

## Yicheng Wu

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RESEARCH INTERESTS	Computer Vision, Computational Photography, and Deep Learning	
EDUCATION	<b>Rice University</b> , Houston, TX, USA	
	Ph.D., ECE / Applied Physics	May 2021
	<ul style="list-style-type: none"><li>• Advisor: Ashok Veeraraghavan, Ph.D.</li><li>• GPA: 4.01/4.00</li></ul>	
	<b>Beijing Normal University</b> , Beijing, China	
	B.S., Physics	June 2015
	<ul style="list-style-type: none"><li>• GPA: 92.1/100      Ranking: 1/137</li></ul>	
WORKING EXPERIENCE	<b>Google Research, Gcam</b>	May 2020 to Nov 2020
	<ul style="list-style-type: none"><li>• Advisors: Qiurui He, Tianfan Xue, Rahul Garg, Jiawen Chen, Jon Barron</li><li>• Role: Research intern</li><li>• Project: Single-image lens flare removal</li></ul>	
	<b>Microsoft Research</b>	May 2017 to Aug 2017
	<ul style="list-style-type: none"><li>• Advisor: Brian Guenter</li><li>• Role: Research intern</li><li>• Project: Multi-user augmented reality applications with low latency and high rendering quality</li></ul>	
PUBLICATIONS	<ol style="list-style-type: none"><li>1. <b>Yicheng Wu*</b>, Shiyu Tan*, Shou-I Yu, Ashok Veeraraghavan. “CodedStereo: Learned Phase Masks for Large Depth-of-field Stereo.” <i>IEEE Conference on Computer Vision and Pattern Recognition</i> (2021) <b>(Oral)</b></li><li>2. <b>Yicheng Wu</b>, Qiurui He, Tianfan Xue, Rahul Garg, Jiawen Chen, Ashok Veeraraghavan, Jonathan T. Barron. “How to Train Neural Networks for Flare Removal.” <i>arXiv preprint arXiv:2011.12485</i> (2020)</li><li>3. Lingbo Jin, Yubo Tang, <b>Yicheng Wu</b>, 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</i> (2020)</li><li>4. <b>Yicheng Wu</b>, 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</i> (2020)</li><li>5. <b>Yicheng Wu*</b>, Fengqiang Li*, Florian Willomitzer, Ashok Veeraraghavan, Oliver Cossairt. “Wavefront sensing based depth sensor for macroscopic objects.” <i>Computational Optical Sensing and Imaging</i> (2020)</li><li>6. <b>Yicheng Wu*</b>, Fengqiang Li*, Florian Willomitzer, Ashok Veeraraghavan, Oliver Cossairt. “WISHED: Wavefront imaging sensor with high resolution and depth ranging.” <i>IEEE International Conference on Computational Photography</i> (2020) <b>(Oral)</b></li></ol>	

7. **Yicheng Wu**, Vivek Boominathan, Huaijin Chen, Aswin Sankaranarayanan, Ashok Veeraraghavan. "PhaseCam3D – Learning phase masks for passive single view depth estimation." *IEEE International Conference on Computational Photography* (2019) (**Oral, Best Poster Award**)
8. **Yicheng Wu**, Manoj Kumar Sharma, Ashok Veeraraghavan. "WISH: Wavefront imaging sensor with high resolution." *Nature Light: Science & Applications* (2019)
9. 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)
10. **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)
11. **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

**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, OpenCV), MATLAB, C++, C, C#, Mathematica

#### LEADERSHIP

Chairman of Student Union in Physics Department May 2013 to May 2014