

Yicheng Wu

CONTACT INFORMATION	Email: wuyichengg@gmail.com	Web: yichengwu.github.io
RESEARCH INTERESTS	Computer Vision, Computational Photography, and Deep Learning	
EDUCATION	Rice University , Houston, TX, USA	
	Ph.D., ECE / Applied Physics	May 2021
	<ul style="list-style-type: none">• Advisor: Ashok Veeraraghavan, Ph.D.• GPA: 4.00/4.00	
	Beijing Normal University , Beijing, China	
	B.S., Physics	June 2015
	<ul style="list-style-type: none">• Ranking: 1/137	
WORKING EXPERIENCE	Snap Research	May 2021 to Present
	<ul style="list-style-type: none">• Manager: Shree K. Nayar• Role: Research Scientist• Topics: Computational Photography, Augmented Reality	
	Google Research	May 2020 to Nov 2020
	<ul style="list-style-type: none">• Advisors: Qiurui He, Tianfan Xue, Rahul Garg, Jiawen Chen, Jon Barron• Role: Research Intern• Project: Single-image lens flare removal	
	Microsoft Research	May 2017 to Aug 2017
	<ul style="list-style-type: none">• Advisor: Brian Guenter• Role: Research Intern• Project: Multi-user augmented reality applications with low latency and high rendering quality	
PUBLICATIONS	<ol style="list-style-type: none">1. Zhanghao Sun, Yu Zhang, Yicheng Wu, Dong Huo, Yiming Qian, Jian Wang. "Structured Light with Redundancy Codes." <i>arXiv</i>, 20222. Fangzhou Mu, Jian Wang*, Yicheng Wu*, Yin Li*. "3D Photo Stylization: Learning to Generate Stylized Novel Views from a Single Image." <i>Conference on Computer Vision and Pattern Recognition (CVPR)</i>, 2022 (Oral)3. Yicheng Wu, Qiurui He, Tianfan Xue, Rahul Garg, Jiawen Chen, Ashok Veeraraghavan, Jonathan T. Barron. "How to Train Neural Networks for Flare Removal." <i>International Conference on Computer Vision (ICCV)</i>, 20214. Yicheng Wu*, Shiyu Tan*, Shou-I Yu, Ashok Veeraraghavan. "CodedStereo: Learned Phase Masks for Large Depth-of-field Stereo." <i>Conference on Computer Vision and Pattern Recognition (CVPR)</i>, 2021 (Oral)5. Lingbo Jin, Yubo Tang, Yicheng Wu, Jackson B. Coole, Melody T. Tan, Xuan Zhao, Hawraa Badaoui, Jacob T. Robinson, Michelle D. Williams, Ann M. Gillenwater, Rebecca R. Richards-Kortum, Ashok Veeraraghavan. "Deep Learning Extended Depth-of-field Microscope for Fast and Slide-free Histology." <i>Proceedings of the National Academy of Sciences (PNAS)</i>, 20206. Yicheng Wu, Vivek Boominathan, Xuan Zhao, Jacob T. Robinson, Hiroshi Kawasaki, Aswin Sankaranarayanan, Ashok Veeraraghavan. "FreeCam3D: Snapshot structured light 3D with freely-moving cameras." <i>European Conference on Computer Vision (ECCV)</i>, 2020	

7. **Yicheng Wu***, Fengqiang Li*, Florian Willomitzer, Ashok Veeraraghavan, Oliver Cossairt. “Wavefront sensing based depth sensor for macroscopic objects.” *Computational Optical Sensing and Imaging (COSI)*, 2020 (**Oral**)
8. **Yicheng Wu***, Fengqiang Li*, Florian Willomitzer, Ashok Veeraraghavan, Oliver Cossairt. “WISHED: Wavefront imaging sensor with high resolution and depth ranging.” *International Conference on Computational Photography (ICCP)*, 2020 (**Oral**)
9. **Yicheng Wu**, Vivek Boominathan, Huaijin Chen, Aswin Sankaranarayanan, Ashok Veeraraghavan. “PhaseCam3D – Learning phase masks for passive single view depth estimation.” *International Conference on Computational Photography (ICCP)*, 2019 (**Oral, Best Poster Award**)
10. **Yicheng Wu**, Manoj Kumar Sharma, Ashok Veeraraghavan. “WISH: Wavefront imaging sensor with high resolution.” *Nature Light: Science & Applications* (2019)
11. Jason Holloway, **Yicheng Wu**, Manoj Kumar Sharma, Oliver Cossairt, Ashok Veeraraghavan. “SAVI: Synthetic apertures for long-range, subdiffraction-limited visible imaging using Fourier ptychography.” *Science Advances* (2017)
12. Xuan Liu, **Yicheng Wu**, Chengdong He, Yuzhuo Wang, Xiaojia Wu, Jing Zhou. “Two-dimensional invisibility anti-cloak structured by a homogeneous anisotropic medium.” *Journal of Optical Technology* (2016)
13. **Yicheng Wu**, Jialin Ma, Yi Yang, Ping Sun. “Improvements of measuring the width of Fraunhofer diffraction fringes using Fourier transform.” *Optik-International Journal for Light and Electron Optics* (2015)
14. **Yicheng Wu**, Chengdong He, Yuzhuo Wang, Xuan Liu, Jing Zhou. “Controlling the wave propagation through the medium designed by linear coordinate transformation.” *European Journal of Physics* (2014)

PATENTS

1. Passive and single-viewpoint 3d imaging system. US20200349729A1 (2020)
2. Wish: Wavefront imaging sensor with high resolution. US20200351454A1 (2020)
3. Synthetic apertures for long-range, sub-diffraction limited visible imaging using Fourier Ptychography. US20200150266A1 (2020)
4. Learning-based lens flare removal. Submitted

TEACHING EXPERIENCE

Teaching Assistant

- ELEC 549: Computational Photography Fall 2017, 2019
- ELEC/COMP 447/546: Introduction to Computer Vision Spring 2018, 2020

AWARDS

- CVPR Doctoral Consortium** June 2021
- Ken Kennedy Institute Oil & Gas HPC Conference Graduate Fellowship** Oct 2018
- Robertson Finley Travel Award** Sep 2018
- Top 10 Students (among all graduates at BNU, top 0.5%)** Jan 2015
- National Fellowship** 2013, 2014, 2015

SKILLS

Python (TensorFlow, Pytorch, OpenCV), MATLAB, C++, C, C#, Mathematica