

Jian Wang

CONTACT INFORMATION	28-10 Jackson Ave Long Island City, NY 11101	412-315-8973 jianwang.cmu@gmail.com
HOME PAGE	https://jianwang-cmu.github.io/	
RESEARCH INTERESTS	Computational Photography, Computer Vision, Signal Processing	
EDUCATION	Carnegie Mellon University (CMU) , Pittsburgh, PA	8/2013 to 8/2018
	Ph.D., Electrical and Computer Engineering department	
	<ul style="list-style-type: none">• Thesis title: High Resolution 2D Imaging and 3D Scanning with Line Sensors• Advisors: Prof. Aswin C. Sankaranarayanan, Prof. Srinivasa Narasimhan	
	University of Science and Technology of China (USTC) , Hefei, China	
	M.S., Automation department	9/2009 to 7/2013
	<ul style="list-style-type: none">• Advisor: Prof. Zonghai Chen	
	Xi'an Jiao Tong University (XJTU) , Xi'an, China	9/2005 to 7/2009
	B.Eng., Automation department B.Ec., Finance department (double major)	
WORK EXPERIENCE	Computational Imaging group, Snap Research	9/2018 to present
	Manager: Shree Nayar	
	Title: Research Scientist	
	Research topics: visual communication, structured light	
	Illumination and Imaging Laboratory, CMU	1/2016 to 7/2018
	Advisor: Prof. Srinivasa Narasimhan	
	Title: Research assistant	
	Research topics: structured light, time-of-flight sensor, dynamic vision sensor, 3D imaging, non-line-of-sight imaging	
	Image Science Lab, CMU	8/2013 to 7/2018
	Advisor: Prof. Aswin C. Sankaranarayanan	
	Title: Research assistant	
	Research topics: video compressive sensing, imaging architecture, optics design, camera-projector system, light transport analysis, photometric stereo, 3D imaging	
	Machine Perception, Google	6/2017 to 12/2017
	Advisor: Dr. Jiawen (Kevin) Chen	
	Title: Software Engineering Intern	
	Research topics: dark flash photography, bilateral filtering, stereo matching, image denoising	
	Media Lab, FutureWei Technologies, Inc.	5/2014 to 8/2014
	Advisor: Dr. Jinwei Gu	
	Title: Research intern	
	Research topics: video co-segmentation, spatial-temporal graph cuts, multi-camera system	
	Microsoft Research Asia	2/2012 to 2/2013

Advisor: Dr. Yasuyuki Matsushita
 Title: Research intern
 Research topics: gigapixel 3D camera, photometric stereo

Simulation and Intelligent Control Lab, USTC

9/2009 to 7/2013

Advisor: Prof. Zonghai Chen
 Title: Research assistant
 Research topics: human action recognition, biometrics, control of intelligent car
 based on visual sensor photoelectric sensor electromagnetic sensor

TEACHING EXPERIENCE	18792 Advanced Digital Signal Processing, Teaching Assistant	Fall 2016
	16823 Physics-based methods in Computer vision, Teaching Assistant	Spring 2016
	18660 Optimization, Teaching Assistant	Spring 2018

- PUBLICATIONS
1. Xu Liu, Chengtao Li, **Jian Wang**, Jingbo Wang, Boxin Shi, Xiaodong He, “Group Contextual Encoding for 3D Point Clouds”, in the Thirty-fourth Conference on Neural Information Processing Systems (**NeurIPS**), Dec. 2020.
 2. Xu Liu, Jiayan Cao, Qianqian Bi, **Jian Wang**, Boxin Shi, Yicheng Wei, “Dense Point Diffusion for 3D Object Detection”, in International Conference on 3D Vision (**3DV**), Nov. 2020.
 3. Vishwanath S. R. Venkata, **Jian Wang**, Mohit Gupta, Shree Nayar, “Micro-baseline Structured Light”, in International Conference on Computer Vision (**ICCV**), Seoul, South Korea, Oct. 2019.
 4. Joseph Bartels, **Jian Wang**, William Whittaker, Srinivasa G. Narasimhan, “Agile Triangulation Light Curtains”, in International Conference on Computer Vision (**ICCV**), Seoul, South Korea, Oct. 2019. (**Oral**)
 5. **Jian Wang**, Tianfan Xue, Jonathan T. Barron, Jiawen Chen, “Stereoscopic Dark Flash for Low-light Photography”, in IEEE Conference on Computational Photography (**ICCP**), Tokyo, Japan, May 2019. (**Oral**)
 6. **Jian Wang**, “High Resolution 2D Imaging and 3D Scanning with Line Sensors”, PhD thesis, Carnegie Mellon University. 2018.
 7. **Jian Wang**, Joseph Bartels, William Whittaker, Aswin C. Sankaranarayanan, Srinivasa G. Narasimhan, “Programmable Triangulation Light Curtains”, in European Conference on Computer Vision (**ECCV**), Munich, Germany, Oct. 2018. (**Oral**)
 8. Zhuo Hui, Kalyan Sunkavalli, Joon-Young Lee, Sunil Hadap, **Jian Wang** and Aswin C. Sankaranarayanan, “Reflectance Capture Using Univariate Sampling of BRDFs”, in International Conference on Computer Vision (**ICCV**), Oct. 2017.
 9. Vishwanath S. R. Venkata, **Jian Wang**, Xin Li, Aswin C. Sankaranarayanan, “Compressive Spectral Anomaly Detection”, in IEEE Conference on Computational Photography (**ICCP**), Stanford, CA, May 2017. (**Oral**)
 10. **Jian Wang**, Aswin C. Sankaranarayanan, Mohit Gupta, and Srinivasa G. Narasimhan, “Dual structured Light 3D Using A 1D Sensor”, in European Conference on Computer Vision (**ECCV**), Amsterdam, The Netherlands, Oct. 2016. (**Oral**)
 11. Aswin C. Sankaranarayanan, **Jian Wang**, and Mohit Gupta, “Radon Transform Imaging: Low Cost Video Compressive Sensing at Extreme Resolutions”, in SPIE Sensing and Analysis Technologies for Biomedical and Cognitive Applications, Baltimore, MD, Apr. 2016.

12. **Jian Wang**, Yasuyuki Matsushita, Boxin Shi, and Aswin C. Sankaranarayanan, “Photometric Stereo with Small Angular Variations”, in International Conference on Computer Vision (**ICCV**), Santiago, Chile, Dec. 2015.
13. Suhas Lohit, Kuldeep Kulkarni, Pavan Turaga, **Jian Wang**, and Aswin C. Sankaranarayanan, “Reconstruction-free Inference on Compressive Measurements”, in 4th IEEE International Workshop on Computational Cameras and Displays (**CCD**), Boston, MA, Jun. 2015. (**Oral, Best paper award**)
14. **Jian Wang**, Mohit Gupta, and Aswin C. Sankaranarayanan, “LiSens — A Scalable Architecture for Video Compressive Sensing”, in IEEE Conference on Computational Photography (**ICCP**), Houston, Texas, Apr. 2015. (**Oral**)
15. **Jian Wang**, Xiao Liang, Yasuyuki Matsushita, Magnetron Chen, and Bojun Huang, “Gigapixel 3D Camera”, Tech-report, <https://goo.gl/zVf4x2>, 2015.
16. **Jian Wang**, Zhiling Wang, and Zonghai Chen, “Gender Recognition Based on Hand Waving Action”, Journal of University of Science and Technology of China, vol. 42 (2), pp. 92-98, 2012.
17. **Jian Wang**, Xiaowei Zhang, Jin Yang, Xin Zan, and Xiaoyong Liu, “Design of Control Algorithms for Smart Car Based on Vision”, Microcomputer & Its Applications, vol. 29, pp. 74-77, 2010.

PATENTS

1. Tianfan Xue, **Jian Wang**, Jiawen Chen, Jonathan T. Barron, “Dark Flash Photography with a Stereo Camera”, US patent, 2019.
2. Zonghai Chen, Zhiling Wang, Yuzhou Zhao, Mingwei Guo, and **Jian Wang**, “Ground Target Positioning Method Applied into Video Monitoring System”, China patent CN102359780 B, 2014.
3. **Jian Wang**, Zhiling Wang, Yuzhou Zhao, Mingwei Guo, and Zonghai Chen, “Real-time Identity Recognition and Authentication Method for Self-service Equipment System of Bank”, China patent CN102364527 A, 2012.

HONORS AND AWARDS

- Liang Ji-Dian Fellowship 2016
- Best paper award, in 4th IEEE International Workshop on Computational Cameras and Displays (**CCD**) 2015
- Best of the best summer intern good performance award, FutureWei Technologies, Inc. 2014
- Award of Excellence, Stars of Tomorrow Internship Program, Microsoft Research Asia 2013
- Huawei Scholarship (Top 1%) 2010
- Second-Class Award (Top 6.5%), in 6th National University Freescale Cup Intelligent Car Racing 2011
- Second-Class Award (Top 8.2%) and Excellent Paper Award (Top 3.7%), in 5th National University Freescale Cup Intelligent Car Racing 2010
- First-Class Award (Top 5.6%) and Excellent Paper Award (Top 4.2%), in 4th National University Freescale Cup Intelligent Car Racing 2009

PROFESSIONAL SERVICE

- Reviewer for conferences WACV 2021, ECCV 2020, CVPR 2020, ICCP 2020, ICCV 2019, CVPR 2019, ICCP 2019, PRCV 2019, CCD 2018, ICIP, ICASSP
- Reviewer for journals IPSJ Transactions on Computer Vision and Applications, IEEE Computer Graphics and Applications, IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT), IEEE Transactions on Image Processing (T-IP)

- Program Committee member for CVPR Workshop on Computational Cameras and Displays (CCD) 2018
- Volunteer for ICCP 2018, 2016