Xianglong He

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EDUCATIONS

Shenzhen International Graduate School, Tsinghua University *2023.08 — 2026.06*
M.Eng in Computer Technology GPA 3.83 / 4.00
Advisor: Prof. Chun Yuan Rank 12 / 75
***Current Focus**: Foundation Model in 3D Content Generation (assets, videos, scenes, etc.)*

Ocean University of China *2019.08 — 2023.06*
B.E. in Computer Science and Technology Overall Grades 96.57 / 100.00
Rank 4 / 269

PUBLICATIONS

- ***GVGEN: Text-to-3D Generation with Volumetric Representation***
  Xianglong He, Junyi Chen*, Sida Peng, Di Huang, Yangguang Li, Xiaoshui Huang, Chun Yuan†, Wanli Ouyang, and Tong He†* **Project Page** *ECCV 2024*
  - Propose 3D representation GaussianVolume, and introduce a two-stage native 3D generation methods.
  - Effectively balance generation speed (~7 sec) and quality; Perform excellently quantitatively and qualitatively.
- ***SparseFlex: High-Resolution and Arbitrary-Topology 3D Shape Modeling***
  ***Xianglong He*,** Zi-Xin Zou*, Chia-Hao Chen, Yuan-Chen Guo, Ding Liang, Chun Yuan†, Wanli Ouyang, Yan-Pei Cao, Yangguang Li†* **Project Page** *arXiv 2025*
  - Introduce sparse structured SparseFlex and Frustum Voxel Training Strategy for high-resolution VAE.
  - Improve performance by a large margin (80%+); Build a foundational model for 3D generation.
- ***MeshCraft: Exploring Efficient and Controllable Mesh Generation with Flow-based DiTs***
  ***Xianglong He**, Junyi Chen, Di Huang, Zexiang Liu, Xiaoshui Huang, Wanli Ouyang, Chun Yuan†, Yangguang Li†* *arXiv 2025*
  - Propose an efficient and controllable native mesh generation method utilizing continuous diffusion model.
  - Yield fast generation speed (for 35 times+), Perform better than baselines quantitatively and qualitatively.
- ***Enhancing the Transferability via Feature-Momentum Adversarial Attack***
  ***Xianglong He**, Yuezun Li, Haipeng Qu, Junyu Dong* *Computers & Security*
  - Propose a transferable black-box attack method via the introduced feature-momentum guidance map.
  - Achieve the best attack success rate (10%+) in 9 normal models and 5 adversarial models.
- ***NOVA3D: Normal Aligned Video Diffusion Model for Single Image to 3D Generation***
  - Propose a novel Image-to-3D method via video generation models and the normal prior. *ICME 2025*
- ***PonderV2: Pave the Way for 3D Foundataion Model with A Universal Pre-training Paradigm***
  - Introduing a universal 3D pre-training paradigm via differentiable rendering. Submitted to *T-PAMI*
- ***Learn to Learn Consistently for Few-Shot Image Classification***
  - Propose a model-agnostic meta-learning framework via self-distilling. *arXiv 2024*

EXPERIENCES

- **Algorithm Intern for 3D Generation (working on Tripo 3.0)** **VAST** *@ 2024.11 — Present*
  Cooperators: *Yangguang Li, Zi-Xin Zou, Yan-Pei Cao, Yuan-Chen Guo, Chia-Hao Chen, Ding Liang*
- **Research Intern for 3D Content** **Shanghai AI Laboratory** *@ 2023.01 — 2024.06*
  Cooperators*: Xiaoshui Huang, Tong He, Di Huang, Junyi Chen, Wanli Ouyang*
- **Research Assistant for AI Security** **Ocean University of China** *@ 2021.10 — 2022.10*
  Cooperators: *Yuezun Li, Haipeng Qu*

AWARDS

- **CCF Elite Collegiate Award** *2021*
- **National College Student Information Security Contest, First Prize** (Rank 5/2136) *2021*
- **Lanqiao Programming Designing Contest (Python A Group), Second Prize** *2022*
- **Lanqiao Programming Designing Contest (C++ A Group), Second Prize** *2020*

MISC

- **Services**: Reviewer for T-CSVT, MIR.
- **Language**: Mandarin (Native); English (Fluent, CET-6: 600/710)
- **Programming**: Python, C++, LaTeX