Yueze (Arthur) Wang

Computational Imaging · Adaptive Optics· Computer Vision

Santa Barbara, CA | +1 (425) 698-5591 | yueze@ucsb.edu | arthurwang8@outlook.com

EDUCATION

University of California, Santa Barbara Sep 2023 – Present

B.S. in Electrical Engineering (Honors)
Overall GPA: **3.64** | Upper-division GPA: **3.76**

RESEARCH MANUSCRIPTS

Yueze Wang and Spencer Lavere Smith. (2026). *Neural Grey: Practical Vignetting Calibration from Casual Camera Rolls.*

Yueze Wang, Che-Hang Yu, Spencer Lavere Smith. (2026). *Active Architecture Optical Systems with Kaleid for unified internal prescription control.*

Unpublished manuscripts.

Yueze Wang. (2026). *SETSUNET: Shared Consensus Geometry for Few-Step Recovery.*

Openreview Link: https://openreview.net/forum?id=omlW02KyAz&nesting=2&sort=date-desc

RESEARCH & ENGINEERING

Undergraduate Student Researcher

Apr 2026 – Present

Spencer Smith Lab · University of California, Santa Barbara

Neural Grey | Radiometric Lens Calibration

- Created a **24.8K physics-informed Neural Net Calibration System** for reusable lens calibration from **four casual camera captures**, jointly estimating lens shading, scene illumination, pose and exposure.
- Designed a **focal-conditioned radial selector** that combines optical metadata with learned spatial residuals to disentangle lens shading from scene illumination.
- Outperformed the strongest evaluated baselines by **5.62 dB** in mean PSNR on **real-camera benchmarks**.

AAOS & Kaleid | Internal Optical Control

- Led algorithm development for **AAOS/Kaleid**, enabling **in-operation optical self-alignment** through joint control of internal lens spacing, centering and tilt across **multiple degrees of freedom**.
- Designed a **physics-structured neural controller** coupling group-wise motion prediction with measured gain selection and joint refinement for microscopy and semiconductor inspection.
- Integrated **diffuser-encoded speckle sensing** with realistic sCMOS photon/read noise, pixel nonuniformity and digitization in wave-optics simulation to infer lens motion from camera intensities.
- Achieved **99%+ task success** across 3 different optical setups, compared with **27.3% for Previous Algorithms** (2026 H. Suchowski Group, Tel Aviv)

MaoMi: Modular Anatomy and Optics for Microscopy | Microscopy Simulation System

- Developed and open-sourced MaoMi, a **modular Python/CUDA reimplementation of NAOMi for two-photon calcium imaging simulation**, originating from a custom-PSF extension built for AAOS research.
- Designed RANA (Ray-Aware Nonuniform Acquisition), a **pluggable wave-optics engine** supporting spatially varying PSFs, high-NA vectorial diffraction, refractive-index mismatch, and time-resolved acquisition.
- Achieved **49.1× optical-stage acceleration** over the original MATLAB implementation (179.6 s → 3.66 s).

Undergraduate Student Researcher · Software Developer

Jan – Sep 2026

Peng Li's Lab · University of California, Santa Barbara

Agora | Natural-Language World Creation

- Led software development of Agora, advancing an experimental multi-agent community into a **closed-beta text-to-game platform**.
- Integrated Phaser.js to translate natural language prompts into interactive games and simulations **fast, reliable, and controlled**.

Student Project Embedded Software & Systems Engineer

2024

ECE Course Project · University of California, Santa Barbara

Automatic Bicycle Shifting System

- Led a **three-person team** in developing an automated electronic bicycle shifting system; received the Best Software Award in ECE 5 among the EE/CE class of 2027.
- Developed automatic calibration software and integrated control, sensing and actuation with custom aerodynamic hardware packaging.

PROFESSIONAL EXPERIENCE

Accenture Song

Jul – Sep 2024

Consulting Analyst Intern · Google Ads AI Strategy

- **Authored a comprehensive 30-page strategic market intelligence report** to guide the Go-To-Market (GTM) deployment of Google Ads AI solutions including Gen AI Landscape, competitor profile, market landscape, partner case study and regional deployment environment.
- **Analyzed cross-border trade policies and institutional corporate networks** to identify and map high-value outbound enterprise clients, accelerating the adoption of Google's AI-powered marketing infrastructure.
- **Formulated executive-level strategic roadmaps and GTM deployment decks**, integrating thorough evaluations of AI-enhanced UI/UX frameworks and curating high-conversion localized KOL (Key Opinion Leader) matrices.

TECHNICAL SKILLS

Programming & ML: Python, C++, Java; PyTorch.
Optics & computation: Zemax, rayoptics, POPPY; radiometric calibration, wavefront analysis, PSF/MTF analysis, inverse problems and numerical optimization.
Hardware & embedded systems: MCU-based control, sensor integration, Verilog, SystemVerilog; Cadence layout and design verification.
CAD: ZW3D, CATIA, KiCad, K-Layout, L-edit, and SolidWorks.

Semiconductor fabrication