

# Yicheng Wu

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CONTACT INFORMATION	770 Boylston Street Boston, MA 02199	Email: <a href="mailto:wuyichengg@gmail.com">wuyichengg@gmail.com</a> Web: <a href="https://yichengwu.github.io">yichengwu.github.io</a>
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: 4.00/4.00</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>Snap Research</b>	May 2021 to Present
	<ul style="list-style-type: none"><li>• Manager: Shree K. Nayar</li><li>• Role: Research scientist</li><li>• Topics: Computational Photography, Augmented Reality</li></ul>	
	<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. Fangzhou Mu, Jian Wang*, <b>Yicheng Wu*</b>, Yin Li*. "3D Photo Stylization: Learning to Generate Stylized Novel Views from a Single Image." <i>arXiv</i>, 2021</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>International Conference on Computer Vision (ICCV)</i>, 2021</li><li>3. Shiyu Tan*, <b>Yicheng Wu*</b>, Shou-I Yu, Ashok Veeraraghavan. "CodedStereo: Learned Phase Masks for Large Depth-of-field Stereo." <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i>, 2021 (<b>Oral</b>)</li><li>4. 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 (PNAS)</i>, 2020</li><li>5. <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 (ECCV)</i>, 2020</li></ol>	

6. **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**)
7. **Yicheng Wu\***, Fengqiang Li\*, Florian Willomitzer, Ashok Veeraraghavan, Oliver Cossairt. “WISHED: Wavefront imaging sensor with high resolution and depth ranging.” *IEEE International Conference on Computational Photography (ICCP)*, 2020 (**Oral**)
8. **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 (ICCP)*, 2019 (**Oral, Best Poster Award**)
9. **Yicheng Wu**, Manoj Kumar Sharma, Ashok Veeraraghavan. “WISH: Wavefront imaging sensor with high resolution.” *Nature Light: Science & Applications* (2019)
10. 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)
11. 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)
12. **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)
13. **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, OpenCV), MATLAB, C++, C, C#, Mathematica