

# ANG CHEN

✉ [angchenlab.com](mailto:angchenlab.com)

✉ [chenang@outlook.com](mailto:chenang@outlook.com)

🔗 [angchen0325](#)

🏠 [scholar:angchen](#)

🆔 [orcid:angchen](#)

Python 

Matlab 

Mathematica 

AnsysOptics 

COMSOL 

Optics 

Photonics 

Sensors 

GPUs 

CUDA 

## ♥ INTERESTS

I consider myself somewhere between an engineer, programmer, and optical physicist. One of my greatest interests is utilizing my knowledge of optics and photonics to solve problems across various industries. In this process, I study various components, develop corresponding optical algorithms, model their optical performance, and conduct relevant optical tests. I am highly motivated to enhance the efficiency of simulations and experiments in engineering, thereby rapidly driving research and development across various industries.

## 🎓 EDUCATION

- 🏠 **Fudan University, Shanghai** 2012.09 - 2018.01  
Ph.D. in condensed matter physics
- 🏠 **Tongji University, Shanghai** 2008.09 - 2012.06  
B.S. in applied physics

## 👥 EMPLOYMENT

- **Senior Technical Expert**, MZ Optoelectronics 2024.04 - present
- **Optical Waveguide Design Expert**, PicoLab, ByteDance 2022.08 - 2024.03
- **Lead Optical Metrology Engineer**, R&D, Ideaoptics 2019.07 - 2022.07
- **Research Associate**, Photonics Lab, UW-Madison 2018.05 - 2019.06

## 🔧 SKILLS

- Deployment of deep learning frameworks with **PyTorch** and **TensorFlow**.
- Data analysis: utilizing **Python** to extract valuable information from raw data.
- Scientific simulation software: **Mathematica**, **MATLAB**, **COMSOL**, and others.
- Utilizing open-source software and algorithm packages for desktop publishing, drawing, and multimedia creation: **L<sup>A</sup>T<sub>E</sub>X**, **Gimp**, **Inkscape**, **Python Manim** library.

## 📖 SELECTED PATENTS

- Tongyu Li, **Ang Chen**, Lei Shi, Guopeng Lu, Mingjia Zheng, Lingjie Fan, Haiwei Yin. “Method, system, computing device and storage medium for optical measurement”, CN Patent, App. No.: CN202011312192.1, Pub. No.: CN112484968B.
- Tongyu Li, **Ang Chen**, Lei Shi, Guopeng Lu, Mingjia Zheng, Lingjie Fan, Haiwei Yin. “Method, system, computing device and storage medium for optical measurement”, US Patent, App. No.: 18/037,569, Pub. No.: US 2023/0408544 A1.

## 📖 SELECTED PAPERS (2535 CITATIONS)

1. **Ang Chen**<sup>†</sup>, Wenzhe Liu<sup>†</sup>, Yiwen Zhang<sup>†</sup>, Bo Wang, Fang Guan, Xiaohan Liu, Lei Shi, Ling Lu and Jian Zi. “Observing vortex polarization singularities at optical band degeneracies,” *Physical Review B* **99**, 180101(R) (2019) [<sup>†</sup>equal contribution; R, Rapid Communications].
2. Yiwen Zhang<sup>†</sup>, **Ang Chen**<sup>†</sup>, Wenzhe Liu<sup>†</sup>, Chia Wei Hsu, Bo Wang, Fang Guan, Xiaohan Liu, Lei Shi, Ling Lu and Jian Zi. “Observation of polarization vortices in momentum space,” *Physical Review Letters* **120**, 186103 (2018) [<sup>†</sup>equal contribution].