Fanbo Xiang

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Bio

I received Ph.D. in Computer Science at UC San Diego advised by professor Hao Su. During my Ph.D. career, I developed the embodied AI simulation platform SAPIEN, now used by hundreds of institutes around the world. Prior to joining UCSD, I earned computer science and math dual bachelor's degrees from University of Illinois Urbana-Champaign.

Education

University of California San Diego

Ph.D. Candidate in Computer Science *2020 - 2024*

M.S. Computer Science *2018 - 2020*

- advisor: **Prof. Hao Su**

University of Illinois Urbana-Champaign

B.S. Computer Science, B.S. Mathematics Dual Degree (with Highest Honors) *2014 - 2018*

Selected Publications

ManiSkill2: A Unified Benchmark for Generalizable Manipulation Skills *ICLR 2023*

Jiayuan Gu*, **Fanbo Xiang***, Xuanlin Li, Zhan Ling, Xiqiang Liu, Tongzhou Mu, Yihe Tang, Stone Tao, Xinyue Wei, Yunchao Yao, Xiaodi Yuan, Pengwei Xie, Zhiao Huang, Rui Chen, Hao Su

ManiSkill: Learning-from-Demonstrations Benchmark for Generalizable Manipulation Skills *NeurIPS 2021*

Tongzhou Mu*, Zhan Ling*, **Fanbo Xiang***, Derek Yang*, Xuanlin Li*, Stone Tao, Zhiao Huang, Zhiwei Jia, Hao Su

Neural Texture Mapping for Volumetric Neural Rendering *CVPR 2021*

Fanbo Xiang, Zexiang Xu, Miloš Hašan, Yannick Hold-Geoffroy, Kalyan Sunkavalli, Hao Su

SAPIEN: A SimulAted Part-based Interactive ENvironment *CVPR 2020*

Fanbo Xiang,Yuzhe Qin, Kaichun Mo, Yikuan Xia, Hao Zhu, Fangchen Liu, Minghua Liu, Hanxiao Jiang, Yifu Yuan, He Wang, Li Yi, Angel Chang, Leonidas Guibas, Hao Su

Close the optical sensing domain gap by physics-grounded active stereo sensor simulation *T-RO 2023*

Xiaoshuai Zhang, Rui Chen, Ang Li, **Fanbo Xiang**, Yuzhe Qin, Jiayuan Gu, Zhan Ling, Minghua Liu, Peiyu Zeng, Songfang Han, Zhiao Huang, Tongzhou Mu, Jing Xu, Hao Su

O2O-Afford: Annotation-free large-scale object-object affordance learning *CoRL 2022*

Kaichun Mo, Yuzhe Qin, **Fanbo Xiang**, Hao Su, Leonidas Guibas

MVSNeRF: Fast Generalizable Radiance Field Reconstruction From Multi-View Stereo *ICCV 2021*

Anpei Chen, Zexiang Xu, Fuqiang Zhao, Xiaoshuai Zhang, **Fanbo Xiang**, Jingyi Yu, Hao Su

OCRTOC: A Cloud-Based Competition and Benchmark for Robotic Grasping and Manipulation *RAL 2021*

Ziyuan Liu, Wei Liu, Yuzhe Qin, **Fanbo Xiang**, Minghao Gou, Songyan Xin, Maximo A Roa, Berk Calli, Hao Su, Yu Sun, Ping Tan

Academic Activities

Challenge Organizer	SAPIEN ManiSkill Challenge (CVPR 2023, ICLR 2022)
	Open Cloud Robot Table Organization Challenge (IROS 2020)
Tutorial Organizer	Building and Working in Environments for Embodied AI (CVPR 2022)
Workshop Organizer	SEAI: Simulation Technology for Embodied AI (ICCV 2021)
Reviewer	CVPR, ICCV, ECCV, SIGGRAPH, ICLR, NeurIPS, AAAI, CoRL, T-RO

Working Experience

Simulation Tech Lead — *San Diego*
Hillbot — *2024 - present*

- Leading robotic simulation systems.

Robotics Simulation Intern — *Remote*
NVIDIA — *June - Sept. 2021, 2022*

- Research on robotics and physical simulation.

Research Intern — *Remote*
Adobe — *June - Sept. 2020*

- Research on neural capture and differentiable rendering.

GPU Software Performance Intern — *Cupertino, CA*
Apple Inc. — *June - Sept. 2019*

- Improving GPU and machine learning workloads for iOS.