://www.editorialmanager.com/mtap/default.aspx>. When you submit, please notice that **article type for submissions will be 1140T - Transfer Learning for Multimedia Applications**. All the papers will be peer-reviewed following the MTAP reviewing procedures. The submissions should clearly demonstrate the evidence of benefits to society or large communities. Originality and impact on society, in combination with the media nature and innovative technical aspects of the proposed solutions, will be the major evaluation criteria.

There are no pages charges in MTAP. Papers extending previously published conference papers are acceptable, as long as the journal submission provides a significant contribution beyond the conference paper, and the overlap is described clearly at the beginning of the journal submission. All publication decisions are subject to approval by the MTAP Editorial Board.

Submissions that are out of scope or not suitable for MTAP, but may still have merit for readers of other journals, may be declined and sent to transfer desk.

### **3 Important Dates:**

- Submission Deadline: Feb 15th, 2019
- Final Manuscript Due: May 15th, 2019

### **4 Guest Editors**

- **Dr. Jingjing Li**, School of Computer Science and Engineering, University of Electronic Science and Technology of China, China, Email: jjl@uestc.edu.cn
- **Dr. Zhengming Ding**, Department of Computer, Information and Technology, Indiana University-Purdue University Indianapolis (IUPUI), USA, Email: zd2@iu.edu
- **Dr. Weiqing Wang**, School of Information Technology, Monash University, Australia, Email: Teresa.Wang@monash.edu