

Xu Han

2ND-YEAR CS GRADUATE STUDENT

Huazhong University of Science and Technology

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“Make it count.”

Education

Huazhong University of Science and Technology (HUST)

Wuhan, China

MASTER OF SCIENCE (M.Sc.), COMPUTER SCIENCE, SCHOOL OF COMPUTER SCIENCE AND TECHNOLOGY

Sep. 2023 - Jun. 2026 (expected)

- Supervised by Prof. Xianzhi Li.
- GPA: 3.91 (3/158), First Prize Scholarship, Tencent Scholarship, Research & Innovation Scholarship, BYD Scholarship.

Shandong University (SDU)

Qingdao, China

BACHELOR OF ENGINEERING (B.Eng.), ARTIFICIAL INTELLIGENCE, SCHOOL OF COMPUTER SCIENCE AND TECHNOLOGY

Sep. 2019 - Jun. 2023

- Supervised by Prof. Mengbai Xiao, Institute of Intelligent Computing.
- GPA: 3.87 (88.7), Honours Degree (1/52), National Scholarship (Top 0.2% nationwide), Outstanding Thesis (Top 6 grads in CS, 2%).

Research Interest

My research passion lies at the vibrant intersection of computer vision, computer graphics, and deep learning, particularly in Representation Learning and Content Generation. I am deeply fascinated by how these disciplines converge to push the boundaries of **generative visual computing**. My current focus spans:

- Representation Learning
- Generative Visual Computing
- 3D Computer Vision

My aspiration is to design principled models to perceive the world and craft stunning visuals—from controllable digital art to cinematic aesthetics, to vivid and immersive 3D worlds that capture the imagination.

Publication

[1] MoST: Efficient Monarch Sparse Tuning for 3D Representation Learning

CVPR 2025

XU HAN, YUAN TANG, JINFENG XU, XIANZHI LI

[Paper](#) [GitHub](#)

- We introduce Monarch Sparse Tuning (MoST), the first reparameterization-based parameter-efficient fine-tuning (PEFT) method tailored for 3D point cloud representation learning.

[2] Mamba3D: Enhancing Local Features for 3D Point Cloud Analysis via State Space Model

ACM MM 2024

XU HAN*, YUAN TANG*, ZHAOXUAN WANG, XIANZHI LI (*EQUAL CONTRIBUTION)

[Paper](#) [GitHub](#)

- We present Mamba3D, a state space model tailored for point cloud learning. Mamba3D surpasses existing methods in multiple tasks, achieving multiple SoTA, with only linear complexity.

[3] More Text, Less Point: Towards 3D Data-Efficient Point-Language Understanding

AAAI 2025

YUAN TANG*, XU HAN*, XIANZHI LI†, QIAO YU, JINFENG XU, YIXUE HAO, LONG HU, MIN CHEN (*EQUAL CONTRIBUTION,

[Paper](#) [GitHub](#)

† CORRESPONDING AUTHOR)

- We introduce a new task, 3D Data-Efficient Point-Language Understanding. Our proposed GreenPLM uses text data to compensate for the lack of 3D data, achieving superior 3D understanding with only 12% or even without 3D data.

[4] Fancy123: One Image to High-Quality 3D Mesh Generation via Plug-and-Play Deformation

CVPR 2025

QIAO YU, XIANZHI LI, YUAN TANG, XU HAN, JINFENG XU, LONG HU, YIXUE HAO, MIN CHEN

[Paper](#) [GitHub](#)

- We propose a SOTA framework for single-image-to-3D-mesh, leveraging 2D deformation, 3D deformation, and unprojection to resolve multiview inconsistency, low fidelity, and blurry coloration.

[5] SASep: Saliency-Aware Structured Separation of Geometry and Feature for Open Set Learning on Point Clouds

CVPR 2025

JINFENG XU, XIANZHI LI, YUAN TANG, XU HAN, QIAO YU, YIXUE HAO, LONG HU, MIN CHEN

[GitHub](#)

- We introduce Saliency-Aware Structured Separation (SASep), an open-set recognition method on 3D point cloud.

[6] MiniGPT-3D: Efficiently Aligning 3D Point Clouds with Large Language Models using 2D Priors

YUAN TANG, **XU HAN**, XIANZHI LI[†], QIAO YU, YIXUE HAO, LONG HU, MIN CHEN ([†] CORRESPONDING AUTHOR)

- We present MiniGPT-3D, an efficient and powerful 3D-LLM that aligns 3D points with LLMs using 2D priors. It has only 47.8 M learnable parameters and is trained in just 26.8h on a single RTX 3090.

ACM MM 2024

PaperGitHub

[7] patchDPCC: A Patchwise Deep Compression Framework for Dynamic Point Clouds

ZIRUI PAN, MENGBAI XIAO[†], **XU HAN**, DONGXIAO YU, GUANGHUI ZHANG, YAO LIU ([†] CORRESPONDING AUTHOR)

- We propose patchDPCC to compress each frame of the point cloud video by divides frames into patch groups, and incorporate a feature transfer module to refine the feature quality.

AAAI 2024

Paper

Experience

Institute of Intelligent Computing, Shandong University

Qingdao, China

RESEARCH ASSISTANT, SUPERVISED BY **PROF. MENGBAI XIAO**.

Oct. 2020 - Jun. 2023

- We propose a dynamic point cloud upsampling model to reduce the bandwidth consumption of point cloud video streaming. To accelerate inference, we propose reducing inter-frame redundancy by aligning adjacent frames in feature space. This research won the **Outstanding Graduation Thesis Award** from Shandong University. We also applied this method to point cloud video compression, improving the quality of point cloud features, which is accepted by **AAAI 2024**.

Honors & Awards

SCHOLARSHIPS

03/2025 Tencent Scholarship, HUST

01/2025 BYD Scholarship, The only one in Dept. of CS, HUST

10/2024 Xiaomi Scholarship Nomination, HUST

10/2024 Research & Innovation Scholarship, HUST

04/2024 Tencent Scholarship, HUST

11/2023 First Prize Scholarship, HUST

10/2022 National Scholarship, Highest honor for undergraduates, top 0.2% nationwide

2021,2022 Huawei Scholarship, Two-year continuous

10/2022 Second Prize Scholarship, Top 10% in Department of Computer Science

10/2022 Research & Innovation Scholarship, Shandong University

Wuhan, China

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Wuhan, China

Wuhan, China

Qingdao, China

Qingdao, China

Qingdao, China

Qingdao, China

AWARDS

07/2023 Outstanding Graduation Thesis Award, Top 6 graduates in Department of Computer Science

06/2023 Honours Bachelor Degree, 1/52

06/2023 Outstanding Graduates Award, Shandong University

2021,2022 Huawei-MOE (Ministry of Education) Future Star Award, Two-year continuous

11/2021 First Prize in China Undergraduate Mathematical Contest in Modeling, Top 0.6% in 45K teams

Qingdao, China

Qingdao, China

Qingdao, China

Qingdao, China

Qingdao, China

Skills

Programming

Languages

Tools

Others

Python, C/C++, Shell, LaTeX

Native in Chinese (Mandarin), Fluent in English

PyTorch, Vim, Git, Blender, CUDA

Basketball (Multiple awards), Electric Guitar