

# Zoubin Bi

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## Education

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### Zhejiang University

*M.Sc of Software Engineering*

*Sep. 2022 – Mar. 2025 (expected)*

### Zhejiang University

*B.Eng of Computer Science*

*Aug. 2018 – Jun. 2022*

## Experience

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### Research Assistant

*State Key Lab of CAD&CG, Zhejiang University, China*

*Sep. 2022 – Present.*

- Research Topic: acquisition and reconstruction of **material & geometry**.
- Co-design and co-optimize software-hardware to accelerate acquisition and reconstruction.
- Advisor: Prof. Hongzhi Wu.

## Research

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### Differentiable Dynamic Visible-Light Tomography

*Research Paper (<https://svbrdf.github.io/publications/dynamicCT/project.html>)*

- Joint first-authored paper accepted to **SIGGRAPH Asia 2023**.
- Proposed the first visible-light tomography system for real-time acquisition and reconstruction of general temporally-varying 3D phenomena.
- Proposed a novel differentiable framework to map both tomography acquisition and reconstruction to an autoencoder.
- Built a prototype hardware using fibers and LED arrays, and developed corresponding calibration method.

### Real-time Acquisition and Reconstruction of Dynamic Volumes with Neural Structured Illumination

*Research Paper (<https://svbrdf.github.io/publications/realtimedynamic/project.html>)*

- Joint first-authored paper accepted to **CVPR 2024**.
- Proposed a novel framework for real-time acquisition and reconstruction of temporally-varying 3D phenomena with high quality.
- Demonstrated the effectiveness of the framework on a lightweight setup with an off-the-shelf projector, and developed a complete calibration algorithm.

## Projects

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### Computer Cluster

*A Small-Scale Computer Cluster for Research*

*Mar. 2023 – Apr. 2023*

- Set up a computer cluster by NIS and NFS.
- Use ansible to make server maintenance more efficient and more convenient.
- Achieved consistent environment and 10 Gbps speed across different nodes.

## Technical Skills

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**Languages:** Python, C/C++, Java, Golang

**Web Development:** Echo, RestAPI, PostgreSQL, MySQL, Postman

**Computer Graphics & Computer Vision:** OpenGL, OpenCV

**Data Science, Machine Learning & Deep Learning:** NumPy, PyTorch, Pandas, SkLearn

**Electronic Design & Embedded Systems:** Verilog, RISC-V, ZYNQ, Arduino

**System Maintenance:** Linux, Docker, Ansible

**Tools:** Git, GDB, Latex, VS Code, Visual Studio