# Guangzhao He

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## Education

**Zhejiang University** — Hangzhou, China
Chu Kochen Honors College — Aug. 2021 — Expected Jun. 2025
B.Sc. Computer Science and Technology
GPA: 3.99/4.00

## Research Experience

**State Key Lab of CAG&CG - Zhejiang University** — Hangzhou, China
*Undergraduate Researcher with Prof. Xiaowei Zhou* — Oct. 2022 — Present

- **Ongoing**: Working on generalizable 4D tracking model for non-rigid objects.
- Improved robustness and spatial consistency of texture generation with novel multi-view denoising pipeline.
- Implemented 3D Gaussian Splatting with signed distance function to improve extracted mesh quality.
- Conducted extensive evaluations and ablation experiments to prove the effectiveness of a proposed dynamic scene representation with real-time 4K rendering capabilities.
- Contributed to the powerful and efficient volumetric video research framework EasyVolcap.
- Accelerated rendering speed of dynamic MLP Maps by more than 2x using optimized geometry priors and model distillation.

**Construction Automation and Robotics Lab - NC State University** — Raleigh, NC, USA
*Research Intern with Prof. Kevin Han* — Jan. 2022 — Feb. 2022

- Systematically reduced model parameters of PIDNet, which was empirically selected from a wide range of semantic segmentation models, to achieve 680+ fps segmentation rate with little-to-none accuracy loss for robotic tasks.

## Publications

- Zhen Xu, Sida Peng, Haotong Lin, **Guangzhao He**, Jiaming Sun, Yujun Shen, Hujun Bao, and Xiaowei Zhou. "4k4d: Real-time 4d view synthesis at 4k resolution." *In Conference on Computer Vision and Pattern Recognition*, 2024.

- Zhen Xu, Tao Xie, Sida Peng, Haotong Lin, Qing Shuai, Zhiyuan Yu, **Guangzhao He**, Jiaming Sun, Hujun Bao, and Xiaowei Zhou. "Easyvolcap: Accelerating neural volumetric video research." *In SIGGRAPH Asia Technical Communications*, 2023.

## Awards

**Cultivation Program for National Natural Science Foundation** — Oct. 2023 — Present
Awarded $2,800 to fund research into representing dynamic 3D scenes with efficient neural radiance fields

**National Student Research Training Program** — Mar. 2023 — Present
Leader of one in 10 teams granted $2,800 for development of consistent video editing models

**Zhejiang Provincial Government Scholarship** — Nov. 2022
Awarded to top 5% students for academic and innovative outstanding

## Related Courses

Linear Algebra, Probability and Mathematical Statistics, Theory of Computation, Advanced Data Structure & Algorithm Analysis, Operating System, Database System, Computer Architecture, General Physics

## Skills

- **Language:** TOEFL 109, IELTS 7.5, GRE 321
- **Programming:** Python, C++, C, Java, MATLAB, Dart, HTML, LaTeX
- **Research Tools:** PyTorch, NumPy, OpenGL, OpenCV