

# IEEE TRANSACTIONS ON **MULTIMEDIA**

A PUBLICATION OF  
THE IEEE CIRCUITS AND SYSTEMS SOCIETY  
THE IEEE SIGNAL PROCESSING SOCIETY  
THE IEEE COMMUNICATIONS SOCIETY  
THE IEEE COMPUTER SOCIETY



<http://www.signalprocessingsociety.org/tmm/>

SEPTEMBER 2016

VOLUME 18

NUMBER 9

ITREAE

(ISSN 1520-9210)

---

PAPERS

*Compression and Coding*

Inter-Prediction Optimizations for Video Coding Using Adaptive Coding Unit Visiting Order .....	1677
..... I. Zupancic, S. G. Blasi, E. Peixoto, and E. Izquierdo	
Knowledge-Based Coding of Objects for Multisource Surveillance Video Data .....	1691
..... J. Xiao, R. Hu, L. Liao, Y. Chen, Z. Wang, and Z. Xiong	
Image Interpolation Based on Non-local Geometric Similarities and Directional Gradients .....	1707
..... S. Zhu, B. Zeng, L. Zeng, and M. Gabbouj	

*Watermarking, Encryption, and Data Hiding*

Bi-level Protected Compressive Sampling .....	1720
..... L. Y. Zhang, K.-W. Wong, Y. Zhang, and J. Zhou	
Robust DT CWT-Based DIBR 3D Video Watermarking Using Chrominance Embedding .....	1733
..... M. Asikuzzaman, M. J. Alam, A. J. Lambert, and M. R. Pickering	

*Image/Video/Graphics Analysis and Synthesis*

Cloud-Based Actor Identification With Batch-Orthogonal Local-Sensitive Hashing and Sparse Representation .....	1749
..... G. Gao, C. H. Liu, M. Chen, S. Guo, and K. K. Leung	
Keypoint Detection in RGBD Images Based on an Anisotropic Scale Space .....	1762
..... M. Karpushin, G. Valenzise, and F. Dufaux	

*3D Processing and Presentation*

Estimating 3D Gaze Directions Using Unlabeled Eye Images via Synthetic Iris Appearance Fitting .....	1772
..... F. Lu, Y. Gao, and X. Chen	

---

(Contents Continued on Back Cover)



(Contents Continued from Front Cover)

---

*Multimodal Perception, Integration, and Multisensory Fusion*

A Universal Framework for Salient Object Detection ..... *J. Lei, B. Wang, Y. Fang, W. Lin, P. L. Callet, N. Ling, and C. Hou* 1783

*Subjective and Objective Quality Assessment, and User Experience*

Do Personality and Culture Influence Perceived Video Quality and Enjoyment? ..... *M. J. Scott, S. C. Guntuku, W. Lin, and G. Ghinea* 1796

On Evaluating Perceptual Quality of Online User-Generated Videos ..... *S. Jang and J.-S. Lee* 1808

Tiling in Interactive Panoramic Video: Approaches and Evaluation ..... *V. R. Gaddam, M. Riegler, R. Eg, C. Griwodz, and P. Halvorsen* 1819

*Content Description and Annotation*

Deep Relative Attributes ..... *X. Yang, T. Zhang, C. Xu, S. Yan, M. S. Hossain, and A. Ghoneim* 1832

*Multimedia Search and Retrieval*

Fast Covariant VLAD for Image Search ..... *W.-L. Zhao, C.-W. Ngo, and H. Wang* 1843

*Social and Web Multimedia*

Learning Geographical Hierarchy Features via a Compositional Model ..... *X. Zhang, X. Hu, S. Wang, Y. Yang, Z. Li, and J. Zhou* 1855

*Consumer Electronics and Entertainment*

On Branded Handbag Recognition ..... *Y. Wang, S. Li, and A. C. Kot* 1869

*Multimedia Streaming and Transport*

Modeling Dynamics of Online Video Popularity ..... *J. Wu, Y. Zhou, D. M. Chiu, and Z. Zhu* 1882

*Big Data Analytics on Multimedia Data and Crowd Sourcing for Multimedia Applications*

Image Co-segmentation via Saliency Co-fusion ..... *K. R. Jerripothula, J. Cai, and J. Yuan* 1896

*Multimodal Human Behavior*

Rating Prediction Based on Social Sentiment From Textual Reviews ..... *X. Lei, X. Qian, and G. Zhao* 1910

---

ANNOUNCEMENT

Introducing IEEE Collabratec ..... 1922

---

Information for Authors ..... 1923

---