CURRICULUM VITAE

WENJUN (KEVIN) ZENG

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Highlights

- Extensive experiences in both academia and industry (both corporates and start-ups)
- Proven leadership and management skills (create clarity, generate energy, deliver success)
- Significant technical contributions to the development of international standards (ISO MPEG, JPEG2000, and Open Mobile Alliance)
- Extensive professional leadership services (IEEE/ACM/standards)
- Prestigious awards (leaderships/best papers/IEEE Fellow)
- Believe in impact-driven research, leading the video analytics research/development powering the Microsoft Cognitive Services, Azure Media Analytics Services, Microsoft Office (Teams/Stream), Microsoft Dynamics, and Windows Machine Learning (ML)
    - for more details, please see research impact & technology contribution
- High quality Ph.D. student mentoring

Professional Interests

Artificial intelligence, computer vision, social network/media analysis, multimedia communications & networking, and content/network security

Education

- Ph.D., Electrical Engineering, Princeton University (1997).
- Master of Science, Electrical Engineering, University of Notre Dame (1993).
- Bachelor of Engineering, Electronic Engineering, Tsinghua University, Beijing, China (1990, with highest honor)

Work Experiences

- Vice President - Research, Chair Professor, Eastern Institute for Advanced Study (Oct. 2021 – present)
- Member of the Senior Leadership Team (SLT), Microsoft Research Asia, Beijing, China (March 2017 – Oct. 2021)
    - Working with lab managing director to oversee R&D strategies in intelligent multimedia
- Sr. Principal Research Manager/ Principal Research Manager, Intelligent Multimedia Group and Media Computing Group, Microsoft Research Asia, Beijing, China (Aug. 2014 – Oct. 2021)
    - Managing a team of around 35 people (10 researchers & 25 joint Ph.D. students/interns)
- Full Professor, Dept. of Computer Science, Univ. of Missouri, Columbia (Sept. 2011 – Aug. 2016, currently adjunct Full Professor)
- Adjunct Professor, Dept. of Electrical & Computer Engineering, Univ. of Missouri, Columbia (Dec. 2008 --present)

- Guest Professor (Ph.D. advisor), Univ. of Science & Technology of China, (March 2017 – present)
- Guest Professor (Ph.D. advisor), Xi'an Jiaotong University, China; Director, Joint MSRA-XJTU Lab on Intelligent Information Processing (2015 – present)
- Guest Professor (Ph.D. advisor), Tianjin University, China. (2013 – present)
- Chief Scientist, StreamOcean (part time, 2011 – Aug. 2014)
- Visiting Professor, Huawei Media Lab, New Jersey, Jan. - July 2013.
- Associate Professor, Dept. of Computer Science, Univ. of Missouri, Columbia (Aug. 2003 – Aug. 2011, tenured Sept. 2007)
- Visiting Professor, Microsoft Research Asia, Beijing, Jan. - June 2011.
- Visiting Professor, Tsinghua University, Beijing, Jan. - June 2011.
- Director, Center for Cyber Security Research, Dept. of Computer Science, Univ. of Missouri, Columbia (2007 -- 2011)
- Director, Mobile Networking and Multimedia Communications Lab, Dept. of Computer Science, Univ. of Missouri, Columbia (Sept. 2003 --present)
- Part-time consultant (representing Huawei in Open Mobile Alliance), Huawei Technologies (2008 - 2011)
- Academic Advisor, Calidus, Inc (now StreamOcean, Inc.) (Aug. 2007 – Oct. 2008).
- Visiting Professor, Microsoft Research Asia, Beijing, June 2006.
- Senior Member Technical Staff (CTO Staff), PacketVideo Corporation (the first unicorn startup in wireless video), San Diego, CA. (Dec. 2000-Aug. 2003)
- Member of Technical Staff, Sharp Labs of America, Camas, WA (June 1997-December 2000)
- Multimedia Communication Lab, Lucent Technologies, Bell Labs, Murray Hill (1996 summer)
- Matsushita Information Technology Lab, Panasonic Tech. Inc., Princeton (1995 summer)
- Consultant, Dept. of Electronic Engineering, Tsinghua Univ., Beijing, China (July 1990 – July 1991)

Awards and Honors

- **Industrial Distinguished Leader Award**, 2018, APSIPA (*Asia Pacific Signal and Information Processing Association*, www.apsipa.org).
- Second place winner, among 72 entries, of the 6th Visual Object Tracking Challenge VOT2018 (http://www.votchallenge.net/vot2018/) "real-time" tracker challenge, held in conjunction with ECCV2018!
- **Best Paper Award**, *IEEE Visual Communications and Image Processing Conference*, 2016.
- IEEE ComSoc MMTC **2016 Best Journal Paper Award**, for the following paper
  - S. Deb Roy, T. Mei, W. Zeng and S. Li, "Towards Cross Domain Learning for Social Video Popularity Prediction," *IEEE Transactions on Multimedia, Special Issue on Social Media as Sensors,* vol. 15, no. 6, Oct. 2013.
- First-place Winner，Grand Challenge on Light-Field Image Compression, ICME 2016.
- **Highest Performing Faculty Member** (top 15%) by Univ. of Missouri with a mid-year raise, Feb. 2014.
- **Best Paper Award**, the 2012 *ACM Inter. Conf. on Multimedia Computing and Service,* Sept. 2012
- **IEEE Fellow**, Class of 2012 (for contributions to multimedia communications and security)
- **Distinguished Service Award**, IEEE Communications Society MMTC**,** 2010
- **Tan Chin Tuan Exchange Fellowship**, Nanyang Technological University, Singapore, July–Aug., 2009
- **Big12 Faculty Fellowship**, 2006-2007
- **Graduate Fellowship**, Princeton University, 1993-1994.
- **Graduate Fellowship**, Center for Applied Mathematics, University of Notre Dame (1992-1993)
- **Most Outstanding Student** Award, Tsinghua University (1987-1990)

Research Activities

- **Funding support** (partial)

  - ✓ "保护云端监控视频隐私的密文内容检测技术研究", National Natural Science Foundation of China, 61771211, 2018/01-2021/12, 550K Chinese Yuan, Co-PI.
  - ✓ "Acquisition of Instrument for Data-intensive Applications with Hybrid Cloud Computing Needs," NSF, CNS-1429294, $1M, Sept. 2014 - Aug. 2018, Senior Personnel.
  - ✓ "REU Site: Research in Consumer Networking Technologies," NSF, CNS-1359125, $360K, March 1, 2014 – Feb. 28, 2017. Co-PI.
  - ✓ "Depth Assisted Image Quality Enhancement," Futurewei Technologies, $100K, Jan. 2014 – Dec. 2015. PI.
  - ✓ "Developing sports themed immersive games on mobile devices," Galoob and Funfare, $30K, July 2013 – June 2014. PI.
  - ✓ "Multimodal sensing and reconstruction of dynamic 3D scenes," National Natural Science Foundation of China, 61228104, 200K Chinese Yuan, Jan. 2013 – Dec. 2014. PI.
  - ✓ "Encrypted domain signal processing," Futurewei Technologies, $80K, Jan. 2012 – Dec. 2012. PI.
  - ✓ "STEM Fellows: ShowMe Nature from Elements to Ecosystems," NSF, DGE-1045322, $1,006,355, June 2011 – May 2014. (Senior Personnel).
  - ✓ "Building a Relevance-based Search Engine for Quality Online Media," MU Mizzou Advantage Program, $50,000. March 2011 – Feb. 2013. PI.
  - ✓ "High Dimensional Joint Sparse Representation and Coding for Multiview Video," National Natural Science Foundation of China, 61072062, 420K Chinese Yuan, Jan. 2011 – Dec. 2013. Co-PI (collaborator)
  - ✓ "Building Recognition," Futurewei Technologies, $20K, Jan. 2011-June 2011. PI
  - ✓ "Target Localization and Tracking with Networked Smartphones," Leonard Wood Institute/ Army Research Labs, $390,666, Nov. 2010 – Dec. 2011. Co-PI.
  - ✓ "GAANN (Graduate Assistance for Areas of National Need)", Department of Education, $400,000, Sept. 2010 – Aug. 2013. Co-PI
  - ✓ "REU Site: Research in Home and Consumer Networking Technologies," NSF, CNS-1004606, $340K, March 1, 2010-Feb. 28, 2013. PI.
  - ✓ "Mobile multimedia services and standards," Futurewei Technologies, $200K, 2008-2010. PI
  - ✓ Center for Cyber Security Research, Gilliom Gift Fund, $150,000 (managing as Center Director), 2007-2010.
  - ✓ "Scalable resource adaptation for IPTV," Futurewei Technologies, $30K, Sept. 2008-March 2009. PI.
  - ✓ "REU Site: Research in Home Networking Technologies," NSF, $300K, Jan. 2007-Dec. 2009, PI.
  - ✓ "Video Streaming in Infrastructure Wireless Mesh Networks", Thomson Lab, Princeton, through the support of one student Intern (about $80K), June 2006- Aug. 2008.
  - ✓ "SIRG: Collaborative Research: DeerNet-Wireless Sensor Networking for Wildlife Behavior Analysis and Interaction Modeling", NSF, $515,535, Sept. 2005-Aug. 2008, Co-PI.
  - ✓ "Enhancing reliability by supporting path-diversity overlay retransmission", Microsoft Research (ConferenceXP Award), $53,000, April 2005-March 2007, PI.
  - ✓ "Wireless sensor networks: middleware and applications," NSF (CNS-0423386), $450,000 (including $150,000 matching fund from MU), Sep. 2004-Aug 2008, Co-PI.
  - ✓ "Big 12 Faculty Fellowship," $2,957, July – Dec. 2006.
  - ✓ "Quality multimedia delivery in mobile home networks", MU Research Board, $26,800, June 1, 2004 to Nov 30, 2005, PI.

- **Publications**

  Summary: 80+ journal papers, 180+ conference papers, a large number of standards contributions and invited talks, two books and five book chapters, 5 tutorials. **A large number of papers have been widely cited**. Total # of citations: 18000+, h-index: 61. For more up-to-date information, see https://scholar.google.com/citations?user=_cUfvYQAAAAJ&hl=en&oi=ao

  Journal Papers:

  1 Liang Xu, Cuiling Lan, Wenjun Zeng, and Cewu Lu, "Skeleton-based mutually assisted interacted object localization and human action recognition," to appear in *IEEE Trans. on Multimedia.*

2 Y. Zhang，C. Wang，X. Wang，W. Liu，and W. Zeng, “VoxelTrack: Multi-Person 3D Human Pose Estimation and Tracking in the Wild,” to appear in *IEEE Transactions on Pattern Analysis and Machine Intelligence*， Early access available April 2022.

3 Jindong Wang, Cuiling Lan, Chang Liu, Yidong Ouyang, Tao Qin, Wang Lu, Yiqiang Chen, Wenjun Zeng, and Philip S. Yu, “Generalizing to Unseen Domains: A Survey on Domain Generalization,” to appear in *IEEE Transactions on Knowledge and Data Engineering*，early access available May 2022, arXiv:2103.03097 [cs.LG].

4 Zhizheng Zhang, Cuiling Lan, Wenjun Zeng, Zhibo Chen*, Shifu Chang, "Beyond Triplet Loss: Meta Prototypical N-tuple Loss for Person Re-identification", Early Access, IEEE Trans. on Multimedia, 2021.

5 Jian-Fang Hu, Jiangxin Sun, Zihang Lin, Jianhuang Lai, Wenjun Zeng, and Wei-Shi Zheng, “APANet: Auto-Path Aggregation for Future Instance Segmentation Prediction,” to appear in *IEEE Transactions on Pattern Analysis and Machine Intelligence*. Early access available Feb. 2021.

6 Chen, Xingyu; Wang, Chunyu; Lan, Xuguang; Zheng, Nanning; Zeng, Wenjun, “Neighborhood Geometric Structure-Preserving Variational Autoencoder for Smooth and Bounded Data Sources,” to appear in *IEEE Transactions on Neural Networks and Learning Systems*. Early access available Feb. 2021.

7 Zhe Zhang, Chunyu Wang, Weichao Qiu, Wenhu Qin, and Wenjun Zeng, “AdaFuse: Adaptive Multiview Fusion for Accurate Human Pose Estimation in the Wild,” to appear in *International Journal of Computer Vision*, arXiv:2010.13302 [cs.CV].

8 Y. Zhang, C. Wang, X. Wang, W. Zeng, and W. Liu, “FairMOT: On the fairness of detection and re-identification in multiple object tracking,” *International Journal of Computer Vision, vol. 129, pp.* 3069–3087, Sept. 2021.

9 X. Jin, C. Lan, W. Zeng, Z. Zhang, Z. Chen, “CASINet: Content-Adaptive Scale Interaction Networks for Scene Parsing,” in *Neurocomputing*, vol. 419, pp. 9-22, Jan. 2021.

10 P. Zhang, J. Xue, C. Lan, W. Zeng, Z. Gao, and N. Zheng, “EleAtt-RNN: Adding Attentiveness to Neurons in Recurrent Neural Networks,” *IEEE Transactions on Image Processing,* vol. 29, no. 1, Dec. 2020.

11 G. Wei, C. Lan, W. Zeng, and Z. Chen, “View Invariant 3D Human Pose Estimation,” *IEEE Trans. on Cir. and Sys. for Video Technology,* vol. 30, no. 12, pp. 4601-4610, Dec. 2020.

12 P. Tang, C. Wang, X. Wang, W. Liu, W. Zeng, and J. Wang, “Object Detection in Videos by High Quality Object Linking,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 42, no. 5, pp. 1272-1278, May 2020.

13 X. Song, C. Lan, W. Zeng, J. Xing, X. Sun, and J. Yang, “Temporal-Spatial Mapping for Action Recognition,” *IEEE Trans. on Cir. and Sys. for Video Technology.* vol. 30, no. 3, pp. 748–759, March 2020.

14 W. Zeng, “Towards Human-Centric Deep Video Understanding,” in *APSIPA Transactions on Signal and Information Processing*, Jan. 2020.

15 C. Cao, Y. Zhang, C. Lan, W. Zeng, H. Lu, and Y. Zhang, “Skeleton-Based Action Recognition with Gated Convolutional Neural Networks,” *IEEE Trans. on Cir. and Sys. for Video Technology,* vol. 29, no. 11, pp. 3247-3257, Nov. 2019.

16 P. Zhang, C. Lan, J. Xing, W. Zeng, J. Xue, and N. Zheng, “View Adaptive Neural Networks for High Performance Skeleton-based Human Action Recognition,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 41, no. 8, pp. 1963-1978, Aug. 2019.

17 B. Li, W. Xie, W. Zeng, and W. Liu, “Learning to Update for Object Tracking with Recurrent Meta-learner,” *IEEE Transactions on Image Processing.* Vol. 28, no. 7, pp. 3624-3635, July 2019.

18 J. Yang, L. Qing, W. Zeng, and X. He, “High-order statistical modeling based on decision tree for distributed video coding,” *IEEE Trans. on Cir. and Sys. for Video Technology,* vol. 29, no. 5, pp. 1488-1502, May 2019.

19 L. Wang, Z. Xiong, H. Huang, G. Shi, F. Wu, and W. Zeng, “High-Speed Hyperspectral Video Acquisition by Combining Nyquist and Compressive Sampling," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 41, no. 4, pp. 857-870, April 2019.

20 Q. Wang, C. Yuan, J. Wang, and W. Zeng, “Learning Attentional Recurrent Neural Network for Visual Tracking”, *IEEE Transactions on Multimedia*, vol. 21, no. 4, pp. 930-942, April 2019.

21 B. Li, W. Ren, D. Fu, D. Tao, D. Feng, W. Zeng, and Z. Wang, “Benchmarking Single Image Dehazing and Beyond,” *IEEE Transactions on Image Processing,* vol. 28, no. 1, pp. 492-505, Jan. 2019.

22 G. Gao, H. Zhang, H. Hu, Y. Wen, J. Cai, C. Luo, and W. Zeng, “Optimizing Quality of Experience for Adaptive Bitrate Streaming via Viewer Interest Inference,” *IEEE Transactions on Multimedia,* vol. 20, no. 12, pp. 3399-3413, Dec. 2018.

23 F. Liang, C. Luo, R. Xiong, W. Zeng, and F. Wu, “Superimposed Modulation for Soft Video Delivery with Hidden Resources,” *IEEE Trans. on Cir. and Sys. for Video Technology*, vol. 28, no. 9, pp. 2345-2358, Sept. 2018.

24 F. Liang, C. Luo, R. Xiong, W. Zeng, and F. Wu, “Hybrid Digital-Analog Video Delivery with Shannon-Kotel’nikov Mappings,” *IEEE Transactions on Multimedia,* vol. 20, no. 8, pp. 2138 – 2152, Aug. 2018.

25 C. Lan, J. Xu, W. Zeng, G. Shi, F. Wu, “Variable Block-Sized Signal Dependent Transform for Video Coding,” *IEEE Trans. on Cir. and Sys. for Video Technology,* pp. 1920-1933, vol. 28, no. 8, Aug. 2018.

26 S. Song, C. Lan, J. Xing, W. Zeng, and J. Liu, "Spatio-Temporal Attention Based LSTM Networks for 3D Action Recognition and Detection," *IEEE Transaction on Image Processing, vol. 27, no. 7, pp. 3459-3471,* July 2018**.**

27 J. Liu, W. Yang, X. Sun, and W. Zeng, “Photo Stylistic Brush: Robust Style Transfer via Superpixel-Based Bipartite Graph,” *IEEE Transactions on Multimedia*, vol. 20, no. 7, pp. 1724-1737, July 2018.

28 C. Lan, C. Luo, W. Zeng, and F. Wu, “A Practical Hybrid Digital-Analog Scheme for Wireless Video Transmission,” *IEEE Trans. on Cir. and Sys. for Video Technology*, vol. 28, no. 7, pp. 1634-1647, July 2018.

29 L. Wang, Z. Xiong, G. Shi, W. Zeng, and F. Wu, “Simultaneous Depth and Spectral Imaging with A Cross-Modal Stereo System,” in *IEEE Trans. on Cir. and Sys. for Video Technology*, vol. 28, no. 3, March 2018.

30 J. Liu, Y. Li, S. Song, J. Xing, C. Lan, and W. Zeng, “Multi-Modality Multi-Task Recurrent Neural Network for Online Action Detection,” *IEEE Trans. on Cir. and Sys. for Video Technology*, vol. 29, no. 9, pp. 2667-2682, Sept. 2019.

31 L. Wang, Z. Xiong, G. Shi, F. Wu, and W. Zeng, “Adaptive Nonlocal Sparse Representation for Dual-Camera Compressive Hyperspectral Imaging,” in *IEEE Transactions on Pattern Analysis and Machine Intelligence,* vol. 39, no 10, Oct. 2017.

32 D. He, C. Lan, C. Luo, E. Chen, F. Wu, and W. Zeng, “Progressive Pseudo-Analog Transmission for Mobile Video Streaming,” *IEEE Trans. on Multimedia,* vol. 19, no. 8, Aug. 2017.

33 Z. Xiong, Y. Zhang, F. Wu, and W. Zeng, “Computational Depth Sensing: Toward High Performance Commodity Depth Cameras,” *IEEE Signal Processing Magazine*, vol. 34, no. 3, May 2017.

34 W. Zeng, “Understanding Humans in Multimedia,” EiC message, *IEEE Multimedia Magazine*, Oct. 2016.

35 H. Wu, X. Sun, J. Yang, W. Zeng, and F. Wu, "Lossless Compression of JPEG Coded Photo Collections," *IEEE Trans. on Image Processing,* vol. 25, no. 6, June 2016.

36 D. He, C. Luo, C. Lan, F. Wu, and W. Zeng, “Structure-Preserving Hybrid Digital-Analog Video Delivery in Wireless Networks,” *IEEE Trans. on Multimedia,* Sept. 2015.

37 X. Ma, L. T. Yang, Y. Xiang, W. Zeng and H. Jin, “Fully Reversible Privacy Region Protection for Cloud Video Surveillance," *IEEE Transactions on Cloud Computing*, *Special Issue on Cloud Security Engineering*, Aug. 2015.

38 X. Ma, W. Zeng, L. T. Yang, D. Zou, and H. Jin, “Lossless ROI Privacy Protection of H.264/AVC Compressed Surveillance Videos,” *IEEE Transactions on Emerging Topics in Computing,* Aug. 2015.

39 S. Deb Roy, G. Lotan and W. Zeng, “The Attention Automaton: Sensing Collective User Interests in Network Communities,” *IEEE Transactions on Network Science and Engineering,* Jan.- March 2015.

40 X. Nie, J. Liu, Q. Wang, W. Zeng, “Graph-based Video Fingerprinting Using Double Optimal Projection,” *Journal of Visual Communication and Image Representation*, 2015, 32(10): 120-129.

41 L. Qin and W. Zeng, “Context-adaptive modeling for wavelet domain distributed video coding” in *IEEE Multimedia Magazine*, *Fast Track Program for ICME2014 papers*, Oct.- Dec. 2014.

42 W. Zeng, Z. Liu, E. Steinbach, “Forging a Close Relationship with Multimedia Communities,” *IEEE Multimedia*, 2014, 21(4): 14-15.

43 X. Nie, W. Zeng, H. Yan, J. Sun, Z. Liu, and Q. Wang, “Structural Similarity-based Video Fingerprinting for Video Copy Detection,” *IET Image Processing,* vol. 8, no. 11, pp. 655-661, 2014.

44 Q. Wang, W. Zeng, and J. Tian, “A Compressive Sensing based Secure Watermark Detection and Privacy Preserving Storage Framework” *IEEE Transactions on Image Processing,* vol. 23, no. 3, March 2014 (**top 5 most frequently downloaded documents for TIP in the month of Feb. 2014**).

45 S. Deb Roy and W. Zeng, “Cognitive Canonicalization of Natural Language Queries using Semantic

Strata," *ACM Transactions on Speech and Language Processing,* Dec. 2013.

46 S. Deb Roy, T. Mei, W. Zeng and S. Li, "Towards Cross Domain Learning for Social Video Popularity Prediction," *IEEE Transactions on Multimedia, Special Issue on Social Media as Sensors,* vol. 15, no. 6, Oct. 2013. (**IEEE ComSoc MMTC 2015 Best Journal Paper Award**)

47 S. Deb Roy, G. Lotan, and W. Zeng, "Social Multimedia Signals: Sense, Process and Put Them to Work", *IEEE Multimedia Magazine*, Jan. – March, 2013. (**2013 IEEE Multimedia Magazine most downloaded paper**)

48 Q. Wang, W. Zeng, and A. G. Lobzhanidze, "Mobile media in action: remote target localization and tracking," *IEEE Multimedia Magazine*, vol. 19, no. 3, July-Sept, 2012.

49 R. Sun and W. Zeng, "Secure and robust image hashing via compressive sensing," *Multimedia Tools and Applications*, Aug. 2012.

50 Y. Xu, C. Zhu, W. Zeng, and X. Li, "Multiple Description Coded Video Streaming in Peer-to-Peer Networks," *EURASIP Signal Processing: Image Communication*, *Special Issue on Advances in Video Streaming for P2P Networks,* vol. 27, no. 5, May 2012, pp. 412-429.

51 S. Deb Roy and W. Zeng, *"*A Game-theoretic Interpretation of P2P Swarm Equilibrium for Incentive Optimization," *IEEE ComSoc MMTC E-Letter*, *Special issue on Decision and Game Theory for Security*, vol. 6, no. 5, May 2011.

52 Wei Liu, Lina Dong and W. Zeng*, "*Motion Refinement Based Progressive Side-Information Estimation for Wyner-Ziv Video Coding," *IEEE Trans. on Cir. and Sys. for Video Technology*, Dec. 2010.

53 W. Liu, W. Zeng, L. Dong, and Q. Yao, "Efficient Compression of Encrypted Grayscale Images," *IEEE Trans. on Image Proc*, April 2010.

54 X. Kang, J. Huang and W. Zeng, *"*Efficient General Print-Scanning Resilient Data Hiding Based on Uniform Log-polar Mapping," *IEEE Transactions on Information Forensics and Security*, vol. 5, no. 1, pp. 1-12, March 2010.

55 W. Zeng, Y. Zhu, H. Lu, and X. Zhuang*, "*Path-diversity P2P Overlay Retransmission for Reliable IP-multicast," *IEEE Trans. on Multimedia*. vol. 11, no. 5, pp. 960-971, Aug. 2009.

56 X. Kang, J. Huang and W. Zeng, *"*Improving Robustness of Quantization-Based Image Watermarking via Adaptive Receiver," *IEEE Trans. on Multimedia*, vol. 10, no. 6, Oct. 2008.

57 X. Kang, W. Zeng, J. Huang, "A Multi-band Wavelet Watermarking Scheme," *International Journal on Network Security*, vol.6, no.2, pp.116–121, Mar. 2008.

58 C.W. Chen, W. Zeng, and R. Steinmetz, "Special Issue on Recent Advances in Distributed Multimedia Communications," *the Proceedings of the IEEE*, *Special Issue on Recent Advances in Distributed Multimedia Communications*, vol. 96, no. 1, January 2008.

59 W. Liu, L. Dong and W. Zeng, "Optimum Detection for Spread-Spectrum Watermarking that Employs Self-masking", *IEEE Transactions on Information Forensics and Security,* vol. 2, no. 4, pp. 645-654, Dec. 2007.

60 P. Zhu, W. Zeng, and C. Li, "Cross-layer Design of Source Rate Control and QoS-Aware Congestion Control for Wireless Video Streaming," in *Journal of Advances in Multimedia, special issue on Cross-layer Optimized Wireless Multimedia Communications*, 2007.

61 P. Zhu, W. Zeng, and C. Li, "Joint design of source rate control and QoS-aware congestion control for video streaming over the Internet," *IEEE Trans. Multimedia*, vol. 9, no. 2, pp. 366-376, Feb. 2007.

62 B. Xie and W. Zeng, "Fast bitstream switching algorithms for real-time adaptive video multicasting," *IEEE Trans. Multimedia*, vol. 9, no. 1, pp. 169-175, Jan. 2007.

63 W. Zeng, J. Lan and X. Zhuang*,* "Security for multimedia adaptation: architectures and solutions", *IEEE MultiMedia Magazine*, pp. 68-76, April-June 2006.

64 B. Xie and W. Zeng*, "*A sequence based rate control framework for consistent quality real-time video," *IEEE Trans. on Circuits & Systems for Video Technology,* vol. 16, no. 1, Jan. 2006.

65 J. Lan, W. Zeng, and X. Zhuang, "Operational distortion-quantization curve based bit allocation for smooth video quality," *Special Issue on Visual Communications in Ubiquitous Era*, *Journal on Visual Communications and Image Representation*, vol. 16, issues 4-5, pp. 527-543, August-October, 2005.

66 W. Zeng, "Adaptive spatial-temporal error concealment with embedded side information," in the *Special Issue on Visual Communications in Ubiquitous Era*, *Journal on Visual Communications and Image Representation*, vol. 16, issues 4-5, pp. 499-511, August-October, 2005.

67 Z. He, W. Zeng, and C. Chen, "Low-pass filtering of rate-distortion functions for quality smoothing in real-time video communication," *IEEE Trans. on Circuits & Systems for Video Technology,* vol. 15, no. 8, pp. 973-981, Aug. 2005.

68 J. Wei, M. Pickering, M. Frater, J. Arnold, J. Boman, and W. Zeng, “Tile boundary artifact reduction using odd tile size and the low-pass first convention,” *IEEE Trans. Image Proc.*, 14(8): 1033-1042, Aug. 2005.

69 M. Ji, S. Shen, W. Zeng, et al, “MPEG-4 IPMP extension – for interoperable protection of multimedia content, “ *EURASIP Journal on Applied Signal Processing*, *Special Issue on Multimedia Security and Rights Management*, 2004:14, pp. 2201-2213, 2004.

70 W. Zeng, K. Nahrstedt, P. A. Chou, A. Ortega, P. Frossard, and H. H. Yu, “Introduction to the Special Issue on Streaming Media,” Guest Editorial, *IEEE Trans on Multimedia*, *Special Issue on Streaming Media*, vol. 6, no. 2, April 2004.

71 W. Zeng and S. Lei, “Efficient frequency domain selective scrambling of video”, in *IEEE Tran. Multimedia*, March 2003.

72 W. Zeng and J. Wen, “3G wireless multimedia: technologies and practical issues,” invited paper, *Journal of Wireless Communications and Mobile Computing*, *Special Issue on Multimedia over Mobile IP*, vol. 2, issue 6, pp. 563-572, Sept. 2002.

73 J. Wen, M. Severa, W. Zeng, M. Luttrell and W. Jin, “A format compliant configurable encryption framework for access control of video”, *IEEE Tran. Circuits & Systems for Video Technology*, *Special Issue on Wireless Video*, pp. 545-557, June 2002.

74 W. Zeng, S. Daly and S. Lei, “An overview of the visual optimization tools in JPEG 2000," invited paper, in *Special Issue on JPEG-2000* of *Signal Processing: Image Communication*, vol. 17, no. 1, pp. 85-104, Jan. 2002.

75 W. Zeng and H. Yu, "Informing clientele through networked multimedia information systems," editorial introduction to the special issue on Multimedia Technologies and Informing Systems, *The International Journal of Informing Science*, vol. 2, no. 4, 1999.

76 W. Zeng and B. Liu, “A statistical watermark detection technique without using original images for resolving rightful ownerships of digital images," in *IEEE Trans. Image Processing*, vol. 8, no. 11, pp. 1534-1548, Nov. 1999.

77 W. Zeng and B. Liu, “Geometric-structure-based error concealment with novel applications in block-based low bit rate coding," *IEEE Trans. on Circuit and System for Video Technology*, vol. 9, no. 4, pp. 648-665, June 1999.

78 C. Podilchuk and W. Zeng, "Image-Adaptive watermarking using visual models," invited paper, *IEEE Journal on Selected Areas in Communications*, vol. 16, No. 4, *Special Issue on Copyright and Privacy Protection*, pp. 525-539, May 1998.

79 W. Zeng and Y. Huang, “Boundary matching detection for recovering erroneously received VQ indices over noisy channels", *IEEE Trans. on Cir. and Sys. for Video Technology*, vol. 6, no. 1, pp. 108-113, Feb. 1996.

80 W. Zeng, Y. Huang, and S. Huang, “Two greedy tree growing algorithms for designing variable rate vector quantizers", *IEEE Trans. Cir. and Sys. for Video Technology*, vol. 5, no. 3, pp. 236-242, June 1995.

Book and Book Chapters:

1. Luo C., Zeng W. (2020) Monocular and Binocular People Tracking. In: Ikeuchi K. (eds) Computer Vision. Springer, Cham.
2. S. Deb Roy and W. Zeng, *Social Multimedia Signals: A Signal Processing Approach to Social Network Phenomena*, ISBN: 978-3-319-09116-7, Springer, Aug. 2014.
3. S. Deb Roy, T. Mei, and W. Zeng, “Bridging social media content across web domains,” book chapter in *Human-Centered Social Media Analytics* edited by Y. Fu, 2013, Springer.
4. W. Zeng and L. Dong, “End-to-end security for multimedia adaptation,” book chapter in *Encyclopedia of Multimedia* (second edition), edited by Borko Furht, ISBN-10: 0387747249, Springer, November 26.
5. W. Zeng, H. Yu and C. Lin (Eds), *Multimedia Security Technologies for Digital Rights Management*, ISBN: 0123694760, Elsevier, July 2006. (the first book designed to provide an in-depth and comprehensive coverage on the state-of-the-art multimedia security technologies for the DRM applications)
6. W. Zeng, “Format compliant content protection,” book chapter in *Multimedia Security Technologies for Digital Rights Management*, W. Zeng, H. Yu and C. Lin (Eds), ISBN: 0123694760, Elsevier, July 2006.
7. W. Zeng and J. Lan, “Real-time Multimedia,” book chapter in *Encyclopedia of Multimedia,* edited by Borko Furht, ISBN: 038724395X, Springer, Dec. 2005.

Conference Papers:

1. Mingqi Yuan, Bo Li, Xin Jin, and Wenjun Zeng, “Rewarding Episodic Visitation Discrepancy for Exploration in Reinforcement Learning,” to appear in Deep RL Workshop, NeurIPS 2022.
2. Danni Xu, Ruimin Hu, Zheng Wang, Linbo Luo, Dengshi Li, and Wenjun Zeng, “Gaze- and Spacing-flow Unveil Intentions: Hidden Follower Discovery,” in *ACM Multimedia 2022.*
3. Yifu Zhang, Chunyu Wang, Xinggang Wang, Wenjun Zeng, Wenyu Liu, “Robust Multi-Object Tracking by Marginal Inference,” in *ECCV2022.*
4. Jiajun Su, Chunyu Wang, Xiaoxuan Ma, Wenjun Zeng, and Yizhou Wang, “Towards Monocular Absolute 3D Human Pose Estimation in the Wild,” in *ECCV2022.*
5. Fei Xie, Chunyu Wang, Guangting Wang, Yue Cao, Wankou Yang, Wenjun Zeng, “Correlation-Aware Deep Tracking,” in CVPR 2022.
6. Namyup Kim, Dongwon Kim, Cuiling Lan, Wenjun Zeng, Suha Kwak, “ReSTR: Convolution-free Referring Image Segmentation Using Transformers,” in CVPR 2022.
7. Zhipeng Huang, Zhizheng Zhang, Cuiling Lan, Wenjun Zeng, Peng Chu, Quanzeng You, Jiang Wang, Zicheng Liu, Zheng-Jun Zha, “Lifelong Unsupervised Domain Adaptive Person Re-identification with Coordinated Anti-forgetting and Adaptation,” in CVPR 2022.
8. Tao Yang, Xuanchi Ren, Yuwang Wang, Wenjun Zeng, “Towards Building A Group-based Unsupervised Representation Disentanglement Framework,” in ICLR2022.
9. Xuanchi Ren*, Tao Yang*, Yuwang Wang, Wenjun Zeng, “Learning Disentangled Representation by Exploiting Pretrained Generative Models: A Contrastive Learning View,” in ICLR2022.
10. Dacheng Yin*, Xuanchi Ren*, Chong Luo, Yuwang Wang, Zhiwei Xiong, Wenjun Zeng, “Retriever: Learning Content-Style Representation as a Token-Level Bipartite Graph,” in ICLR2022.
11. G. Wang, Y. Zhao, C. Tang, C. Luo, and W. Zeng, “When Shift Operation Meets Vision Transformer: An Extremely Simple Alternative to Attention Mechanism,” in AAAI 2022.
12. C. Tang, Y. Zhao, G. Wang, C. Luo, W. Xie, and W. Zeng, “Sparse MLP for Image Recognition: Is Self-Attention Really Necessary? in AAAI 2022.
13. Tao Yu, Cuiling Lan, Wenjun Zeng, Mingxiao Feng, Zhibo Chen, “PlayVirtual: Augmenting Cycle-Consistent Virtual Trajectories for Reinforcement Learning,” in NeurIPS 2021。
14. Guoqiang Wei, Cuiling Lan, Wenjun Zeng, Zhibo Chen, “ToAlign: Task-Oriented Alignment for Unsupervised Domain Adaptation,” in NeurIPS 2021.
15. Xin Jin, Cuiling Lan, Wenjun Zeng, and Zhibo Chen, “Re-energizing Domain Discriminator with Sample Relabeling for Adversarial Domain Adaptation” in ICCV 2021.
16. Rongchang Xie, Chunyu Wang, Wenjun Zeng, Yizhou Wang, “An Empirical Study of the Collapsing Problem in Semi-Supervised 2D Human Pose Estimation,” in ICCV 2021.
17. Yucheng Zhao, Guangting Wang, Chong Luo, Wenjun Zeng, Zheng-Jun Zha, “Self-Supervised Visual Representations Learning by Contrastive Mask Prediction,” in ICCV 2021.
18. X. Ren, T. Yang, Y. Wang, and W. Zeng, “Rethinking Content and Style: Exploring Bias for Unsupervised Disentanglement,” *Proc. of the ICCV Workshops*, 2021, pp. 1823-1832.
19. Fei Xie, Chunyu Wang, Guangting Wang, Wankou Yang, Wenjun Zeng, “Learning Tracking Representations via Dual-Branch Fully Transformer Networks,” *Proc. of the ICCV Workshops*, 2021, pp. 2688-2697.
20. Kecheng Zheng, Cuiling Lan, Wenjun Zeng, Jiawei Liu, Zhizheng Zhang, and Zheng-Jun Zha, “Pose-Guided Feature Learning with Knowledge Distillation for Occluded Person Re-Identification,” *ACM Multimedia* 2021.
21. Zhizheng Zhang, Cuiling Lan, Wenjun Zeng, Zhibo Chen, and Shih-Fu Chang, “Uncertainty-Aware Few-Shot Image Classification,” in *International Joint Conference on Artificial Intelligence (IJCAI)*, 2021.
22. W. Liao, C. Lan, M. Yang, W. Zeng, and B. Rosenhahn, “Target-Tailored Source-Transformation for Scene Graph Generation,” in *4th Multimodal Learning and Applications (MULA) Workshop*, CVPR 2021.
23. Xiaotian Chen, Yuwang Wang, Xuejin Chen, Wenjun Zeng, “S2R-DepthNet: Learning a Generalizable Depth-specific Structural Representation,” in CVPR 2021 (**Oral Paper**).
24. Guangting Wang, Yizhou Zhou, Chong Luo, Wenxuan Xie, Wenjun Zeng, Zhiwei Xiong, “Unsupervised Visual Representation Learning by Tracking Patches in Video,” in CVPR 2021.
25. Guoqiang Wei, Cuiling Lan, Wenjun Zeng, Zhibo Chen, “MetaAlign: Coordinating Domain Alignment and Classification for Unsupervised Domain Adaptation,” in CVPR 2021.
26. Y. Zhao, D. Yin, C. Luo, Z. Zhao, C. Tang, W. Zeng, and Z. Zha, “General-Purpose Speech Representation Learning through a Self-Supervised Multi-Granularity Framework,” arXiv:2102.01930 **[cs.SD]**
27. K. Zheng, C. Lan, W. Zeng, Z. Zhang, and Z. Zha, “Exploiting Sample Uncertainty for Domain Adaptive Person Re-Identification,” in AAAI2021.
28. X. Wang, Z. Wang, T. Yamasaki, and W. Zeng, “Very Important Person Localization in Unconstrained Conditions: A New Benchmark,” in AAAI2021.
29. Hanyue Tu, Chunyu Wang, and Wenjun Zeng, “End-to-End Estimation of Multi-Person 3D Poses from Multiple Cameras,” in *ECCV* 2020 (**Oral**).

30. Xin Jin, Cuiling Lan, Wenjun Zeng, Zhibo Chen, “Global Distance-distributions Separation for Unsupervised Person Re-identification,” in *ECCV* 2020.
31. He A., Wang G., Luo C., Tian X., Zeng W. (2020) AF2S: An Anchor-Free Two-Stage Tracker Based on a Strong SiamFC Baseline. In: Bartoli A., Fusiello A. (eds) Computer Vision – ECCV 2020 Workshops (*Visual Object Tracking Challenge Workshop*). *ECCV* 2020.
32. Zheng Wang, Zhixiang Wang, Yinqiang Zheng, Yang Wu, Wenjun Zeng, and Shin’ichi Satoh, “Beyond Intra-modality: A Survey of Heterogeneous Person Re-Identification,” *International Joint Conference on Artificial Intelligence (IJCAI)*, 2020 (Survey Track).
33. Chuanxin Tang, Chong Luo, Zhiyuan Zhao, Wenxuan Xie, and Wenjun Zeng, “Joint Time-Frequency and Time Domain Learning for Speech Enhancement,” *International Joint Conference on Artificial Intelligence (IJCAI)*, 2020.
34. Yucheng Zhao, Chong Luo, Zheng-Jun Zha, and Wenjun Zeng, “Multi-Scale Group Transformer for Long Sequence Modeling in Speech Separation,” *International Joint Conference on Artificial Intelligence (IJCAI)*, 2020.
35. Yizhou Zhou, Xiaoyan Sun, Chong Luo, Zheng-Jun Zha, Wenjun Zeng, “Spatiotemporal Fusion in 3D CNNs: A Probabilistic View,” in *CVPR* (**oral paper**), June 2020, Seattle, USA.
36. Xin Jin, Cuiling Lan, Wenjun Zeng, Zhibo Chen, Li Zhang, “Style Normalization and Restitution for Generalizable Person Re-identification,” in *CVPR*, June 2020, Seattle, USA.
37. Zhizheng Zhang, Cuiling Lan, Wenjun Zeng, Zhibo Chen, “Multi-Granularity Reference-Aided Attentive Feature Aggregation for Video-based Person Re-identification,” in *CVPR*, June 2020, Seattle, USA.
38. Zhizheng Zhang, Cuiling Lan, Wenjun Zeng, Xin Jin, Zhibo Chen, “Relation-aware Global Attention for Person Re-identification,” in *CVPR*, June 2020, Seattle, USA.
39. Guangting Wang, Chong Luo, Xiaoyan Sun, Zhiwei Xiong, Wenjun Zeng, “Tracking by Instance Detection: A Meta-Learning Approach,” in *CVPR* (**oral paper**), June 2020, Seattle, USA.
40. Zhe Zhang, Chunyu Wang, Wenhu Qin, and Wenjun Zeng, “Fusing wearable imus with multi-view images for human pose estimation: A geometric approach,” in *CVPR*, June 2020, Seattle, USA.
41. Pengfei Zhang, Cuiling Lan, Wenjun Zeng, Junliang Xing, Jianru Xue, Nanning Zheng, “Semantics-Guided Neural Networks for Efficient Skeleton-Based Human Action Recognition,” in *CVPR*, June 2020, Seattle, USA.
42. X. Jin, C. Lan, W. Zeng, and Z. Chen, “Uncertainty-aware Multi-shot Knowledge Distillation for Image-based Object Re-identification,” in *AAAI 2020*.
43. X. Jin, C. Lan, W. Zeng, G. Wei, and Z. Chen, “Semantics-Aligned Representation Learning for Person Re-identification,” in *AAAI 2020*.
44. D. Yin, C. Luo, Z. Xiong, and W. Zeng, “PHASEN: A Phase-and-Harmonics-Aware Speech Enhancement Network.” in *AAAI 2020*.
45. Y. Zhou, X. Sun, C. Luo, Z. Zha, and W. Zeng, “Posterior-Guided Neural Architecture Search,” in *AAAI 2020*.
46. J. Mei, X. Chen, C. Wang, A. Yuille, X. Lan, and W. Zeng, “Learning to Refine 3D Human Pose Sequences,” in *2019 International Conference on 3D Vision*.
47. J. Zhou, Y. Wang, K. Qin, and W. Zeng, “Moving Indoor: Unsupervised Video Depth Learning in Challenging Environments,” in *ICCV 2019*, Seoul, Korea.
48. J. Zhou, Y. Wang, K. Qin, and W. Zeng, “Unsupervised High-Resolution Depth Learning from Videos with Dual Networks,” in *ICCV 2019*, Seoul, Korea.
49. H. Qiu, C. Wang, J. Wang, N. Wang, and W. Zeng, “Cross View Fusion for 3D Human Pose Estimation,” in *ICCV 2019*, Seoul, Korea.
50. J. Sun, J. Xie, Z. Lin, J. Hu, W. Zheng, J. Lai, and W. Zeng, “Predicting future instance segmentation with contextual pyramid ConvLSTMs,” *ACM Multimedia 2019*.
51. R. Yang, X. Sun, M. Xu, W. Zeng, “Quality-gated convolutional LSTM for enhancing compressed video,” *IEEE Inter. Conf. on Multimedia & Expo*, July 8-12, 2019, Shanghai (oral).
52. Z. Zhang, C. Lan, W. Zeng, and Z. Chen, “Densely Semantically Aligned Person Re-Identification,” *IEEE Conference on Computer Vision and Pattern Recognition*, June 2019.
53. G. Wang, C. Luo, Z. Xiong, and W. Zeng, “SPM-Tracker: Series-Parallel Matching for Real-Time Visual Object Tracking,” *IEEE Conference on Computer Vision and Pattern Recognition*, June 2019.
54. Y. Zhou, X. Sun, Z. Zha, W. Zeng, “Context-Reinforced Semantic Segmentation,” *IEEE Conference on Computer Vision and Pattern Recognition*, June 2019.
55. G. Gao, L. Dong, H. Zhang, Y. Wen, W. Zeng, “Content-Aware Personalised Rate Adaptation for Adaptive Streaming via Deep Video Analysis,” 2019 *IEEE Inter. Conf. on Communications (ICC): Communication Software, Services and Multimedia Applications Symposium*.
56. C. Wang, H. Qiu, A. Yuille, and W. Zeng, "Learning Basis Representation to Refine 3D Human Pose Estimations," in 2019 *AAAI Conference on Artificial Intelligence*.
57. H. Luo, W. Xie, X. Wang, W. Zeng, "Detect or Track: Towards Cost-Effective Video Object Detection/Tracking," in 2019 *AAAI Conference on Artificial Intelligence*.

58. C. Wang, X. Sun, X. Chen, and W. Zeng, “Real-time object tracking with motion information,” *IEEE Inter. Conf. on Visual Communications and Image Processing*, Dec. 9-12, 2018.
59. X. Liu, X. Nie, W. Zeng, C. Cui, L. Zhu, and Y. Yin, “Fast Discrete Cross-modal Hashing with Regressing from Semantic Labels”, *ACM Multimedia*, 2018 (oral).
60. J. Shen, F. Liang, C. Luo, H. Li, and W. Zeng, “Cooperative Hybrid Digital-Analog Video Transmission in D2D Networks,” *IEEE Int. Conf. Image Proc.*, Oct. 2018.
61. J. Mei, C. Wang, and W. Zeng, “Online Dictionary Learning for Approximate Archetypal Analysis,” *European Conference on Computer Vision* (*ECCV*), Sept. 2018.
62. P. Zhang, J. Xue, C. Lan, W. Zeng, Z. Gao, and N. Zheng, "Adding Attentiveness to the Neurons in Recurrent Neural Networks,", *European Conference on Computer Vision* (*ECCV*), Sept. 2018.
63. A. He, C. Luo, X. Tian, and W. Zeng, “Towards a Better Match in Siamese Network Based Visual Object Tracker,” *ECCV 2018 Visual Object Tracking Challenge Workshop VOT2018*, Sept. 2018. 2nd place winner, among 72 entries, of VOT2018 (http://www.votchallenge.net/vot2018/) “real-time” tracker challenge.
64. S. Song, C. Lan, J. Xing, W. Zeng, and J. Liu, "Skeleton-Indexed Deep Multi-Modal Feature Learning for High Performance Human Action Recognition," *IEEE Int. Conf. Multimedia and Expo*, July 2018.
65. A. He, C. Luo, X. Tian, and W. Zeng, “A Twofold Siamese Network for Real-Time Object Tracking,” in CVPR 2018.
66. Y. Zhou, X. Sun, Z. Zha, and W. Zeng, “MiCT: Mixed 3D/2D Convolutional Tube for Human Action Recognition,” in CVPR 2018.
67. L. Zhao, J. Wang, X. Li, Z. Tu, and W. Zeng, “On the Connection of Deep Fusion to Ensembling,” arXiv:1611.07718, Nov. 2016.
68. K. Sun, C. Lan, J. Xing, J. Wang, W. Zeng, and D. Liu, “Human Pose Estimation using Global and Local Normalization”, in ICCV 2017.
69. P. Zhang, C. Lan, J. Xing, W. Zeng, J. Xue, and N. Zheng, “View Adaptive Recurrent Neural Networks for High Performance Human Action Recognition from Skeleton Data,” in ICCV 2017.
70. Y. Zhou, X. Sun, D. Liu, Z. Zha, and W. Zeng, “Adaptive Pooling in Multi-Instance Learning for Web Video Annotation,” in ICCV2017, Workshop on Web-scale Vision and Social Media.
71. M. Dong, D. He, C. Luo, D. Liu, and W. Zeng, “A CNN-Based Approach for Automatic License Plate Recognition in the Wild,” in *British Machine Vision Conference*, September 4, 2017.
72. H Liu, D Liu, X Sun, F Wu, and W Zeng, “On-line fall detection via a boosted cascade of hybrid features,” ICME Workshops, 2017.
73. S. Song, C. Lan, J. Xing, W. Zeng, and J. Liu, “An End-to-End Spatio-Temporal Attention Model for Human Action Recognition from Skeleton Data”, in 2017 *AAAI Conference on Artificial Intelligence*.
74. J**.** Wang, Z. Wei, T. Zhang, and W. Zeng, “Deeply-Fused Nets,” arXiv:1605.07716v1, May 2016.
75. L. Wang, Z. Xiong, G. Shi, F. Wu, and W. Zeng, “Compressive Hyperspectral Imaging with Complementary RGB Measurements,” in *Visual Communications and Image Processing,* Nov. 2016 (**Best Paper Award**).
76. Y. Li, C. Lan, J. Xing, W. Zeng, C. Yuan, and J. Liu, Online Human Action Detection using Joint Classification-Regression Recurrent Neural Networks, in ECCV 2016, Amsterdam, Oct. 2016.
77. D. Liu, L. Wang, L. Li, Z. Xiong, F. Wu, and W. Zeng, “Pseudo-sequence-based Light Field Image Compression,” in *IEEE Inter. Conf. on Multimedia & Expo, Grand Challenge on Light-Field Image Compression*, July 2016. (**Winner of the Challenge**)
78. X. Lan, Z. Xiong, W. Zhang, S. Li, H. Chang, and W. Zeng, “A Super-Fast Online Face Tracking System for Video Surveillance,” in 2016 *IEEE Int'l Symposium on Circuits & Systems*.
79. W. Zhu, C. Lan, J. Xing, W. Zeng, Y. Li, L. Shen, X. Xie, “Co-occurrence Feature Learning for Skeleton Based Action Recognition Using Regularized Deep LSTM Networks,” 2016 *AAAI Conference on Artificial Intelligence*.
80. C. Lan, D. He, C. Luo, F. Wu, and W. Zeng, “Progressive Pseudo-Analog Transmission for Mobile Video Live Streaming,” *2015 Visual Communications and Image Processing*.
81. D. He, C. Luo, F. Wu, and W. Zeng, “Swift: A Hybrid Digital-Analog Scheme for Low-Delay Transmission of Mobile Stereo Video,” FULL PAPER in *ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems* (MSWiM), Cancun, Mexico, November 2-6, 2015.
82. H. Zeng, J. Chen, X. Kang, and W. Zeng, “Removing camera fingerprint to disguise photograph source,” *IEEE Inter. Conf. Image Proc.*, 2015.
83. L. Wang, Z. Xiong, D. Gao, G. Shi, W. Zeng and F. Wu, “High-speed Hyperspectral Video Acquisition with a Dual-camera Architecture,” 2015 *IEEE Conference on Computer Vision and Pattern Recognition* (CVPR).
84. C. Lan, J. Xu, W. Zeng, and F. Wu, “Compound image compression using lossless and lossy using LZMA in HEVC,” 2015 *IEEE Inter. Conf. on Multimedia and Expo,* main conference (oral presentation) (15% acceptance rate).

85. S. Shruti, S. Deb Roy, and W. Zeng, "Influence of social media on performance of movies," *Workshop on Cross-media Analysis for Social Multimedia*, 2014 *IEEE Inter. Conf. on Multimedia & Expo*.
86. L. Qing and W. Zeng, "Improving distributed video coding by exploiting context-adaptive modeling," 2014 *IEEE Inter. Conf. on Multimedia and Expo,* main conference (oral presentation) (15% acceptance rate).
87. Q. Wang, W. Zeng, and J. Tian, "Compressive sensing based secure multiparty privacy preserving framework for collaborative data-mining and signal processing," 2014 *IEEE Inter. Conf. on Multimedia and Expo,* main conference (oral presentation) (15% acceptance rate).
88. J. Tian and W. Zeng, "Delta interpolation for upsampling imaging solutions," 2014 *IEEE Inter. Conf. on Multimedia and Expo,* main conference (poster presentation) (30% acceptance rate).
89. Q. Wang, W. Zeng, and J. Tian, "Integrated secure watermark detection and privacy preserving storage in the compressive sensing domain," regular paper (35% acceptance rate), in *IEEE Inter. Workshop on Information Forensics and Security*, Guangzhou, China, Nov. 2013.
90. S. D. Roy and W. Zeng, "The Hidden Potential of Movie Genome Communities: Analyzing fine-grained Semantic Information in Motion Pictures," regular paper (30% acceptance rate), *IEEE International Conference on Semantic Computing*, Irvine, CA, Sept. 2013.
91. X. Li, W. Zeng, and Y. Duan, "Geometry based airborne LiDAR data compression" *IEEE Inter. Conf. on Multimedia and Expo* main conference oral presentation (12.7% acceptance rate), July 2013.
92. A. Lobzhanidze and W. Zeng, "Proactive Caching of Online Video by Mining Mainstream Media," *IEEE Inter. Conf. on Multimedia and Expo* main conference oral presentation (12.7% acceptance rate), July 2013. (**Best paper award candidate**)
93. X. Li, W. Zeng, and Y. Duan, "A hybrid approach for tree classification in airborne LiDAR data," *IEEE Inter. Conf. on Acoustic, Speech, and Signal Processing*, May 2013.
94. A. Lobzhanidze, W. Zeng, P. Gentry, and A. Taylor, "Mainstream Media vs. Social Media for Trending Topic Prediction – An Experimental Study," work-in-progress, *IEEE Consumer Communications & Networking Conf.* Jan. 2013.
95. S. D. Roy and W. Zeng, "A Computational Cognitive Model for Semantic Sub-network Extraction from Natural Language Queries" the *24th International Conference on Computational Linguistics* (COLING)*,* Dec. 2012 (long paper, **19% acceptance rate**).
96. S. D. Roy, T. Mei, W. Zeng, and S. Li, "SocialTransfer: Cross-Domain Transfer Learning from Social Streams for Media Applications," *ACM Multimedia* (long paper, **20% acceptance rate**), Oct. 2012.
97. X. Xu, T. Mei, W. Zeng, R. Yu, and J. Luo, "AMIGO: Accurate Mobile Image Geotagging," the fourth *International Conference on Multimedia Computing and Service,* Sept. 2012. (**Best paper award winner**)
98. S.D. Roy, T. Mei, W. Zeng, and S. Li, "Empowering Cross-domain Internet Media with Real-time Topic Learning from Social Streams," *IEEE Inter. Conf. on Multimedia and Expo* main conference oral presentation (**15% acceptance rate**), July 2012, Melbourne, Australia.
99. Q. Wang, A. Lobzhanidze, H.I. Jang, W. Zeng, and Y. Shang, "Video based Real-world Remote Target Tracking on Smartphones," *IEEE Inter. Conf. on Multimedia and Expo* main conference (30% acceptance rate), July 2012, Melbourne, Australia.
100. J. Fu, S. Wang, Y. Lu, S. Li, and W. Zeng, "Kinect-Like Depth Denoising," *IEEE Inter. Sym. Circuits and Systems*, May 2012, Seoul, Korea.
101. Q. Wang, A. Lobzhanidze, H. Jang, W. Zeng, Y. Shang, J. Yang, **"**Image and video-based remote target localization and tracking on smartphones**,"** *SPIE Geospatial InfoFusion conference*, *SPIE Defense, Security, and Sensing Symposium*, April 2012, Baltimore, MD.
102. X. Kang, X. Xu, A. Peng, and W. Zeng, "Scalable Lossy Compression for Pixel-Value Encrypted Images," Data Compression Conference, April 2012, Snowbird, Utah, USA.
103. Y. Shang, W. Zeng, D. Ho, et al, "Nest: NEtworked Smartphones for Target localization, in *Proc. IEEE Consumer Communications and Networking Conference*, Jan. 2012, Las Vegas.
104. Q. Wang, A. Lobzhanidze, S. Roy, W. Zeng and Y. Shang, "PositionIt: An Image-based Remote Target Localization System on Smartphones", (demo paper), in *ACM Multimedia Conference,* Nov. 2011.
105. J. Kim, S. Won, W. Zeng, and S. Park, "Copyright protection of vector map using digital watermarking in the spatial domain," the 7th *International Conference on Digital Content, Multimedia Technology and its Applications*, Aug. 16-18, 2011, Busan, Republic of Korea.
106. Y. Zhu, H. Liu, Y. Guo, and W. Zeng, "Network assisted media streaming in multi-hop wireless networks," in *IEEE Inter. Conf. on Computer Communication Networks,* Maui, Aug. 2011.
107. S. D. Roy, J. Tian, H. Yu, and W. Zeng, "A multi-layer key stream-based approach to achieve joint encryption and compression for h.264 video," *IEEE ICME* 2011, *Workshop on Content Protection & Forensics*.
108. X. Li, Y. Duan, W. Zeng, N. Maerz, J. Otoo, "Integrating Optical Image with LIDAR for 3D Fracture Orientation Analysis", 2011 *IEEE Inter. Geoscience and Remote Sensing Symposium*, July 2011.

109. D. Karpman, D. Ashbrook, X. Li, Y. Duan, and W. Zeng, "Lidar depth image compression using clustering, re-indexing, and JPEG2000", *Proc. of SPIE Defense, Security, and Sensing*, *Conference on Laser Radar Technology and Applications XVI*, vol. 8037, April 2011.
110. R. Sun, X. Yan, and W. Zeng, "Geometric invariant robust image hashing via zernike moment," in *Inter. Conf. on Networks Security, Wireless Communications and Trusted Computing,* April 2011.
111. W. Zeng, J. Lu, Q. Wang, and S. Bock, "Overview of the OMA Secure Content Identification Mechanism," *Workshop on Visual Content Identification and Search* (VCIDS'10), *IEEE International Conference on Multimedia and Expo*, July 2010.
112. S. Bock, S. Newsome, Q. Wang, and W. Zeng, X. Lin, J. Lu, "iImage---An iPhone Image Based Information Retrieval Application," *Proc. IEEE Consumer Communications and Networking Conf*., Las Vegas, Jan. 2010.
113. S. D. Roy, T. Kneriem, S. Churchman, and W. Zeng, "Design Issues of the prTorrent File Sharing Protocol," *Proc. IEEE Consumer Communications and Networking Conference*, January 2010, Las Vegas.
114. T. Alexenko, M. Jenne, S. D. Roy, and W. Zeng, "Cross-Site Request Forgery: Attack and Defense," *Proc. IEEE Consumer Communications and Networking Conf*., Las Vegas, Jan. 2010.
115. X. Liu and W. Zeng, "Throughput and Delay Analysis of the IEEE 802.15.3 CSMA/CA Mechanism," The 2nd *IEEE International Workshop on Wireless Network Algorithm and Theory*, co-located with *IEEE International Conference on Mobile Ad-hoc and Sensor Systems*, Macau SAR, P.R.C., October 12, 2009.
116. S. D. Roy and W. Zeng, "prTorrent: On Establishment of Piece Rarity in the BitTorrent Unchoking Algorithm," full paper (**20% acceptance rate**) in the *Ninth International Conference on Peer-to-Peer Computing* (P2P2009), Sept. 2009, Seattle, WA.
117. Y. Zhu, H. Liu, Y. Guo, and W. Zeng, "Challenges and Opportunities in Supporting Video Streaming over Infrastructure Wireless Mesh Networks," invited paper, *Workshop on Emerging Technologies in Multimedia Communications & Networking*, *IEEE International Conference on Multimedia and Expo*, June 2009.
118. C. Dartigue, H. Jang, and W. Zeng, "A New Data-Mining Based Approach for Network Intrusion Detection," in the *7th Annual Conf. Commu. Networks and Services Research*, Mocton, Canada, May 2009.
119. Q. Yao, W. Zeng, and W. Liu, "Multi-Resolution Based Hybrid Spatiotemporal Compression of Encrypted Videos," in *Proc. IEEE Int. Conf. Acous., Speech and Sig. Process.,* April 2009.
120. W. Liu, L. Dong, and W. Zeng, "Estimating Side-Information for Wyner-ziv Video Coding Using Resolution-Progressive Decoding and Extensive Motion Exploration," in *Proc. IEEE Int. Conf. Acous., Speech and Sig. Process.,* April 2009.
121. Y. Zhu, W. Liu, L. Dong, W. Zeng, and H. Yu, "High Performance Adaptive Video Services based on Bitstream Switching for IPTV System," *IEEE Consumer Communications and Networking Conf*., Las Vegas, Jan. 2009.
122. W. Liu, W. Zeng, L. Dong, Q. Yao, "Resolution-progressive Compression of Encrypted Grayscale Images," *IEEE International Conference on Image Processing*, Oct. 2008.
123. X. Kang, X. Zhong, J. Huang, W. Zeng, "An Efficient Print-scanning Resilient Data Hiding Scheme Based on a Novel LPM," *IEEE International Conference on Image Processing*, Oct. 2008.
124. Y. Zhu, W. Zeng, H. Liu, Y. Guo, and S. Mathur, "Supporting Video Streaming Services in Infrastructure Wireless Mesh Networks: Architecture and Protocols," *IEEE Inter. Confer. Communications*, May 2008.
125. W. Liu, L. Dong and W. Zeng, "Power-Efficient Rate Allocation for Slepian-Wolf Coding over Wireless Sensor Networks," *IEEE Int. Conf. Acous., Speech and Sig. Process.,* April 2008.
126. W. Liu, L. Dong and W. Zeng, "Wyner-Ziv Video Coding with Multi-resolution Motion Refinement: Theoretical Analysis and Practical Significance," in *Visual Communications and Image Processing* (VCIP), San Jose, Jan. 2008.
127. W. Liu, L. Dong and W. Zeng, "Optimum Detection for Spread-Spectrum Watermarking that Employs Self-masking", in *IEEE International Conference on Image Processing*, Sept. 2007.
128. Y. Zhu, W. Zeng and H. Lu, "Exploiting Overlay Path-diversity for Scalable Reliable Multicast," in *IEEE International Conference on Multimedia and Expo*, July 2007.
129. X. Kang, C. Liu, W. Zeng, C. Liu, and J. Huang, "Fast and automatic watermark resynchronization based on Zernike moments," in *Conference on Security, Steganography, and Watermarking of Multimedia Contents, IS&T/SPIE Symposium on Electronic Imaging*, January 2007.
130. W. Liu, L. Dong, and W. Zeng, "Optimum detection of image-adaptive watermarking in DCT domain," *IEEE Inter. Confer. Image Processing,* Oct. 2006.
131. Z. He and W. Zeng, "Rate-distortion optimized transmission power adaptation for video streaming over wireless channels," *IEEE Inter. Confer. Image Processing,* Oct. 2006.
132. W. Zeng, Y. Zhu, H. Lu, and H. Jiang, "Path-diversity overlay retransmission architecture for reliable multicast," *IEEE Inter. Confer. Multimedia and Expo*, July 2006.

133. P. Zhu, W. Zeng, and C. Li, “Cross-layer design of source rate control and QoS-aware congestion control for wireless video streaming,” *IEEE Inter. Confer. Multimedia and Expo*, July 2006.
134. W. Zeng, “On security architecture and functionality of distributed multimedia,” in 40th Annual *Conference on Information Sciences and Systems*, Princeton, NJ, March 2006.
135. P. Zhu, W. Zeng, and C. Li, “A novel source rate control algorithm for video streaming over the Internet,” in *Visual Communications and Image Processing* (VCIP), Jan. 2006.
136. W. Liu and W. Zeng, “Scalable non-binary distributed source coding using gray codes,” in *IEEE Inter. Workshop on Multimedia Signal Processing,* Shanghai, China, Oct. 2005.
137. P. Zhu, W. Zeng, and C. Li, “Joint design of source rate control and QoS-aware congestion control for streaming video over the Internet,” in *IEEE Inter. Workshop on Multimedia Signal Processing,* Shanghai, China, Oct. 2005.
138. X. Kang, Y. Q. Shi, J. Huang, and W. Zeng, “Multi-band wavelet based digital watermarking using principal component analysis,” in *International Workshop on Digital Watermarking*, pp. 139-146, Sept. 2005, Siena, Italy.
139. B. Xie and W. Zeng, “On the rate-distortion performance of dynamic bitstream switching mechanisms,” *IEEE Inter. Confer. Multimedia and Expo*, July 2005.
140. X. Kang, W. Zeng, J. Huang, X. Zhuang, “Digital watermarking based on multi-band wavelet and principal component analysis,” in *Visual Communications and Image Processing* (VCIP) 2005, July 12-15, 2005, Beijing, China.
141. M. Sullivan and W. Zeng, “A protocol for simultaneous real time playback and full quality storage of streaming media,” *IEEE Inter. Confer. Communications*, Seoul, Korea, May 2005.
142. W. Zeng, J. Lan, and X. Zhuang, “Security architectures and analysis for content adaptation,” in *Conference on Security, Steganography, and Watermarking of Multimedia Contents VII, IS&T/SPIE Symposium on Electronic Imaging*, January 2005.
143. W. Zeng, X. Zhuang, and J. Lan, “Network friendly media security: rationales, solutions, and open issues,” *Proc. IEEE Inter. Conf. Image Proc.,* Singapore, Oct. 2004.
144. B. Xie and W. Zeng, “An improved rate-quantization model for rate control in real-time video encoding,” *Proc. IEEE Inter. Conf. Image Proc.,* Singapore, Oct. 2004.
145. B. Xie and W. Zeng, “Rate-distortion optimized dynamic bitstream switching for scalable video streaming,” in *IEEE Inter. Confer. Multimedia and Expo*, Taipei, Taiwan, June 2004.
146. J. Lan, X. Zhuang, and W. Zeng, “Single-pass frame-level constant distortion bit allocation for smooth video quality,” in *IEEE Inter. Confer. Multimedia and Expo*, Taipei, Taiwan, June 2004.
147. B. Xie and W. Zeng, “Two fast bitstream switching algorithms for real-time adaptive multicasting of video,” in *IEEE Inter. Confer. on Communications*, Paris, France, June 2004.
148. B. Xie and W. Zeng, “Source characteristics based fast bitstream switching,” *Proc. IEEE International Conference on Multimedia and Expo*, 2003.
149. W. Zeng, “Spatial-temporal error concealment with side information for standard video codecs,” *Proc. IEEE International Conference on Multimedia and Expo*, 2003.
150. W. Zeng and J. Wen, “3G wireless multimedia: technologies and practical issues,” invited paper, *Proc. IEEE Inter. Conf. Image Proc., Special Session on Wireless Imaging*, Sept. 2002.
151. B. Xie and W. Zeng, “Sequence-based rate control for constant quality video,” *Proc. IEEE Inter. Conf. Image Proc.*, Sept. 2002.
152. W. Zeng J. Wen and M. Severa, “Fast self-synchronous content scrambling by spatially shuffling codewords of compressed bitstreams,” *Proc. IEEE Inter. Conf. Image Proc.*, Sept. 2002.
153. W. Zeng, J. Wen, and M. Severa, “Format-compliant selective scrambling for multimedia access control,” invited talk, *IEEE Inter. Conf. on Information Technology: Coding and Computing*, April 2002.
154. J. Wen, M. Severa, W. Zeng, M. Luttrell and W. Jin, “A format compliant configurable encryption framework for access control of multimedia,” in *IEEE Workshop on Multimedia Signal Processing*, pp. 435-440, Oct. 2001.
155. S. Deshpande and W. Zeng, “Scalable streaming of JPEG2000 images using Hypertext Transfer Protocol,” in *ACM Multimedia*, Oct. 2001. (full paper, **20% acceptance rate**).
156. J. Wei, M. Pickering, M. Frater, J. Boman, J. Arnold and W. Zeng, “Boundary artifact reduction using odd tile length and the low pass first convention (OTLPF),” *Proc. of SPIE Conf. on Applications of Digital Image Process.*, July 29 – Aug. 3, 2001.
157. S. Deshpande and W. Zeng, “HTTP streaming of JPEG2000 images,” Inter. Conf. on Information Technology: Coding and Computing, pp. 15-19, April 2001.
158. W. Zeng and Weiping Li, "Preface to special session on media streaming," *IEEE Inter. Conf. on Information Technology: Coding and Computing*, pp. 1-1, April 2001.
159. W. Zeng, S. Daly and S. Lei, "Visual optimization tools in JPEG 2000," invited paper, special session on JPEG-2000, *ICIP'2000*, Sept. 2000, Vancouver, Canada.
160. W. Zeng, S. Daly and S. Lei, "Point-wise extended visual masking for JPEG-2000 image compression," *ICIP'2000*, Sept. 2000, Vancouver, Canada.

161. W. Zeng, J. Li and S. Lei, "An efficient color re-indexing scheme for palette-based compression," *ICIP'2000*, Sept. 2000, Vancouver, Canada.
162. S. Daly, W. Zeng, J. Li and S. Lei, "Visual masking in wavelet compression for JPEG2000," in *IS&T/SPIE Symposium on Electronic Imageing: Image and Video Communications and Processing*, vol. 3974, San Jose, Jan. 2000.
163. W. Zeng, "Visual optimization in digital image watermarking," invited talk, *Workshop on Multimedia and Security at ACM Multimedia '99*, Orlando, Oct. 1999.
164. W. Zeng and S. Lei, "Digital watermarking in a perceptually normalized domain," in *Proc. 33rd Annual Asilomar Conf. on Signals , Systems, and Computers,* Oct. 1999.
165. W. Zeng and S. Lei, "Efficient Frequency Domain Video Scrambling for Content Access Control," (full paper, **20% acceptance rate**) *ACM Multimedia'99*, Nov. 1999.
166. W. Zeng, B. Liu and S. Lei, "Extraction of multiresolution watermark images for resolving rightful ownership," in *IS&T/SPIE Symposium on Electronic Imageing: Science & Technology* , pp. 404-414, Jan. 1999.
167. W. Zeng, J. Li and S. Lei, "Adaptive wavelet transforms with spatially varying filters for scalable image coding," in *ICIP'98*, Chicago, Oct. 1998.
168. W. Zeng, "Digital watermarking and data hiding: technologies and applications," invited talk, *Proc. International Conference on Information Systems, Analysis and Synthesis,* pp. 223-229, 1998.
169. W. Zeng and B. Liu, "On resolving rightful ownerships of digital images by invisible watermarks," in *Proc. Inter. Conf. Image Processing*, vol. 1, pp. 552-555, 1997.
170. W. Zeng, B. Guo and B.Liu, "Feature-oriented rate shaping of pre-compressed image/video," in *Proc. Inter. Conf. Image Processing*, vol. 2, pp. 772-775, 1997.
171. C. Podilchuk and W. Zeng, "Watermarking of the JPEG Bitstream*," Proc. Inter. Confer. Imaging Science, Systems, and Technology*, pp. 253-260, June, 1997.
172. C. Podilchuk and W. Zeng, "Perceptual watermarking of still images," in *Proceeding, The First IEEE Signal Processing Society Workshop on Multimedia Signal Processing*, pp. 363-368, June 1997, Princeton, New Jersey.
173. C. Podilchuk and W. Zeng, "Digital image watermarking using visual models," Technical Memo, Multimedia Communication Lab, Lucent Technologies, Bell labs., Sept., 1996. Also in *SPIE/IS\&T Electronic Imaging'97*, Feb. 1997.
174. W. Zeng and B. Liu, "Rate shaping by block dropping for transmission of MPEG-precoded video over channels of dynamic bandwidth", (full paper, **20% acceptance rate**) in *Proc. ACM Multimedia '96*, pp. 385-393, Nov. 1996.
175. W. Zeng, Y. Tan, B. Liu and L. Yiin, "Novel approach to unequal error protection for image/video delivery with source detector," In *SPIE Photonics East '96: Voice, Video and Data Communication*, vol. 2915, Nov. 1996.
176. Y. Chang, W. Zeng, I. Kamel and R. Alonso, "Integrated image and speech analysis for content-based video indexing," *IEEE Inter. Conf. Multimedia Computing and Systems*, pp. 306-313, June 1996, Japan.
177. W. Zeng and B. Liu, "Directional spatial interpolation for DCT-based low bit rate coding", *Proc. IEEE Inter. Conf. Acoustic, Speech, and Signal Proc*., Atlanta, May 1996.
178. W. Zeng and B. Liu, "Geometric-structure-based directional filtering for error concealment in image/video transmission", *SPIE Photonics East'95: Wireless Data Transmission*, vol. 2601, pp. 145-156, Oct. 1995.
179. W. Zeng and Y. Huang, "Boundary matching detection for progressive transmission of VQ indexes over noisy channels", *Proc. IEEE Int. Symp. on Cir. and Systems*, vol. 3, pp. 249-252, May 1994.
180. W. Zeng, Y. Huang, and S. Huang, "Greedy tree growing algorithms for designing variable rate vector quantizers," *Proc. IEEE Int. Conf. Acous., Speech and Sig. Process*., pp. 594-597, 1993.

Other invited presentations (keynote/panel/expert talk):

- W. Zeng, "Unlocking the Potential of Disentangled Representation for Robust Media Understanding" **Keynote speech,** the 2nd *Inter. Workshop on Robust Understanding of Low-quality Multimedia Data: Unitive Enhancement, Analysis and Evaluation,* in conjunction with *ACM MM2022,* Oct. 2022.
- W. Zeng, "Unsupervised disentangled representation learning and applications," **Keynote speech,** *2021 6th Inter. Conference on Image, Vision and Computing*, July 2021.
- W. Zeng, "Human Centric Special Understanding," **Keynote speech**, *The first Inter. Workshop on Deep Learning for Human-Centric Activity Understanding*, in conjunction with *ICPR2020*, Jan. 2021.
- W. Zeng, "New multimedia interface technologies to improve the lives of persons with disabilities," **Multimedia Star Innovator Keynote**, *IEEE Inter. Conf. on Multimedia & Expo*, July 2019.
- W. Zeng, "Deep Learning in the Quest for Visual Intelligences," **Keynote speech**, the 2017 10th *Inter. Congress on Image and Signal Processing, BioMedical Engineering and Informatics* (CISP-BMEI 2017),

Shanghai, China, 14-16 October 2017.

- W. Zeng, "How Deep Learning Changed the Landscape of Visual Understanding?" **Keynote speech**, 2017 *IEEE Inter. Conf. on Multimedia Big Data (BigMM)*, April 2017, Laguna Hills, California, USA.
-
- Panelist, Industry Panel on From Papers to Products: Bridging the Gap between Multimedia Research and Practical Applications, *IEEE Inter. Conf. on Multimedia & Expo*, July 2019.
- Expert judge, *AI Challenger*, Dec. 2018.
- W. Zeng, invited talk, "From Pose Estimation to Action Recognition," *ECCV 2018 The 1st Person in Context (PIC) Workshop and Challenge*, Sept. 2018.
- W. Zeng, invited talk, "Towards Human-Centric Video Understanding," *the first China Symposium on Cognitive Computing and Hybrid Intelligence*, Aug. 25-26, Xi'an, China.
- W. Zeng, invited talk, "From Human Pose Estimation to Action Recognition," *IEEE Conference on Future Multimedia Technologies*, Xiamen, Aug. 2018.
- Panelist, Panel on "未来多媒体技术的前景展望", *IEEE Conference on Future Multimedia Technologies*, Xiamen, Aug. 2018.
- Panelist, Panel on "Should Challenges on Public Datasets be the Primary Driver of Multimedia Research", *IEEE Inter. Conf. on Multimedia & Expo*, San Diego, July 2018.
- W. Zeng, "Unlocking the Potential of Deep Video Understanding," invited speech, ArchSummit 2017, Beijing, Dec. 2017.
- W. Zeng, "微软人工智能--点亮未来," invited speech, Shanghai Microsoft Technology Center (MTC) day Nov. 16-17, 2017, Shanghai.
- W. Zeng, "人工智能之--图像识别," invited speech, Shanghai Microsoft Technology Center (MTC) day Nov. 16-17, 2017, Shanghai.
- W. Zeng, invited industrial talk, "Empowering Human Centric Video Understanding," *IEEE Signal and Data Science Forum*, April 2016, Wuhan, China.
- Panelist, Editors' Panel, *IEEE China Summit and International Conference on Signal and Information Processing* (ChinaSIP), July 2015, Chengdu, China.
- W. Zeng, "High Order Entropy Coding – From Conventional Video Coding to Distributed Video Coding," Expert Talk on Innovating the Future Leveraging the Past at "Time Machine" session of ICME 2012.
- W. Zeng (as a Panelist), "Scalable reliable multicast Panel presentation", Panel presentation, Panel on "Scalable Adaptive Multicast", *Workshop on Peer-to-Peer Multicasting*, *IEEE Consumer Communications and Networking Conference,* Las Vegas, Jan. 2007.
- W. Zeng (as a Panelist), "Reliable multicast streaming architecture", Panel presentation, Panel on "Distributed Multimedia Content Streaming over Collaborative Networks," *IEEE International Workshop on Multimedia Signal Processing*, Shanghai, China, Oct. 2005.
- W. Zeng, H. Lu, Y. Zhu, and H. Jiang, "Enhancing reliability by supporting path-diversity overlay retransmission," Microsoft Research Faculty Summit, Redmond, WA, July 2005.

Tutorials:

1. W. Zeng, "Towards Human-Centric Video Understanding," tutorial, *IEEE SPS Multimedia Signal Proc. Summer School*, July 2017. The Hong Kong Polytechnic University.
2. W. Zeng, "Video understanding," tutorial, *The Visual Image Search and Visual Analytics (VISVA) 2016 Summer School*, Singapore.
3. W. Zeng and S. D. Roy, "Social Multimedia Signals: when Social Networking meets Signal Processing," tutorial, *2013 IEEE Inter. Conf. Multimedia & Expo*.
4. W. Zeng, "Distributed Video Coding: Theory, Practice, and New Promises," tutorial, *IEEE Inter. Conf. Multimedia & Expo*, July 2010.
5. "Multimedia Security Technologies for Digital Rights Management", (with B. Zhu, H. Jin, Q. Sun, C.-Y. Lin and H. Yu), tutorial, *International Conference on Multimedia and Expo*, July 2007
6. "Multimedia Security Technologies for Digital Rights Management", (with Ching-Yung Lin and Heather Yu), tutorial, *IEEE International Conference on Consumer Electronics* (ICCE), Las Vegas, Jan. 8, 2005.

Standards contributions and invited talks:

1. 73 input contributions to Open Mobile Alliance and IETF (Internet Engineering Task Force)，49 of which were adopted.
2. W. Zeng, et al., "SCIDM (Secure Content Identification Mechanism) WID for Approval," OMA-TP-2008-0077R02-INP_WID_0160_SCIDM_for_Approval.doc, Open Mobile Alliance, Beijing, Feb. 2008. (Approved)

3. W. Zeng, G. Wen, and M. Severa, “Editorial changes and extension of Annex C on selective decryption configuration message,” *ISO/IEC JTC 1/SC 29/WG 11/IPMP* M7989, Jeju, March 2002.
4. G. Wen, W. Zeng, D. Kosiba and M. Severa, “Rationale for format-compliant configurable selective encryption in IPMP standardization,” ISO/IEC JTC 1/SC 29/WG 11/IPMP M7212, Paris, June 2001.
5. G. Wen, W. Zeng, D. Kosiba and M. Severa, “A format-compliant configurable encryption framework for access control of multimedia,” ISO/IEC JTC 1/SC 29/WG 11/IPMP M7213, Paris, June 2001. (**adopted into MPEG4 IPMP extensions IS**)
6. G. Wen, W. Zeng, M. Severa and D. Kosiba, “A configuration message format for selective encryption tools,” ISO/IEC JTC 1/SC 29/WG 11/IPMP M7216, Paris, June 2001.
7. J. Wei, M. Pickering, M. Frater, J. Arnold, J. Boman and W. Zeng, “Report on core experiment – odd tile length low pass first convention,” ISO/IEC JTC1/SC29/WG1 N2097, Singapore, March 2001. Adopted into JPEG2000 Part II. (**adopted into JPEG2000 Part II**.)
8. J. Wei, M. Pickering, M. Frater, J. Arnold, J. Boman and W. Zeng, “Further results on core experiment-Test odd length tiles,” ISO/IEC JTC1/SC29/WG1 N1969, New Orleans, Dec. 2000.
9. W. Zeng, "Report on CE V1 (Evaluation of the distortion-adaptive progressive CSF weighting technique)" ISO/IEC JTC1/SC29/WG1 N1716, Arles, France, July, 2000.
10. W. Zeng and S. Lei, "Report on CE V1 (CSF weighting strategy for visual progressive coding)," ISO/IEC JTC1/SC29/WG1 N1584, Tokyo, March, 2000.
11. S. Lei, G. Borden and W. Zeng, "Support of color palette approach for Part 1 of JPEG-2000," ISO/IEC JTC1/SC29/WG1 N1601, Tokyo, March, 2000.
12. T. Chinen, M. Nadenau, J. Reichel, and W. Zeng, "Report on CE C03 (Optimizing color image compression)," ISO/IEC JTC1/SC29/WG1 N1587, Tokyo, March, 2000.
13. Wenjun Zeng, "Visual optimization strategies in digital image watermarking," invited talk, Digital Imaging Group Technical Forum on Copyright Protection at PMA (Photo Marketing Association) meeting, Las Vegas, Feb. 2, 2000.
14. W. Zeng, S. Daly and S. Lei, "Report on CE V1 (Improve visual quality by making use of both self-contrast masking and neighborh ood masking)," ISO/IEC JTC1/SC29/WG1 N1452, Maui, Hawaii, Dec. 1999. (**adopted into JPEG2000 Part II**).
15. W. Zeng and S. Lei, "Option of JPEG2000 for coding palettized images-a proposal," ISO/IEC JTC1/SC29/WG1 N1453,Maui, Hawaii, Dec. 1999. (**adopted into JPEG2000 Part I**).
16. W. Zeng, S. Daly and S. Lei, "Report on CE V1 (exploitation of visual masking through control of individual block contributions)," ISO/IEC JTC1/SC29/WG1 N1303, Vancouver, Canada, July, 1999.
17. W. Zeng and S. Lei, "Transform domain perceptual watermarking with scalable visual detection- a proposal for JPEG2000," ISO/IEC JTC1/SC29/WG1 N759, Geneva, Switzerland,March, 1998.
18. J. Li, W. Zeng and S. Lei, "Sharp rate-distortion optimized embedded wavelet coding-an algorithm proposal for JPEG2000," ISO/IEC JTC1/SC29/WG1 N621, Oct., 1997.
19. Invited talks at various research labs and universities (Samsung Research America, Microsoft Research Asia, Thomson Lab, Bell Labs, IBM T.J. Watson Research Center, David Sarnoff Research Center, Panasonic Information & Networking Technology Lab, Texas Instrument R&D Center, Huawei Technologies, ZTE Corporation, Institute for Infocomm Research, Singapore, Univ. of California at Los Angeles, Australian Defense Force Academy (ADFA), Univ. of New South Wales, Univ. of Maryland, Univ. of California, Riverside, Chinese Univ. of Hong Kong, Tsinghua Univ., Shanghai Jiao Tong University, Beijing Jiaotong University, Fudan University, Sun Yat-Sen University, Nanyang Technological Univ., Tianjin University, University of Science & Technology of China, Harbin Institute of Technology, Xi'an University of Electronic Science and Technology of China, National University of Taiwan, Academia Sinica, Taiwan, Ryerson University,Canada, Shangdong University, University of Electronic Science and Technology of China , Xiamen University, Tsinghua University Graduate School at Shenzhen, Peking University, Tongji University, Wuhan University, Huazhong Univ. of Science & Technology, UC Irvine, Xi’an Jiaotong Univ., Fuzhou Univ., Nankai Univ., Univ. of Science & Technology of China, Hong Kong Polytechnic University, Zhongyuan University of Technology, Yonsei Univ., etc)

- **Patents**
  - ✓ 20+ granted US patents, and many more pending

Professional Services

- **Editorial board:**

- ✓ Editorial board member, *International Journal of Computer Vision*, (2018 -).
- ✓ Board Member (Section Editors), second edition of the book: Computer Vision: A Reference Guide**,** edited by Katsushi Ikeuchi**.**
- ✓ Guest Editor, *Special Issue on Video Computing in the Cloud: Mobile Computing*, *IEEE Trans. Circuit and Systems for Video Technology*, Jan. 2017.
- ✓ Guest Editor, *IEEE Communications Magazine Special Issue on Impact of Next-Generation Mobile Technologies on IoT-Cloud Convergence, Jan. 2017.*
- ✓ Lead Guest Editor (with Z. Liu and E. Steinbach), *IEEE Multimedia Magazine*, *Fast Track Program for ICME2014 papers*, Oct.- Dec. 2014.
- ✓ Steering Committee Member, *IEEE Transactions on Mobile Computing*. (2014 - 2016).
- ✓ Steering Committee Member, *IEEE Transactions on Multimedia* (June 2009 – Dec. 2012)
- ✓ Associate Editor-in-Chief, *IEEE Multimedia Magazine*, Jan. 2014 – Dec. 2017. Associate Editor, 2006 – 2017.
- ✓ Associate Editor, *IEEE Transactions on Circuits & Systems for Video Technologies* (June 2010 - 2015)
- ✓ Associate Editor, *IEEE Transactions on Information Forensics & Security* (2009 - 2012)
- ✓ Associate Editor, *IEEE Transactions on Multimedia,* 2004 - 2008.
- ✓ Guest Editor (with L. Cao, G. Hua, Y. Kompatsiaris), *Special Issue on 2012 ACM Multimedia Best Papers, ACM Trans. on Multimedia Computing Communications and Applications*, 2013.
- ✓ Lead Guest Editor (with W. Lin), *Special Issue on QoE Modeling and Applications for Multimedia Systems*, *ZTE Communications*, March 2013.
- ✓ Guest Editor (with C. Chen and R. Steinmetz), *Special Issue on Recent Advances in Distributed Multimedia Communications,* the *Proceedings of the IEEE,* published in January 2008.
- ✓ Best Paper Award Committee Member, *IEEE Transactions on Multimedia* (2005, 2006)
- ✓ Editor, ZTE Communications, May 2012 – present.
- ✓ Editor, Journal of Communications, 2008- present.
- ✓ Lead Guest Editor (with K. Nahrstedt, P. A. Chou, A. Ortega, P. Frossard, and H. H. Yu), *IEEE Transactions on Multimedia's Special Issue on Streaming Media,* April 2004.
- ✓ Guest editor, *Special Issue on "Informing Clientele through Networked Multimedia Information Systems*", *Journal of Informing Science* (vol. 2, no. 4, 1999 and vol.3, no.1, 2000).

- **Technical Committee:**

- ✓ Member, IEEE Jack S. Kilby Signal Processing Medal Committee (Oct. 2018 – present).
- ✓ Elected member of *IEEE Signal Processing Society's Image, Video and Multidimensional Signal Processing Technical Committee* (Jan. 2019 -).
- ✓ Area Chair, Elected member of *IEEE Signal Processing Society's Information Forensics and Security Technical Committee,* January 2011 – Dec. 2013.
- ✓ Vice Chair of *IEEE Communication Society's Multimedia Communications Technical Committee,* May 2008- May 2010. Member since 2003, currently advisory committee member.
- ✓ Elected member of *IEEE Signal Processing Society's Multimedia Signal Processing Technical Committee,* 2005-2009. Currently associated member.
- ✓ Elected member of *IEEE Circuits & Systems Society's Multimedia Systems and Applications Technical Committee*, 2007- present. Member of Technical Vision Subcommittee, Membership & Election Subcommittee, and TMM Ad Hoc Subcommittee. Chair of Membership & Election Subcommittee (since 2018)
- ✓
- ✓ Award Chair, *IEEE International Conference on Visual Communications and Image Processing*, Dec. 2022, Suzhou, China.
- ✓ Chair, *Workshop on Towards Human-Like Visual Learning and Reasoning*, *Microsoft Research Summit* 2021. Opening remarks
- ✓ Panel co-organizer (with Enrico Magli), *PANEL-3: Change or die? Revisiting the signal processing publication model*, *IEEE ICASSP 2021*.
- ✓ TPC member, NTIRE: New Trends in Image Restoration and Enhancement Workshop and Challenges, 2018-2021.
- ✓ TPC member, the First Workshop on Analysis of Aerial Motion Imagery (WAAMI), ICPR 2020.
- ✓ Co-organizer, Special Session on Human-Centric Cross-Modal Retrieval, *ACM Inter. Conf. on Multimedia Retrieval* (ICMR), 2020.
- ✓ Area Chair, *2018 IEEE Inter. Conf. on Image Processing*, Athens, Greece.
- ✓ Best Paper Award for Industry Committee, *2018 IEEE Inter. Conf. on Image Processing*, Athens, Greece.
- ✓ **General co-Chair**, 2018 *IEEE International Conference on Multimedia and Expo*, San Diego
- ✓ **TPC co-Chair**, *2017 IEEE Inter. Conf. on Image Processing*, Beijing, China.

- ✓ TPC co-Chair, *IEEE ChinaSIP*, July 12-15, 2015, Chengdu, China.
- ✓ Awards Committee, 2015 *IEEE Inter. Conf. on Image Processing,* Québec city, Canada.
- ✓ **Steering Committee member** (Multimedia Society and History Sub-committee), *IEEE International Conference on Multimedia and Expo* (Jan. 2014 – present)
- ✓ Track Chair, 2014 *IEEE International Conference on Multimedia and Expo.*
- ✓ *Track/area Chair, 2014 IEEE Int. Conf. Acous., Speech and Sig. Process*.
- ✓ **Technical Program co-Chair**, *2013 IEEE Workshop on Information Forensics and Security*.
- ✓ Workshop co-Chair, *Inter. Workshop on Socio-Mobile Media Computing*, 2013 *IEEE International Conference on Multimedia and Expo*.
- ✓ Area Chair, *ACM Multimedia 2012*.
- ✓ Workshop co-Chair, *Inter. Workshop on Emerging Multimedia Systems and Applications*, 2012 *IEEE International Conference on Multimedia and Expo*.
- ✓ Workshop co-Chair, *Inter. Workshop on Visual Content Identification and Search*, 2011 *IEEE International Conference on Multimedia and Expo.*
- ✓ **Steering Committee Chair**, *IEEE International Conference on Multimedia and Expo* (Jan. 2010 – Dec. 2011).
- ✓ Interim Steering Committee member, *IEEE International Conference on Multimedia and Expo* (July. 2009 – Dec. 2009)
- ✓ **Steering committee member**, *IEEE Consumer Communications and Networking Conference.* (2008 – present)
- ✓ Co-organizer, Special Session on Quality of Experience in Emerging Multimedia Systems and Applications, *IEEE Inter. Conf. Image Processing*, 2010.
- ✓ Co-organizer, Special Session on Human-Centric Multimedia Communications, *IEEE International Conference on Multimedia and Expo*, 2010.
- ✓ Demo co-Chair, Packet Video Workshop, Hong Kong, 2010.
- ✓ **Technical Program Vice Chair**, *IEEE International Conference on Multimedia and Expo*, Cancun, Mexico, 2009.
- ✓ Conference Special Session co-Chair, *IEEE International Workshop on Multimedia Signal Processing*, 2008
- ✓ Organizing Committee Member (Publication Chair), *IEEE International Conference on Multimedia and Expo*, Beijing, 2007.
- ✓ **Technical Program Chair**, *IEEE Consumer Communications and Networking Conference,* Las Vegas, Jan. 2007.
- ✓ Publication Chair, *IEEE International Conference on Multimedia and Expo,* Beijing, 2007.
- ✓ **Technical program Vice-Chair**, *IEEE Consumer Communications and Networking Conference,* Las Vegas, Jan. 2006.
- ✓ Conference Special Session and Tutorial Chair, *IEEE Workshop on Multimedia Signal Processing*, Shanghai, China, Oct. 2005.
- ✓ **Technical program Co-Chair**, *Multimedia Communications and Networking Symposium*, *IEEE Inter. Conf. Communication*, Korea, May 2005.
- ✓ Chair, *Workshop on Digital Rights Management Impact on Consumer Communications*, 2005 *IEEE Consumer Communications and Networking Conference/Consumer Electronic Show,* Las Vegas, Jan. 2005.
- ✓ TPC Member, Packet Video Workshop, Seattle, 2009.
- ✓ Session Chair (Security), *IEEE International Conference on Image Processing*, Oct. 2008.
- ✓ Session Chair (Multimedia Applications), *IEEE International Conference on Acoustic, Speech, and Signal Proc,* April 2008.
- ✓ TPC Member, *General Symposium*, *IEEE Global Communications Conference*, Washington, DC, Nov. 2007.
- ✓ TPC Member, *IEEE Workshop on Multimedia Signal Processing*, Chania, Crete, Greece, Oct. 2007.
- ✓ Session Chair (Security), *IEEE International Conference on Image Processing*, Sept. 2007.
- ✓ TPC Member, *ACM Multimedia*, Santa Barbara, Oct., 2006.
- ✓ TPC Member, *International Workshop on Multimedia Applications*, Hangzhou, China, Nov. 3, 2005.
- ✓ TPC Member, *IEEE International Conference on Multimedia and Expo,* Taipei, Taiwan, June 2004.
- ✓ TPC Member, *Multimedia Technologies and Services Symposium, the IEEE Inter. Conference on Communications* (ICC 2004), Paris, France, June 20-24, 2004.
- ✓ TPC Member, *Next Generation Networks and Internet Symposium*, *IEEE Global Communications Conference*, San Francisco, CA, USA, Dec. 2003.
- ✓ TPC Member, *IEEE International Conference on Multimedia and Expo*, Baltimore, MD, July 2003.TPC Member, *Multimedia Symposium, the 2004 International Conference on Communications* (ICC 2004), Paris, France, June 20-24, 2004.
- ✓ TPC Member, *13th International Packetvideo Workshop*, Nantes, France, April 28-30, 2003.

- ✓ TPC Member, *IEEE International Conference on Multimedia and Expo*, Lausanne, Switzerland, Aug. 2002. Co-organizer (with Phil Chou and Heather Yu) of *Special Session on "Rate-Distortion Optimized Delivery of Realtime and Streaming Media"*, and Co-organizer (with H. Yu) of *the Panel Session on "Defining the Next Generation Challenges in Media Composition, Compression, and Communication R&D"* (Panelists: Tsuhan Chen, Leonardo Chiariglione, Bernd Girod, Phil Chou, Ed. Delp, Dorée D. Seligmann)
- ✓ TPC Member, *12th International Packetvideo Workshop*, Pittsburgh, PA, USA, April 2002.
- ✓ TPC Member, *IEEE Inter. Conf. Information Technology: Coding and Computing*, April 2002.
- ✓ Co-organizer (with Weiping Li), *Special Session on "Media Streaming"*, and TPC Member, *IEEE Inter. Conf. Information Technology: Coding and Computing*, April 2001.
- ✓ Guest editor, Special Issue on "Informing Clientele through Networked Multimedia Information Systems", *Journal of Informing Science* (vol. 2, no. 4, 1999 and vol.3, no.1, 2000).
- ✓ Reviewer for IEEE Tran. Multimedia, IEEE Transactions on Information Forensics & Security, IEEE Tran. Circuit and System for Video Technologies, IEEE Trans. Image Processing, IEEE Trans. Signal Processing, IEEE Tran. Mobile Computing, IEEE Tran. Communications, IEEE Journal on Selected Areas in Comm., ACM Tran. Information and System Security, Journal of Visual Communication and Image Representation, Pattern Recognition Letters, and numerous IEEE and ACM international conferences.

- **Proposal reviewer**:

  - ✓ Expert reviewer for "Establishment of an Intra-Faculty Research Centre on Data Science and Artificial Intelligence," Hong Kong Polytechnic University, 2021.
  - ✓ Proposal reviewer for National Natural Science Foundation of China, May 2018.
  - ✓ Proposal reviewer for "Zhongxing Young Scientist Prize" ("中兴青年科学家奖"), 2018.
  - ✓ Proposal reviewer for Nanyang Technological Univ., Academic Research Fund Tier 1, April 2016.
  - ✓ Proposal reviewer for the Austrian Science Fund, Feb. 2012.
  - ✓ Panelist, NSF CISE REU Cluster Review Panel, Nov. 2010.
  - ✓ Panelist, NSF Theoretical Foundation Cluster Review Panel, April 2005, June 2007.
  - ✓ Proposal reviewer for the Research Grants Council of Hong Kong, Dec. 2006.
  - ✓ Proposal reviewer for MU Research Board, Fall 2003, Winter 2004, Fall 2011.
  - ✓ Reviewer for the Innovation and Technology Commission, a funding agency for applied research of the Government of the Hong Kong Special Administrative Region.

- **Standards Activities**

  - ✓ Internet Engineering Task Force (IETF) (March 2010 – Dec. 2010)
  - ✓ Committee member of Open Mobile Alliance (OMA) (Oct. 2007- 2010)
    - **Vice Chair**, Security Working Group, OMA (March 2008 – April 2009)
    - Work Item **Champion and Convenor**, WID0160, Secure Content Identification Mechanism (SCIDM), approved in Feb. 2008, enabler candidate release approved in March 2010. 52 contributions, 33 of which were adopted.
    - Active contributor to the development of the "Mobile Spam Reporting" Work Item. (2009 – 2010). 21 contributions, 16 of which were adopted.
    - Editor of "Application layer security common functions 1.1 technical specifications", OMA.
    - Editor of "OMA SEC-CERT Management Objects (MO)", OMA Security Working Group
  - ✓ Committee member of *ISO/IEC JTC1/SC29/WG11* (MPEG video coding standard). Contributor to the MPEG-4/21 IPMP (intellectual property rights management and protection) standardization activities.
    - One proposal on "format compliant selective encryption framework" has been adopted as a normative annex (Annex A) in MPEG4 IPMP International Standard.
    - Four contributions to the MPEG IPMP meeting.
  - ✓ Committee member of *ISO/IEC JTC1/SC29/WG1* (JPEG2000 image compression standard). Main contributor to the visual optimization work in JPEG2000.
    - One proposal (palette-based JPEG2000) has been adopted into JPEG2000 Part I.
    - One proposal (point-wise extended masking) has been adopted into JPEG 2000 Part II.
    - Another proposal (on a special wavelet filtering operation to reduce tile boundary artifacts) has been adopted into JPEG 2000 Part II.
    - Four technologies adopted into JPEG2000 verification model software.
    - Eleven contributions to the JPEG2000 meeting.

- ✓ Participant of ITU Video Coding Experts Group (VCEG)'s H.26L/JVT/MPEG AVC standardization activities.

Teaching Activities

- **Student supervision**
  - **Ph.D. Students graduated**

1. Xin Jin (Long-term intern, USTC, graduated in June 2022, now a tenure-track assistant professor at Eastern Institute for Advanced Study. Winner of Baidu's Talent Program (AIDU). Thesis topic: Research on Cross-domain Problems for Intelligent Surveillance, June 2022
2. Xiaotian Chen (joint USTC-MSRA Ph.D. student, graduated in June 2022, now with Huawei Research. Thesis topic: Structure-guided Monocular Depth Estimation, June 2022.
3. Yizhou Zhou (Joint USTC-MSRA Ph.D. student, graduated in June 2021, now with Tencent, Winner of Tencent's Talent Program (技术大咖), Huawei's Genius Youth Talent Program, and Alibaba's Ali Star Talent program). Thesis title: Deep Convolutional Video Representation Learning and Application, June 2021.
4. Zhizheng Zhang (Long-term intern, USTC, graduated in June 2021, now with MSRA, also Winner of Tencent's Talent Program (技术大咖), Huawei's Genius Youth Talent Program, and Alibaba's Ali Star Talent program). Thesis title: Research on Attention Mechanism for Neural Networks, June 2021. 2021 年中国电子教育学会优秀博士学位论文奖。
5. Rina Bao (Joint Ph.D. student, Univ. of Missouri), graduated in June 2021, now with Harvard Medical School. Thesis title: Deep Learning Architectures for 2D and 3D Perception.
6. Aleksandre Givi Lobzhanidze (graduated in May 2014, now with TikTok, was with Amazon, Seattle, WA. Thesis title: Engaging Mainstream Media for Efficient Content Distribution and Creation)
7. Suman D. Roy (graduated in Dec 2013, now with Betawork, NYC).

   Winner of 2013 College of Engineering Outstanding Graduate Student Award. *Nominee for the MU 2013-2014 Distinguished Doctoral Dissertation Award*.
8. Qia Wang (graduated in Dec 2013, now with Cruise, was with Amazon, Seattle, WA).

   Winner of University of Missouri Student Innovation Award in 2010 (with a funding of $25,000 to develop smartphone based location based services).
9. Eileen Li (graduated in Dec 2013, now with Boeing in St. Louis, was with Washington Univ. in St. Louis)
10. Yingnan Zhu (graduated in May 2009, now with Samsung Research Lab, Irvine, CA)
11. Wei Liu (graduated in Dec. 2008, now co-founder of CrazyCDN (云熵), was with Alibaba, Shanda Interactive Entertainment, Beijing, China, and Sony Research Lab, San Jose, CA).

    Winner of 2007 College of Engineering Outstanding Graduate Student Award.
12. Peng Zhu (Tsinghua Univ., as an external co-advisor), July 2006. Now with R&D institute of China Unicom, was with Hitachi R&D, Beijing, China.

  - **Master's Students graduated**

1. Abhishek U. Shah (graduated in Dec 2015, now with Microsoft)
2. Abhishek Mahnot (graduated in Aug. 2014)
3. Chen Liu (graduated in May 2014)
4. Dhawal Dilip Nikam (graduated in May 2014)
5. Fnu Shruti (graduated in May 2014, now with Dish Network)
6. Sreya Ravi (graduated in Dec. 2013, now in India)
7. Leyla El-Naggar (graduated in July 2013, now in Chicago)
8. Michael Sullivan (graduated in Dec. 2010, now with Boeing)
9. Sz Chyuan Lin (graduated in Dec. 2010, now with MU)

10. Yangyang Wu (graduated in July 2010)
11. Shi-Min Lee (graduated in July 2010, now in Korea)
12. Lina Dong (graduated in Dec, 2009, now with Google)
13. Christine Dartigue (May 2008, now in Haiti)
14. Hui Peng (May 2008)
15. Aleksandre Givi Lobzhanidze (Dec. 2007. Now with Amazon)
16. Hongbing Jiang (Dec, 2005, Jointly with Dr. Palaniappan. Now with Ameren, MO)
17. Asim Samiuddin (May 2004)

- **Ph.D. Thesis Supervision**

1. Liang Xu (joint SJTU-EIAS Ph.D. student, first year)
2. Mingqi Yuan (joint Hong Kong Polytechnic Univ-EIAS Ph.D. student, first year)
3. Wenjie Zhu (joint Hong Kong Polytechnic Univ-EIAS Ph.D. student, first year)
4. Jingwen Fu (joint XJTU-MSRA Ph.D. student, second year)
5. Zhipeng Huang (joint USTC-MSRA Ph.D. student, third year)
6. Jiaqi Xu (joint USTC-MSRA Ph.D. student, third year)
7. Tao Yang (joint XJTU-MSRA Ph.D. student, fourth year, Thesis topic: Unsupervised disentangled representation learning)
8. Jiayao Lu (joint USTC-MSRA Ph.D. student, fifth year, Thesis topic: Unsupervised video representation learning)
9. Guoqiang Wei (joint USTC-MSRA Ph.D. student, fifth year, Thesis topic: Domain generalizable and adaptive deep learning)
10. Xin Jin (Long-term intern, USTC, Thesis topic: Research on Cross-domain Problems for Intelligent Surveillance, June 2022)
11. Xiaotian Chen (joint USTC-MSRA Ph.D. student, Thesis topic: Structure-guided Monocular Depth Estimation, June 2022.)
12. Zhizheng Zhang (Long-term intern, USTC, Thesis title: Research on Attention Mechanism for Neural Networks, June 2021)
13. Yizhou Zhou (joint USTC-MSRA Ph.D. student, Thesis title: Deep Convolutional Video Representation Learning and Application, June 2021)
14. Rina Bao, (Joint Ph.D. student, Univ. of Missouri, Thesis title: Deep Learning Architectures for 2D and 3D Perception, June 2021)
15. Aleksandre Givi Lobzhanidze (Thesis title: Engaging Mainstream Media for Efficient Content Distribution and Creation, May 2014)
16. Eileen Li (Thesis title: LiDAR Data Classification and Compression, Dec. 2013)
17. Qia Wang (Thesis title: Geo-tagging and Privacy-preservation in Mobile Cloud Computing, Dec. 2013)
18. Suman D. Roy (Thesis title: On Cross-domain Social Semantic Learning, Dec. 2013)
19. Yingnan Zhu (Thesis title: Streaming Video Using Cooperative Networking, May 2009)
20. Wei Liu (Thesis title: Decoder Learning Based Distributed Source Coding for High-efficiency, Low-cost and Secure Multimedia Communications, Dec. 2008)
21. Peng Zhu (Tsinghua Univ., as an external co-advisor, 2003-2006) (Thesis title: Source and Channel Rate Control for Streaming Multimedia)
22. Zhiming Zhang (2007-2008) (visiting Ph.D. student from Tsinghua Univ., Beijing, China)

- **Master's Thesis Supervision**

1. Ashutosh Mishra (2011-2013)
2. Abhishek U. Shah, *Classification of Twitter Trends using Feature Ranking and Feature Selection*, MS Thesis, Univ. of Missouri, Dec. 2015.
3. Abhishek Mahnot, *3-D soccer for smart mobile devices using 3-D ball tracking*, MS project, Univ. of Missouri, Aug. 2014.

4. Chen Liu, *Hierarchical Block based Compressive Sensing with Hadoop Implementation*, MS Thesis, Univ. of Missouri, May 2014.
5. Dhawal Dilip Nikam, *Advertising and Location Recommendations (ADLOC)*, MS project, Univ. of Missouri, May 2014.
6. Fnu Shruti, *Influence of Social Media on Performance of Movies*, MS Thesis, Univ. of Missouri, May 2014.
7. Leyla El-Naggar, *A Semantic Ontology-based Approach for Document Ranking to Improve Query-Document Relevancy*, MS project, Univ. of Missouri, July 2013.
8. Sz Chyuan Lin, *An adaptive non-polling HCCA mechanism for streaming video QoS in IEEE 802.11e network*, MS Thesis, Univ. of Missouri, Dec. 2010.
9. Michael Sullivan, *A protocol for simultaneous real time playback and full quality storage of streaming media,* MS Thesis, Univ. of Missouri, Dec. 2010. Now with Boeing
10. Sreya Ravi (Networking, now in India, was with Sprint)
11. Yangyang Wu, *Design and Implementation of a Portable prTorrent Simulator System*, MS Thesis, Univ. of Missouri, July 2010.
12. Shi Min Lee, *HIPAA and E-mobile Health Security Technologies*, MS project report, Univ. of Missouri, July 2010.
13. Lina Dong, *Video Adaptation for IPTV Applications*, MS Thesis, Univ. of Missouri, Dec. 2009.
14. Christine Dartigue, *Network Intrusion Detection: A Data Analysis Approach,* MS project report, Univ. of Missouri, May 2008.
15. Hui Peng, *NORM based Reliable Multicast Performance Analysis of Classroom Presenter*, MS project report, Univ. of Missouri, May 2008.
16. Lobzhanidze, Aleksandre Givi, *Building Hybrid Multicast by Combining IP and Application Layers,* MS Thesis, Univ. of Missouri, Dec 2007.
17. Hongbing Jiang, *Multi-Path Video Streaming System*, MS project report, Univ. of Missouri, Dec. 2005.
18. Asim Samiuddin, *IPAM: A Web-Based IP/DNS Management System*, MS Thesis, Univ. of Missouri, July 2004.

- **Postdocs/Visiting Scholars**

1. Dr. Baao Xie, Postdoc, Eastern Institute for Advanced Study
2. Dr. Zheng Wang, National Institute of Informatics, Japan (MSRA Young Visiting Researcher, 2020)
3. Prof. Ling Guan, Ryerson University, Canada (MSRA Visiting Researcher, 2017)
4. Prof. Zhuowen Tu, Univ. of California, San Diego (MSRA Visiting Researcher, 2016)
5. Prof. Xiaojing Ma, Huazhong University of Science and Technology (MSRA Young Visiting Researcher, 2015)
6. Prof. Jiaying Liu, Peking Univ. (MSRA Young Visiting Researcher, 2015)
7. Prof. Junliang Xing, Chinese Academy of Science (MSRA Young Visiting Researcher, 2015)
8. Dr. Xin Liu, Fudan University (2015-2016)
9. Fei Liu, China Telecom (2014-2015), now with Huawei, Singapore.
10. Dr. Shaohui Liu, Harbin Institute of Technology (2013-2014)
11. Dr. Xiushan Nie, Shandong University of Finance and Economics (July 2013 – Jan 2014)
12. Dr. Xiaojing Ma, Huazhong University of Science and Technology (April 2013 – April 2014)
13. Prof. Linbo Qing, Sichuan University (Nov. 2012 – Nov. 2013)
14. Prof. Rui Sun, Hefei University of Technology (2010 – 2011)
15. Dr. Jungyeop Kim (2009-2010)
16. Dr. Sung-Hoon Hong (2004-2005)

- **Other intern supervisions**

Namyup Kim, Manjin Kim, Xiaoyi Zhang, Qinying Liu, Tao Yu, Kecheng Zheng, Liang Xu, Xin

Kang, Zihang Lin, Tian Li, Hanyue Tu, ChangZuo Goh, Congqi Cao, Haibo Qiu, Junsheng Zhou, Junwu Weng, Pengfei Zhang, Takuya Kiyokawa, Wentong Liao, Xiaolin Song, Xingyu Chen, Yanghao Li, Siyu Jiang, Wentao Zhu, Sijie Song, Ke Sun, Chi Su, Huanjing Yue, Haifeng Liu, Zeng Hwung, Xiaosong Lan, Yiren Lu, Li Shen, Lizhi Wang, Wei Zhang, Wenbo Li

- **Courses taught**

  - ✓ Advanced Multimedia, Tsinghua University, Spring 2011.
  - ✓ CS4850/7850 Computer Networks I, Univ. of Missouri-Columbia, Winter, Fall 2005 - 2014.
  - ✓ CS8850 Computer Networks II, Univ. of Missouri-Columbia, Fall 2008 - 2013.
  - ✓ CS8660 Multimedia Security, Univ. of Missouri-Columbia, Fall 2007, Winter 2008 – 2010, 2012, 2014.
  - ✓ CS4650/7650 Digital Image Processing, Univ. of Missouri-Columbia, Winter 2007.
  - ✓ CS3270 Introduction to Digital Logic, Univ. of Missouri-Columbia, Winter 2006.
  - ✓ CS4001/7001 Multimedia Security and Digital Rights Management, Univ. of Missouri-Columbia, Fall 2005, Fall 2006.
  - ✓ CS4670/7670 Digital Image Compression, Univ. of Missouri-Columbia, Fall 2004.
  - ✓ CS467 Multimedia Communications and Networking, Univ. of Missouri-Columbia, Winter 2004.
  - ✓ CECS367 Digital Image Compression, Univ. of Missouri-Columbia, Fall 2003.