

Junsong Yuan

CONTACT INFORMATION University at Buffalo
CSE Department
#338H, Davis Hall
Buffalo, NY 14260
Voice: +1 (716) 645-0562
Fax: +1 (716) 645-3464
E-mail: jsyuan@buffalo.edu
http: <http://www.cse.buffalo.edu/~jsyuan/>

CURRENT **State University of New York at Buffalo**, Buffalo, NY, USA
Professor, CSE Department, Aug. 2021 - Present
Director of Graduate Admissions, CSE Department, Aug. 2022 - Present
Director of Visual Computing Lab, CSE Department, March 2018 - Present

PREVIOUS **State University of New York at Buffalo**, Buffalo, NY, USA
Associate Professor, CSE Department, March 2018 - Aug. 2021
Director of Visual Computing Lab, CSE Department
Nanyang Technological University, Singapore
Associate Professor, School of EEE, Sept. 2015 - March 2018
Nanyang Assistant Professor, School of EEE, Sept., 2009 - Aug. 2015

EDUCATION **Northwestern University**, Evanston, Illinois, USA
Doctor of Philosophy in Electrical and Computer Engineering, August, 2009
Thesis: Mining Image and Video Data (*Outstanding EECS PhD Thesis Award*)
National University of Singapore, Singapore
Master of Engineering in Electrical and Computer Engineering, January, 2005
Thesis: Robust Short Clip Representation and Fast Search through Large Video Collections
Huazhong University of Science and Technology, Wuhan, P.R.China
Special Program for the Gifted Young
Bachelor of Engineering, Communication Engineering, July, 2002

RESEARCH INTERESTS Computer Vision and Pattern Recognition
Video Analytics
Human Action and Gesture Analysis
Large-Scale Visual Search and Mining
Biomedical Image Analysis and Applications

INDUSTRY RESEARCH EXPERIENCE **Microsoft Research**, Redmond, Washington, USA
Research Intern **June - September, 2008**
Kodak Research Laboratory, Rochester, New York, USA
Research Intern **June - September, 2007**
Motorola Laboratory, Schaumburg, Illinois, USA
Research Intern **June - September, 2006**

Institute for Infocomm Research, Singapore
Research Scholar

January 2003 - December, 2004

TEACHING
EXPERIENCE

Coursera Course: Computer Vision Basics (with Radhakrishna Dasari) ¹

Over 80,000 enrollment by 2025
First course of this specialization
Received a 4.2/5.0 rating

CSE Department, University at Buffalo, USA

Lecture

CSE473/573 Computer vision and Image Processing, 2018-2026
CSE 610 Advanced Multimedia Systems, 2022

Seminar

CSE707 Selected Topics in Computer Vision, 2018-2022, 2026

School of EEE, Nanyang Technological University, Singapore

Lecture

EE4476/IM4476 Image Processing, 2011-2015 1st semester
EE4483/IM4483 Artificial Intelligence and Data Mining, 2011-2017 1st semester

Tutorial

EE2010/IM2010 Signals and Systems, 2015-2017 2nd semester
EE4483/IM4483 Artificial Intelligence and Data Mining, 2011-2017 1st semester
EE4476/IM4476 Image Processing, 2012-2015 1st semester

GRANTS

PI: Hand Object Interaction and Video Generation, Ant Research, USA, Oct. 2025 - Oct. 2026, \$ 100,000

PI: US-Southeast Asia Regional Workshop on responsive artificial intelligence, National Science Foundation (NSF), USA, Aug. 2024 - Aug. 2025, \$ 99,941

PI: Chain-of-Look Video Reasoning for Openset Human Object Interaction Detection, SONY Faculty Innovation Award, USA, Sept. 2024 - Aug. 2025, \$ 100,000

PI: Multi-modal visual analytics, Wormpex AI Research, USA, Jan. 2023 - Dec. 2023, \$ 15,000

Collaborator: NSF AI Institute for Transforming Education for Children with Speech and Language Processing Challenges, National Science Foundation (NSF), USA, Jan. 2023 - Dec. 2027, \$20,000,000

PI: Hand Object Interaction Modeling, Meta Reality Labs, USA, Jan. 2022 - June 2022, \$ 25,000

PI: Video Object Detection and Segmentation, Amazon Go, USA, Nov. 2021 - May. 2022, \$ 15,000 and \$ 7,000 AWS credit

PI: Digital Virtual Human, InnoPeak Technology, USA, March 2021 - March 2022, \$ 50,000

Co-PI: Scaling Up Human-Action Analysis Systems, Amazon Faculty Award, USA, April 2021 - April 2022, \$ 57,000 and \$10,000 AWS Promotional Credits (with Changyou Chen as PI)

¹<https://www.coursera.org/learn/computer-vision-basics>

PI: SCC-PG: Towards cybernetic buildings: integrated intelligent sensing to create responsive environments, National Science Foundation (NSF), USA, Oct. 2020 - Sept. 2021, \$150,000

Co-PI: Multi-media Analytics Leading to Intent and Semantic Evidence (MALISE), DARPA project, USA, July 2020 - June 2024, \$1,300,000 (with David Doermann as PI)

PI: Hand Gesture Analysis, Kwai Research, USA, Jan. 2020 - Dec. 2020, \$ 50,000

PI: Tutorial Video Analytics, Adobe Research, USA, April 2018 - April 2019, \$ 12,000

PI: Video Captioning, Snap Research, USA, April 2018 - Dec. 2018, \$ 25,000

PI: Video Analytics for Autonomous Driving, Horizon Robotics Inc., USA Oct. 2018-Oct. 2020, \$ 360,000

PI: Start-up funds, University at Buffalo, March 2018 - March 2021, \$ 200,000

PI: Towards More Social Robots: Understanding Human Behaviours with 2D and 3D Sensors, Microsoft Research Asia, Dec. 2016 - Dec. 2017, S\$ 40,233, unrestricted gift ²

PI: Towards More Social Robots: Understanding Human Behaviours with 2D and 3D Sensors, Microsoft Azure credits, Dec. 2016 - Dec. 2017, \$ 5,000

PI: A Vision-based Solution for Egocentric Hand Motion Analysis on Wearable Devices, Singapore Ministry of Education (MoE) Tier-2 Grant, July 2016 - June 2019, S\$509,040

PI: Exploring Visual Relevance to Construct a Holistic Picture of Online News, Singapore Ministry of Education (MoE) Tier-1 Grant, Nov. 2014 - Oct. 2017, S\$149,200

PI: Real-time Automated Analysis of Soccer Videos, Advanced Digital Sciences Center (ADSC), Singapore, Jan. 2016 - Jan. 2019, S\$155,000

PI: Discriminative Action States Discovery for On-line Action Recognition, Defense Science Organization (DSO) National Labs, Aug. 2016 - July 2018, S\$ 199,525

PI: Mining and Identifying Abnormal and Suspicious Activities, Singapore Defence Research and Technology Office (DRTech), Dec. 2015 - Dec. 2018, S\$ 308,000

PI: Towards The Reality of 3D Imaging and Display: Multi-Layered Computational Display, Singapore National Research Foundation (NRF), April 2014 - March 2019, S\$1,003,541

PI: General Object Recognition by Big Data Retrieval, Omron Inc., Japan, July 2015 - June 2016, S\$ 99,000

PI: Media Analytics, Singapore Media Development Authority (MDA), Dec. 2012 - Nov. 2017, S\$ 1,000,000

Joint-PI: Scene Understanding Through Bottom-up and Top-down Processing, Singapore National Research Foundation (NRF), July 2015 - June 2018, S\$ 643,600

Joint-PI: Sensor Fusion Frameworks for Objects Classification, Terrain Classification and Localization, Singapore National Research Foundation (NRF), July 2015 - June 2017, S\$ 489,000

²1 S\$ is around 0.70 US\$

Joint-PI: Autonomous Virtual Humans and Social Robot for Tele-presence, Singapore Media Development Authority (MDA), Feb. 2012 - March 2016, S\$ 1,512,000

PI: Abnormal Video Event Detection for Traffic Safety, NTU-JSPS Joint Research Projects, April 2012 - March 2014, S\$ 76,000

PI: Video object discovery, Adobe Systems, USA, Dec. 2013 - Aug. 2014, US\$ 26,000, unrestricted gift

PI: Hand gesture recognition using depth camera, Microsoft Research Redmond, USA, Dec. 2011 - Dec. 2012, US\$ 15,000, unrestricted gift

PI: Real-time Object Retrieval in Large Scale Video Data, Singapore Infocomm Development Authority (IDA), April - Dec. 2013, S\$430,000

PI: Fusion of Velodyne and Image Detection Modules, Defense Science Organization (DSO) National Labs, Feb 2012 - July 2012, S\$ 37,383

PI: Cognitive Approach for Activity Learning, Defense Science Organization (DSO) National Labs, Dec. 2012 - Nov. 2014, S\$ 160,080

PI: Towards the reality of autonomous vehicles, College of Engineering Seed Grant, NTU, Oct. 2012 - March 2013, S\$ 46,000

PI: Integrating a User within a group or a crowd using Computer Vision and Synthetic Vision, IMI Seed Grant, Institute for Media Innovation, NTU, Dec. 2012 - June 2014, S\$ 89,000

PI: Mining Image and Video Data, Nanyang Assistant Professorship, NTU, Sept. 2009 - Aug. 2012, S\$ 1,000,000

Co-PI: Towards Reality of Integrated 3D Imaging and Display, EEE Seed Grant, NTU, Oct. 2012 - March 2013, S\$ 50,000

Co-PI: NTU-MGH Programme on Clinical Neurotechnologies, EEE Seed Grant, NTU, Oct. 2012 - March 2013, S\$ 48,000

Collaborator: Towards 3D nanoscope with super spatial resolution, Ministry of Education Tier-2 Grant, April 2013- March 2016, S\$723,500

Collaborator: Low Power Frame-less Image Sensor for High Speed Object Tracking, Ministry of Education Tier-1 Grant, Nov. 2014- Oct 2017, S\$215,500

HONORS AND
AWARDS

Distinguished Lecturer, IEEE Signal Processing Society, 2026-2027
 Distinguished Member, Association for Computing Machinery (ACM), 2025
 Faculty Innovation Award, SONY, 2024
 SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities, 2022
 Fellow of Institute of Electrical and Electronics Engineers (IEEE), 2021
 Fellow of Asia-Pacific Artificial Intelligence Association (AAIA), 2021
 UB CSE Senior Researcher of the Year Award, 2020
 Fellow of International Association of Pattern Recognition (IAPR), 2018
 Best Paper Award, IEEE Trans. on Multimedia, 2016
 Outstanding EECS PhD Thesis Award, Northwestern University, USA, 2010
 Nanyang Assistant Professorship, Nanyang Technological University, 2009
 Doctoral Spotlight Award, IEEE Conf. Computer Vision and Pattern Recognition, 2009
 National Outstanding Student, Ministry of Education, China, 2001
 Hu Chunan Fellowship, Ministry of Education, China, 2001 (100 from entire China)
 Model of Outstanding Students, Huazhong Univ. of Sci. and Tech., China, 2000 (20 out of 30,000)

BOOKS

1. Hongxing Wang, Chaoqun Weng, and Junsong Yuan, Visual Pattern Discovery and Recognition, by Springer, 2017
2. Nadia Magnenat Thalmann, Junsong Yuan, Daniel Thalmann, Bum-Jae You, Context Aware Human-Robot and Human-Agent Interaction, by Springer, 2015
3. Gang Yu, Junsong Yuan, and Zicheng Liu, Human Action Analysis with Randomized Trees, by Springer, 2015
4. Junsong Yuan, Discovering visual patterns in image and video data: concepts, algorithms, experiments, by VDM Verlag Dr. Muller, April 2011

BOOK CHAPTERS

1. Junwu Weng, Xudong Jiang, Junsong Yuan, "NBNN-Based Discriminative 3D Action and Gesture Recognition," Intelligent Scene Modeling and Human-Computer Interaction, Springer, 2021
2. Hui Liang and Junsong Yuan, "Random Forests with Optimized Leaves for Hough-Voting," Intelligent Scene Modeling and Human-Computer Interaction, Springer, 2021
3. Liu hao Ge and Junsong Yuan, "Hand Pose Estimation," invited book chapter in *Computer Vision: A Reference Guide*, Springer, 2020
4. Liu hao Ge, Junsong Yuan, and Nadia Thalmann, "Real-time Hand Pose Estimation Using Depth Camera," invited book chapter in *RGB-D Image Analysis and Processing*, Springer, 2019
5. Gangqiang Zhao and Junsong Yuan, "Automatic Visual Pattern Discovery via Cohesive Sub-graph Mining," invited book chapter in *Mobile Cloud and Visual Media Computing*, Springer, 2016
6. Yang Cong, Ji Liu, Junsong Yuan, and Jiebo Luo, "Low Rank Online Metric Learning", invited book chapter in *Low-Rank and Sparse Modeling for Visual Analysis*, Springer, 2014
7. Hui Liang and Junsong Yuan, "Hand Parsing and Gesture Recognition with a Commodity Depth Camera", invited book chapter in *Computer Vision and Machine Learning with RGB-D Sensors*, Springer, 2014
8. Zhu Li, Yun Fu, Junsong Yuan, Ying Wu, A. K. Katsaggelos and Thomas S. Huang, "Multi-media Data Indexing", invited book chapter in *Semantic Mining Technologies for Multimedia Databases*, Idea Group Inc., 2010

9. Junsong Yuan and Ying Wu, "Common pattern discovery in multimedia data mining", invited book chapter in *Encyclopedia of Data Warehousing and Mining (2nd Edition)*, Idea Group Inc., 2008
1. Changlong Jiang, Yang Xiao, Jinghong Zheng, Haohong Kuang, Cunlin Wu, Mingyang Zhang, Zhiguo Cao, Min Du, Joey Tianyi Zhou, Junsong Yuan, "3D Hand Pose Estimation via Articulated Anchor-to-Joint 3D Local Regressors," *IEEE Trans. Pattern Anal. Mach. Intell.* 48(1): 982-998 (2026)
2. Cheng Peng, Jing Liao, Lei Jiang, Wei Liang, Antonio Esposito, Kuanching Li, Junsong Yuan, "DAFNet: A novel image restoration model with mixed SimpleGate," *Digit. Signal Process.* 168: 105492 (2026)
3. Tianyu Luan, Yuanhao Zhai, Jingjing Meng, Zhong Li, Zhang Chen, Yi Xu, Junsong Yuan, "Scalable High-Fidelity 3D Hand Shape Reconstruction via Graph-Image Frequency Mapping and Graph Frequency Decomposition," *IEEE Trans. Pattern Anal. Mach. Intell.* 47(7): 5832-5846 (2025)
4. Chongshou Li, Yuheng Liu, Xinke Li, Yuning Zhang, Tianrui Li, Junsong Yuan, "Deep Hierarchical Learning for 3D Semantic Segmentation," *International Journal of Computer Vision* 133(7): 4420-4441 (2025)
5. Jiaxin Li, Hongxing Wang, Jiawei Tan, Zhilong Ou, Junsong Yuan, "Aligning Instance-Semantic Sparse Representation Towards Unsupervised Object Segmentation and Shape Abstraction With Repeatable Primitives," *IEEE Trans. Vis. Comput. Graph.* 31(10): 6884-6898 (2025)
6. Shiwen Zhang, Shuang Chen, Wei Liang, Kuanching Li, Arcangelo Castiglione, Junsong Yuan, "PFLIC: A novel personalized federated learning-based iterative clustering," *Comput. Sci. Inf. Syst.* 22(3): 945-970 (2025)
7. Xuelu Feng, Yunsheng Li, Dongdong Chen, Mei Gao, Mengchen Liu, Junsong Yuan, Chunming Qiao, "Benchmarking large and small MLLMs," *Machine Vision and Applications* 36(6): 137 (2025)
8. Zhigang Tu, Zhengbo Zhang, Zitao Gao, Chunluan Zhou, Junsong Yuan, Bo Du, "FADE: A Dataset for Detecting Falling Objects Around Buildings in Video," *IEEE Trans. Inf. Forensics Secur.*, 20: 9746-9759 (2025)
9. Miao Liao, Ruixin Yang, Yuqian Zhao, Wei Liang, Junsong Yuan, "FocalTransNet: A Hybrid Focal-Enhanced Transformer Network for Medical Image Segmentation," *IEEE Trans. on Image Processing (T-IP)*, 34: 5614-5627 (2025)
10. Jun Wen, Yufeng Chen, Ruiqi Shi, Wei Ji, Menglin Yang, Difei Gao, Junsong Yuan, Roger Zimmermann, "HOVER: Hyperbolic Video-Text Retrieval," *IEEE Trans. on Image Processing (T-IP)*, 34: 6192-6203 (2025)
11. Yuting Tang, Dafang Zhang, Kuan-Ching Li, Junsong Yuan, "Uncovering Malicious Accounts in Online Social Networks Using XGBoost and Graph Convolution Networks," *IEEE Trans. Consumer Electron.* 71(2): 6489-6498 (2025)
12. Huixin Zhu, Zhili Zhang, Junyang Zhao, Hui Duan, Yao Ding, Xiongwu Xiao, Junsong Yuan, "Scene reconstruction techniques for autonomous driving: a review of 3D Gaussian splatting," *Artificial Intelligence Review* 58(1): 30 (2025)
13. Xuelu Feng, Yunsheng Li, Dongdong Chen, Chunming Qiao, Junsong Yuan, Lu Yuan, Gang Hua, "Pluralistic Salient Object Detection," *IEEE Trans. on Image Processing (T-IP)*, 34: 2325-2337 (2025)
14. Huilin Lai, Ye Luo, Bo Li, Jianwei Lu, Junsong Yuan, "Bilateral Proxy Federated Domain Generalization for Privacy-Preserving Medical Image Diagnosis," *IEEE J. Biomed. Health Informatics*, 29(4): 2784-2797 (2025)

15. Xingyu Tong, Yang Xiao, Bo Tan, Jianyu Yang, Zhiguo Cao, Joey Tianyi Zhou, Junsong Yuan, "You Will Never Walk Alone: One-Shot 3D Action Recognition With Point Cloud Sequence," *IEEE Trans. Circuits Syst. Video Technol.* (T-CSVT) 34(11): 11464-11477 (2024)
16. Bo Tan, Yang Xiao, Yancheng Wang, Shuai Li, Jianyu Yang, Zhiguo Cao, Joey Tianyi Zhou, Junsong Yuan, "Beyond Pattern Variance: Unsupervised 3-D Action Representation Learning With Point Cloud Sequence," *IEEE Trans. Neural Networks Learn. Syst.* (T-NNLS) 35(12): 18186-18199 (2024)
17. Jiayu Zhang, Zhigang Tu, Junwu Weng, Junsong Yuan, Bo Du, "A Modular Neural Motion Retargeting System Decoupling Skeleton and Shape Perception," *IEEE Trans. Pattern Anal. Mach. Intell.* (T-PAMI) 46(10): 6889-6904, 2024
18. Jiaxin Li, Hongxing Wang, Jiawei Tan, Junsong Yuan, "Shared Latent Membership Enables Joint Shape Abstraction and Segmentation With Deformable Superquadrics," *IEEE Trans. Image Process.* (T-IP) 33: 3564-3577, 2024
19. Zhiyu Wang, Chao Yang, Bin Jiang, Junsong Yuan, "A Dual Reinforcement Learning Framework for Weakly Supervised Phrase Grounding," *IEEE Trans. on Multimedia* (T-MM), 26: 394-405, 2024
20. Jiawei Tan, Hongxing Wang, Junsong Yuan, "Characters Link Shots: Character Attention Network for Movie Scene Segmentation," *ACM Trans. Multimed. Comput. Commun. Appl.* (ACM TOMM) 20(4): 94:1-94:23, 2024
21. Zachary Steever, Kyle Hunt, Mark Karwan, Junsong Yuan, Chase C. Murray, "A Graph-Based Approach for Relating Integer Programs," in *INFORMS Journal on Computing* (JOC), 2024
22. Jiyang Li, Lin Huang, Siddharth Shah, Sean J. Jones, Yincheng Jin, Dingran Wang, Adam Russell, Seokmin Choi, Yang Gao, Junsong Yuan, Zhanpeng Jin, "SignRing: Continuous American Sign Language Recognition Using IMU Rings and Virtual IMU Data," *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* (IMWUT) 7(3): 107:1-107:29, 2023
23. Yuanhao Zhai, Le Wang, Wei Tang, Qilin Zhang, Nanning Zheng, David S. Doermann, Junsong Yuan, Gang Hua, "Adaptive Two-Stream Consensus Network for Weakly-Supervised Temporal Action Localization," *IEEE Trans. Pattern Anal. Mach. Intell.* (T-PAMI) 45(4): 4136-4151, 2023
24. Zhigang Tu, Zhisheng Huang, Yujin Chen, Di Kang, Linchao Bao, Bisheng Yang, Junsong Yuan, "Consistent 3D Hand Reconstruction in Video via Self-Supervised Learning," *IEEE Trans. Pattern Anal. Mach. Intell.* (T-PAMI) 45(8): 9469-9485, 2023
25. Wenzheng Zeng, Yang Xiao, Guilei Hu, Zhiguo Cao, Sicheng Wei, Zhiwen Fang, Joey Tianyi Zhou, Junsong Yuan, "Eyelid's Intrinsic Motion-Aware Feature Learning for Real-Time Eyeblink Detection in the Wild," *IEEE Trans. Inf. Forensics Secur.* (T-IFS) 18: 5109-5121, 2023
26. Zhigang Tu, Yuanzhong Liu, Yan Zhang, Qizi Mu, Junsong Yuan, "DTCM: Joint Optimization of Dark Enhancement and Action Recognition in Videos," *IEEE Trans. Image Process.* (T-IP) 32: 3507-3520, 2023
27. Xuan Gong, Liangchen Song, Rishi Vedula, Abhishek Sharma, Meng Zheng, Benjamin Planche, Arun Innanje, Terrence Chen, Junsong Yuan, David S. Doermann, Ziyang Wu, "Federated Learning With Privacy-Preserving Ensemble Attention Distillation," *IEEE Trans. Medical Imaging* (T-MI) 42(7): 2057-2067, 2023
28. Zhigang Tu, Jiayu Zhang, Hongyan Li, Yujin Chen, Junsong Yuan, "Joint-Bone Fusion Graph Convolutional Network for Semi-Supervised Skeleton Action Recognition," *IEEE Trans. Multimed.* (T-MM) 25: 1819-1831, 2023
29. Liangchen Song, Anpei Chen, Zhong Li, Zhang Chen, Lele Chen, Junsong Yuan, Yi Xu, Andreas Geiger, "NeRFPlayer: A Streamable Dynamic Scene Representation with Decomposed

- Neural Radiance Fields,” *IEEE Trans. Vis. Comput. Graph.* (T-VCG), 29(5): 2732-2742, 2023
30. Zhigang Tu, Hongyan Li, Wei Xie, Yuanzhong Liu, Shifu Zhang, Baoxin Li, Junsong Yuan, “Optical flow for video super-resolution: a survey,” *Artificial Intelligence Review (AIR)* 55(8): 6505-6546, 2022
 31. Zachary Steever, Chase C. Murray, Junsong Yuan, Mark H. Karwan, Marco E. Lübbecke, “An Image-Based Approach to Detecting Structural Similarity Among Mixed Integer Programs,” *INFORMS J. Comput.* 34(4): 1849-1870, 2022
 32. Nan Xi, Jingjing Meng, Junsong Yuan, “Forest Graph Convolutional Network for Surgical Action Triplet Recognition in Endoscopic Videos,” *IEEE Trans. Circuits and Systems for Video Technology* (T-CSVT), 32(12): 8550-8561, 2022
 33. Koteswar Rao Jerripothula, Prerana Mukherjee, Jianfei Cai, Shijian Lu, Junsong Yuan, “AppFuse: An Appearance Fusion Framework for Saliency Cues,” *IEEE Trans. Circuits and Systems for Video Technology* (T-CSVT), 32(12): 8261-8274, 2022
 34. Yuanzhong Liu, Junsong Yuan, Zhigang Tu, “Motion-Driven Visual Tempo Learning for Video-Based Action Recognition,” in *IEEE Trans. Image Processing* (T-IP) 31: 4104-4116, 2022
 35. Zhiwen Fang, Zhiguo Cao, Yang Xiao, Kaicheng Gong, Junsong Yuan, “MAT: Multianchor Visual Tracking With Selective Search Region,” in *IEEE Trans. Cybernetics* (T-CYB) 52(7): 7136-7150, 2022
 36. Jun Wen, Junsong Yuan, Qian Zheng, Risheng Liu, Zhefeng Gong, Nenggan Zheng, “Hierarchical domain adaptation with local feature patterns,” in *Pattern Recognition* (PR), 124: 108445, 2022
 37. Yunpeng Chang, Zhigang Tu, Wei Xie, Bin Luo, Shifu Zhang, Haigang Sui, and Junsong Yuan, “Video anomaly detection with spatio-temporal dissociation,” in *Pattern Recognition* (PR), 2022
 38. Jialian Wu, Liangchen Song, Qian Zhang, Ming Yang, Junsong Yuan, “ForestDet: Large-Vocabulary Long-Tailed Object Detection and Instance Segmentation,” in *IEEE Trans. Multimedia* (T-MM), 24: 3693-3705, 2022
 39. Sudhir Yarram, Junsong Yuan, Ming Yang, “Adversarial structured prediction for domain-adaptive semantic segmentation,” in *Machine Vision and Applications* (MVA), 33(5): 67, 2022
 40. Yujun Cai, Liuhaog Ge, Jianfei Cai, Nadia Thalmann, and Junsong Yuan, “3D Hand Pose Estimation Using Synthetic Data and Weakly Labeled RGB Images,” in *IEEE Trans. on Pattern Analysis and Machine Intelligence* (T-PAMI), 2021
 41. Sheng Liu, Zhou Ren, and Junsong Yuan, “SibNet: Sibling Convolutional Encoder for Video Captioning,” in *IEEE Trans. on Pattern Analysis and Machine Intelligence* (T-PAMI), 43(9): 3259-3272, 2021
 42. Jing Tang, Xueyan Tang, Andrew Lim, Kai Han, Chongshou Li, Junsong Yuan, “Revisiting Modified Greedy Algorithm for Monotone Submodular Maximization with a Knapsack Constraint,” In Proc. ACM Meas. Anal. Comput. Syst. 5(1): 08:1-08:22, 2021
 43. Yujin Chen, Zhigang Tu, Di Kang, Ruizhi Chen, Linchao Bao, Zhengyou Zhang, Junsong Yuan, “Joint Hand-Object 3D Reconstruction From a Single Image With Cross-Branch Feature Fusion,” in *IEEE Trans. Image Processing* (T-IP), 30: 4008-4021 2021
 44. Koteswar Rao Jerripothula, Jianfei Cai, Jiangbo Lu, Junsong Yuan, “Image Co-Skeletonization via Co-Segmentation,” in *IEEE Trans. Image Processing* (TIP) 30: 2784-2797, 2021
 45. Tan Yu, Jingjing Meng, Ming Yang, Junsong Yuan, “3D Object Representation Learning: A Set-to-Set Matching Perspective,” in *IEEE Trans. on Image Processing* (T-IP), 30: 2168-2179, 2021

46. Jianyu Yang, Wu Liu, Junsong Yuan, and Tao Mei, "Hierarchical Soft Quantization for Skeleton-Based Human Action Recognition," in *IEEE Trans. on Multimedia (T-MM)*, 2021
47. Liangchen Song, Gang Yu, Junsong Yuan, Zicheng Liu, "Human pose estimation and its application to action recognition: A survey," *J. Vis. Commun. Image Represent. (JVCI)*, 76: 103055, 2021
48. Lin Huang, Boshen Zhang, Zhilin Guo, Yang Xiao, Zhiguo Cao, Junsong Yuan, "Survey on depth and RGB image-based 3D hand shape and pose estimation," in *Virtual Reality and Intelligent Hardware* 3(3): 207-234, 2021
49. Weixiang Hong, Xueyan Tang, Jingjing Meng, and Junsong Yuan, "Asymmetric Mapping Quantization for Nearest Neighbor Search," in *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, 42(7): 1783-1790, 2020
50. Tan Yu, Jingjing Meng, Chen Fang, Hailin Jin, and Junsong Yuan, "Product Quantization Network for Fast Visual Search," in *International Journal of Computer Vision (IJCV)*, 128(8): 2325-2343, 2020
51. Zhenzhen Wang, Weixiang Hong, Yap-Peng Tan, and Junsong Yuan, "Pruning 3D Filters For Accelerating 3D ConvNets," *IEEE Trans. on Multimedia (T-MM)*, 22(8): 2126-2137, 2020
52. Junwu Weng, Xudong Jiang, Junsong Yuan, and Wei-Long Zheng, "Early Action Recognition with Category Exclusion using Policy-based Reinforcement Learning," *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 30(12): 4626-4638 2020
53. Chunlun Zhou and Junsong Yuan, "Occlusion Pattern Discovery for Partially Occluded Object Detection," in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 30(7): 2067-2080, 2020
54. Bin Jiang, Wenxuan Tu, Chao Yang, and Junsong Yuan, "Context-Integrated and Feature-Refined Network for Lightweight Object Parsing," in *IEEE Trans. Image Processing (T-IP)*, 29: 5079-5093, 2020
55. Long Tian, Zhigang Tu, Dejun Zhang, Jun Liu, Baoxin Li, Junsong Yuan, "Unsupervised Learning of Optical Flow With CNN-Based Non-Local Filtering," in *IEEE Trans. Image Processing (T-IP)* 8429-8442 2020
56. Guilei Hu, Yang Xiao, Zhiguo Cao, Lubin Meng, Zhiwen Fang, Joey Tianyi Zhou, and Junsong Yuan, "Towards Real-time Eyeblick Detection in The Wild: Dataset, Theory and Practices," *IEEE Trans. on Information Forensics and Security (T-IFS)*, 15: 2194-2208, 2020
57. Mengjia Yan, Jingjing Meng, Chunlun Zhou, Zhigang Tu, Yap-Peng Tan, and Junsong Yuan, "Detecting Spatiotemporal Irregularities in Videos via a 3D Convolutional Autoencoder," in *Journal of Visual Communication and Image Representation (JVCI)*, 67: 102747, 2020
58. Xiaohan Tu, Cheng Xu, Siping Liu, Guoqi Xie, Jing Huang, Renfa Li, Junsong Yuan, "Learning Depth for Scene Reconstruction Using an Encoder-Decoder Model," *IEEE Access* 8: 89300-89317, 2020
59. Lihao Ge, Hui Liang, Junsong Yuan, Daniel Thalmann, "Real-time 3D Hand Pose Estimation with 3D Convolutional Neural Networks," in *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, 41(4): 956-970, 2019
60. Feng Zhao, Zhiguo Cao, Yang Xiao, Jing Mao, Junsong Yuan, "Real-time Detection of Fall from Bed using a Single Depth Camera," in *IEEE Transactions on Automation Science and Engineering (T-ASE)*, 16(3): 1018-1032, 2019
61. Hui Liang, Junsong Yuan, Jun Lee, Lihao Ge, and Daniel Thalmann, "Spatially-Optimized Hough Forest for Robust Palm Pose Tracking with Arbitrary Hand Postures," in *IEEE Trans. on Cybernetics (T-CYB)*, 49(2): 527-541, 2019
62. Zhigang Tu, Hongyan Li, Dejun Zhang, Justin Dauwels, Baoxin Li, Junsong Yuan, "Action-Stage Emphasized Spatiotemporal VLAD for Video Action Recognition," in *IEEE Trans. Image Processing (T-IP)*, 28(6): 2799-2812, 2019

63. Zhi Gao, Yuwei Wu, Xingyuan Bu, and Yunde Jia, Tan Yu, Junsong Yuan, "Learning a Robust Representation via a Deep Network on Symmetric Positive Definite Manifolds," in *Pattern Recognition (PR)*, 92: 1-12, 2019
64. Chunluan Zhou and Junsong Yuan, "Multi-label Learning of Part Detectors for Occluded Pedestrian Detection," in *Pattern Recognition (PR)*, 86: 99-111, 2019
65. Yuwei Wu, Feng Gao, Yicheng Huang, Jie Lin, Vijay Chandrasekhar, Junsong Yuan, Ling-Yu Duan, "Codebook-Free Compact Descriptor for Scalable Visual Search," in *IEEE Trans. Multimedia (T-MM)* 21(2), 388-401, 2019
66. Jiaqi Zhang, Zhenzhen Wang, Jingjing Meng, Yap-Peng Tan, and Junsong Yuan, "Boosting Positive and Unlabeled Learning for Anomaly Detection with Multi-features," in *IEEE Trans. on Multimedia (T-MM)*, 21(5): 1332-1344, 2019
67. Bin Jiang, Xin Huang, Chao Yang, and Junsong Yuan, "SLTFNet: A spatial and language-temporal tensor fusion network for video moment retrieval," in *Information Processing and Management*, 56(6), 2019
68. Zhigang Tu, Wei Xie, Dejun Zhang, Ronald Poppe, Remco C. Veltkamp, Baoxin Li, Junsong Yuan, "A survey of variational and CNN-based optical flow techniques," in *Signal Processing: Image Communication*, 72: 9-24, 2019
69. Weichao Shen, Yuwei Wu, Junsong Yuan, Lingyu Duan, Jian Zhang, and Yunde Jia, "Robust Distracter-Resistive Tracker via Learning A Multi-component Discriminative Dictionary," in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 29(7): 2012-2028, 2019
70. Zhigang Tu, Wei Xie, Justin Dauwels, Baoxin Li, and Junsong Yuan, "Semantic Cues Enhanced Multi-modality Multi-Stream CNN for Action Recognition," in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 29(5): 1423-1437, 2019
71. Junwu Weng, Chaoqun Weng, Junsong Yuan, and Zicheng Liu, "Discriminative Spatio-Temporal Pattern Discovery for 3D Action Recognition ", in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 29(4): 1077-1089, 2019
72. Koteswar Rao Jerripothula, Jianfei Cai, and Junsong Yuan, "Efficient Video Object Co-localization with Co-saliency Activated Tracklets", in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 29(3): 744-755, 2019
73. Rui Zhong, Ionut Schiopu, Bruno Cornelis, Shao-Ping Lu, Junsong Yuan, Adrian Munteanu, "Dictionary Learning-based, Directional and Optimized Prediction for Lenslet Image Coding," in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 29(4): 1116-1129, 2019
74. Jing Tang, Xueyan Tang, and Junsong Yuan, "An Efficient and Effective Hop-Based Approach for Influence Maximization in Online Social Networks," in *Social Network Analysis and Mining (SNAM)*, 8(1): 10, 2018
75. Ling-Yu Duan, Yuwei Wu, Lingbo Yang, Yicheng Huang, Zhe Wang, Junsong Yuan, and Wen Gao, "Minimizing Reconstruction Bias Hashing via Joint Projection Learning and Quantization," in *IEEE Trans. on Image Processing (T-IP)*, 27(6): 3127-3141, 2018
76. Jingjing Meng, Suchen Wang, Hongxing Wang, Junsong Yuan, and Yap-Peng Tan, "Video Summarization via Multi-View Representative Selection," in *IEEE Trans. on Image Processing (T-IP)*, 27(5): 2134-2145, 2018
77. Weixiang Hong and Junsong Yuan, "Fried Binary Embedding: from High-Dimensional Visual Features to High-Dimensional Binary Codes ," in *IEEE Trans. on Image Processing (T-IP)*, 27(10): 4825-4837, 2018
78. Zhenzhen Wang and Junsong Yuan, "Simultaneously Discovering and Localizing Common Objects in Wild Images," in *IEEE Trans. on Image Processing (T-IP)*, 27(9): 4503-4515, 2018

79. Jiong Yang and Junsong Yuan, "Temporally Enhanced Image Object Proposals for Online Object and Action Detection," in *Journal of Visual Communication and Image Representation (JVCI)*, 53: 245-256, 2018
80. Hongxing Wang and Junsong Yuan, "Representative Selection on a Hypersphere," in *IEEE Signal Processing Letter (SPL)*, 2018
81. Junlin Hu, Jiwen Lu, Yap-Peng Tan, Junsong Yuan, and Jie Zhou, "Local Multi-Metric Learning for Face and Kinship Verification," in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, 28(8): 1875-1891, 2018
82. Zhigang Tu, Wei Xie, Qianqing Qin, Ronald Poppe, RC Veltkamp, Baoxin Li, and Junsong Yuan, "Multi-Stream CNN: Applying Human-Related Region Based Descriptors for Action Recognition," in *Pattern Recognition (PR)*, 79: 32-43, 2018
83. Jing Tang, Xueyan Tang, and Junsong Yuan, "Profit Maximization for Viral Marketing in Online Social Networks: Algorithms and Analysis," in *IEEE Trans. on Knowledge and Data Engineering (T-KDE)*, 30(6): 1095-1108, 2018
84. Das Bhattacharjee Sreyasee, Junsong Yuan, Yicheng Huang, Jingjing Meng, and Lingyu Duan, "Sketch based object search via Query Adaptive Re-ranking," in *IEEE Trans. on Multimedia (T-MM)*, 20(10): 2761-2773, 2018
85. Koteswar Rao Jerripothula, Jianfei Cai and Junsong Yuan, "Quality-guided Fusion-based Co-saliency Estimation for Image Co-segmentation and Co-localization", in *IEEE Trans. on Multimedia (T-MM)*, 20(9): 2466-2477, 2018
86. Liuhaio Ge, Hui Liang, Junsong Yuan, Daniel Thalmann, "Robust 3D Hand Pose Estimation from Single Depth Images using Multi-View CNNs," in *IEEE Trans. on Image Processing (T-IP)*, 27(9): 4422-4436, 2018
87. Jing Tang, Xueyan Tang, and Junsong Yuan, "Traffic-Optimized Data Placement for Social Media," *IEEE Trans. on Multimedia (T-MM)*, Vol. 20, No. 4, pp. 1008-1023, 2018
88. Philip Anthony Surman, Shizheng Wang, Junsong Yuan, and Yuanjin Zheng, "One-stop Measurement Model for Fast and Accurate Tensor Display Characterization," *Journal of the Optical Society of America*, 2018
89. Hongxing Wang, Yoshinobo Kawahara, Chaoqun Weng, and Junsong Yuan, "Representative Selection with Structured Sparsity," in *Pattern Recognition (PR)*, Vol. 63, pp. 268-278, 2017
90. Zhigang Tu, Wei Xie, Mengjia Yan, Remco C. Veltkamp, Baoxin Li, and Junsong Yuan, "Fusing Disparate Object Signatures for Salient Object Detection in Videos," in *Pattern Recognition (PR)*, Vol. 72, pp. 285-299, 2017
91. Anirban Chakraborty, Bappaditya Mandal, and Junsong Yuan, "Person Re-identification Using Multiple Egocentric Views," in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, Vol. 27, No. 3, pp. 484-498, 2017
92. Jianfeng Ren, Xudong Jiang, Junsong Yuan, and Nadia Thalmann, "Sound-Event Classification Using Robust Texture Features for Robot Hearing," in *IEEE Trans. on Multimedia (T-MM)*, Vol. 19, No. 3, pp. 447-458, 2017
93. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "LBP-Structure Optimization with Symmetry and Sparsity Regularizations for Scene Classification," in *IEEE Signal Processing Letter (SPL)*, Vol. 24, No. 1, pp. 37-41, 2017
94. Chaoqun Weng, Hongxing Wang, Junsong Yuan, and Xudong Jiang, "Discovering Class-Specific Spatial Layouts for Scene Recognition," in *IEEE Signal Processing Letter (SPL)*, Vol. 24, No. 8, pp. 1143-1147, 2017
95. Kang Dang and Junsong Yuan, "Learning Location Constrained Pixel Classifiers for Image Parsing with Regular Spatial Layout", in *Journal of Visual Communication and Image Representation (JVCI)*, 2017

96. Shizheng Wang, Ong Kien Seng, Philip Anthony Surman, Junsong Yuan, Yuanjin Zheng, and Xiaowei Sun, "Quality of Experience Measurement for Light Field 3D Displays on Multilayer LCDs," *Journal of the Society for Information Display (JSID)*, 2017
97. Zhiwen Fang, Zhiguo Cao, Yang Xiao, Lei Zhu, and Junsong Yuan, "Adobe Boxes: Locating Object Proposals using Object Adobes," in *IEEE Trans. on Image Processing (T-IP)*, Vol. 25, No. 9, pp. 4116-4128, 2016
98. Jiong Yang, Brian Price, Xiaohui Shen, Zhe Lin, Junsong Yuan, "Fast appearance modeling for automatic primary video object segmentation," in *IEEE Trans. on Image Processing (T-IP)*, Vol. 25, No. 2, pp. 503-515, 2016
99. Jianyu Yang, Hongxing Wang, Junsong Yuan, Youfu Li, Jianyang Liu, "Invariant Multi-Scale Descriptor for Shape Representation, Matching and Retrieval", in *Computer Vision and Image Understanding (CVIU)*, Vol. 145, pp. 43-58, 2016
100. Jiong Yang, Gangqiang Zhao, Junsong Yuan, Xiaohui Shen, Zhe Lin, Brian Price, Jonathan Brandt, "Discovering Primary Objects in Videos by Saliency Fusion and Iterative Appearance Estimation," in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, Vol. 26, No. 6, pp. 1070-1083, 2016
101. Koteswar Rao Jerripothula, Jianfei Cai and Junsong Yuan, "Image Co-segmentation via Saliency Co-fusion", in *IEEE Trans. on Multimedia (T-MM)*, Vol. 18, No. 9, pp. 1896-1909, 2016
102. Das Sreyasee, Junsong Yuan, Yap-Peng Tan, Ling-Yu Duan, "Query-adaptive Small Object Search using Object Proposals and Shape-aware Descriptors," in *IEEE Trans. on Multimedia (T-MM)*, Vol. 18, No. 4, pp. 726-737, 2016
103. Jingjing Meng, Junsong Yuan, Jiong Yang, Yap-Peng Tan, Gang Wang, "Object Instance Search in Videos via Spatio-Temporal Path Discovery", in *IEEE Trans. on Multimedia (T-MM)*, Vol. 18, No. 1, pp. 116-127, 2016
104. Jianyu Yang, Junsong Yuan, Youfu Li, "Parsing 3D motion trajectory for gesture recognition," *Journal of Visual Communication and Image Representation (JVCI)*, Vol. 38, pp. 627-640, 2016
105. Ye Luo, Junsong Yuan, and Jianwei Lu, "Finding Spatio-temporal Salient Paths for Video Objects Discovery," *Journal of Visual Communication and Image Representation (JVCI)*, Vol. 38, pp. 45-54, 2016
106. Bo Hu, Junsong Yuan, and Yuwei Wu, "Discriminative Action States Discovery for On-line Action Recognition," in *IEEE Signal Processing Letter (SPL)*, Vol. 23, No. 10, pp. 1374-1378, 2016
107. Gangqiang Zhao, Junsong Yuan, Gang Hua, and Jiong Yang, "Topical Video Object Discovery from Key Frames by Modeling Word Co-occurrence Prior", *IEEE Trans. on Image Processing (T-IP)*, Vol. 24, No. 12, pp. 5739-5752, 2015
108. Yuwei Wu, Yunde Jia, Peihua Li, Jian Zhang, and Junsong Yuan, "Manifold Kernel Sparse Representation of Symmetric Positive Definite Matrices and Its Applications," in *IEEE Trans. on Image Processing (T-IP)*, Vol. 24, No. 11, pp. 3729-3741, 2015
109. Yuning Jiang, Jingjing Meng, Junsong Yuan, and Jiebo Luo, "Randomized Spatial Context for Object Search," in *IEEE Trans. on Image Processing (T-IP)*, Vol. 24, No. 6, pp. 1748-1762, 2015
110. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "A Chi-Squared-Transformed Subspace of LBP Histogram for Visual Recognition," in *IEEE Trans. on Image Processing (T-IP)*, Vol. 24, No. 6, pp. 1893-1904, 2015
111. Yuwei Wu, Mingtao Pei, Min Yang, Junsong Yuan, and Yunde Jia, "Robust Discriminative Tracking via Landmark-based Label Propagation", in *IEEE Trans. on Image Processing (T-IP)*, Vol. 24, No. 5, pp. 1510-1523, 2015

112. Hongxing Wang and Junsong Yuan, "Collaborative Multi-feature Fusion for Transductive Spectral Learning" in *IEEE Trans. on Cybernetics*, Vol. 45, No. 3, pp 465-475, 2015
113. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "Learning LBP Structure by Maximizing the Conditional Mutual Information," in *Pattern Recognition (PR)*, Vol. 48, No. 10, pp. 3180-3190, 2015
114. Hui Liang, Junsong Yuan, and Daniel Thalmann, "Resolving Ambiguous Hand Pose Predictions by Exploiting Part Correlations," in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, Vol. 25, No. 7, pp. 1125-1139, 2015
115. Gang Yu, Junsong Yuan, and Zicheng Liu, "Propagative Hough Voting for Human Activity Detection and Recognition", in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, Vol. 25, No. 1, pp. 87-98, 2015
116. Chaoqun Weng and Junsong Yuan, "Efficient Mining of Optimal AND/OR Patterns for Visual Recognition", in *IEEE Trans. on Multimedia (T-MM)*, Vol. 17, No. 5, pp. 626-635, 2015
117. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "LBP Encoding Schemes Jointly Utilizing the Information of Current Bit and Other LBP Bits," in *IEEE Signal Processing Letter (SPL)*, Vol. 22, No. 12, pp. 2373-2377, 2015
118. Jianfeng Ren, Xudong Jiang, Junsong Yuan, Gang Wang, "Optimizing LBP Structure For Visual Recognition Using Binary Quadratic Programming," in *IEEE Signal Processing Letter (SPL)*, Vol. 21, No. 11, pp. 1346-1350, 2014
119. Zerrin Yumak, Jianfeng Ren, Nadia Magnenat Thalmann, Junsong Yuan, "Modelling Multi-Party Interactions among Virtual Characters, Robots, and Humans", in *Presence: Teleoperators and Virtual Environments (Presence)*, Vol. 23, No. 2, pp. 172-190, 2014
120. Yang Xiao, Zhijun Zhang, Aryel Beck, Junsong Yuan, and Daniel Thalmann, "Human-Robot Interaction by Understanding Upper Body Gestures", in *Presence: Teleoperators and Virtual Environments (Presence)*, Vol. 23, No. 2, pp. 133-154, 2014
121. Jiang Wang, Zicheng Liu, Ying Wu, and Junsong Yuan, "Learning Actionlet Ensemble for 3D Human Action Recognition", in *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, Vol. 36, No. 5, pp. 914-927, 2014
122. Tran Du, Junsong Yuan, and David Forsyth, "Video event detection: from video subvolume localization to spatio-temporal path search", in *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, Vol. 36, No. 2, pp. 404-416, 2014
123. Hongxing Wang, Junsong Yuan, and Ying Wu, "Context-Aware Discovery of Visual Co-occurrence Patterns", in *IEEE Trans. on Image Processing (T-IP)*, Vol. 23, No. 4, pp.1805-1819, 2014
124. Yang Xiao, Jianxin Wu, and Junsong Yuan, "mCENTRIST: A Multi-channel Feature Generation Mechanism for Scene Categorization", in *IEEE Trans. on Image Processing (T-IP)*, Vol. 23, No.2, pp.823-836, 2014
125. Hui Liang, Junsong Yuan, and Daniel Thalmann, "Parsing the Hand in Depth Images," in *IEEE Trans. on Multimedia (T-MM)*, Vol. 16, No. 5, pp. 1241-1253, 2014
126. Gangqiang Zhao, Xuhong Xiao, Junsong Yuan and Gee Wah Ng, "Fusion of 3D-LIDAR and Camera Data for Scene Parsing", in *Journal of Visual Communication and Image Representation (JVCI)*, Vol. 25, No. 1, pp. 165-183, 2014
127. Yang Xiao, Zhiguo Cao, and Junsong Yuan, "Entropic image thresholding based on GLGM histogram", in *Pattern Recognition Letter (PRL)*, Vol. 40, pp. 47-55, 2014
128. Hongxing Wang, Gangqiang Zhao, and Junsong Yuan, "Visual Pattern Discovery in Image and Video Data: A Brief Survey", in *WIREs Data Mining and Knowledge Discovery (WIREs-DMKD)*, Vol. 4, No. 1, pp. 24-37, 2014

129. Zhou Ren, Junsong Yuan, and Wenyu Liu, "Minimum Near-Convex Shape Decomposition", in *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, Vol. 35, No. 10, pp 2546-2552, 2013
130. Gang Yu, Junsong Yuan, and Zicheng Liu, "Action Search by Example using Randomized Visual Vocabularies", in *IEEE Trans. on Image Processing (T-IP)*, Vol. 22, No. 1, pp. 377-390, 2013
131. Yang Cong, Ji Liu, Junsong Yuan, and Jiebo Luo, "Self-supervised Online Metric Learning with Low Rank Constraint for Scene Categorization", in *IEEE Trans. on Image Processing (T-IP)*, Vol. 22, No. 8, pp. 3179-3191, 2013
132. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "Noise-Resistant Local Binary Pattern with an Embedded Error-Correction Mechanism", in *IEEE Trans. on Image Processing (T-IP)*, Vol. 22, No. 10, pp. 4049-4060, 2013
133. Yang Cong, Junsong Yuan, and Ji Liu, "Abnormal Event Detection in Crowded Scenes using Sparse Representation", in *Pattern Recognition (PR)*, Vol. 46, No. 7, pp. 1851-1864, 2013
134. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "A Complete and Fully Automated Face Verification System on Mobile Devices", in *Pattern Recognition (PR)*, Vol. 46, No. 1, pp. 45-56, 2013
135. Yang Cong, Junsong Yuan, and Yandong Tang, "Video Anomaly Search in Crowded Scenes via Spatio-Temporal Motion Context", in *IEEE Transactions on Information Forensics and Security (T-IFS)*, Vol. 8, No. 10, pp 1590-1599, 2013
136. Zhou Ren, Junsong Yuan, Jingjing Meng and Zhengyou Zhang, "Robust Part-based Hand Gesture Recognition using Kinect Sensor", in *IEEE Trans. on Multimedia (T-MM)*, Vol. 15, No. 5, pp. 1110-1120, 2013 (**T-MM Best Paper Award 2016**)
137. Hui Liang, Junsong Yuan, Daniel Thalmann, Zhengyou Zhang, "Model-based Hand Pose Estimation via Spatial-temporal Hand Parsing and 3D Fingertip Localization", in *The Visual Computer (TVC)*, Vol. 29, No. 6-8, pp. 837-848, 2013
138. Zhenzhong Chen, Junsong Yuan, and Yap-Peng Tan, "Hybrid Saliency Detection for Images", in *IEEE Signal Processing Letter (SPL)*, Vol. 20, No. 1, pp. 95-98, 2013
139. Yang Cong, Junsong Yuan, and Jiebo Luo, "Towards Scalable Summarization of Consumer Videos via Sparse Dictionary Selection", in *IEEE Trans. on Multimedia (T-MM)*, Vol. 14, No. 1, pp. 66-75, 2012
140. Rongrong Ji, Ling-Yu Duan, Hongxun Yao, Jie Chen, Junsong Yuan, Yong Rui, and Wen Gao, "Location Discriminative Vocabulary Coding for Mobile Landmark Search", in *International Journal on Computer Vision (IJCV)*, Vol. 96, No. 3, pp. 290-314, 2012
141. Junsong Yuan, Gangqiang Zhao, Yun Fu, Zhu Li, Aggelos Kasselgolos, and Ying Wu, "Discovering Thematic Objects in Images Collections and Videos", in *IEEE Trans. on Image Processing (T-IP)*, Vol. 21, No. 4, pp. 2207-2219, 2012
142. Junsong Yuan and Ying Wu, "Mining Visual Collocation Patterns via Self-Supervised Subspace Learning", *IEEE Trans. on Systems, Man and Cybernetics Part B: Cybernetics (T-SMC-B)*, Vol. 42, No. 2, pp.334-346, 2012
143. Junsong Yuan, Zicheng Liu and Ying Wu, "Discriminative Video Pattern Search for Efficient Action Detection", in *IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI)*, Vol. 33, No. 9, pp. 1728-1743, Sept. 2011
144. Gangqiang Zhao, Junsong Yuan, Jiang Xu and Ying Wu, "Discovering the Thematic Object in Commercial Videos", in *IEEE Multimedia Magazine*, Vol. 18, No. 3, pp. 56-65, 2011
145. Ye Luo, Junsong Yuan, Ping Xue and Qi Tian, "Saliency Density Maximization for Efficient Visual Object Discovery", in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, Vol. 21, No. 12, pp.1822-1834, 2011

146. Gang Yu, Norberto A., Junsong Yuan, Zicheng Liu, “Fast Action Detection via Discriminative Random Forest Voting and Top-K Subvolume Search”, in *IEEE Trans. on Multimedia (T-MM)*, Vol. 13, No. 3, pp. 507-517, 2011
147. Jiang Xu, Junsong Yuan, and Ying Wu, “Learning Spatio-Temporal Dependency of Local Patches for Complex Motion Segmentation”, in *Computer Vision and Image Understanding (CVIU)*, Vol. 115, No. 3, pp. 334-351, Mar. 2011
148. Fan Jiang, Junsong Yuan, Sotirios A. Tsafaris and Aggelos K. Katsaggelos, “Anomalous Video Event Detection Using Spatiotemporal Context”, in *Computer Vision and Image Understanding (CVIU)*, Vol. 115, No. 3, pp. 323-333, Mar. 2011
149. Junsong Yuan and Zicheng Liu, “Video-Based Human Action Detection Resources”, in *IEEE Signal Processing Magazine*, pp. 136-139, Sept. 2010.
150. Junsong Yuan, Jiebo Luo and Ying Wu, “Mining Compositional Features from GPS and Visual Cues for Event Recognition in Photo Collections”, in *IEEE Trans. on Multimedia (T-MM)*, Vol. 12, No. 07, pp.705-716, Nov. 2010.
151. Junsong Yuan, Jingjing Meng, Ying Wu and Jiebo Luo, “Mining Recurring Events through Forest Growing”, in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, Vol. 18, No. 11, pp.1597-1607, Nov. 2008.
152. Yun Fu, Zhu Li, Junsong Yuan, Ying Wu and Thomas S. Huang, “Locality vs. Globality: Query-Driven Localized Linear Models for Facial Image Computing”, in *IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT)*, Vol.18, No.12, pp.1741-1752, Dec. 2008.
153. Heng Chen, Junsong Yuan and Yuanjie Li, “An Application of Chaos Synchronization in Secure Audio Communication,” In *Journal of Physics and Engineering*, Vol. 11, No.1, 2001 (In Chinese).

CONFERENCE
PUBLICATIONS

*Part I: Selected Papers in
CVPR/ICCV/ECCV/NIPS/ICLR/IJCAI/AAAI/KDD/SIGMOD/ACM MM

1. Zixin Zhu, Haoxiang Li, Xuelu Feng, He Wu, Chunming Qiao and Junsong Yuan, “GeoRemover: Removing Objects and Their Causal Visual Artifacts,” in *Proc. Adv. Neural Inform. Process. Syst (NeurIPS)*, 2025 (**Spotlight**)
2. Peiming Li, Ziyi Wang, Yulin Yuan, Hong Liu, Xiangming Meng, Junsong Yuan, Mengyuan Liu, “UST-SSM: Unified Spatio-Temporal State Space Models for Point Cloud Video Modeling,” in *Proc. IEEE International Conference on Computer Vision (ICCV’25)*, 2025
3. Ziyi Wang, Peiming Li, Hong Liu, Zhichao Deng, Can Wang, Jun Liu, Junsong Yuan, Mengyuan Liu, “Recognizing Actions from Robotic View for Natural Human-Robot Interaction,” in *Proc. IEEE International Conference on Computer Vision (ICCV’25)*, 2025
4. Yuanhao Zhai, Yen-Liang Lin, Minxu Peng, Larry Davis, Ashwin Chandramouli, Junsong Yuan, David Doermann, “Text2Outfit: Controllable Outfit Generation with Multimodal Language Models,” in *Proc. IEEE International Conference on Computer Vision (ICCV’25)*, 2025
5. Zixin Zhu, Kevin Duarte, Mamshad Nayeem Rizve, Chengyuan Xu, Ratheesh Kalarot, Junsong Yuan, “CompSlider: Compositional Slider for Disentangled Multiple-Attribute Image Generation,” in *Proc. IEEE International Conference on Computer Vision (ICCV’25)*, 2025
6. Mahesh Bhosale, Abdul Wasi, Yuanhao Zhai, Yunjie Tian, Samuel Border, Nan Xi, Pinaki Sarder, Junsong Yuan, David Doermann, Xuan Gong, “PathDiff: Histopathology Image Synthesis with Unpaired Text and Mask Conditions,” in *Proc. IEEE International Conference on Computer Vision (ICCV’25)*, 2025

7. Luyuan Xie, Tianyu Luan, Wenyuan Cai, Guochen Yan, Zhaoyu Chen, Nan Xi, Yuejian Fang, Qingni Shen, Zhonghai Wu, and Junsong Yuan, “dFLMoE: Decentralized Federated Learning via Mixture of Experts for Medical Data Analysis,” in *IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR)*, 2025
8. Nan Xi, Jingjing Meng, Yietian Chen, Chaosheng Dong, Yan Gao, Yi Sun and Junsong Yuan, “Generative Prompting for Complex Product Retrieval,” in *Proc. Web Conf. Companion (WWW Companion)*, 2025
9. Sudhir Yarram and Junsong Yuan, “Forecasting Future Videos from Novel View via Disentangled 3D Scene Representation,” in *Proc. European Conf. on Computer Vision (ECCV’24)*, 2024
10. Zixin Zhu, Xuelu Feng, Dongdong Chen, Junsong Yuan, Chunming Qiao, and Gang Hua, “Exploring Pre-trained Text-to-Video Diffusion Models for Referring Video Object Segmentation,” in *Proc. European Conf. on Computer Vision (ECCV’24)*, 2024
11. Yuanhao Zhai, Kevin Lin, Linjie Li, Chung-Ching Lin, Jianfeng Wang, Zhengyuan Yang, David Doermann, Junsong Yuan, Zicheng Liu, and Lijuan Wang, “IDOL: Unified Dual-Modal Latent Diffusion for Human-Centric Joint Video-Depth Generation,” in *Proc. European Conf. on Computer Vision (ECCV’24)*, 2024
12. Tianyu Luan, Zhongpai Gao, Luyuan Xie, Abhishek Sharma, Hao Ding, Benjamin Planche, Meng Zheng, Ange Lou, Terrence Chen, Junsong Yuan, and Ziyang Wu, “Divide and Fuse: Body Part Mesh Recovery from Partially Visible Human Images,” in *Proc. European Conf. on Computer Vision (ECCV’24)*, 2024
13. Yisong Wang, Nan Xi, Jingjing Meng, and Junsong Yuan, “Interaction-centric Spatio-Temporal Context Reasoning for Multi-Person Video HOI Recognition,” in *IEEE Proc. European Conf. on Computer Vision (ECCV’24)*, 2024
14. Jialian Wu, Jianfeng Wang, Zhengyuan Yang, Zhe Gan, Zicheng Liu, Junsong Yuan, and Lijuan Wang, “GRiT: A Generative Region-to-text Transformer for Object Understanding,” in *IEEE Proc. European Conf. on Computer Vision (ECCV’24)*, 2024
15. Tianyu Luan, Zhong Li, Lele Chen, Xuan Gong, Lichang Chen, Yi Xu, Junsong Yuan, “Spectrum AUC Difference (SAUCD): Human-aligned 3D Shape Evaluation,” in *IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR’24)*, 2024
16. Xianzu Wu, Xianfeng Wu, Tianyu Luan, Yajing Bai, Zhongyuan Lai, and Junsong Yuan, “FSC: Few-point Shape Completion,” in *IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR’24)*, 2024
17. Yuanhao Zhai, Kevin Lin, Zhengyuan Yang, Linjie Li, Jianfeng Wang, Chung-Ching Lin, David S. Doermann, Junsong Yuan, Lijuan Wang, “Motion Consistency Model: Accelerating Video Diffusion with Disentangled Motion-Appearance Distillation,” *NeurIPS’24*, 2024
18. Zhang Chen, Zhong Li, Liangchen Song, Lele Chen, Jingyi Yu, Junsong Yuan, Yi Xu, “NeuRBF: A Neural Fields Representation with Adaptive Radial Basis Functions,” in *Proc. IEEE International Conference on Computer Vision (ICCV’23)*, 2023 (Oral)
19. Yuanhao Zhai, Tianyu Luan, David Doermann, Junsong Yuan, “Towards Generic Image Manipulation Detection with Weakly-Supervised Self-Consistency Learning,” in *Proc. IEEE International Conference on Computer Vision (ICCV’23)*, 2023
20. Yuanhao Zhai, Ziyi Liu, Zhenyu Wu, Yi Wu, Chunluan Zhou, David Doermann, Junsong Yuan, Gang Hua, “SOAR: Scene-debiasing Open-set Action Recognition,” in *Proc. IEEE International Conference on Computer Vision (ICCV’23)*, 2023
21. Nan Xi, Jingjing Meng, Junsong Yuan, “Open Set Video HOI detection from Action-centric Chain-of-Look Prompting,” in *Proc. IEEE International Conference on Computer Vision (ICCV’23)*, 2023

22. Wentao Bao, Lele Chen, Libing Zeng, Zhong Li, Yi Xu, Junsong Yuan, Yu Kong, “Uncertainty-aware State Space Transformer for Egocentric 3D Hand Trajectory Forecasting,” in *Proc. IEEE International Conference on Computer Vision (ICCV’23)*, 2023
23. Liangchen Song, Xuan Gong, Helong Zhou, Jiajie Chen, Qian Zhang, David Doermann, Junsong Yuan, “Exploring the Knowledge Transferred by Response-Based Teacher-Student Distillation,” in *Proc. ACM International Conf. on Multimedia (ACM MM’23)*, 2023
24. Liangchen Song, Liangliang Cao, Hongyu Xu, Kai Kang, Feng Tang, Junsong Yuan, Yang Zhao, “RoomDreamer: Text-Driven 3D Indoor Scene Synthesis with Coherent Geometry and Texture,” in *Proc. ACM International Conf. on Multimedia (ACM MM’23)*, 2023
25. Nan Xi, Jingjing Meng, Junsong Yuan, “Chain-of-Look Prompting for Verb-centric Surgical Triplet Recognition in Endoscopic Videos,” in *Proc. ACM International Conf. on Multimedia (ACM MM’23)*, 2023
26. Yuanhao Zhai, Mingzhen Huang, Tianyu Luan, Lu Dong, Ifeoma Nwogu, Siwei Lyu, David Doermann, Junsong Yuan, “Language-guided Human Motion Synthesis with Atomic Actions,” in *Proc. ACM International Conf. on Multimedia (ACM MM’23)*, 2023
27. Sidharth Anand, Naresh Kumar Devulapally, Sreyasee Das Bhattacharjee, Junsong Yuan, “Multi-label Emotion Analysis in Conversation via Multimodal Knowledge Distillation,” in *Proc. ACM International Conf. on Multimedia (ACM MM’23)*, 2023
28. Zhong Li, Liangchen Song, Zhang Chen, Xiangyu Du, Lele Chen, Qian Zhang, Junsong Yuan, Yi Xu, “Relit-NeuLF: Efficient Relighting and Novel View Synthesis via Neural 4D Light Field,” in *Proc. ACM International Conf. on Multimedia (ACM MM’23)*, 2023
29. Xuan Gong, Liangchen Song, Meng Zheng, Benjamin Planche, Terrence Chen, Junsong Yuan, David Doermann, and Ziyang Wu, “Progressive Multi-view Human Mesh Recovery with Self-Supervision,” in *Proc. AAAI Conf. on Artificial Intelligence (AAAI’23)*, 2023 (Oral)
30. Qinji Yu, Nan Xi, Junsong Yuan, Ziyu Zhou, Kang Dang, Xiaowei Ding, “Source-Free Domain Adaptation for Medical Image Segmentation via Prototype-Anchored Feature Alignment and Contrastive Learning,” in *Proc. International Conf. on Medical Image Computing and Computer Assisted Intervention (MICCAI’23)*, 2023
31. Lin Huang, Chung-Ching Lin, Kevin Lin, Lin Liang, Lijuan Wang, Junsong Yuan, and Zicheng Liu, “Neural Voting Field for Camera-Space 3D Hand Pose Estimation,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’23)*, 2023
32. Tianyu Luan, Yuanhao Zhai, Jingjing Meng, Zhong Li, Zhang Chen, Yi Xu, and Junsong Yuan, “High Fidelity 3D Hand Shape Reconstruction via Scalable Graph Frequency Decomposition,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’23)*, 2023
33. Libing Zeng, Lele Chen, Wentao Bao, Zhong Li, Yi Xu, Junsong Yuan, and Nima K. Kalantari, “3D-aware Facial Landmark Detection via Multi-view Consistent Training on Synthetic Data,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’23)*, 2023
34. Liangchen Song, Xuan Gong, Benjamin Planche, Meng Zheng, David Doermann, Junsong Yuan, Terrence Chen, and Ziyang Wu, “PREF: Predictability Regularized Neural Motion Fields,” in *Proc. European Conf. on Computer Vision (ECCV’22)*, 2022 (Oral)
35. Lin Huang, Tomas Hodan, Lingni Ma, Linguang Zhang, Luan Tran, Christopher Twigg, Po-Chen Wu, Junsong Yuan, Cem Keskin, and Robert Wang, “Neural Correspondence Field for Object Pose Estimation”, in *Proc. European Conf. on Computer Vision (ECCV’22)*, 2022
36. Shenyuan Gao, Chunluan Zhou, Chao Ma, Xinggang Wang, and Junsong Yuan, “AiATrack: Attention in Attention for Transformer Visual Tracking”, *Proc. European Conf. on Computer Vision (ECCV’22)*, 2022
37. Jialian Wu, Sudhir Yarram, Hui Liang, Tian Lan, Junsong Yuan, Jayan Eledath, and Gerard Medioni, “Efficient Video Instance Segmentation via Tracklet Query and Proposal,” *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’22)*, 2022

38. Suchen Wang, Yueqi Duan, Henghui Ding, Yap-Peng Tan, Kim-Hui Yap, Junsong Yuan, “Learning Transferable Human-Object Interaction Detector with Natural Language Supervision,” *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’22)*, 2022
39. Jinlu Zhang, Zhigang Tu, Jianyu Yang, Yujin Chen, and Junsong Yuan, “MixSTE: Seq2seq Mixed Spatio-Temporal Encoder for 3D Human Pose Estimation in Video,” *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’22)*, 2022
40. Sheng Liu, Kevin Lin, Lijuan Wang, Junsong Yuan, Zicheng Liu, “OVIS: Open-Vocabulary Visual Instance Search via Visual-Semantic Aligned Representation Learning,” in *Proc. AAAI Conference on Artificial Intelligence (AAAI’22)*, 2022
41. Liangchen Song, Jialian Wu, Ming Yang, Qian Zhang, Yuan Li, and Junsong Yuan, “Stacked Homography Transformations for Multi-View Pedestrian Detection,” in *IEEE Conf. on Computer Vision (ICCV’21)*, 2021 (oral)
42. Yujun Cai et. al., “A Unified 3D Human Motion Synthesis Model via Conditional Variational Auto-Encoder,” in *IEEE Conf. on Computer Vision (ICCV’21)*, 2021
43. Bing Li, Chia-Wen Lin, Cheng Zheng, Shan Liu, Junsong Yuan, Bernard Ghanem, and C.-C. Jay Kuo, “High Quality Disparity Remapping with Two-Stage Warping,” in *IEEE Conf. on Computer Vision (ICCV’21)*, 2021
44. Suchen Wang, Kim Hui Yap, Junsong Yuan, and Yap-Peng Tan, “Discovering Human Interactions with Large-Vocabulary Objects via Query and Multi-Scale Detection,” in *IEEE Conf. on Computer Vision (ICCV’21)*, 2021
45. Jialian Wu, Jiale Cao, Liangchen Song, Yu Wang, Ming Yang, and Junsong Yuan, “Track to Detect and Segment: An Online Multi-Object Tracker,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’21)*, 2021
46. Yujin Chen, Zhigang Tu, Di Kang, Linchao Bao, Ying Zhang, Xuefei Zhe, Ruizhi Chen, and Junsong Yuan, “Model-based 3D Hand Reconstruction via Self-Supervised Learning”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’21)*, 2021
47. Ziyi Liu, Le Wang, Qilin Zhang, Wei Tang, Junsong Yuan, Nanning Zheng, Gang Hua, “AC-SNet: Action-Context Separation Network for Weakly Supervised Temporal Action Localization,” in *Proc. AAAI Conference on Artificial Intelligence (AAAI’21)*, 2233-2241, 2021
48. Ziyi Liu, Le Wang, Wei Tang, Junsong Yuan, Nanning Zheng, Gang Hua, “Weakly Supervised Temporal Action Localization Through Learning Explicit Subspaces for Action and Context,” in *Proc. AAAI Conference on Artificial Intelligence (AAAI’21)*, 2242-2250, 2021
49. Liangchen Song, Jialian Wu, Ming Yang, Qian Zhang, Yuan Li, Junsong Yuan, “Robust Knowledge Transfer via Hybrid Forward on the Teacher-Student Model,” in *Proc. AAAI Conference on Artificial Intelligence (AAAI’21)*, 2558-2566, 2021
50. Helong Zhou, Liangchen Song, Jiajie Chen, Ye Zhou, Guoli Wang, Junsong Yuan, Qian Zhang, “Rethinking Soft Labels for Knowledge Distillation: A Bias-Variance Tradeoff Perspective,” in *Proc. International Conf. on Learning Representations (ICLR’21)*, 2021
51. Liangchen Song, Jialian Wu, Ming Yang, Qian Zhang, Yuan Li, and Junsong Yuan, “Handling Difficult Labels for Multi-label Image Classification via Uncertainty Distillation”, in *Proc. ACM International Conf. on Multimedia (MM’21)*, 2021
52. Liangchen Song, Sheng Liu, Celong Liu, Zhong Li, Yuqi Ding, Yi Xu, and Junsong Yuan, “Learning Kinematic Formulas from Multiple View Videos,” in *Proc. ACM International Conf. on Multimedia (MM’21)*, 2021
53. Lin Huang, Jianchao Tan, Jingjing Meng, Ji Liu, and Junsong Yuan, “HOT-Net: Non-Autoregressive Transformer for 3D Hand-Object Pose Estimation”, in *Proc. ACM International Conf. on Multimedia (MM’20)*, 2020

54. Jialian Wu, Liangchen Song, Tiancai Wang, Qian Zhang, and Junsong Yuan, “Forest R-CNN: Large-Vocabulary Long-Tailed Object Detection and Instance Segmentation”, in *Proc. ACM International Conf. on Multimedia (MM’20)*, 2020
55. Jialian Wu, Chunluan Zhou, Qian Zhang, Ming Yang, and Junsong Yuan, “Self-Mimic Learning for Small-scale Pedestrian Detection”, in *Proc. ACM International Conf. on Multimedia (MM’20)*, 2020
56. Ye Liu, Junsong Yuan, and Chang Wen Chen, “ConsNet: Learning Consistency Graph for Zero-Shot Human-Object Interaction Detection”, in *Proc. ACM International Conf. on Multimedia (MM’20)*, 2020
57. Xinke Li, et. al., “Campus3D: A Photogrammetry Point Cloud Benchmark for Hierarchical Understanding of Outdoor Scene”, in *Proc. ACM International Conf. on Multimedia (MM’20)*, 2020
58. Yuanhao Zhai, Le Wang, Wei Tang, Qilin Zhang, Junsong Yuan, and Gang Hua, “Two-Stream Consensus Network for Weakly-Supervised Temporal Action Localization,” in *Proc. European Conf. on Computer Vision (ECCV)*, 2020 (*Spotlight*)
59. Lin Huang, Jianchao Tan, Ji Liu, and Junsong Yuan, “Hand-Transformer: Non-Autoregressive Structured Modeling for 3D Hand Pose Estimation”, in *Proc. European Conf. on Computer Vision (ECCV’20)*, 2020
60. Yujun Cai, et. al., “Learning Progressive Joint Propagation for Human Motion Prediction”, in *Proc. European Conf. on Computer Vision (ECCV’20)*, 2020
61. Ping Yu, Yang Zhao, Chunyuan Li, Junsong Yuan, and Changyou Chen, “Structure-Aware Human-Action Generation”, in *Proc. European Conf. on Computer Vision (ECCV’20)*, 2020
62. Yunpeng Chang, Zhigang Tu, Wei Xie, and Junsong Yuan, “Clustering Driven Deep Autoencoder for Video Anomaly Detection”, in *Proc. European Conf. on Computer Vision*, 2020
63. Junwu Weng, Donghao Luo, Yabiao Wang, Ying Tai, Chengjie Wang, Jilin Li, Feiyue Huang, Xudong Jiang, and Junsong Yuan, “Temporal Distinct Representation Learning for Action Recognition”, in *Proc. European Conf. on Computer Vision (ECCV’20)*, 2020
64. Anil Armagan, et. al., “Measuring Generalisation to Unseen Viewpoints, Articulations, Shapes and Objects for 3D Hand Pose Estimation under Hand-Object Interaction”, in *Proc. European Conf. on Computer Vision (ECCV’20)*, 2020
65. Jialian Wu, Chunluan Zhou, Ming Yang, Qian Zhang, Yuan Li, and Junsong Yuan, “Temporal-Context Enhanced Detection of Heavily Occluded Pedestrians,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’20)*, 2020
66. Suchen Wang, Kim-Hui Yap, Junsong Yuan, and Yap-Peng Tan, “Discovering Human Interactions with Novel Objects via Zero-Shot Learning,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’20)*, 2020
67. Yancheng Wang, Yang Xiao, Fu Xiong, Wenxiang Jiang, Zhiguo Cao, Joey Tianyi Zhou, and Junsong Yuan, “3DV: 3D Dynamic Voxel for Action Recognition in Depth Video,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’20)*, 2020
68. Zhenyi Wang, Ping Yu, Yang Zhao, Ruiyi Zhang, Yufan Zhou, Junsong Yuan, Changyou Chen, “Learning Diverse Stochastic Human-Action Generators by Learning Smooth Latent Transitions,” in *Proc. AAAI Conference on Artificial Intelligence (AAAI’20)*, 2020
69. Tianhang Zheng, Changyou Chen, Junsong Yuan, Bo Li and Kui Ren, “PointCloud Saliency Maps,” in *Proc. Int’l Conf. on Computer Vision (ICCV’19)*, 2019 (*oral*)
70. Chunluan Zhou, Ming Yang, and Junsong Yuan, “Discriminative Feature Transformation for Occluded Pedestrian Detection,” in *Proc. Int’l Conf. on Computer Vision (ICCV’19)*, 2019

71. Fu Xiong, Boshen Zhang, Yang Xiao, Zhiguo Cao, Taidong Yu, Joey Tianyi Zhou, and Junsong Yuan “A2J: Anchor-to-Joint Regression Network for 3D Articulated Pose Estimation from a Single Depth Image” in *Proc. Int’l Conf. on Computer Vision (ICCV’19)*, 2019
72. Yujun Cai, Liuhao Ge, Jun Liu, Jianfei Cai, Tat-Jen Cham, Junsong Yuan, Nadia Magnenat Thalmann, “Exploiting Spatial-temporal Relationships for 3D Pose Estimation via Graph Convolutional Networks” in *Proc. Int’l Conf. on Computer Vision (ICCV’19)*, 2019
73. Yujin Chen, Zhigang Tu, Liuhao Ge, Dejun Zhang, Ruizhi Chen, Junsong Yuan, “SO-HandNet: Self-Organizing Network for 3D Hand Pose Estimation with Semi-supervised Learning,” in *Proc. Int’l Conf. on Computer Vision (ICCV’19)*, 2019
74. Tan Yu, Zhou Ren, Yuncheng Li, Enxu Yan, Ning Xu, Junsong Yuan, “Temporal Structure Mining for Weakly Supervised Action Detection,” in *Proc. Int’l Conf. on Computer Vision (ICCV’19)*, 2019
75. Jun Wen, Nenggan Zheng, Junsong Yuan, Zhefeng Gong, and Changyou Chen, “Bayesian Uncertainty Matching for Unsupervised Domain Adaptation,” in *Proc. International Joint Conference on Artificial Intelligence (IJCAI’19)*
76. Yiding Yang, Xinchao Wang, Mingli Song, Junsong Yuan, and Dacheng Tao “SPAGAN: Shortest Path Graph Attention Network,” in *Proc. International Joint Conference on Artificial Intelligence (IJCAI’19)*
77. Chen Wang, Jianfei Yang, Lihua Xie, and Junsong Yuan, “Kervolutional Neural Networks,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’19)*, 2019 (*oral*)
78. Liuhao Ge, Zhou Ren, Yuncheng Li, Zehao Xue, Yingying Wang, Jianfei Cai, Junsong Yuan, “3D Hand Shape and Pose Estimation from a Single RGB Image” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’19)*, 2019 (*oral*)
79. Suchen Wang, Jingjing Meng, Junsong Yuan, Yap-Peng Tan, “Joint Representative Selection and Feature Learning: A Semi-Supervised Approach”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’19)*, 2019
80. Jun Wen et. al., “Exploiting Local Feature Patterns for Unsupervised Domain Adaptation,” in *Proc. AAAI Conference on Artificial Intelligence (AAAI’19)*, 2019 (*Oral*)
81. Yujun Cai, Liuhao Ge, Jianfei Cai, and Junsong Yuan, “Weakly-supervised 3D Hand Pose Estimation from Monocular RGB Images”, in *Proc. European Conf. on Computer Vision (ECCV’18)*, 2018 (*oral*)
82. Liuhao Ge, Zhou Ren, and Junsong Yuan, “Point-to-Point Regression PointNet for 3D Hand Pose Estimation”, in *Proc. European Conf. on Computer Vision (ECCV’18)*, 2018
83. Junwu Weng, Mengyuan Liu, Xudong Jiang, and Junsong Yuan, “Deformable Pose Traversal Convolution for 3D Action and Gesture Recognition”, in *Proc. European Conf. on Computer Vision (ECCV’18)*, 2018
84. Tan Yu, Junsong Yuan, Chen Fang, Hailin Jin, “Product Quantization Network for Fast Image Retrieval”, in *Proc. European Conf. on Computer Vision (ECCV’18)*, 2018
85. Chunluan Zhou and Junsong Yuan, “Bi-box Regression for Pedestrian Detection and Occlusion Estimation”, in *Proc. European Conf. on Computer Vision (ECCV’18)*, 2018
86. Tan Yu, Jingjing Meng, and Junsong Yuan, “Multi-view Harmonized Bilinear Network for 3D Object Recognition,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’18)*, 2018 (*Spotlight*)
87. Liuhao Ge, Junwu Weng, Yujun Cai, Junsong Yuan, “Hand PointNet: 3D Hand Pose Estimation using Point Sets,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’18)*, 2018 (*Spotlight*)

88. Mengyuan Liu and Junsong Yuan, "Recognizing Human Actions as Evolution of Pose Estimation Maps," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'18)*, 2018
89. Weixiang Hong, Zhenzhen Wang, Ming Yang, and Junsong Yuan, "Conditional Generative Adversarial Network for Structured Domain Adaptation," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'18)*, 2018
90. Shizheng Wang, Wenjuan Liao, Phil Surman, Zhigang Tu, Yuanjin Zheng and Junsong Yuan, "Salience Guided Depth Calibration for Perceptually Optimized Compressive Light Field 3D Display," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'18)*, 2018
91. Shanxin Yuan, Guillermo Garcia-Hernando, Bjorn Stenger, Tae-Kyun Kim, Gyeongsik Moon, Ju Yong Chang, Kyoung Mu Lee, Pavlo Molchanov, Lihao Ge, Junsong Yuan, Xinghao Chen, Guijin Wang, Fan Yang, Kai Akiyama, Yang Wu, Qingfu Wan, Meysam Madadi, Sergio Escalera, Shile Li, Dongheui Lee, Iason Oikonomidis, Antonis Argyros, "3D Hand Pose Estimation: From Current Achievements to Future Goals," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'18)*, 2018
92. Chen Wang, Le Zhang, Lihua Xie, and Junsong Yuan, "Kernel Cross-Correlator," in *Proc. AAAI Conference on Artificial Intelligence (AAAI'18)*, 2018
93. Weixiang Hong, Jingjing Meng, and Junsong Yuan, "Tensorized Projection for High-Dimensional Binary Embedding," in *Proc. AAAI Conference on Artificial Intelligence (AAAI'18)*, 2018
94. Weixiang Hong, Jingjing Meng, Junsong Yuan, and Xueyan Tang, "Distributed Composite Quantization," in *Proc. AAAI Conference on Artificial Intelligence (AAAI'18)*, 2018 (*Oral*)
95. Jing Tang, Xueyan Tang, Xiaokui Xiao, and Junsong Yuan, "Online Processing Algorithms for Influence Maximization," in *Proc. of the ACM SIGMOD International Conference on Management of Data (SIGMOD)*, 2018 (*Oral*)
96. Jing Tang, Xueyan Tan, and Junsong Yuan, "Towards Profit Maximization for Online Social Network Providers," *IEEE Conf. on Computer Communications (INFOCOM'18)*, 2018 (*Oral*)
97. Sheng Liu, Zhou Ren, Junsong Yuan, "SibNet: Sibling Convolutional Encoder for Video Captioning," in *ACM Conf. on Multimedia (ACM MM)*, 2018 (*Oral*)
98. Chunluan Zhou and Junsong Yuan, "Multi-label Learning of Part Detectors for Heavily Occluded Pedestrian Detection," in *Proc. Int'l Conf. on Computer Vision (ICCV'17)*, 2017
99. Jiong Yang and Junsong Yuan, "Common Action Discovery and Localization in Unconstrained Videos," in *Proc. Int'l Conf. on Computer Vision (ICCV'17)*, 2017
100. Tan Yu, Zhenzhen Wang, and Junsong Yuan, "Compressive Quantization for Fast Object Instance Search in Videos," in *Proc. Int'l Conf. on Computer Vision (ICCV'17)*, 2017
101. Lihao Ge, Hui Liang, Junsong Yuan, and Daniel Thalmann, "3D Convolutional Neural Networks for Efficient and Robust Hand Pose Estimation from Single Depth Images," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'17)*, 2017
102. Tan Yu, Yuwei Wu, and Junsong Yuan, "HOPE: Hierarchical Object Prototype Encoding for Efficient Object Instance Search in Videos," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'17)*, 2017
103. Junwu Weng, Chaoqun Weng, and Junsong Yuan, "Spatio-Temporal Naive-Bayes Nearest-Neighbor (ST-NBNN) for Skeleton-based Action Recognition," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'17)*, 2017
104. Weixiang Hong, Junsong Yuan, and Das Bhattacharjee Sreyasee, "Fried Binary Embedding for High-Dimensional Visual Features," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'17)*, 2017

105. Jerripothula Koteswar, Jianfei Cai, Jiangbo Lu, and Junsong Yuan, "Object Co-skeletonization with Co-segmentation," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'17)*, 2017
106. Tan Yu, Jingjing Meng, and Junsong Yuan, "Is my object in this video?: Reconstruction-based object instance search in videos," in *Proc. International Joint Conference on Artificial Intelligence (IJCAI'17)*, 2017
107. Tan Yu, Yuwei Wu, Das Bhattacharjee Sreyasee, and Junsong Yuan, "Efficient Object Instance Search Using Fuzzy Object Matching," in *Proc. AAAI Conference on Artificial Intelligence (AAAI'17)*, 2017
108. Jiaqi Zhang, Zhenzhen Wang, Junsong Yuan, and Yap-Peng Tan, "Positive and Unlabeled (PU) Learning for Anomaly Detection with Multi-features," in *Proc. ACM Int'l Conf. on Multimedia (MM'17)*, 2017 (full paper)
109. Jingjing Meng, Hongxing Wang, Junsong Yuan, Yap-Peng Tan, "From Keyframes to Key Objects: Video Summarization by Representative Object Proposal Selection," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'16)*, 2016
110. Lihao Ge, Hui Liang and Junsong Yuan, Daniel Thalmann, "Robust 3D Hand Pose Estimation in Single Depth Images: from Single-View CNN to Multi-View CNNs," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'16)*, 2016
111. Jerripothula Koteswar, Jianfei Cai, and Junsong Yuan, "CATS: Co-saliency Activated Tracklet Selection for Video Co-localization", in *Proc. European Conf. on Computer Vision (ECCV'16)*, 2016
112. Zhe Wang, Lingyu Duan, Junsong Yuan, Tiejun Huang, Wen Gao, "To Project More or to Quantize More: Minimize Reconstruction Bias for Learning Compact Binary Codes," in *Proc. International Joint Conference on Artificial Intelligence (IJCAI'16)*, 2016
113. Das Bhattacharjee Sreyasee, Junsong Yuan, Weixiang Hong, and Xiang Ruan, "Query Adaptive Instance Search using Object Sketches," in *Proc. ACM Int'l Conf. on Multimedia (MM'16)*, 2016 (full paper)
114. Kang Dang, Jiong Yang, and Junsong Yuan, "Adaptive Exponential Smoothing for Online Filtering of Pixel Prediction Maps," in *Proc. Int'l Conf. on Computer Vision (ICCV'15)*, 2015
115. Gang Yu and Junsong Yuan, "Fast Action Proposals for Human Action Detection and Search," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'15)*, 2015
116. Hongxing Wang, Chaoqun Weng, and Junsong Yuan, "Multi-feature Spectral Clustering with Minimax Optimization," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'14)*, 2014
117. Gangqiang Zhao, Junsong Yuan, and Gang Hua, "Topical Video Object Discovery from Key Frames by Modeling Word Co-occurrence Prior", in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'13)*, 2013
118. Tran Du and Junsong Yuan, "Max-Margin Structured Output Regression for Spatio-Temporal Action Localization", in *Proc. Advances Neural Information Processing Systems (NIPS'12)*, 2012
119. Yuning Jiang, Junsong Yuan and Gang Yu, "Randomized Spatial Partition for Scene Recognition", in *Proc. European Conf. on Computer Vision (ECCV'12)*, 2012
120. Gang Yu, Junsong Yuan, and Zicheng Liu, "Propagative Hough Voting for Human Activity Recognition", in *Proc. European Conf. on Computer Vision (ECCV'12)*, 2012
121. Yuning Jiang, Jingjing Meng, and Junsong Yuan, "Randomized Visual Phrases for Object Search", in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'12)*, 2012

122. Jiang Wang, Zicheng Liu, Ying Wu, and Junsong Yuan, “Mining Actionlet Ensemble for Action Recognition with Depth Cameras”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’12)*, 2012
123. Zhou Ren, Junsong Yuan, Chunyuan Li, and Wenyu Liu, “Minimum Near-Convex Decomposition for Robust Shape Representation”, in *Proc. Int’l Conf. on Computer Vision (ICCV’11)*, 2011
124. Junsong Yuan, Ming Yang, and Ying Wu, “Mining Discriminative Co-occurrence Patterns for Visual Recognition”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’11)*, pp. 2777-2784, 2011
125. Tran Du and Junsong Yuan, “Optimal Spatio-Temporal Path Discovery for Video Event Detection”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’11)*, pp. 3321-3328, 2011
126. Yang Cong, Junsong Yuan and Ji Liu, “Sparse Reconstruction Cost for Abnormal Event Detection”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’11)*, pp. 3449-3456, 2011
127. Gang Yu, Junsong Yuan, and Zicheng Liu, “Unsupervised Random Forest Voting for Fast Action Search”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’11)*, pp. 865-872, 2011
128. Jiang Xu, Junsong Yuan and Ying Wu, “Multimodal Partial Estimates Fusion”, in *Proc. Int’l Conf. on Computer Vision (ICCV’09)*, pp. 2177-2184, 2009
129. Junsong Yuan, Zicheng Liu and Ying Wu, “Discriminative Subvolume Search for Efficient Action Detection”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’09)*, pp. 2442-2449, 2009 (**CVPR’09 Best Doctoral Spotlight Award**).
130. Junsong Yuan and Ying Wu, “Context-aware clustering”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’08)*, 2008
131. Junsong Yuan, Jiebo Luo and Ying Wu, “Mining compositional features for boosting”, in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’08)*, 2008
132. Junsong Yuan and Ying Wu, “Spatial random partition for common visual pattern discovery”, in *Proc. Int’l Conf. on Computer Vision (ICCV’07)*, pp.1-8, 2007
133. Junsong Yuan, Ying Wu and Ming Yang, “Discovery of Collocation Patterns: from Visual Words to Visual Phrases,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’07)*, 2007
134. Ming Yang, Junsong Yuan and Ying Wu, “Spatial selection for attentional visual tracking,” in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR’07)*, 2007
135. Junsong Yuan, Ying Wu and Ming Yang, “From Frequent Itemsets To Semantically Meaningful Visual Patterns”, in *Proc. ACM Int’l Conf. on Knowledge Discovery and Data Mining (SIGKDD’07)*, pp.864-873, 2007 (*oral*)

*Part II: Papers in Image/Video/Vision/Multimedia/Graphics

136. Sidharth Anand, Chaitanya Sai Chandu Yendru, Sreyasee Das Bhattacharjee, Junsong Yuan, “Multimodal Conversatioal Emotion Analysis with Robustness to Incomplete Modality Details, *IEEE Conf. on Multimedia Expo (ICME’25)* 2025: 1-6
137. Zheng Chen, Zhiqi Zhang, Junsong Yuan, Yi Xu, Lantao Liu, “Show Your Face: Restoring Complete Facial Images from Partial Observations for VR Meeting,” *IEEE Winter Conference on Applications of Computer Vision (WACV’24)*, 2024
138. Nitin Bansal, Pan Ji, Junsong Yuan, Yi Xu, “Semantics-Depth-Symbiosis: Deeply Coupled Semi-Supervised Learning of Semantics and Depth,” *IEEE Winter Conference on Applications of Computer Vision (WACV’23)*, 2023

139. Michael Mu, Sreyasee Das Bhattacharjee, Junsong Yuan, "Self-Supervised Distilled Learning for Multi-modal Misinformation Identification," *IEEE Winter Conference on Applications of Computer Vision (WACV'23)*, 2023
140. Junxuan Huang, Junsong Yuan, Chunming Qiao, Yatong An, Cheng Lu, Bai Chen, "POINTACL: Adversarial Contrastive Learning for Robust Point Clouds Representation Under Adversarial Attack," *IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP'23)*, 2023
141. Zhong Li, Liangchen Song, Celong Liu, Junsong Yuan, Yi Xu, "NeuLF: Efficient Novel View Synthesis with Neural 4D Light Field," *Eurographics Symposium on Rendering (EGSR'22)*, 59-69, 2022
142. Sudhir Yarram, Ming Yang, Junsong Yuan, Chunming Qiao, "Joint Global-Local Alignment for Domain Adaptive Semantic Segmentation," *IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP'22)*, 2022
143. Sudhir Yarram, Jialian Wu, Pan Ji, Yi Xu, Junsong Yuan, "Deformable VisTR: Spatio Temporal Deformable Attention for Video Instance Segmentation," *IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP'22)*, 2022
144. Junxuan Huang, Junsong Yuan, Chunming Qiao, "Generation for Unsupervised Domain Adaptation: A Gan-Based Approach for Object Classification with 3D Point Cloud Data," *IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP'22)*, 2022
145. Balaji Arumugam, Sreyasee Das Bhattacharjee, Junsong Yuan, "Multimodal Attentive Learning for Real-time Explainable Emotion Recognition in Conversations," *IEEE International Symposium on Circuits and Systems (ISCAS'22)*, 1210-1214, 2022
146. Junyi Liu, Esha Naidu, Jialian Wu, Shira Gabriel, Edward Steinfeld, Junsong Yuan, "Personalized Prediction of Indoor Comfort Using Graph Convolutional Matrix Completion," *IEEE Conf. on Multimedia Information Processing and Retrieval (MIPR'22)*, 258-261, 2022
147. Sreyasee Das Bhattacharjee, Junsong Yuan, "Multimodal Co-training for Fake News Identification Using Attention-aware Fusion," *Asian Conf. on Pattern Recognition (ACPR'21)* 2021
148. Sreyasee Das Bhattacharjee, Junsong Yuan, "Proactive Student Persistence Prediction in MOOCs via Multi-domain Adversarial Learning," *Asian Conf. on Pattern Recognition (ACPR'21)* 2021
149. Hanyu Li, Sabrina Racine-Brzostek, Nan Xi, Jiwen Luo, Zhen Zhao, Junsong Yuan, "Learning to Detect Monoclonal Protein in Electrophoresis Images," in *Visual Communication and Image Processing (VCIP'21)* 2021
150. Sheng Liu, Liangchen Song, Yi Xu, Junsong Yuan, "NeCH: Neural Clothed Human Model," in *Visual Communication and Image Processing (VCIP'21)* 2021
151. Wei Wang, Shibo Zhou, Jingxi Li, Xiaohua Li, Junsong Yuan, Zhanpeng Jin, "Temporal Pulses Driven Spiking Neural Network for Time and Power Efficient Object Recognition in Autonomous Driving," in *International Conf. on Pattern Recognition (ICPR)*, 6359-6366, 2020
152. Ziqiao Weng, Jingjing Meng, Zhaohua Ding, and Junsong Yuan, "S3F: A Multi-View Slow-Fast Network for Alzheimer's Disease Diagnosis," in *IEEE Conf. on Multimedia Expo (ICME'20)*, 2020
153. Junming Chen, Jingjing Meng, Xinchao Wang, and Junsong Yuan, "Dynamic Graph CNN for Event-Camera Based Gesture Recognition", in *IEEE International Symposium on Circuits and Systems (ISCAS'20)*, 2020
154. Xiao Wu, Jiaying Liu, and Junsong Yuan, "Multipath Event-based Network for Low-power Human Action Recognition," *IEEE World Forum on Internet of Things (WF-IoT'20)*, 2020
155. Sreyasee Das Bhattacharjee, Junsong Yuan, "Semantic Enhanced Sketch Based Image Retrieval with Incomplete Multimodal Query," *BigMM* 86-93, 2020

156. Qinyi Wang, Yexin Zhang, Junsong Yuan, and Yilong Lu, "Space-Time Event Clouds for Gesture Recognition: From RGB Cameras to Event Cameras," *IEEE Winter Conference on Applications of Computer Vision (WACV'19)*, 2019 (*oral*)
157. Sreyasee Das Bhattacharjee, William J. Tolone, Ashish Mahabal, Mohammed Elshambakey, Isaac Cho, Abdullah al-Raihan Nayeem, Junsong Yuan, and S. George Djorgovski, "Multi-View, Generative, Transfer Learning for Distributed Time Series Classification," *IEEE Conf. on Big Data Workshop (IEEE BigData Workshop)*, pp. 5585-5594, 2019 (**best paper award of IEEE BigData Workshop**)
158. Bin Jiang, Xin Huang, Chao Yang and Junsong Yuan, "Cross-Modal Video Moment Retrieval with Spatial and Language-Temporal Attention," *ACM International Conference on Multimedia Retrieval (ICMR'19)*, 2019
159. Jianyu Yang, Chen Zhu, and Junsong Yuan, "Spatio-Temporal Multi-Scale Soft Quantization Learning for Skeleton-based Human Action Recognition," in *IEEE Conf. on Multimedia Expo (ICME'19)*, 2019
160. Jianyu Yang, Chen Zhu, and Junsong Yuan, "Motion-Let Clustering for Skeleton-Based Action Recognition," in *IEEE Conf. on Multimedia Expo Workshop (ICMEW'19)*, 2019
161. Kang Dang, Chunluan Zhou, Zhigang Tu, Michael Hoy, Justin Dauwels, Junsong Yuan, "Actor-Action Semantic Segmentation with Region Masks," *British Conf. on Machine Vision (BMVC'18)*, 2018
162. Yanjun Zhu, Gang Yu, Junsong Yuan, Kai-Kuang Ma, "Selecting Informative Frames for Action Recognition with Partial Observations," *Proc. IEEE Conf. on Image Processing (ICIP'18)*, 2018 (*oral*)
163. Mengjia Yan and Junsong Yuan, "3D Convolutional Generative Adversarial Networks for Detecting Temporal Irregularities in Videos," *International Conf. on Pattern Recognition (ICPR'18)*, 2018
164. Zhenzhen Wang and Junsong Yuan, "Unsupervised Multiple-Instance Learning for Instance Search," in *IEEE Conf. on Multimedia Expo (ICME'18)*, 2018
165. Zhiwen Fang, Junsong Yuan, and Nadia Thalmann, "Understanding Human-Object Interaction in RGB-D videos for Human Robot Interaction," *Computer Graphics International (CGI'18)*, 2018
166. Chen Wang, Junsong Yuan, and Lihua Xie, "Non-Iterative SLAM," *International Conference on Advanced Robotics, (ICAR'17)*, 2017 (**best paper award**)
167. Jianyu Yang, Chen Zhu, and Junsong Yuan, "Real Time Hand Gesture Recognition via Finger-Emphasized Multi-Scale Description," *IEEE Conf. on Multimedia Expo (ICME'17)*, 2017
168. Das Sreyasee, Junsong Yuan, Jiaqi Zhang, and Yap-Peng Tan, "Context-Aware Graph-Based Analysis for Detecting Anomalous Activities," *IEEE Conf. on Multimedia Expo (ICME'17)*, 2017
169. Rui Zhong, Shizheng Wang, Bruno Cornelis, Yuanjing Zheng, Junsong Yuan, and Adrian Munteanu, "Efficient Directional and L1-optimized Intra-Prediction for Light Field Images," *Proc. IEEE Conf. on Image Processing (ICIP'17)*, 2017 (*oral*)
170. Jiong Yang and Junsong Yuan, "Temporally Enhanced Image Object Proposals for Videos," in *IEEE Conf. on Multimedia Expo (ICME'17)*, 2017 (*oral*)
171. Jing Tang, Xueyan Tang, and Junsong Yuan, "Influence Maximization Meets Efficiency and Effectiveness: A Hop-Based Approach," *IEEE/ACM International Conference on Social Networks Analysis and Mining (ASONAM'17)*, 2017 (*oral*)
172. Michael Colin Hoy, Justin Dauwels, and Junsong Yuan, "Efficient Tracking of Closely Spaced Objects in Depth Data using Sequential Dirichlet Process Clustering," *IEEE Intelligent Vehicles Symposium (IV'17)*, 2017

173. Michael Colin Hoy, Justin Dauwels, and Junsong Yuan, "Efficient Ground Object Segmentation in 3D LIDAR Based on Cascaded Mode Seeking," *IEEE Intelligent Transportation Systems Conference (ITSC'17)*, 2017
174. Jingjing Meng, Suchen Wang, Hongxing Wang, Yap-Peng Tan, and Junsong Yuan, "Video Summarization via Multi-view Representative Selection," *Intl. Conf. on Computer Vision Workshop (ICCVW)*, 2017
175. Zhenzhen Wang, Jingjing Meng, Tan Yu, and Junsong Yuan, "Common Visual Pattern Discovery and Search," *Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)*, 2017
176. Kang Dang, Michael Colin Hoy, Justin Dauwels, and Junsong Yuan, "Real-time Hierarchical Fusion System for Semantic Segmentation in Offroad Scenes," *Proc. 20th Int'l. Conf. on Information Fusion (FUSION'17)*, 2017
177. Ruibing Jin, Bojan Andonovski, Zhigang Tu, Jianliang Wang, Junsong Yuan, Desmond Mark Tham, "A framework based on deep learning and mathematical morphology for cabin door detection in an automated aerobridge docking system," *Proc. Asian Control Conference (ACC'17)*, 2017
178. Zhao Liu, Yuwei Wu, Junsong Yuan, and Yap-Peng Tan, "Learning A Multi-class Discriminative Dictionary with Nonredundancy Constraints for Visual Classification," in *Proc. ACM Int'l Conf. on Multimedia (MM'16)*, 2016 (*short paper*)
179. Yuwei Wu, Zhe Wang, Junsong Yuan, and Lingyu Duan, "A Compact Binary Aggregated Descriptor via Dual Selection for Visual Search," in *Proc. ACM Int'l Conf. on Multimedia (MM'16)*, 2016 (*short paper*)
180. Hui Liang, Junhui Hou, Junsong Yuan, and Daniel Thalmann, "Random Forest with Suppressed Leaves for Hough Voting," *Proc. Asian Conf. on Computer Vision (ACCV'16)*, 2016
181. Chunlun Zhou and Junsong Yuan, "Learning to integrate Occlusion-specific Detectors for Heavily Occluded Pedestrian Detection," *Proc. Asian Conf. on Computer Vision (ACCV'16)*, 2016
182. Hui Liang, Jin Wang, Qian Sun, Yong-Jin Liu, Junsong Yuan, Jun Luo, Ying He, "Barehanded Music: Real-time Hand Interaction for Virtual Piano," *ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D'16)*, 2016 (*oral*)
183. Jing Tang, Xueyan Tang, and Junsong Yuan, "Profit Maximization for Viral Marketing in Online Social Networks," *IEEE International Conf. on Network Protocols (ICNP'16)*, 2016 (*oral*)
184. Junlin Hu, Jiwen Lu, Junsong Yuan, and Yap-Peng Tan, "Collaborative Multi-View Metric Learning for Visual Classification," *IEEE Conf. on Multimedia Expo (ICME'16)*, 2016
185. Haoran Xu, Jianyu Yang, Junsong Yuan, "Invariant Multi-Scale Shape Descriptor for Object Matching and Recognition," *Proc. IEEE Conf. on Image Processing (ICIP'16)*, 2016 (*oral*)
186. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "Sound-Event Classification Using Pseudo-Color CENTRIST Feature and Classifier Selection," *1st International Workshop on Pattern Recognition (IWPR'16)*, 2016 (*oral*)
187. Rui Zhong, Shizheng Wang, Bruno Cornelis, Yuanjin Zheng, Junsong Yuan, and Adrian Munteanu, "L1-optimized linear prediction for light field image compression," *Picture Coding Symposium (PCS'16)*, 2016 (*oral*)
188. Philip Anthony Surman, Shizheng Wang, Kien Seng Ong, Xiaowei Sun, Junsong Yuan, Yuanjin Zheng, "Multi-Layer Light Field Display Characterization", *3DTV-CON 2016* (*oral*)
189. Wenjuan Liao, Shizheng Wang, Mingyu Sun, Phil Surman, Yuanjin Zheng, Junsong Yuan, and Xiao Wei Sun, "Perceptually Optimized Dual-layer Light Field 3D Display Using A Moire-aware Compressive Factorization," *SID Symposium Digest of Technical Papers*, 2016 (*oral*)

190. Michael Hoy, Chaoqun Weng, Junsong Yuan and Justin Dauwels, "Bayesian Tracking of Multiple Objects with Vision and Radar," *Proc. International Conference on Control, Automation, Robotics and Vision (ICARCV'16)*, 2016
191. Jing Tang, Xueyan Tang, Junsong Yuan, "Optimizing Inter-Server Communication for Online Social Networks", in *Proc. IEEE Conf. on Distributed Computing Systems (ICDCS'15)*, 2015 (*oral*)
192. Hui Liang, Junsong Yuan, Daniel Thalmann and Nadia Thalmann, "AR in Hand: Egocentric Palm Pose Tracking and Gesture Recognition for Augmented Reality Applications", in *Proc. ACM Int'l Conf. on Multimedia (MM'15)*, 2015 (*demo paper*)
193. Jerripothula Koteswar, Jianfei Cai, and Junsong Yuan, "QCCE: Quality Constrained Co-saliency Estimation for Common Object Detection," *Proc. IEEE Conf. on Visual Communication and Image Processing (VCIP'15)*, 2015 (*oral*)
194. Shizheng Wang, Zhenfeng Zhuang, Phil Surman, Junsong Yuan, Yuanjin Zheng, Xiao Wei Sun, "Two-layer Optimized Light Field Display Using Depth Initialization," *Proc. IEEE Conf. on Visual Communication and Image Processing (VCIP'15)*, 2015 (*oral*)
195. Shizheng Wang, Xiangyu Zhang, Qijia Cheng, Rajendran Kaviya, Phil Surman, Junsong Yuan, Xiao Wei Sun, "Glasses-free Light Field 3D Display," *Proc. IEEE Conf. on Visual Communication and Image Processing (VCIP'15)*, 2015
196. Jingjing Meng, Junsong Yuan, Gang Wang and Yap-Peng Tan, "Fast Object Instance Search in Videos From One Example", *Proc. IEEE Conf. on Image Processing (ICIP'15)*, 2015
197. Jerripothula Koteswar, Jianfei Cai, and Junsong Yuan, "Group saliency propagation for large scale and quick image co-segmentation", *Proc. IEEE Conf. on Image Processing (ICIP'15)*, 2015 (*oral*)
198. Hui Liang, Junsong Yuan, and Daniel Thalmann, "Egocentric Hand Pose Estimation and Distance Recovery in a Single RGB Image," *Proc. IEEE Conf. on Multimedia Expo (ICME'15)*, 2015
199. Shizheng Wang, Mingyu Sun, Phil Surman, Junsong Yuan, and Xiao Wei Sun, "Maximizing the 2D Viewing Field of a Computational Two-layer 3D Display", *SID Symposium Digest of Technical Papers*, 2015
200. Jianyu Yang, Junsong Yuan, Youfu Li, "Flexible Trajectory Indexing for 3D Motion Recognition", in *Proc. IEEE Winter Conference on Applications of Computer Vision (WACV'15)*, 2015
201. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "Quantized Fuzzy LBP for Face Recognition", in *IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP'15)*, 2015
202. Daniel Thalmann, Hui Liang, Junsong Yuan, "First-Person Palm Pose Tracking and Gesture Recognition in Augmented Reality," in *10th Intl. Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Application (VISIGRAPP)*, 2015
203. Das Bhattacharjee Sreyasee, Junsong Yuan, Lingyu Duan and Yap-Peng Tan, "Query-adaptive Logo Search using Shape-aware Descriptors", in *Proc. ACM Int'l Conf. on Multimedia (MM'15)*, 2015 (*short paper*)
204. Hong Zhang, Junsong Yuan, Xingyu Gao, and Zhenyu Chen, "Boosting Cross-media Retrieval via Visual-Auditory Feature Analysis and Relevance Feedback", in *Proc. ACM Int'l Conf. on Multimedia (MM'14)*, 2014 (*short paper*)
205. Zerrin Yumak, Jianfeng Ren, Nadia Magnenat Thalmann, Junsong Yuan, "Tracking and fusion for multiparty interaction with a virtual character and a social robot," *SIGGRAPH Asia Workshop on Autonomous Virtual Humans and Social Robot for Telepresence*, 2014 (*oral*)
206. Yang Xiao, Gangqiang Zhao, Junsong Yuan, Daniel Thalmann, "Activity recognition in unconstrained RGB-D video using 3D trajectories," *SIGGRAPH Asia Workshop on Autonomous Virtual Humans and Social Robot for Telepresence*, 2014 (*oral*)

207. Kang Dang and Junsong Yuan, "Location Constrained Pixel Classifiers for Image Parsing with Regular Spatial Layout," in *Proc. British Machine Vision Conference (BMVC'14)*, 2014
208. Chunluan Zhou and Junsong Yuan, "Non-rectangular Part Discovery for Object Detection," in *Proc. British Machine Vision Conference (BMVC'14)*, 2014
209. Gangqiang Zhao, Junsong Yuan, and Kang Dang, "Height Gradient Histogram (HIGH) for 3D Scene Labelling," in *Proc. International Conf. on 3D Vision (3DVision'14)*, 2014
210. Gang Yu, Zicheng Liu, and Junsong Yuan, "Discriminative Orderlet Mining For Real-time Recognition of Human-Object Interaction" in *Proc. Asian Conf. on Computer Vision (ACCV'14)*, 2014
211. Junlin Hu, Jiwen Lu, Junsong Yuan, and Yap-Peng Tan, "Large Margin Multi-Metric Learning for Face and Kinship Verification in the Wild" in *Proc. Asian Conf. on Computer Vision (ACCV'14)*, 2014
212. Xinchun Yan, Junsong Yuan, and Hui Liang, "Efficient Online Spatio-Temporal Filtering for Video Event Detection" in *Proc. European Conf. on Computer Vision Workshop (ECCVW) on Video Event Categorization, Tagging and Retrieval towards big data*, 2014 (*oral*)
213. Hong Zhang, Li Chen, Jun Liu, and Junsong Yuan, "Hierarchical Multi-feature Fusion for Multimodal Data Analysis", in *Proc. IEEE Conf. on Image Processing (ICIP'14)*, 2014
214. Jerripothula Koteswar, Jianfei Cai, Fanman Meng, and Junsong Yuan, "Automatic Image Co-Segmentation using Geometric Mean Saliency", in *Proc. IEEE Conf. on Image Processing (ICIP'14)*, 2014 (**Top 10% paper**)
215. Hui Liang, Junsong Yuan, and Daniel Thalmann, "Improved Hand Pose Estimation via Multimodal Prediction Fusion," in *Prof. Computer Graphics International (CGI'14)*, 2014
216. Gang Yu and Junsong Yuan, "Scalable Forest Hashing for Fast Similarity Search," in *Proc. IEEE Conf. on Multimedia Expo (ICME'14)*, 2014
217. Ye Luo, Gangqiang Zhao, and Junsong Yuan, "Thematic Saliency Detection using Spatial-Temporal Context", in *Proc. Int'l Conf. on Computer Vision Workshop (ICCVW'13) on Large-Scale Video Search and Mining (LSVSM)*, 2013 (*oral*)
218. Yang Xiao, Junsong Yuan, Daniel Thalmann, "Human-Virtual Human Interaction by Upper Body Gesture Understanding", in *ACM Symposium on Virtual Reality Software and Technology (VRST'13)*, 2013 (*oral*)
219. Jingjing Meng, Junsong Yuan, Gang Wang, Jianbo Xu, "Object Instance Search in Videos," in *Proc. Intl. Conf. on Information, Communication and Signal Processing (ICICS'13)*, 2013 (*oral*)
220. Kang Dang, Junsong Yuan, and Ho Yee Tiong, "Voxel Labelling in CT Images using Data-Driven Contextual Features", in *Proc. IEEE Conf. on Image Processing (ICIP'13)*, 2013 (**Top 10% paper**)
221. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "Learning Binarized Pixel-Difference Pattern for Scene Recognition", in *Proc. IEEE Conf. on Image Processing (ICIP'13)*, 2013 (*oral*)
222. Jianfeng Ren, Xudong Jiang, Junsong Yuan, "Relaxed Local Ternary Pattern for Face Recognition", in *Proc. IEEE Conf. on Image Processing (ICIP'13)*, 2013
223. Chaoqun Weng, Hongxing Wang, and Junsong Yuan, "Learning Weighted Geometric Pooling for Image Classification", in *Proc. IEEE Conf. on Image Processing (ICIP'13)*, 2013
224. Hui Liang, Junsong Yuan, and Daniel Thalmann, "Model-based Hand Pose Estimation via Spatial-temporal Hand Parsing and 3D Fingertip Localization," in *Computer Graphics International, (CGI'13)*, 2013 (*oral*)
225. Chaoqun Weng, Yuning Jiang, and Junsong Yuan, "Direct Mining Co-occurrence Features for Visual Recognition: a Branch and Bound Method", in *Proc. IEEE Conf. on Multimedia Expo (ICME'13)*, 2013 (*oral, acceptance rate [15%]*)

226. Chaoqun Weng, Hongxing Wang, and Junsong Yuan, "Hierarchical Sparse Coding based on Spatial Pooling and Multi-feature Fusion", in *Proc. IEEE Conf. on Multimedia Expo (ICME'13)*, 2013
227. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, "Dynamic Texture Recognition Using Enhanced LBP Features", in *IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP'13)*, 2013
228. Wen Gao, Ling-Yu Duan, Jun Sun, Junsong Yuan, Yonggang Wen, Jianfei Cai, Alex C. Kot, "Mobile Media Communication, Processing, and Analysis: a review of recent advances", in *IEEE International Symposium on Circuits and Systems (ISCAS'13)*, 2013 (*oral*)
229. Ye Luo and Junsong Yuan, "Salient Object Detection in Videos by Optimal Spatio-Temporal Path Discovery", in *Proc. ACM Int'l Conf. on Multimedia (MM'13)*, 2013 (*short paper*)
230. Gang Yu, Junsong Yuan, and Zicheng Liu, "Predicting Human Activities using Spatio-Temporal Structure of Interest Points", in *Proc. ACM Int'l Conf. on Multimedia (MM'12)*, 2012 (*short paper*)
231. Hui Liang, Junsong Yuan and Daniel Thalmann, "3D Fingertip and Palm Tracking in Depth Image Sequences", in *Proc. ACM Int'l Conf. on Multimedia (MM'12)*, 2012 (*short paper*)
232. Chunluan Zhou and Junsong Yuan, "Arbitrary-Shape Object Localization using Adaptive Image Grids", in *Proc. Asian Conf. on Computer Vision (ACCV'12)*, 2012
233. Jiang Wang, Junsong Yuan, Zhuoyuan Chen, and Ying Wu, "Spatial Locality-Aware Sparse Coding and Dictionary Learning", in *Proc. Asian Conf. on Machine Learning (ACML'12)*, 2012 (*oral*)
234. Jie Lin, Junsong Yuan, Lingyu Duan, Siwei Luo, and Wen Gao, "Social Image Tagging by Mining Sparse Tag Patterns from Auxiliary Data", in *Proc. IEEE Conf. on Multimedia Expo (ICME'12)*, 2012 (*oral*)
235. Jie Lin, Lingyu Duan, Junsong Yuan, Qingyong Li, and Siwei Luo, "Learning Sparse Tag Patterns for Social Image Classification", *Proc. IEEE Conf. on Image Processing (ICIP'12)*, 2012
236. Yang Cong, Junsong Yuan, and Yandong Tang, "Object Tracking via online Metric Learning", *Proc. IEEE Conf. on Image Processing (ICIP'12)*, 2012
237. Gangqiang Zhao and Junsong Yuan, "Curb detection and tracking using 3D-Lidar Scanner", *Proc. IEEE Conf. on Image Processing (ICIP'12)*, 2012
238. Gangqiang Zhao, Xuhong Xiao and Junsong Yuan, "Fusion of Velodyne and Camera Data for Scene Parsing", *Proc. 15th Int'l. Conf. on Information Fusion (FUSION'12)*, 2012 (*oral*)
239. Hui Liang, Junsong Yuan, and Daniel Thalmann, "Hand Pose Estimation by Combining Fingertip Tracking and Articulated ICP", in *Proc. ACM SIGGRAPH Conf. on Virtual-Reality Continuum and its Applications in Industry, (VRCAI'12)*, 2012 (*oral*)
240. Yuning Jiang, Jingjing Meng, and Junsong Yuan, "Rapid Object Search Engine for Contextual Advertisement", in *Proc. ACM Int'l Conf. on Multimedia (MM'12)*, 2012 (*demonstration paper*)
241. Zhou Ren, Jingjing Meng, Junsong Yuan, and Zhengyou Zhang, "Robust Hand Gesture Recognition with Kinect Sensor", in *Proc. ACM Int'l Conf. on Multimedia (MM'11)*, pp.759-760, 2011 (*demonstration paper*)
242. Hongxing Wang, Junsong Yuan, Yap-Peng Tan, "Combining Feature Context and Spatial Context for Image Data Mining", in *Proc. IEEE Conf. on Data Mining (ICDM'11)*, 2011 (*regular paper*)
243. Gangqiang Zhao and Junsong Yuan, "Discovering Thematic Patterns in Videos via Cohesive Sub-graph Mining", in *Proc. IEEE Conf. on Data Mining (ICDM'11)*, 2011 (*short paper*)

244. Jianfeng Ren, Xudong Jiang, and Junsong Yuan, “A Fast and Accurate Cascade Subspace Face/Eye Detector on Mobile Devices”, in *Proc. Int’l Conf. on Computer Vision Workshop (ICCVW’11) on mobile vision*, 2011 (*oral*)
245. Yuning Jiang, Jingjing Meng, Junsong Yuan, “Grid-based Local Feature Bundling for Efficient Object Search and Localization”, in *Proc. IEEE Conf. on Image Processing (ICIP’11)*, 2011 (*oral*)
246. Ye Luo, Junsong Yuan, Ping Xue and Qi Tian, “Salient Region Detection and Its Application to Video Retargeting”, in *Proc. IEEE Conf. on Multimedia Expo (ICME’11)*, 2011 (*oral*)
247. Xinchao Wang, Zhu Li, Lei Zhang, and Junsong Yuan, “Grassmann Hashing for Approximate Nearest Neighbor Search in High Dimensional Space”, in *Proc. IEEE Conf. on Multimedia Expo (ICME’11)*, 2011
248. Zhou Ren, Jingjing Meng, and Junsong Yuan, “Depth Camera based Hand Gesture Recognition and its Applications in Human-Computer-Interaction”, in *Proc. Intl. Conf. on Information, Communication and Signal Processing (ICICS’11)*, 2011 (*invited paper*)
249. Chaoqun Weng, Gang Hua, and Junsong Yuan, “Multiple Instance Boosting with Global Smoothness Regularization”, in *Proc. Intl. Conf. on Information, Communication and Signal Processing (ICICS’11)*, 2011 (*invited paper*)
250. Gang Yu, Junsong Yuan and Zicheng Liu, “Real-time Human Action Search using Random Forest based Hough Voting”, in *Proc. ACM Int’l Conf. on Multimedia (MM’11)*, pp. 1149-1152, 2011 (*short paper*)
251. Zhou Ren, Junsong Yuan, and Zhengyou Zhang, “Robust Hand Gesture Recognition Based on Finger-Earth Mover’s Distance with a Commodity Depth Camera”, in *Proc. ACM Int’l Conf. on Multimedia (MM’11)*, pp.1093-1096, 2011 (*short paper*)
252. Jingjing Meng, Junsong Yuan, Yuning Jiang, Nitya Narasimhan, Venu Vasudevan, and Ying Wu, “Interactive Visual Object Search through Mutual Information Maximization”, in *Proc. ACM Int’l Conf. on Multimedia (MM’10)*, pp. 1147-1150, 2010 (*short paper*)
253. Gangqiang Zhao and Junsong Yuan, “Mining and Cropping Common Object from Images”, in *Proc. ACM Int’l Conf. on Multimedia (MM’10)*, pp. 975-978, 2010 (*short paper*)
254. Gangqiang Zhao, Lin Chen, Gencai Chen and Junsong Yuan, “KPB-SIFT: A Compact Local Feature Descriptor”, in *Proc. ACM Int’l Conf. on Multimedia (MM’10)*, pp. 1175-1178, 2010 (*short paper*)
255. Ye Luo, Junsong Yuan, Ping Xue, and Qi Tian, “Saliency Density Maximization for Object Detection and Localization”, in *Proc. Asian Conference on Computer Vision (ACCV’10)*, pp. 396-408, 2010
256. Fei Yuan, Veronique Prinet, and Junsong Yuan, “Middle-Level Representation for Human Activities Recognition: the Role of Spatio-temporal Relationships”, in *Proc. European Conference on Computer Vision Workshop (ECCVW) on Human Motion: Understanding, Modeling, Capture and Animation*, 2010 (*oral*)
257. Norbert A., Zicheng Liu, and Junsong Yuan, “Efficient search of Top-K video subvolumes for multi-instance action detection”, in *Proc. IEEE Conf. on Multimedia Expo (ICME’10)*, pp. 328-333, 2010 (*oral*)
258. Jiang Xu, Junsong Yuan, and Ying Wu, “Bipolar Grouping”, in *Proc. IEEE Conf. on Multimedia Expo (ICME’10)*, pp. 54-59, 2010 (*oral*)
259. Fan Jiang, Junsong Yuan, Sotirios A. Tsafaris and Aggelos K. Katsaggelos, “Anomalous Video Event Detection Using Spatiotemporal Context”, in *Proc. IEEE Conf. on Image Processing (ICIP’10)*, pp. 705-708, 2010
260. Junsong Yuan, Zicheng Liu, Ying Wu, Zhengyou Zhang, Speeding up Spatio-Temporal Sliding-Window Search for Efficient Event Detection in Crowded Videos, in *ACM Multimedia Workshop on Events in Multimedia*, 2009 (*oral*)

261. Junsong Yuan, Jiebo Luo, Henry Kautz and Ying Wu, "Mining GPS Traces and Visual Words for Event Classification", in *Proc. ACM Intl. Conf. on Multimedia Information Retrieval (ACM MIR'08)*, pp.2-9, 2008 (*invited paper*).
262. Jingjing Meng, Junsong Yuan, Mat Hans and Ying Wu, "Mining Motifs from Human Motion", in *Proc. EUROGRAPHICS'08*, pp. 71-74, 2008.
263. Junsong Yuan, Zhu Li, Yun Fu, Ying Wu and Thomas S. Huang, "Common spatial pattern discovery by efficient candidate pruning," in *Proc. IEEE Conf. on Image Processing (ICIP'07)*, pp. 165-168, 2007 (*oral*).
264. Junsong Yuan, Wei Wang, Jingjing Meng, Ying Wu and Dongge Li, "Mining repetitive clips through finding continuous paths," in *Proc. ACM Int'l Conf. on Multimedia (MM'07)*, pp.289-292, 2007 (*short paper*).
265. Yun Fu, Junsong Yuan, Zhu Li, Ying Wu and Thomas S. Huang, "Query-driven locally adaptive fisher faces and expert-model for face recognition," in *Proc. IEEE Conf. on Image Processing (ICIP'07)*, pp.141-144, 2007 (*oral*).
266. Zhu Li, Yun Fu, Junsong Yuan, Ying Wu and Thomas S. Huang, "Query driven localized linear discriminant models for head pose estimation," in *Proc. IEEE Conf. on Multimedia and Expo (ICME'07)*, pp. 1810-1813, 2007 (*oral*).
267. Junsong Yuan, Ling-Yu Duan, Qi Tian and Changsheng Xu, "Fast and Robust Short Video Clip Search Using an Index Structure," in *Proc. of 6th ACM International Workshop on Multimedia Information Retrieval in conjunction with ACM Multimedia'04 (MIR'04)*, pp.65-68, 2004 (*oral*).
268. Junsong Yuan, Qi Tian and Surendra Ranganath, "Fast and Robust Search Method for Short Video Clips from Large Video Collection," in *Proc. of 17th International Conference on Pattern Recognition (ICPR'04)*, pp.866-869, 2004.
269. Junsong Yuan, Ling-Yu Duan, Qi Tian, Surendra Ranganath and Changsheng Xu, "Fast and Robust Short Video Clip Search for Copy Detection," in *Proc. of 2004 Pacific-Rim Conference on Multimedia (PCM'04)*, Published by *Lecture Notes in Computer Science (LNCS)*, pp.479-488, 2004 (*invited paper*).
270. Ling-Yu Duan, Junsong Yuan, Qi Tian and Changsheng Xu, "Fast and Robust Short Video Clip Search Using an Index Structure," in *Proc. of ACM Int'l Conf. on Multimedia (MM'04)*, pp.756-757, 2004. (*demonstration*)

PATENTS

1. Lihua Xie, Cheng Wang, and Junsong Yuan, "Simultaneous Localization and Mapping Methods and Apparatus," US patent filed 07/2017, issued 07/2022
2. Cheng Wang, Lihua Xie, and Junsong Yuan, "A Fast Dense Method For Inertial-Visual SLAM," Singapore provisional patent, Filed 09/2016
3. Xiaowei Sun, Shizheng Wang, Jiew Siew Lim, Junsong Yuan, Philip Anthony Surman, "Head Tracked Multiview 3D Display," , Singapore provisional patent, Filed 04/2015
4. Junsong Yuan and Hui Liang, "Estimating the hand pose using a single RGB camera", Singapore provisional patent, Filed 09/2014.
5. Junsong Yuan, Yuning Jiang and Jingjing Meng, "System and method For large scale visual object search", US provisional patent, Filed 05/2012.
6. Junsong Yuan, Zhou Ren and Jingjing Meng, "System and method for robust hand gesture recognition using commodity depth sensor", US provisional patent, Filed 10/2011.
7. Zicheng Liu and Junsong Yuan, "Efficient action detection through sub-volume mutual information maximization", US Patent pending, US 2010/0315506 A1, Filed 06/10/2009.
8. Jiebo Luo and Junsong Yuan, "Image classification using capture-location-sequence information", US Patent issued, US 8,055,081 B2, Filed 04/14/2008, Issued 11/08/2011.

9. Junsong Yuan, Wei Wang, Zhu Li and Dongge Li, “Method and apparatus for video clip searching and mining”, US Patent pending, US 2008/0226173 A1, Filed 03/13/2007.

MEMBERSHIP

Member, IEEE Conf. on Multimedia (ICME) Steering Committee, 2018-2019
Member, IEEE Image, Video, and Multidimensional Signal Processing Technical Committee IVMSPTC, 2020 - 2028
Member, IEEE Multimedia System and Applications Technical Committee (MSA-TC), 2014 - 2022
Member, IEEE Visual Signal Processing and Communications Technical Committee (VSPC-TC), 2014 - 2020

SERVICE FOR REFEREED JOURNALS

Editor-in-Chief, Journal of Visual Communications and Image Representation (JVCI), 2025 - present
Senior Editor, Journal of Selected Topics in Signal Processing (J-STSP), 2025 - present
Associate Editor, Computer Vision and Image Understanding (CVIU), 2025 - present
Associate Editor, IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI), 2023 - present
Associate Editor, Machine Vision and Applications (MVA), 2020 - present
Senior Area Editor, Journal of Visual Communications and Image Representation (JVCI), 2018 - 2024
Associate Editor, IEEE Transactions on Image Processing (T-IP), 2016 - 2020
Associate Editor, IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT), 2016 - 2019
Associate Editor, The Visual Computer Journal (TVC), 2013 - 2025
Associate Editor, IPSJ Trans. on Computer Vision and Applications (CVA), 2015 - 2017
Guest Editor³, Journal of Selected Topics in Signal Processing (J-STSP), 2024-2025
Guest Editor⁴, ACM Transactions on Multimedia Computing, Communications, and Applications (ToMM), 2020-2021
Guest Editor⁵, International Journal of Computer Vision (IJCV), 2014-2015

SERVICE FOR REFEREED CONFERENCES

General Co-Chair

IEEE Conference on Multimedia Expo (ICME'24)

Technical Program Co-Chair

IEEE Conference on Acoustics, Speech, and Signal Processing (ICASSP'27)
IEEE Conference on Multimedia Expo (ICME'18)
IEEE Conference on Visual Communications and Image Processing (VCIP'15)

Workshop Co-Organizer

IEEE CVPR 2015 Workshop on Large-scale video search and mining (LSVSM'15)
SIGGRAPH Asia 2014 Workshop on Autonomous Virtual Humans and Social Robot for Telepresence
IEEE ICCV 2013 Workshop on Large-scale video search and mining (LSVSM'13)
IEEE CVPR 2013 Workshop on Human action understanding from 3D data (HAU3D'13)
IEEE CVPR 2012 Workshop on Human action understanding from 3D data (HAU3D'12)
IEEE CVPR 2012 Workshop on Large-scale video search and mining (LSVSM'12)

Organizing Co-Chair

Asian Conf. on Computer Vision (ACCV'14)

Area Chair

³Special Series on AI in Signal & Data Science - Toward Explainable, Reliable, and Sustainable Machine Learning

⁴Special Issue on Explainable AI on Multimedia Computing

⁵Special Issue on Human Activity Understanding from 2D and 3D Data

International Conference on Machine Learning (ICML'26)
AAAI Conference on Artificial Intelligence (AAAI'26)
IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP'16)
Conference on Neural Information Processing Systems (NeurIPS'24)
IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'17'19'20'21'22'24'25'26)
IEEE Conf. on Computer Vision (ICCV'21'23'25)
European Conf. on Computer Vision (ECCV'22'24'26)
ACM Conf. on Multimedia (ACM MM'18)
IEEE Conf. on Image Processing (ICIP'17'18)
International Conf. on Pattern Recognition (ICPR'16'18)
Asian Conference on Computer Vision (ACCV'14'18'24)
IEEE Winter Conference on Applications and Computer Vision (WACV'14'19)
IEEE Conference on Multimedia Expo (ICME'14'15)

Senior Area Chair

ACM Conf. on Multimedia (ACM MM'24'25)

Demo Co-Chair

IEEE International Joint Conference on Biometrics (IJCB'24)

Tutorial Chair

ACM Conference on Multimedia Retrieval (ICMR'15)

Workshop Co-Chair

Asian Conf. on Pattern Recognition (ACPR'19)

Panel Co-Chair

IEEE Conf. on Face and Gesture (FG'23)

Publication Co-Chair

IEEE Conf. on Multimedia Expo (ICME'16)

Publicity Co-Chair

ACM Conf. on Multimedia (ACM MM'24)

Web Chair

IEEE Conf. on Computer Vision and Pattern Recognition (CVPR'17)

Brave New Ideas Co-Chair

ACM Conf. on Multimedia (ACM MM'20)

Doctoral Symposium Co-Chair

ACM Conf. on Multimedia (ACM MM'18)

Senior Program Committee Member

AAAI Conference on Artificial Intelligence (AAAI'22'20)

International Joint Conference on Artificial Intelligence (IJCAI'18)

International Advisory Committee Member

International Conference on Image Processing and Machine Vision (IPMV'25)

IAPR International Conference on Computer Vision and Image Processing (CVIP'22'21)

CURRENT AND
PREVIOUS
GRADUATE
STUDENTS

Zixin Zhu (Ph.D. student of UB)

Xuelu Feng (Ph.D. student of UB; co-supervise with Chunming Qiao)

Kairui Shi (Ph.D. student of UB)

Ziqing Chang (Ph.D. student of UB)

Tianyu Luan (Ph.D. of UB, 2025)
now: Scientist at Accenture, San Jose, USA

Nan Xi (Ph.D. of UB, 2025)
now: Assitant Professor at Virginia Commonwealth University, Richmond, Virginia, USA

Sudhir Kumar (Ph.D. of UB, 2025)
now: Research Scientist at Adobe, Bangalore, India

Yuanhao Zhai (Ph.D. of UB, 2025; co-supervise with Dave Doermann)
now: Scientist at Meta, San Jose, USA

Liangchen Song (Ph.D. of UB, 2023)
now: Machine Learning Researcher at Apple, San Jose, USA

Lin Huang (Ph.D. of UB, 2023)
now: Research Engineer at NetEase, Seattle, USA

Jialian Wu (Ph.D. of UB, 2023)
now: Machine Learning Researcher at AMD, Seattle, USA

Sheng Liu (Ph.D. of UB, 2022)
now: Applied Scientist at Amazon, Seattle, USA

Suchen Wang (Ph.D. of NTU, 2022; co-supervise with Yap-Peng Tan and Kim-Hui Yap)
now: Senior Applied Scientist at Amazon, Seattle, USA

Yujun Cai (Ph.D. of NTU, 2021; co-supervise with Jianfei Cai and Tat-Jen Cham)
Interdisciplinary Graduate School (IGS) Premium Scholarship
now: Assistant Professor at Queensland University, Australia

Zhenzhen Wang (Ph.D. of NTU, 2020; co-supervise with Yap-Peng Tan)
now: Scientist at Amazon, Seattle, USA

Junwu Weng (Ph.D. of NTU, 2019)
now: Scientist at Bytedance, Shenzhen, China

Tan Yu (Ph.D. of NTU, 2019)
Interdisciplinary Graduate School (IGS) Premium Scholarship
now: Scientist at NVidia, San Jose, USA

Chunluan Zhou (Ph.D. of NTU, 2018)
now: Scientist at Ant Group, Bei Jing, China

Kang Dang (Ph.D. of NTU, 2018)
now: Associate Professor at Xi'An Jiaotong Liverpool University, Suzhou, China

Liuhao Ge (Ph.D. of NTU, 2018)

Interdisciplinary Graduate School (IGS) Premium Scholarship
now: Scientist at Meta, San Jose, USA

Jiong Yang (Ph.D. of NTU, 2018)
Interdisciplinary Graduate School (IGS) Premium Scholarship
now: Researcher at Nutonomy Inc., Singapore

Jing Tang (Ph.D. of NTU, 2017; co-supervise with Xueyan Tang)
Interdisciplinary Graduate School (IGS) Premium Scholarship;
now: Assistant Professor at Hong Kong University of Science and Technology (HKUST), Guangzhou, China

Koteswar Rao Jerripothula (Ph.D. of NTU, 2017; co-supervise with Jianfei Cai)
Interdisciplinary Graduate School (IGS) Premium Scholarship;
now: Associate Professor at Indian Institute of Technology (IIT) Kanpur, India

Chaoqun Weng (Ph.D. of NTU, 2017)
now: Researcher at Bytedance, Beijing, China

Hui Liang (Ph.D. of NTU, 2015)
now: Senior Applied Scientist at Amazon, Seattle, USA

Hongxing Wang (Ph.D. of NTU, 2015)
now: Professor at Chongqing University, Chongqing, China

Ye Luo (Ph.D. of NTU, 2014)
now: Associate Professor at Tongji University, Shanghai, China

Gang Yu (Ph.D. of NTU, 2014)
now: Principal Research Scientist at StepFun, Shanghai, China
Microsoft Research Asia Fellowship 2011

Jiaqi Zhang (M.Eng. of NTU, 2018)
now: Researcher at Tiktok, Singapore

Mengjia Yan (M.Eng. of NTU, 2018)
now: Engineer at Changan Automobile, Chongqing, China

Bo Hu (M.Eng. of NTU, 2017)
now: Data Science Manager at American Express, Singapore

Zhou Ren (M.Eng. of NTU, 2012)
now: Applied Science Manager, Amazon, Seattle, USA

CURRENT AND
PREVIOUS
RESEARCH STAFF

Dr. Zhiwen Fang (Post-Doc research fellow, Sept. 2017 - March 2018)
now: Professor and Chair, Southern Medical University, Guangzhou, China

Dr. Mengyuan Liu (Post-Doc research fellow, Aug. 2017 - March 2018)
now: Assistant Professor at Peking University, Shenzhen, China

Dr. Zhigang Tu (Post-Doc research fellow, Dec. 2016 - March 2018)
now: Professor at Wuhan University, Wuhan, China

Weixiang Hong (Research Assistant, Nov. 2015 - Dec. 2017)

now: Engineer at Meta, San Jose, USA

Dr. Shizheng Wang (Post-Doc research fellow, April 2014 - Aug. 2017)
now: Associate Professor at Chinese Academy of Science, Beijing, China
Chinese Academy of Science Hundred Talents Program (category C)

Dr. Anirban Chakraborty (Post-Doc research fellow, Nov. 2015 - Dec. 2016)
now: Associate Professor at Indian Institute of Science (IISc), Bangalore, India

Dr. Das Bhattacharjee Sreyasee (Post-Doc research fellow, Aug. 2014 - Nov. 2016)
now: Assistant Professor of Teaching at University at Buffalo, Buffalo, USA

Dr. Yuwei Wu (Post-Doc research fellow, Aug. 2014 - Aug. 2016)
now: Associate Professor at Beijing Institute of Technology, Beijing, China

Dr. Jianfeng Ren (Research Associate, Aug. 2010 - July 2015)
now: Associate Professor at University of Nottingham Ningbo, Ningbo, China

Dr. Jianyu Yang (Post-Doc research fellow, Jan. 2015 - July 2015)
now: Associate Professor at Soochow University, Suzhou, China

Dr. Gangqiang Zhao (Post-Doc research fellow, March 2010 - Sept. 2014)
now: Senior Research Scientist at Morpx Inc., Hangzhou, China

Dr. Yang Xiao (Post-Doc research fellow, Feb. 2013 - June 2014)
now: Professor at Huazhong University of Science and Technology (HUST), Wuhan, China

Yuning Jiang (Research Assistant, Aug. 2010 - May 2013)
now: Applied Science Manager at Alibaba, Beijing, China

Dr. Du Tran (Research Associate, April 2010 - July 2012)
now: Research Scientist at Google, San Jose, USA

Dr. Yang Cong (Post-Doc research fellow, May 2010 - April 2011)
now: Dean and Professor at South China University of Technology (SCUT), Guangzhou, China

Dr. Zhenzhong Chen (senior research scientist, Sept. 2011 - March 2012)
now: Professor at Wuhan University, Wuhan, China

KEYNOTES AND TUTORIALS

Keynote: Intelligent Hand Sensing and Augmented Interaction
International Conference on Image Processing and Machine Vision (IPMV 2024), Hong Kong, Dec. 2024

Distinguished Lecture: An Introspective on Statistical Pattern Recognition in the Age of Generative AI
McMaster University, ECE Department, Sept. 2024

Keynote: Intelligent Hand Sensing and Applications in Metaverse
Asian conference on Artificial Intelligence (ACAIT), Changzhou, China, Oct. 2022

Keynote: Hand Sensing for Interactive Augmentation
Computer Graphics International (CGI), Calgary, Canada, June 2019

Keynote: Towards More Intelligent Machines: Understanding Human Behaviors with 2D and 3D Sensors

Intl. Conf. on Internet Multimedia Computing and Services (ICIMCS), Nanjing, China, Aug. 2018

Tutorial: Towards Comprehensive Reasoning in Vision-Language Models

Invited Talk: Chain-of-Look Video Reasoning

Int. Conf. on Computer Vision (ICCV'25), Hawaii, USA, Oct. 2025

Tutorial: AcTion Localization And Segmentation in Untrimmed Videos (with Dr. Angela Yao, Dr. Fadime Sener, and Dr. Guodong Ding)

European Conf. on Computer Vision (ECCV'22), 2022

Tutorial: Human Pose Estimation and Action Recognition (with Dr. Gang Yu and Dr. Zicheng Liu)

IEEE Conf. on Image Processing (ICIP'19), Taipei, Taiwan, Sept. 2019

Tutorial: Mining Image and Video Data (with Dr. Ying Wu)

Asian Conf. on Computer Vision (ACCV'14), Singapore, Nov. 2014

Tutorial: Mining Image and Video Data

IEEE Conf. on Image Processing (ICIP'13), Melbourne, Australia, Sept. 2013

Tutorial: Understanding human actions with 2D and 3D sensors (with Dr. Zicheng Liu)

IEEE Conf. on Automatic Face and Gesture Recognition (FG'13), Shanghai, China, April 2013

Tutorial: Social Robots and Virtual Humans in 3D TelePresence (with Prof. Nadia Thalmann and Prof. Daniel Thalmann)

SIGGRAPH Intl. Conf. on Virtual-Reality Continuum and its Applications in Industry (VRCAI'12), Singapore, Dec. 2012

Tutorial: Human action analysis with 2D and 3D sensors (with Dr. Zicheng Liu)

IEEE Conf. on Multimedia Expo (ICME'12), Melbourne, Australia, July 2012

SERVICES AT UB

Director of Graduate Admission, CSE, University at Buffalo, 2022-2026

Member, Executive Committee, CSE, University at Buffalo, 2022-2026

Chair/Co-Chair, Tenure Track Hire Search Committee, CSE, University at Buffalo, 2021-2023

Chair, Learning Science Clustering Hire Search Committee, SEAS, University at Buffalo, 2021-2022

Senate of the University (50 elected members in total), Sept. 2021 - Aug. 2023

Member, SUNY Empire Innovation Program (EIP) faculty search committee, University at Buffalo (UB), 2019-2020 and 2020-2021

Member, CSE Distinguished Speaker committee, CSE, University at Buffalo, 2019-2021

SERVICES AT NTU

Senate of the University (50 elected members in total), July 2016 - March 2018

NTU Research Council member for Informatics and Mathematics, Dec. 2015 - March 2018

Program director of video analytics, School of EEE, Oct. 2011 - Sept. 2016