

# Yijie Zhang

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## EDUCATION

University of California Los Angeles, Los Angeles, CA	Sep. 2018 – Exp. Apr. 2020
M.S. in Electrical Engineering	
Zhejiang University, Hangzhou, China	Sep. 2014 – June. 2018
B.E. in Opto-Electronics Information Science and Engineering	

## RESRARCH INTEREST

Computational Imaging, Biomedical Imaging, Machine Learning, Digital Pathology

## RESEARCH EXPERIENCE

University of California, Los Angeles	Apr. 2018 – Exp. Apr. 2020
Graduate Research Student, Virtual Staining	
<ul style="list-style-type: none"><li>Implemented Image preprocessing such as image registration on several datasets.</li><li>Designed a neural network for virtual multi staining, staining blending and capturing microstructures of staining tissues.</li><li>Optimized the state-of-the-art system for virtual staining to get credible inference results for pathologist's clinical diagnosis.</li></ul>	
Zhejiang University	Mar. 2018 – May 2020
Undergraduate Research Student, Invisibility Cloak with Optical Surface Transformation	
<ul style="list-style-type: none"><li>Designed and simulated structure of the device by COMSOL, Fabricated the device and waveguide.</li><li>Set up testing system, tested the device and documented the device's performance in different fields</li></ul>	
University of Notre Dame	Jul. 2018 – Aug. 2020
Summer Research Student, Photo-Induced Terahertz Circuit	
<ul style="list-style-type: none"><li>Designed structure of the optical tuning EBG circuit, and optimized it with HFSS</li><li>Built the optimized circuit and did some tests by VNA</li></ul>	

## PROJECTS

Deep optics beyond reconstruction	Oct. 2018 – Exp. Jan. 2020
<ul style="list-style-type: none"><li>Built a differentiable optical image formation model and optimize the optical model with Unet on NYU Depth-v2 dataset to get depth encoded images.</li><li>Continued the deep optics model with high level application, which is still in progress.</li></ul>	

## PUBLICATIONS

- Y. Rivenson, K. de haan, **Y. Zhang**, and A. Ozcan, "Virtual histological staining on the use of deep learning". Review paper. In Writting.
- K. de haan\*, **Y. Zhang**\*, J. Li, Y. Rivenson, and A. Ozcan, "Virtual histological staining for clinical diagnosis in Kidney Transplant ". In Progress (co-first author)
- K. de haan\*, **Y. Zhang**\*, Y. Rivenson, and A. Ozcan, "Multi Virtual histological Staining, Staining Blending and Staining for Microstructure" To be submitted to *Light: Science & Applications*. (co-first author)
- Y. Zhang**, A. Echeberria, T. Zhoua and B. Jalali, "Comparison of Optoelectronic Reservoir Computing and LSTM," Poster, *Photonics West 2020*, accepted.
- F. Sun\*, **Y. Zhang**\*, J. Evans, and S. He, "[A Camouflage Device Without Metamaterials](#)," *Progress In Electromagnetics Research*, Vol. 165, 107-117, 2019. (co-first author)
- P. Cataldi, J. Guerrero, S. Puyol, L. Ceseracciu, L. Notte, A. Reale, **Y. Zhang**, et al. "[Sustainable electronics based on crop plant extracts and graphene: A "bioadvantaged" approach](#)," *Advanced Sustainable Systems*, vol. 2, no. 8, 2018.

## Skills

Programming languages and Framework	Python, C, JAVA, MATLAB, TensorFlow
Simulation Software	HFSS, ZMAX, COMSOL, AutoCAD, SolidWork