

# Yijie Zhang

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[Homepage](#)

## EDUCATION

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**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

## RESEARCH INTEREST

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Computational Imaging, Biomedical Imaging, Machine Learning, Digital Pathology

## RESEARCH EXPERIENCE

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**University of California, Los Angeles**

Apr. 2018 – Exp. Apr. 2020

*Graduate Research Student, Virtual Staining*

- Implemented Image preprocessing such as image registration on several datasets.
- Designed a neural network for virtual multi staining, staining blending and capturing microstructures of staining tissues.
- Optimized the state-of-the-art system for virtual staining to get credible inference results for pathologist's clinical diagnosis.

**Zhejiang University**

Mar. 2018 – May 2020

*Undergraduate Research Student, Invisibility Cloak with Optical Surface Transformation*

- Designed and simulated structure of the device by COMSOL, Fabricated the device and waveguide.
- Set up testing system, tested the device and documented the device's performance in different fields

**University of Notre Dame**

Jul. 2018 – Aug. 2020

*Summer Research Student, Photo-Induced Terahertz Circuit*

- Designed structure of the optical tuning EBG circuit, and optimized it with HFSS
- Built the optimized circuit and did some tests by VNA

## PROJECTS

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**Deep optics beyond reconstruction**

Oct. 2018 – Exp. Jan. 2020

- Built a differentiable optical image formation model and optimize the optical model with Unet on NYU Depth-v2 dataset to get depth encoded images.
- Continued the deep optics model with high level application, which is still in progress.

## PUBLICATIONS

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- K. de haan\*, **Y. Zhang\***, J. Li, Y. Rivenson, and A. Ozcan, "Virtual histological staining for clinical diagnosis in Kidney Transplant ". In Writting (co-first author)
- **Y. Zhang\***, K. de haan\*, Y. Rivenson\*, J. Li 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

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**Programming languages and Framework**

Python, C, JAVA, MATLAB, TensorFlow

**Simulation Software**

HFSS, ZMAX, COMSOL, AutoCAD, SolidWorks