Jichong Zhou

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Education

Shanghai Jiao Tong University **Sep. 2021 – Mar. 2024 (expected)**
Master of Electronic information, GPA: Top 20%, ***National Scholarship*** *Shanghai, China*
Research Topics: wavefront sensing, optical measurement and imaging, image process

Beijing Institute of Technology **Sep. 2017 – Jun. 2021**
Bachelor of Instrumental Science *Beijing, China*
*GPA: 91/100 (****Rank 1st****),* ***National Scholarship****, Xiaomi Special Scholarship (****Top 0.1%****)*

Work Experience

Huawei Technologies Co., Ltd. **Jul. 2023 – Sep. 2023**
Camera Department - Media Algorithms Intern *Shanghai, China*

- Build end-to-end simulation model of camera from optical imaging to image process in the Camera Simulation Group.
- Model and analyze stray light problems in Camera using physical optics simulation.

Projects

Shack-Hartmann wavefronts sensor (SHWS) research and development **Jun. 2021 - Mar 2023**
Independent research and development

- Design and selection of components according to R&D specifications.
- Research papers on SHWS and implement image processing and numerical computation algorithms using MATLAB.
- Build a virtual instrument for SHWS on MATLAB using Fourier optics and analyzing the errors.
- Design structures using SolidWorks and development software using Python and PyQt.
- Publish two papers in SCI journals and file for two patents.

Stereo vision system development **Dec. 2020 - Jun. 2021**
Algorithm and Software Development

- Familiar with stereo vision principles. Completion of camera calibration, aberration correction, and stereo matching.
- Develop software with PyQt. The system achieves sub-millimeter measurement accuracy in the depth direction.
- Patent "Based on differential projection stereo vision detection method and detection device", the third inventor.

Research

- **Topic:** Shack-Hartmann wavefront sensor accuracy analysis and uncertainty evaluation.
  Zhou J*, He Q, Qu Y, et al. Arbitrary wavefront uncertainty evaluation for the Shack–Hartmann wavefront sensor using physical optics propagation[J]. Applied Physics Letters, 2023, 123(7). (SCI Q2 TOP, IF 4.0)*
- **Topic:** Enhance Shack-Hartmann wavefront sensor dynamic range to state-of-the-art levels.
  Yang J, ***Zhou J****, Qiu L, et al. Large dynamic range Shack-Hartmann wavefront sensor based on adaptive spot matching[J]. Light: Advanced Manufacturing (Accepted, excepted SCI Q1 and IF 7-9, co-author with my supervisor)*

Competition

- **Third Prize** of China Mathematics Competition **2018**
- **Second Prize** of China Undergraduate Mathematical Contest in Modeling **2019**
- **Meritorious Winner** of MCM/ICM Contest in Modeling **2019**
- **Second Prize** of North China Division of China National University Students' Opt-Sci-Tech Competition **2020**

Skills & Others

- **Development Tools:** *Python, MATLAB, C/C++, PyQt, OpenCV, SolidWorks*
- **Knowledge:** *Optical Imaging, Image Processing, Numerical Computation, Data Structures*
- **Languages:** *Mandarin (Native), English (CET6: 526)*
- **Interests:** *Guitar, Basketball*

Extracurricular

Teaching Assistant **Sep. 2021 – Dec. 2021**
Assist teachers with teaching assignments *Shanghai Jiao Tong University*

Members of voluntary associations **2017 – 2019**
Organize and participate in book sales and other public service activities *Beijing Institute of Technology*