

# 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%).

## Publication

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

CVPR 2025

XU HAN, YUAN TANG, JINFENG XU, XIANZHI LI<sup>†</sup>

GitHub

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

### [6] 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

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.

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

AAAI 2025

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

<sup>†</sup> CORRESPONDING AUTHOR)

GitHub

- 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.

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

ACM MM 2024

XU HAN\*, YUAN TANG\*, ZHAOXUAN WANG, XIANZHI LI<sup>†</sup> (\*EQUAL CONTRIBUTION, <sup>†</sup> CORRESPONDING AUTHOR)

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.

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

ACM MM 2024

YUAN TANG, XU HAN, XIANZHI LI<sup>†</sup>, QIAO YU, YIXUE HAO, LONG HU, MIN CHEN (<sup>†</sup> CORRESPONDING AUTHOR)

GitHub

- 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.

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

AAAI 2024

ZIRUI PAN, MENGBAI XIAO<sup>†</sup>, XU HAN, DONGXIAO YU, GUANGHUI ZHANG, YAO LIU (<sup>†</sup> 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.

## Experience

- 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

01/2025	<b>BYD Scholarship</b> , The only one in Dept. of CS, HUST	Wuhan, China
10/2024	<b>Xiaomi Scholarship Nomination</b> , HUST	Wuhan, China
10/2024	<b>Research &amp; Innovation Scholarship</b> , HUST	Wuhan, China
04/2024	<b>Tencent Scholarship</b> , HUST	Wuhan, China
11/2023	<b>First Prize Scholarship</b> , HUST	Wuhan, China
10/2022	<b>National Scholarship</b> , Highest honor for undergraduates, top 0.2% nationwide	Qingdao, China
2021,2022	<b>Huawei Scholarship</b> , Two-year continuous	Qingdao, China
10/2022	<b>Second Prize Scholarship</b> , Top 10% in Department of Computer Science	Qingdao, China
10/2022	<b>Research &amp; Innovation Scholarship</b> , Shandong University	Qingdao, China

### AWARDS

07/2023	<b>Outstanding Graduation Thesis Award</b> , Top 6 graduates in Department of Computer Science	Qingdao, China
06/2023	<b>Honours Bachelor Degree</b> , 1/52	Qingdao, China
06/2023	<b>Outstanding Graduates Award</b> , Shandong University	Qingdao, China
2021,2022	<b>Huawei-MOE (Ministry of Education) Future Star Award</b> , Two-year continuous	Qingdao, China
11/2021	<b>First Prize in China Undergraduate Mathematical Contest in Modeling</b> , Top 0.6% in 45K teams	Qingdao, China

## Skills

<b>Programming</b>	Python, C/C++, Shell, LaTeX
<b>Languages</b>	Native in Chinese (Mandarin), Fluent in English
<b>Tools</b>	PyTorch, Vim, Git, Blender, CUDA
<b>Others</b>	Basketball (Multiple awards), Electric Guitar