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IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY
Special Issue on Group and Crowd Behavior Analysis for Intelligent Multi-camera Video Surveillance

Despite significant progress in human behaviour analysis over the past few years, most of today's state of the art algorithms focus on analysing individual behaviour in a simple environment monitored by a single camera. Recently, the widespread availability of cameras and a growing need for public safety have shifted the attention of researchers in video surveillance from individual behavior analysis to group and crowd behavior analysis in multi-camera networks. Group behavior analysis provides a novel level for describing events, which are semantically more meaningful, highlighting barely visible relational connections among people. Crowd behavior analysis can also be used for anomaly detection such as panic scenarios, dangerous situations, and illegal behaviors in public spaces.

Although the studies on group and crowd behavior analysis in multi-camera networks are valuable for both research and industry, there are many fundamental problems unsolved so far, such as how to calibrate multiple cameras, how to compute the topology of camera networks, how to detect moving objects in dynamic scenes, how to track human across camera views, how to complement RGB and depth data for accurate human pose estimation, how to fuse information from multiple cameras for the analysis of group and crowd behaviour, how to automatically learn abnormal behaviour patterns, just to mention a few among a diverse range of challenges. This special issue will provide the image/video community with a forum to present new academic research and industrial development in intelligent multi-camera video surveillance.

Topics of interest include, but are not limited to:

- Robust multi-camera calibration
- Dynamic background subtraction
- Human tracking over multiple cameras
- Person re-identification
- Human pose estimation using RGB-D data
- Human action recognition
- Affective computing of human behaviour
- Group detection and tracking
- Collective crowd behaviours modelling and learning
- Abnormal behaviour patterns learning and detection
- Learning on big visual data in multi-camera networks
- Privacy-preserving multi-camera surveillance
- Benchmark database and evaluation

In particular, we encourage the construction and dissemination of publicly accessible databases for Group and Crowd Behavior Analysis with Multiple Cameras.

Important Dates

Initial Paper Submission:	December 15, 2015
Initial Paper Decision:	February 28, 2016
Revised Paper Submission:	April 15, 2016
Revised Paper Decision:	June 15, 2016
Publication Date:	December 2016

Manuscript submissions and reviewing process

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Guest Editors

Hongxun Yao	Harbin Institute of Technology, China	h.yao@hit.edu.cn
Andrea Cavallaro	Queen Mary University of London	a.cavallaro@qmul.ac.uk
Thierry Bouwmans	University of La Rochelle, France	thierry.bouwmans@univ-lr.fr
Zhengyou Zhang	Microsoft Research, USA	zhang@microsoft.com