

## JIAN SUN ([www.jiansun.org](http://www.jiansun.org))

### CONTACT INFO

Email: [sunjian@megvii.com](mailto:sunjian@megvii.com)  
Birth date: Oct 30, 1976  
Homepage: [www.jiansun.org](http://www.jiansun.org)

### ADDRESS

3F Tower A, Raycom Info Tech Park  
No.2 Kexueyuan South Road  
Haidian District, Beijing, China 100190

### EDUCATION

Xian Jiaotong University, Xian, China  
*Doctor of Philosophy, Electronic Engineering, 2000-2003*

Xian Jiaotong University, Xian, China  
*Master, Electronic Engineering, 1997-2000*

Xian Jiaotong University, Xian, China  
*Bachelor, Electronic Engineering, 1993-1997*

### EXPERIENCES

Megvii Technology (Face++)	<b>Chief Scientist</b> <b>Managing Director of Research</b>	2016 - present
Microsoft Research USA	<b>Principal Research Manager</b> <b>Microsoft Partner</b>	2015 - 2016
Microsoft Research Asia	<b>Principal Research Manager</b>	2013 - 2015
	<b>Senior Researcher Manager</b>	2010 - 2013
	<b>Lead Researcher</b>	2008 - 2010
	<b>Researcher</b>	2005 - 2008
	<b>Associate Researcher</b>	2003 - 2005

### HONORS AND AWARDS

Common Object in Context (COCO) Visual Recognition Challenge 2018 Winner Awards

Common Object in Context (COCO) Visual Recognition Challenge 2017 Winner Awards

National Natural Science Award of China (second class), 2016

Best Paper Award, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016

ImageNet Large Scale Visual Recognition Challenge 2015 Competition Winner Awards, 2015

Common Object in Context Visual Recognition Challenge 2015 Winner Awards, 2015

MIT Technology Review Young Innovator under 35 (MIT TR35), 2010

Best Paper Award, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2009

Microsoft Research Asia Fellowship, 2001

## Professional Activities

Area chair, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019  
Area chair, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017  
Area chair, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016  
Area chair, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015  
Area chair, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012  
Area chair, *IEEE International Conference on Computer Vision (ICCV)*, 2011  
Paper committee, ACM SIGGRAPH 2011  
Adjunct professor, Xian Jiaotong University (XJTU), China, 2011 - present

## PUBLICATIONS

### Peer-reviewed Conference Papers

1. Ningning Ma, Xiangyu Zhang, Hai-Tao Zheng, Jian Sun. ShuffleNet V2: Practical Guidelines for Efficient CNN Architecture Design. *European Conference on Computer Vision (ECCV)*, 2018.
2. Erjin Zhou, Zhimin Cao, Jian Sun. GridFace: Face Rectification via Learning Local Homography Transformations. *European Conference on Computer Vision (ECCV)*, 2018.
3. Zhenli Zhang, Xiangyu Zhang, Chao Peng, Xiangyang Xue, Jian Sun. ExFuse: Enhancing Feature Fusion for Semantic Segmentation. *European Conference on Computer Vision (ECCV)*, 2018.
4. Xiangyu Xu, Deqing Sun, Sifei Liu, Wenqi Ren, Yu-Jin Zhang, Ming-Hsuan Yang, Jian Sun. Rendering Portraits from Monocular Camera and Beyond. *European Conference on Computer Vision (ECCV)*, 2018.
5. Zeming Li, Chao Peng, Gang Yu, Xiangyu Zhang, Yangdong Deng, Jian Sun. DetNet: Design Backbone for Object Detection. *European Conference on Computer Vision (ECCV)*, 2018.
6. Tete Xiao, Yingcheng Liu, Bolei Zhou, Yuning Jiang, Jian Sun. Unified Perceptual Parsing for Scene Understanding. *European Conference on Computer Vision (ECCV)*, 2018.
7. Xiangyu Zhang, Xinyu Zhou, Mengxiao Lin, Jian Sun. ShuffleNet: An Extremely Efficient Convolutional Neural Network for Mobile Devices. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018
8. Chao Peng, Tete Xiao, Zeming Li, Yuning Jiang, Xiangyu Zhang, Kai Jia, Gang Yu, Jian Sun. MegDet: A Large Mini-Batch Object Detector. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018
9. Yilun Chen, Zhicheng Wang, Yuxiang Peng, Zhiqiang Zhang, Gang Yu, Jian Sun. Cascaded Pyramid Network for Multi-Person Pose Estimation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018
10. Xinlong Wang, Tete Xiao, Yuning Jiang, Shuai Shao, Jian Sun, Chunhua Shen. Repulsion Loss: Detecting Pedestrians in a Crowd. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018
11. Yihui He, Xiangyu Zhang, and Jian Sun. Channel Pruning for Accelerating Very Deep Neural Networks. *IEEE International Conference on Computer Vision (ICCV)*, 2017
12. Chao Peng, Xiangyu Zhang, Gang Yu, Guiming Luo, and Jian Sun. Large Kernel Matters - Improve Semantic Segmentation by Global Convolutional Network. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017
13. Zhaowei Cai, Xiaodong He, Jian Sun, and Nuno Vasconcelos. Deep Learning With Low Precision by Half-Wave Gaussian Quantization. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017

14. Jifeng Dai, Yi Li, Kaiming He, and Jian Sun. R-FCN: Object Detection via Region-based Fully Convolutional Networks. *Conference on Neural Information Processing Systems (NIPS)*, 2016
15. Jifeng Dai, Kaiming He, Yi Li, Shaoqing Ren, and Jian Sun. Instance-sensitive Fully Convolutional Networks. *European Conference on Computer Vision (ECCV)*, 2016
16. Shuaicheng Liu, Ping Tan, Lu Yuan, Jian Sun, and Bing Zeng. MeshFlow: Minimum Latency Online Video Stabilization. *European Conference on Computer Vision (ECCV)*, 2016
17. Dong Chen, Gang Hua, Fang Wen, and Jian Sun. Supervised Transformer Network for Efficient Face Detection. *European Conference on Computer Vision (ECCV)*, 2016
18. Kaiming He, Xiangyu Zhang, Shaoqing Ren, and Jian Sun. Identity Mapping in Deep Residual Networks. *European Conference on Computer Vision (ECCV)*, 2016
19. Kaiming He, Xiangyu Zhang, Shaoqing Ren, and Jian Sun. Deep Residual Learning for Image Recognition. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016
20. Jifeng Dai, Kaiming He, and Jian Sun. Instance-aware Semantic Segmentation via Multi-task Network Cascades. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016
21. Jifeng Dai, Kaiming He, and Jian Sun. ScribbleSup: Scribble-Supervised Convolutional Networks for Semantic Segmentation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016
22. Shaoqing Ren, Kaiming He, Ross Girshick, Jian Sun. Faster R-CNN: Towards Real-Time Object Detection with Region Proposal Networks. *Conference on Neural Information Processing Systems (NIPS)*, 2015.
23. Kaiming He, Xiangyu Zhang, Shaoqing Ren, and Jian Sun. Delving Deep into Rectifiers: Surpassing Human-Level Performance on ImageNet Classification. *IEEE International Conference on Computer Vision (ICCV)*, 2015
24. Jifeng Dai, Kaiming He, and Jian Sun. BoxSup: Exploiting Bounding Boxes to Supervise Convolutional Networks for Semantic Segmentation. *IEEE International Conference on Computer Vision (ICCV)*, 2015
25. Xiangyu Zhang, Jianhua Zou, Xiang Ming, Kaiming He, and Jian Sun. Efficient and Accurate Approximations of Nonlinear Convolutional Networks. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015
26. Xiao Sun, Yichen Wei, Shuang Liang, Xiaoou Tang, and Jian Sun. Cascaded Hand Pose Regression. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015
27. Kaiming He and Jian Sun. Convolutional Neural Networks at Constrained Time Cost. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015
28. Jifeng Dai, Kaiming He, and Jian Sun. Convolutional Feature Masking for Joint Object and Stuff Segmentation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015
29. Dongping Li, Kaiming He, Jian Sun, and Kun Zhou. A Geodesic-Preserving Method for Image Warping. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015
30. Yan Xia, Kaiming He, Pushmeet Kohli, and Jian Sun. Sparse Projections for High-Dimensional Binary Codes. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015
31. Kaiming He, Xiangyu Zhang, Shaoqing Ren, and Jian Sun. Spatial Pyramid Pooling in Deep Convolutional Networks for Visual Recognition. *European Conference on Computer Vision (ECCV)*, 2014
32. Dong Chen, Shaoqing Ren, Yichen Wei, Xudong Cao, and Jian Sun. Joint Cascade Face Detection and Alignment. *European Conference on Computer Vision (ECCV)*, 2014
33. Tiezheng Ge, Kaiming He, and Jian Sun. Graph Cuts for Supervised Binary Coding. *European Conference on Computer Vision (ECCV)*, 2014

34. Shaoqing Ren, Xudong Cao, Yichen Wei, Jian Sun. Face Alignment at 3000 FPS via Regressing Local Binary Features. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
35. Chen Qian, Xiao Sun, Yichen Wei, Xiaoou Tang, Jian Sun. Realtime and Robust Hand Tracking from Depth. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
36. Shuaicheng Liu, Lu Yuan, Ping Tan, Jian Sun. SteadyFlow: Spatially Smooth Optical Flow for Video Stabilization. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
37. Tiezheng Ge, Kaiming He, Jian Sun. Product Sparse Coding. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
38. Wangjiang Zhu, Shuang Liang, Yichen Wei, Jian Sun. Saliency Optimization from Robust Background Detection. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
39. Yan Xia, Kaiming He, Fang Wen, and Jian Sun. Joint Inverted Indexing. *IEEE International Conference on Computer Vision (ICCV)*, 2013.
40. Kaiming He, Huiwen Chang, and Jian Sun. Content-Aware Rotation. *IEEE International Conference on Computer Vision (ICCV)*, 2013.
41. Ziyang Ma, Kaiming He, Yichen Wei, Jian Sun, and Enhua Wu. Constant Time Weighted Median Filtering for Stereo Matching and Beyond. *IEEE International Conference on Computer Vision (ICCV)*, 2013.
42. Dong Chen, Xudong Cao, Fang Wen, and Jian Sun. Blessing of Dimensionality: High Dimensional Feature and Its Efficient Compression for Face Verification. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2013 (oral).
43. Tiezheng Ge, Kaiming He, Qifa Ke, and Jian Sun. Optimized Product Quantization for Approximate Nearest Neighbor Search. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2013.
44. Kaiming He, Fang Wen, and Jian Sun. K-means Hashing: an Affinity-Preserving Quantization Method for Learning Binary Compact Codes. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2013.
45. Dong Chen, Xudong Cao, Fang Wen, and Jian Sun. Bayesian Face Revisited: A Joint Formulation. *European Conference on Computer Vision (ECCV)*, 2012.
46. Kaiming He and Jian Sun. Statistics of Patch Offsets for Image Completion. *European Conference on Computer Vision (ECCV)*, 2012.
47. Yichen Wei, Fang Wen, Wangjiang Zhu, and Jian Sun. Geodesic Saliency Using Background Priors. *European Conference on Computer Vision (ECCV)*, 2012.
48. Lu Yuan and Jian Sun. Automatic Exposure Correction of Consumer Photographs. *European Conference on Computer Vision (ECCV)*, 2012.
49. Xudong Cao, Yichen Wei, Fang Wen, and Jian Sun. Face Alignment by Explicit Shape Regression. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012 (oral).
50. Kaiming He and Jian Sun. Computing Nearest-Neighbor Fields via Propagation-Assisted KD-Trees. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.
51. Shuicheng Liu, Lu Yuan, Ping Tan and Jian Sun. Video Stabilization with a Depth Camera. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.
52. Liwei Wang, Jiaya Jia, and Jian Sun. Learning Sparse Covariance Patterns for Natural Scenes. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.
53. Jie Feng, Yichen Wei, and Jian Sun. Salient Object Detection by Composition. *IEEE International Conference on Computer Vision (ICCV)*, 2011.
54. Lu Yuan and Jian Sun. High Quality Image Reconstruction from RAW and JPEG Image Pair. *IEEE International Conference on Computer Vision (ICCV)*, 2011.

55. Qi Yin, Xiaoou Tang, and Jian Sun. An Associate-Predict Model for Face Recognition. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2011.
56. Chunhui Zhu, Fang Wen, and Jian Sun. A Rank-Order Distance based Clustering Algorithm for Face Tagging. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2011.
57. Kaiming He, Christoph Rhemann, Carsten Rother, Xiaoou Tang, and Jian Sun. A Global Sampling Method for Alpha Matting. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2011.
58. Kaiming He, Jian Sun, and Xiaoou Tang. Guided Image Filtering. *European Conference on Computer Vision (ECCV)*, 2010.
59. Zhimin Cao, Qi Yin, Xiaoou Tang, and Jian Sun. Face Recognition with Learning-based Descriptor. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2010.
60. Zhong Wu, Qifa Ke, Jian Sun, and Heung-Yeung Shum. Scalable Face Image Retrieval with Identity-Based Quantization and Multi-Reference Reranking. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2010.
61. Kaiming He, Xiaoou Tang, and Jian Sun. Fast Matting Using Large Kernel Matting Laplacian Matrices. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2010.
62. Jiangyu Liu and Jian Sun. Parallel Graph-cuts by Adaptive Bottom-up Merging. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2010.
63. Mingcai Zhou, Lin Liang, Jian Sun and Yangsheng Wang. AAM based Face Tracking with Temporal Matching and Face Segmentation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2010.
64. Zhong Wu, Qifa Ke, and Jian Sun. A Multi-Sample, Multi-Tree Approach to Bag-of-Words Image Representation. *IEEE International Conference on Computer Vision (ICCV)*, 2009.
65. Kaiming He, Jian Sun, and Xiaoou Tang. Single Image Haze Removal using Dark Channel Prior. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2009, **Best Paper Award**.
66. Zhong Wu, Qifa Ke, Michael Isard, and Jian Sun. Bundling Features for Large Scale Partial-Duplicate Web Image Search. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2009.
67. Lin Liang, Rong Xiao, Fang Wen and Jian Sun. Face Alignment via Component based Discriminative Search. *European Conference on Computer Vision (ECCV)*, 2008.
68. Weiwei Zhang, Jian Sun, Xiaoou Tang. Cat Head Detection - How to Effectively Exploit Shape and Texture Features. *European Conference on Computer Vision (ECCV)*, 2008.
69. Jian Sun, Jian Sun, Zongben Xu and Heung-Yeung Shum. Image Super-resolution using Gradient Profile Prior. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2008.
70. Yichen Wei, Jian Sun, Xiaoou Tang and Heung-Yeung Shum. Interactive Offline Tracking for Color Object. *IEEE International Conference on Computer Vision (ICCV)*, 2007.
71. Lu Yuan, Jian Sun, Long Quan and Heung-Yeung Shum. Blurred/No-Blurred Image Alignment using Kernel Sparseness Prior. *IEEE International Conference on Computer Vision (ICCV)*, 2007.
72. Tie Liu, Jian Sun, Nan-Ning Zheng, Xiaoou Tang and Heung-Yeung Shum. Learning to Detect A Salient Object. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2007.
73. Jian Sun, Jian Sun, Sing-Bing Kang, Zongben Xu, Xiaoou Tang and Heung-Yeung Shum. Flash Cut: Foreground Extraction with Flash/No-Flash Image Pairs. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2007.
74. Jindong Wang, Jian Sun, Long Quan, Xiaoou Tang and Heung-Yeung Shum. Picture Collage. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2006.

75. Jian Sun, Weiwei Zhang, Xiaoou Tang and Heung-Yeung Shum. Background Cut. *European Conference on Computer Vision (ECCV)*, 2006.
76. Jian Sun, Weiwei Zhang, Xiaoou Tang and Heung-Yeung Shum. Bi-directional Tracking using Trajectory Segment Analysis. *IEEE International Conference on Computer Vision (ICCV)*, 2005.
77. Jian Sun, Yin Li, Sing-Bing Kang and Heung-Yeung Shum. Symmetric Stereo Matching for Occlusion Handling. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2005.
78. Jiaya Jia, Jian Sun, Chi-Keung Tang, and Heung-Yeung Shum. Bayesian Correction of Image Intensity with Spatial Consideration. *European Conference on Computer Vision (ECCV)*, 2004.
79. Jian Sun, Nan-Ning Zheng, Hai Tao and Heung-Yeung Shum. Generic Image Hallucination with Primal Sketch Prior. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2003.
80. Jian Sun, Heung-Yeung Shum and Nan-Ning Zheng. Stereo Matching using Belief Propagation. *European Conference on Computer Vision (ECCV)*, 2002.

### Book Chapter

Jian Sun, Yin Li, Sing Bing Kang, and Heung-Yeung Shum. Symmetric stereo matching for occlusion handling. *Advances in Markov Random Fields for Vision and Image Processing*, A. Blake, P. Kohli, and C. Rother (Eds.), MIT Press, 2011.

### Referred Journal Papers

1. Wengang Zhou, Houqiang Li, Jian Sun, Qi Tian. Collaborative Index Embedding for Image Retrieval. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2017
2. Dong Chen, Xudong Cao, David Wipf, Fang Wen, Jian Sun. An Efficient Joint Formulation for Bayesian Face Verification. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2016
3. Shaoqing Ren, Kaiming He, Ross Girshick, and Jian Sun. Faster R-CNN: Towards Real-Time Object Detection with Region Proposal Networks. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2016
4. Xiangyu Zhang, Jianhua Zou, Kaiming He, and Jian Sun. Accelerating Very Deep Convolutional Networks for Classification and Detection. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2015.
5. Chao Dong, Chen Change Loy, Kaiming He, and Xiaoou Tang. Image Super-Resolution Using Deep Convolutional Networks. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2015.
6. Kaiming He, Xiangyu Zhang, Shaoqing Ren, and Jian Sun. Spatial Pyramid Pooling in Deep Convolutional Networks for Visual Recognition. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2015.
7. Kaiming He and Jian Sun. Image Completion Approaches using the Statistics of Similar Patches. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2014.
8. Tiezheng Ge, Kaiming He, Qifa Ke, and Jian Sun. Optimized Product Quantization. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2014.
9. Shuaicheng Liu, Lu Yuan, Ping Tan, and Jian Sun. Bundled Camera Paths for Video Stabilization. *ACM Transactions on Graphics (SIGGRAPH)*, 2013.
10. Kaiming He, Huiwen Chang, and Jian Sun. Rectangling Panorama Images via Warpping. *ACM Transactions on Graphics (SIGGRAPH)*, 2013.

11. Tiezheng Ge, Kaiming He, Qifa Ke, and Jian Sun. Optimized Product Quantization for Approximate Nearest Neighbor Search. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2013.
12. Kaiming He, Jian Sun, and Xiaoou Tang. Guided Image Filtering. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2013.
13. Zhong Wu, Qifa Ke, Jian Sun, Heung-Yeung Shum. Scalable Face Image Retrieval with Identity-Based Quantization and Multireference Reranking. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2011.
14. Tie Liu, Jian Sun, Nan-Ning Zheng, Xiaoou Tang and Heung-Yeung Shum. Learning to Detect A Salient Object. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2011.
15. Kaiming He, Jian Sun, Xiaoou Tang. Single Image Haze Removal using Dark Channel Prior. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2010.
16. Litian Tao, Lu Yuan, and Jian Sun. SkyFinder: Attribute-based Sky Image Search. *ACM Transactions on Graphics (SIGGRAPH)*, Vol. 27, Article No. 74, 2009.
17. Jiangyu Liu, Jian Sun, and Heung-Yeung Shum. Paint Selection. *ACM Transactions on Graphics (SIGGRAPH)*, Vol. 27, Article No. 74, 2009.
18. Lu Yuan, Jian Sun, Long Quan and Heung-Yeung Shum. Progressive Inter-scale and intra-scale Non-blind Image Deconvolution. *ACM Transactions on Graphics (SIGGRAPH)*, Vol. 27, Article No. 74, 2008.
19. Tai-Pang Wu, Jian Sun, Chi-Keung Tang and Heung-Yeung Shum. Interactive Normal Reconstruction from a Single Image. *ACM Transactions on Graphics (SIGGRAPH Asia)*, Vol. 27, Article No. 119, 2008
20. Lu Yuan, Jian Sun, Long Quan and Heung-Yeung Shum. Image Deblurring with Blurred/Noisy Image Pairs. *ACM Transactions on Graphics (SIGGRAPH)*, Vol. 26, Article No. 1, 2007.
21. Jian Sun, Lin Liang, Fang Wen and Heung-Yeung Shum. Image Vectorization using Optimized Gradient Mesh. *ACM Transactions on Graphics (SIGGRAPH)*, Vol. 26, Article No. 11, 2007.
22. Jian Sun, Yin Li, Sing-Bing Kang and Heung-Yeung Shum. Flash Matting. *ACM Transactions on Graphics (SIGGRAPH Asia)*, Vol. 25, pp. 772-778, 2006.
23. Jiaya Jia, Jian Sun, Chi-Keung Tang and Heung-Yeung Shum. Drag-and-Drop Pasting. *ACM Transactions on Graphics (SIGGRAPH Asia)*, Vol. 25, pp. 631-637, 2006.
24. Jian Sun, Lu Yuan, Jiaya Jia and Heung-Yeung Shum. Image Completion with Structure Propagation. *ACM Transactions on Graphics (SIGGRAPH Asia)*, Vol. 24, pp. 861-868, 2005.
25. Yin Li, Jian Sun and Heung-Yeung Shum. Video Object Cut and Paste. *ACM Transactions on Graphics (SIGGRAPH Asia)*, Vol. 24, pp. 595-600, 2005.
26. Jian Sun, Jiaya Jia, Chi-Keung Tang and Heung-Yeung Shum. Poisson Matting. *ACM Transactions on Graphics (SIGGRAPH Asia)*, Vol. 23, pp. 315-321, 2004.
27. Yin Li, Jian Sun, Chi-Keung Tang and Heung-Yeung Shum. Lazy Snapping. *ACM Transactions on Graphics (SIGGRAPH Asia)*, Vol. 23, pp. 303-308, 2004.
28. Heung-Yeung Shum, Jian Sun, Shuntaro Yamazaki, Yin Li and Chi-Keung Tang. Pop-Up LightField. *ACM Transactions on Graphics*, Vol. 23, pp. 142-162, 2004
29. Jian Sun, Heung-Yeung Shum and Nan-Ning Zheng. Stereo Matching using Belief Propagation. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Vol.25, No. 7, pp. 787-800, 2003.

#### **International or US Patents**

7599547, 7940985, 8773423, 8406564, 8855411, 8340461, 8554011, 7609888, 7817822, 7379611, 7633511, 7724952, 7620914, 7576755, 8238694, 7463296, 8386964, 8185526, 8625888, 8571271, 7502521, 7808532, 7720283, 7636128, 8503767, 8687880, 8351713, 8254697, 7317843, 8498455, 8864581, 8184926, 8200017, 8452087, 802693

## REFERENCES

- Nanning Zheng                      Professor, President(2003-2014), Xian Jiaotong University  
Email: nnzheng@xjtu.edu.cn  
Tel: +86 (10) 82668233
- Baining Guo                         Assistant Managing Director, Microsoft Research Asia  
Email: bainguo@microsoft.com  
Tel: +86 (10) 58965422
- Heung-Yeung Shum                 Executive Vice President, Microsoft Corporation  
Email: hshum@microsoft.com  
Tel: +1 (425) 7038165
- Qi Yin                                 CEO & Co-Founder, Megvii Technology  
Email: yq@megvii.com  
Tel: +86 13699249228