

HAONAN QIU

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OBJECTIVE

I am actively pursuing research opportunities related to video generation/enhancement/control/editing.

RESEARCH INTERESTS

My research interests mainly focus on Artificial Intelligence Generated Content (AIGC). I have worked on various research topics related to **video diffusion models**, including longer video generation, high-resolution visual generation, efficient generation, motion control, and customized generation.

EDUCATION

PhD program in School of CSE, supervised by Prof. Ziwei Liu (MMLab@NTU) Aug 2021 - Dec 2025
Nanyang Technological University, GPA: 4.33/5.00

Bachelor of Engineering in Computer Science Aug 2015 - May 2020
The Chinese University of Hong Kong, Shenzhen, CGPA: 3.69/4.00, MGPA: **3.96/4.00** (Ranking: **1/71**)

SELECTED PUBLICATIONS

FreeScale: Unleashing the Resolution of Diffusion Models via Tuning-Free Scale Fusion
Haonan Qiu, Shiwei Zhang, Yujie Wei, Ruihang Chu, Hangjie Yuan, Xiang Wang, Yingya Zhang, Ziwei Liu
International Conference on Computer Vision (ICCV), 2025

FreeNoise: Tuning-Free Longer Video Diffusion via Noise Rescheduling
Haonan Qiu, Menghan Xia, Yong Zhang, Yingqing He, Xintao Wang, Ying Shan, Ziwei Liu
International Conference on Learning Representations (ICLR), 2024

FreeTraj: Tuning-Free Trajectory Control in Video Diffusion Models
Haonan Qiu, Zhaoxi Chen, Zhouxia Wang, Yingqing He, Menghan Xia, Ziwei Liu
arXiv preprint, 2024

ReliTalk: Relightable Talking Portrait Generation from a Single Video
Haonan Qiu, Zhaoxi Chen, Yuming Jiang, Hang Zhou, Xiangyu Fan, Lei Yang, Wayne Wu, Ziwei Liu
International Journal of Computer Vision (IJCV), 2024.

SemanticAdv: Generating Adversarial Examples via Attribute-conditional Image Editing
Haonan Qiu*, Chaowei Xiao*, Lei Yang*, Xinchen Yan, Honglak Lee, Bo Li
European Conference on Computer Vision (ECCV), 2020.

Few-shot Forgery Detection via Guided Adversarial Interpolation
Haonan Qiu, Siyu Chen, Bei Gan, Kun Wang, Huafeng Shi, Jing Shao, Ziwei Liu
Pattern Recognition (PR), 2023.

Two-phase Hair Image Synthesis by A Self-Enhancing Generative Model
Haonan Qiu, Chuan Wang, Hang Zhu, Xiangyu Zhu, Jinjin Gu, Xiaoguang Han
Computer Graphics Forum (CGF), 2019.

Timestep Embedding Tells: It's Time to Cache for Video Diffusion Model
Feng Liu, Shiwei Zhang, Xiaofeng Wang, Yujie Wei, **Haonan Qiu**, Yuzhong Zhao, Yingya Zhang, Qixiang Ye, Fang Wan
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2025

Text2Human: Text-Driven Controllable Human Image Generation
Yuming Jiang, Shuai Yang, **Haonan Qiu**, Wayne Wu, Chen Change Loy, Ziwei Liu
ACM Transactions on Graphics (SIGGRAPH), 2022.

RESEARCH EXPERIENCE

Research Scientist Intern, at Meta	Present
• Efficient high-resolution video generation.	
Research Collaborator, with Netflix Eyeline Studios	Feb 2025 - May 2025
• CineScale . Proposed a method for higher-solution visual generation, unlocking the 4k video generation (in submission).	
Research Collaborator, with Alibaba TongYi Vision Intelligence Lab	July 2024 - Jan 2025
• FreeScale . Proposed a method for higher-solution visual generation, unlocking the 8k image generation (published in ICCV).	
Research Collaborator, with Tencent AI Lab	June 2023 - June 2024
• FreeNoise . Proposed a tuning-free and time-efficient paradigm for longer video generation based on pre-trained video diffusion models (published in ICLR).	
• FreeTraj . Proposed a tuning-free method for trajectory-controllable video generation (in submission).	
Research Consultant, at SenseTime	Nov 2020 - July 2021
• Proposed the first benchmark of the few-shot forgery detection and a novel SOTA method for this task (published in PR).	
Research Collaborator, with Professor Bo Li at UIUC	May 2019 - Nov 2020
• SemanticAdv . Achieved semantic attack by feature-space interpolation , which owned the strongest attack performance compared to all other semantic attack methods (published in ECCV).	

ACADEMIC REVIEWERS

Journal

TPAMI, IJCV

Conference

ICLR, CVPR, ICCV, Siggraph, Siggraph Asia, AAAI, AISTAT

TEACHING EXPERIENCE

Teaching Assistant at NTU

SC1005: Digital Logic	Fall 2023
SC2006: Software Engineering	Spring 2023

Undergraduate Teaching Assistant at CUHK(SZ)

CSC3002: Introduction to Computer Science: Programming Paradigms	Fall 2017, Spring 2018
CSC1002: Computational Laboratory	Spring 2017

SELECTED HONORS

AISG PhD Fellowship	2022, 2023, 2024
Academic Performance Scholarship	2018
Undergraduate Student Teaching Fellow	2017, 2018
Undergraduate Research Award	2016, 2017, 2018
Dean's List	2016, 2017, 2018