

YUANBO YANG

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Research Overview

My research centers on **vision foundation models**, with a focus on understanding their internal mechanisms and improving their design. Key areas include:

- **Understanding and Improving:** Uncovering the mechanisms of generative models to guide efficient architecture design.
- **World Simulators:** Developing interactive and realistic vision generative models as world simulators.
- **Grounding with Generative Priors:** Leveraging generative priors for precise grounding in real-world environments.

Education

University of California San Diego

Ph.D. Student

Fall 2026 –

Advisor: Hao Zhang

Zhejiang University

Master of Artificial Intelligence

2022 – 2025

Advisor: Yiyi Liao

Hangzhou Dianzi University

Bachelor of Electronics Engineering

2018 – 2022

Research Experience

Anamma AI

Research Intern

2026 – Present

University of Michigan

Research Intern

2025

Mentor: Jun Gao

Ant Group

Research Intern

2023 – 2025

Mentor: Yujun Shen and Nan Xue

Selected Publications

The * sign denotes equal contribution. 📄 Google Scholar

- Chunyang Li*, **Yuanbo Yang***, Jiahao Shao*, Hongyu Zhou, Katja Schwarz, Yiyi Liao. ReRoPE: Repurposing RoPE for Relative Camera Control. In *SIGGRAPH*, 2026.
- Jiaxin Huang, **Yuanbo Yang**, Bangbang Yang, Lin Ma, Yuewen Ma, Yiyi Liao. Gen3R: 3D Scene Generation Meets Feed-Forward Reconstruction. In *CVPR*, 2026.

- **Yuanbo Yang***, Jiahao Shao*, Xinyang Li, Yujun Shen, Andreas Geiger, Yiyi Liao. Prometheus: 3D-Aware Latent Diffusion Models for Feed-Forward Text-to-3D Scene Generation. In *CVPR*, 2025.
- **Yuanbo Yang**, Yujun Shen, Yue Wang, Andreas Geiger, Yiyi Liao. UrbanGen: Urban Generation with Compositional and Controllable Neural Fields. In *T-PAMI*, 2025.
- Jiahao Shao*, **Yuanbo Yang***, Hongyu Zhou, Youmin Zhang, Yujun Shen, Matteo Poggi, Yiyi Liao. ChronoDepth: Learning Temporally Consistent Video Depth from Video Diffusion Priors. In *CVPR*, 2025.
- Yichong Lu*, Yuzhuo Tian*, Zijin Jiang*, Yikun Zhao, **Yuanbo Yang**, Hao Ouyang, Haoji Hu, Huimin Yu, Yujun Shen, Yiyi Liao. Orientation Matters: Making 3D Generative Models Orientation-Aligned. In *NeurIPS*, 2025.
- Tianyu Yuan*, **Yuanbo Yang***, Lin-Zhuo Chen, Yao Yao, Zhuzhong Qian. HeFT: Harnessing Video Diffusion Priors for Robust Correspondence. *arXiv:2512.04619*, 2025.
- **Yuanbo Yang**, Yifei Yang, Hanlei Guo, Rong Xiong, Yue Wang, Yiyi Liao. UrbanGIRAFFE: Representing Urban Scenes as Compositional Generative Neural Feature Fields. In *ICCV*, 2023.
- Xinya Chen, Hanlei Guo, Yanrui Bin, Shangzhan Zhang, **Yuanbo Yang**, Hongyu Zhou, Youmin Zhang, Yujun Shen, Yiyi Liao. TeFF: Learning 3D-Aware GANs from Unposed Images with Template Feature Field. In *ECCV (Oral)*, 2024.
- Shangzhan Zhang, Sida Peng, Tao Xu, **Yuanbo Yang**, Tianrun Chen, Nan Xue, Yujun Shen, Hujun Bao, Ruizhen Hu, Xiaowei Zhou. MaPa: Text-driven Photorealistic Material Painting for 3D Shapes. In *SIGGRAPH*, 2024.

Technical Skills

Python; PyTorch; Lightning; CUDA; C; Linux; LaTeX; Claude Code