

# 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/>

MARCH 2019

VOLUME 21

NUMBER 3

ITMUF8

(ISSN 1520-9210)

## SPECIAL SECTION ON TRUSTWORTHINESS IN SOCIAL MULTIMEDIA ANALYTICS AND DELIVERY

### GUEST EDITORIAL

Trustworthiness in Social Multimedia Analytics and Delivery .....	537
..... Z. Su, Q. Fang, H. Wang, S. Mehrotra, A. C. Begen, Q. Ye, and A. Cavallaro	

### SPECIAL SECTION PAPERS

#### *Watermarking, Encryption, and Data Hiding*

Differentially-Private and Trustworthy Online Social Multimedia Big Data Retrieval in Edge Computing .....	539
..... P. Zhou, K. Wang, J. Xu, and D. Wu	

#### *Trust in Social Multimedia and Privacy-Protecting Multimedia Analysis*

Enhancing the Robustness of Neural Collaborative Filtering Systems Under Malicious Attacks .....	555
..... Y. Du, M. Fang, J. Yi, C. Xu, J. Cheng, and D. Tao	

#### *Social and Web Multimedia*

Hybrid Deep-Learning-Based Anomaly Detection Scheme for Suspicious Flow Detection in SDN: A Social Multimedia Perspective .....	566
..... S. Garg, K. Kaur, N. Kumar, and J. J. P. C. Rodrigues	

#### *Multimedia for Social Activities in Health, Environment, and Urban Living*

Enabling Trusted and Privacy-Preserving Healthcare Services in Social Media Health Networks .....	579
..... W. Tang, J. Ren, and Y. Zhang	

#### *Trust in Social Multimedia and Privacy-Protecting Multimedia Analysis*

Trust-Based Privacy-Preserving Photo Sharing in Online Social Networks .....	591
..... L. Xu, T. Bao, L. Zhu, and Y. Zhang	



---

*System Design and Optimization*

Trust-Based Video Management Framework for Social Multimedia Networks . . . . . *B. E. Mada, M. Bagaa, and T. Taleb* 603

*Multimedia for Personal Applications (Mobile, Wearables, Interactive)*

Emotion-Aware Multimedia Systems Security . . . . . *Y. Zhang, Y. Qian, D. Wu, M. S. Hossain, A. Ghoneim, and M. Chen* 617

*Multimedia Content Delivery Networks*

Socially Aware Trust Framework for Multimedia Delivery in D2D Cooperative Communication . . . . .  
. . . . . *J. Yan, D. Wu, and R. Wang* 625

*Trust in Social Multimedia and Privacy-Protecting Multimedia Analysis*

Differential Privacy Oriented Distributed Online Learning for Mobile Social Video Prefetching . . . . .  
. . . . . *M. Wang, C. Xu, X. Chen, H. Hao, L. Zhong, and S. Yu* 636

*Transport and Automotive*

Trust Assessment in Vehicular Social Network Based on Three-Valued Subjective Logic . . . . .  
. . . . . *T. Cheng, G. Liu, Q. Yang, and J. Sun* 652

---

REGULAR PAPERS

*Image/Video/Graphics Analysis and Synthesis*

Context-Aware Three-Dimensional Mean-Shift With Occlusion Handling for Robust Object Tracking in RGB-D Videos  
. . . . . *Y. Liu, X.-Y. Jing, J. Nie, H. Gao, J. Liu, and G.-P. Jiang* 664

A Computational Model for Stereoscopic Visual Saliency Prediction . . . . . *H. Cheng, J. Zhang, Q. Wu, and P. An* 678

Shape-Optimizing and Illumination-Smoothing Image Stitching . . . . . *S. Liu and Q. Chai* 690

Probabilistic Semantic Retrieval for Surveillance Videos With Activity Graphs . . . . .  
. . . . . *Y. Chen, J. Wang, Y. Bai, G. Castañón, and V. Saligrama* 704

Temporal Action Localization in Untrimmed Videos Using Action Pattern Trees . . . . .  
. . . . . *H. Song, X. Wu, B. Zhu, Y. Wu, M. Chen, and Y. Jia* 717

Adjusted Non-Local Regression and Directional Smoothness for Image Restoration . . . . .  
. . . . . *C. Ren, X. He, and T. Q. Nguyen* 731

*Multimedia Search and Retrieval*

Integrating Image and Textual Information in Human–Robot Interactions for Children With Autism Spectrum Disorder  
. . . . . *X. Yang, M.-L. Shyu, H.-Q. Yu, S.-M. Sun, N.-S. Yin, and W. Chen* 746

Improving Object Retrieval Quality by Integration of Similarity Propagation and Query Expansion . . . . .  
. . . . . *S. Pang, J. Ma, J. Zhu, J. Xue, and Q. Tian* 760

*Social and Web Multimedia*

Exploring Users' Internal Influence from Reviews for Social Recommendation . . . . . *G. Zhao, X. Lei, X. Qian, and T. Mei* 771

*Deep Learning for Multimedia Analysis*

Heterogeneous Hashing Network for Face Retrieval Across Image and Video Domains . . . . .  
. . . . . *C. Jing, Z. Dong, M. Pei, and Y. Jia* 782

*Speech, Language, and Audio in Video Analysis; Music in Multimedia*

Connecting Subspace Learning and Extreme Learning Machine in Speech Emotion Recognition . . . . .  
. . . . . *X. Xu, J. Deng, E. Coutinho, C. Wu, L. Zhao, and B. W. Schuller* 795

---

Information for Authors . . . . .

---