(Mino) Mutian XU

许牧天

✉ mutianxu@link.cuhk.edu.cn
🕮 Personal Homepage
🎓 Google Scholar   ⭘ Github

Education

2021–present **Ph.D. Candidate**, *The Chinese University of Hong Kong*, Shenzhen.
Computer vision, 3D vision and Deep Learning

2018–2020 : **M.Sc. in Computer Engineering (GPA: 3.592/4.0)**, *University of California*, Irvine.

2014–2018 : **B.Eng. in Radio Wave Propagation & Antenna (GPA: 3.56/4.0)**, *Xidian University*, Xi'an.

Publications *(* denotes **equal contribution**, † indicates **project lead**)*

REFEREED CONFERENCE PUBLICATIONS

Xianggang Yu *, **Mutian Xu** †*, Yidan Zhang *, Haolin Liu *, Chongjie Ye *, *et al.*, and Xiaoguang Han. MVImgNet: A Large-scale Dataset of Multi-view Images. In *CVPR 2023,* **100+ citations**.

Mutian Xu *, Runyu Ding *, Hengshuang Zhao, and Xiaojuan Qi. PAConv: Position Adaptive Convolution with Dynamic Kernel Assembling on Point Clouds. In *CVPR 2021,* **400+ citations**.

Mutian Xu *, Pei Chen *, Haolin Liu, and Xiaoguang Han. TO-Scene: A Large-scale Dataset for Understanding 3D Tabletop Scenes. In *ECCV 2022,* **Oral Presentation (2.7%)**.

Mutian Xu, Xingyilang Yin, Lingteng Qiu, Yang Liu, Xin Tong, and Xiaoguang Han. SAMPro3D: Locating SAM Prompts in 3D for Zero-Shot Instance Segmentation. In *3DV 2025,* **100+ GitHub stars**.

Mutian Xu *, Junhao Zhang *, Zhipeng Zhou, Mingye Xu, Xiaojuan Qi, and Yu Qiao. Learning Geometry-Disentangled Representation for Complementary Understanding of 3D Object Point Cloud. In *AAAI 2021,* **100+ citations**.

Mingye Xu *, **Mutian Xu** *, Tong He, Wanli Ouyang, Yali Wang, Xiaoguang Han, and Yu Qiao. MM-3DScene: 3D Scene Understanding by Customizing Masked Modeling with Informative-Preserved Reconstruction and Self-Distilled Consistency. In *CVPR 2023*.

David Junhao Zhang, **Mutian Xu** †, Jay Zhangjie Wu, Chuhui Xue, Wenqing Zhang, Xiaoguang Han, Song Bai, and Mike Zheng Shou. Free-ATM: Harnessing Free Attention Masks for Representation Learning on Diffusion-Generated Images. In *ECCV 2024*.

Lingteng Qiu *, Guanying Chen *, Xiaodong Gu *, Qi Zuo, **Mutian Xu**, Yushuang Wu, Weihao Yuan, Zilong Dong, Liefeng Bo, and Xiaoguang Han. RichDreamer: A Generalizable Normal-Depth Diffusion Model for Detail Richness in Text-to-3D. In *CVPR 2024*, ***Highlight (2.8%)***.

Lingteng Qiu *, Guanying Chen *, Jiapeng Zhou, **Mutian Xu**, Junle Wang, and Xiaoguang Han. REC-MV: REconstructing 3D Dynamic Cloth from Monucular Videos. In *CVPR 2023*.

In Submission

Mutian Xu, Chongjie Ye, Haolin Liu, Yushuang Wu, Jiahao Chang and Xiaoguang Han. Stable-Sim2Real: Exploring Simulation of Real-Captured 3D Data with Two-stage Depth Diffusion.

Yidan Zhang *, **Mutian Xu †***, Yiming Hao, Kun Zhou, Jiahao Chang, Xiaoqiang Liu, Pengfei Wang and Xiaoguang Han. VC-Agent: An Interactive Agent for Customized Video Dataset Collection.

Xingyilang Yin *, **Mutian Xu ***, Xu Gu and Xi Yang. Unleashing the Multi-View Fusion Potential: Noise Correction in VLM for Open-Vocabulary 3D Scene Understanding.

Hongxiang Zhao *, Xingchen Liu *, **Mutian Xu**, Yiming Hao, Weikai Chen and Xiaoguang Han. Roger: Advancing Video Generation of Task-Oriented Hand-Object Interaction for Generalizable Robotic Manipulation.

Jiahao Chang, Chenghong Li, Yihao Zhi, Yinyu Nie, Chongjie Ye, **Mutian Xu** and Xiaoguang Han. GSComplete: Geometry-guided Gaussian Splatting Completion for Objects with 2D and 3D Diffusion Priors.

Xingchen Liu *, Chongjie Ye *, Yushuang Wu, Ziteng Lu, Jiahao Chang, **Mutian Xu**, Shuguang Cui and Xiaoguang Han. DreamVerse: Pushing the Boundary of 3D Data Scale with Optimization-based Synthesis.

REFEREED JOURNAL ARTICLES

Chaoqi Chen, Yushuang Wu, Qiyuan Dai, Hong-Yu Zhou, **Mutian Xu**, Sibei Yang, Xiaoguang Han, and Yizhou Yu. A Survey on Graph Neural Networks and Graph Transformers in Computer Vision: A Task-Oriented Perspective. *TPAMI*, 2024.

Awards & Certificates

2024 **WAIC Youth Outstanding Paper Nomination Award** (世界人工智能大会青年优秀论文提名奖, MVImgNet), 2024

2023 **Top Reviewer, NeurIPS 2023 (9.9%)**

2023 **Outstanding Reviewer, CVPR 2023 (3.3%)**

2023 **CCF Excellent Graphics Open-Source Dataset** (中国计算机学会年度优秀图形开源数据集奖, MVImgNet), 2023

2022/24 Outstanding Teaching Assistant Award of CUHKSZ

2017 TOFEL Test, 104/120

2017	GRE Test, 325/340
2017	Second-class school-level scholarship
2017	Third-class school-level scholarship

Research Experience

June,2020 – Feb,2021	**CVMI Lab, The University of Hong Kong**, *Research Assistant.* *3D Point Cloud Convolution*
Advisor :	**Prof. Xiaojuan Qi**
July,2019 – Nov,2019	**Multimedia Lab, Shenzhen Institutes of Advanced Technology**, *Visiting Student.* *3D Object Point Cloud Classification and Segmentation*
Advisor :	**Prof. Yu Qiao** and **Dr. Zhipeng Zhou**

Professional Services

Journal Reviewer	TIP, IJCV, TVCG, NEUCOM, TMM, MVAP
Conference Reviewer	CVPR 23/24/25, ICCV 21/23, ECCV 24, ICLR 24/25, ICML 24, NeurIPS 23, 3DV 25, IJCAI 24, WACV 24/25, ACCV 24

Talks

2024	"我要这 *paper* 有何用 *(Why Do I Need Papers)*？", VALSE Webinar 2024
2023	**Outstanding Student Forum** of VALSE 2023
2023	**Outstanding Student Forum** of China 3DV 2023
2023	Youth PhD Talk - ECCV 2022, invited by AI-TIME

Teaching Assistantship

CSC1001: Introduction to Computer Science: Programming Methodology, CUHKSZ, ***Leading TA***.

CSC1002: Computational Laboratory, CUHKSZ.

CSC3002: Introduction to Computer Science: Programming Paradigms, CUHKSZ.

Previous Mentorship

2022	Pei Chen, M.Phil. at CUHKSZ, now at Ant Group

Miscellaneous

3rd Place in the 31st School Singer Contest, Xidian University

Piano Professional Certificate Level 10