

Call for Papers
Multimedia Tools and Applications
Special Issue on Visual Multimedia Learning from Big Surveillance Data

Intelligent video surveillance is an important topic in the field of computer vision and pattern recognition. Significant progress has achieved in the last decades, from object detection, tracking and parsing to activity recognition and video understanding. With the development of internet technology and the ubiquitous presence of low-cost surveillance cameras nowadays, surveillance video has become a typical big data, offering both opportunities and challenges for intelligent video surveillance. Visual multimedia learning, which can be treated as the most significant breakthrough in the past 10 years, has greatly affected the methodology of computer vision and achieved terrific progress in both academy and industry. Visual multimedia learning is firstly adopted in ImageNet Competition for object categorization, which achieved a 12% progress in 2012 and confirmed the priority of deep learning for computer vision applications. From then on, deep learning has been adopted in all kinds of computer vision applications and many breakthroughs have achieved in sub-areas, like DeepFace on LFW competition for face verification, GoogleNet for ImageNet Competition for object categorization. It can be expected that more and more computer vision applications will benefit from Visual multimedia learning. On one hand, the mass data involve more abundant information to mine. It suffers from various difficulties such as noise, label deficiency and computational complexity.

This special issue focuses on learning methods to achieve high performance Visual Multimedia analysis and understanding under uncontrolled environments in large scale, which is also a very challenging problem. Moreover, it attracts much attention from both the academia and the industry. We hope this topic will aggregate top level works on the new advances in Visual Multimedia analysis and understanding from big surveillance data. The purpose of this SI is to provide a forum for researchers and practitioners to exchange ideas and progress in related areas. Topics of interests include, but are not limited to:

- Visual multimedia learning for wide area surveillance applications
- Semi-supervised/unsupervised learning for surveillance
- Learning for Camera topology construction and fusion
- Video abstraction from mass surveillance data
- Activity detection/recognition/profiling from mass data
- Large surveillance video database annotation and searching
- Object retrieval/identification for surveillance
- Sensitive text, image/video discovery in surveillance data
- Analysis and understanding the videos by unmanned aerial vehicle
- Visual multimedia learning for feature representation
- Visual multimedia learning for face analysis
- Visual multimedia learning for object recognition
- Visual multimedia learning for scene understanding
- Visual multimedia learning for activity recognition
- Visual multimedia learning for biometrics

The submitted papers must be original and must not be under consideration in any other venue. All submitted papers will be reviewed by at least three reviewers and selected based on

their originality, significance, relevance, and clarity of presentation. Manuscripts must be prepared according to the journal's Instructions for Authors: <http://www.springer.com/11042>. Prospective authors should submit manuscripts using the Editorial Manager system: <https://www.editorialmanager.com/mtap/> .

Important Dates

Manuscript Due: October 31, 2016

First Round of Reviews: January 31, 2017

Final Decision: April 15, 2017

Guest Editors:

Zheng Xu, Tsinghua University, China

Junchi Yan, IBM Research, China

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