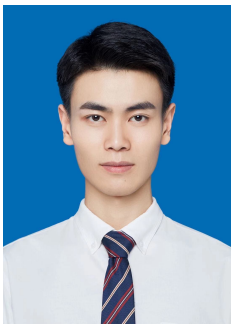
# Dai Jun

Zhejiang University, Hangzhou, Zhejiang Province, China

Portfolio · GitHub

Mail: jundai@zju.edu.cn

Mobile: 86-17612289359

## EDUCATION

- **Zhejiang University** **(2021 - Present)**
  Master of Engineering, Optical Engineering
  GPA: 3.88/4.0

- **Tianjin University** **(2017 - 2021)**
  Bachelor of Opto-Electronics Information Science and Engineering
  GPA: 3.56/4.0 (Major 3.75/4.0), Rank: 24/94 (10/94, first three years)
  Physics Optics (91), Advanced Mathematics (96), Linear Algebra and Application (92), Fundamental of Optoelectronics (94), Technology of Optoelectronics Sensor Application (94.6)

## RESEARCH INTERESTS

- 3D Generation & Reconstruction
  Distil more physical prior into generative models and reconstruction models;
- Computational Imaging/Photography/Optics
  Using current AI models to simulate Photography/Imaging processes more accurately;
- Physical-based Computer Vision
  Decode more information from physical perspective for computer vision;

## RESEARCH EXPERIENCE

- **Integrated Opto-Electronics Laboratory, Tianjin University** **Dec.2020 – May.2021**
  Research Intern
  Supervised by Prof. Delong Zhang
  Worked on the simulation part of Design of Erbium-doped Lithium Niobate Photonic Wire Amplifier

- **College of Information Science & Electronic Engineering, Zhejiang University** **Jul.2023 – Dec.2023**
  Research Intern
  Supervised by Prof. Yiyi Liao
  Worked on designing new algorithms for 3D reconstruction/generation of objects and scenes, especially strange cars. Improve the current autonomous driving simulation platform to make it be more in line with realistic roads and scenarios. Current work mainly focus on the 3D reconstruction of a certain object given a single-view image.

- **Advanced Computing and Storage Laboratory, Huawei Company** **Apr.2023 – Jul.2023**
  Research Intern
  Worked with Dr. Chong Li
  Design a new paradigm of optical convolution computation and implemented a demo of optical neural network finishing image classification tasks.

- **SAIL, Shanghai AI Laboratory** **Oct.2023 – Present**
  Research Intern
  Supervised by Prof. Tianfan Xue and Prof. Jinwei Gu
  Using End-to-End optimization to combine both Optics and Computer Vision algorithms and to design more robust End-to-End models for real-world use.

## PUBLICATIONS

- Fan, L., Long, X., Dai, J., Li, C., Dong, X., & He, J. J. (2023). Optical–electronic hybrid Fourier convolutional neural network based on super-pixel complex-valued modulation. Applied Optics, 62(5), 1337-1344.

- Dai, Jun, et al. "On-chip 4F-system based on concave mirrors for optical neural networks." Holography, Diffractive Optics, and Applications XIII. Vol. 12768. SPIE, 2023.

- Paper "Optical convolution computing based on arrayed waveguide grating router" manuscript has been accepted by *Laser & Photonics Reviews (IF=11.0)*

## SKILLS

- **Programming Languages**
  Python, Java, Matlab

- **Technical**
  PyTorch, openCV, Git

- **Languages**
  Chinese (native)
  English (Fluent, IELTS: Listening:8.5-Reading:8.5-Writing:6.0-Speaking:5.5)

## HONORS AND AWARDS

- **First Prize in the Chineses Mathematics Competition Preliminary Contest. (Province-level)**
- **Second Prize in Tianjin City College Student Mathematics Competition. (Province-level)**
- **Mathematical Contest in Modeling of 2020, Honorable Mention (H Prize)**
- **Third-class Scholarship in Tianjin University. (Twice)**
- **Rank No.1 at national post-graduate entrance examination**. (1/2000+)
- **Scholarship for academic achievement in Zhejiang University.(2022-2023)**