

CALL FOR PAPERS
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY
Special Issue on Large Scale and Nonlinear Similarity Learning for Intelligent Video
Analysis

Learning similarity and distance measures have become increasingly important for the analysis, matching, retrieval, recognition, and categorization of video and multimedia data. With the ubiquitous use of digital imaging devices, mobile terminals and social networks, there are massive volumes of heterogeneous and homogeneous video and multimedia data from multiple sources, e.g., news media websites, microblog, mobile phone, social networking, etc. Moreover, the spatio-temporal coherence among video data can also be utilized for self-supervised learning of similarity and distance metrics. This trend has brought several challenging issues for developing similarity and metric learning methods for large scale and weakly annotated data, where outliers and incorrectly annotated data are inevitable. Recently, scalability has been investigated to cope with large scale metric learning, while nonlinear similarity models have shown their great potentials in learning invariant representation and nonlinear measures of video and multimedia data.

Although the studies on large scale and nonlinear similarity learning for intelligent video analysis are valuable for both research and industry, there are many fundamental problems remain unsolved. In order to pursue first-class research outputs along this direction, this special issue aimed at promoting the scaling-up of metric learning for massive video and multimedia data, the development of nonlinear and deep similarity learning models, the extension to semi-supervised, multi-task, and robust metric learning, and the applications to video-based face recognition, person re-identification, human activity recognition, multimedia retrieval, cross-media matching, and video surveillance. This special issue will provide the image/video community with a forum to present new academic research and industrial development in intelligent video analysis.

Topics of interest include, but are not limited to:

- Large scale similarity and distance metric learning
- Nonlinear, local, and deep similarity learning, metric learning on Riemann manifold
- Semi-supervised, weakly supervised, self-paced and multi-task metric learning
- Online, stochastic methods for metric learning
- Parallel computing, memory management, and performance trade-off for large scale metric learning
- Video-based face recognition and person re-identification
- Cross-media and heterogeneous multimedia matching
- Human action and activity recognition
- Multimedia retrieval and learning to hash
- Self-supervised learning using video data
- Performance evaluation and benchmark dataset

Important Dates

Initial Paper Submission:	January 31, 2017
Initial Paper Decision:	March 31, 2017
Revised Paper Submission:	May 15, 2017
Revised Paper Decision:	June 30, 2017
Publication Date:	December 2017

Manuscript submissions and reviewing process

Submission of a paper to CSVT is permitted only if the paper has not been submitted, accepted, published, or copyrighted in another journal. Papers that have been published in conference and workshop proceedings may be submitted for consideration to CSVT provided that (i) the authors cite their earlier work; (ii) the papers are not identical; and (iii) the journal publication includes novel elements (*e.g.*, more comprehensive experiments). For submission information, please consult the IEEE CSVT Information for Authors: <http://tcsvt.polito.it/authors.html>.

Guest Editors

Wangmeng Zuo	Harbin Institute of Technology, China	wmzuo@hit.edu.cn
Liang Lin	Sun Yat-Sen University, China	linliang@ieee.org
Alan L. Yuille	The Johns Hopkins University, US	yuille@stat.ucla.edu
Horst Bischof	Graz University of Technology, Austria	bischof@icg.tu-graz.ac.at
Lei Zhang	Microsoft Research, US	leizhang@microsoft.com
Fatih Porikli	Australian National University, Australia	fatih.porikli@anu.edu.au