

# HAONAN QIU

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## OBJECTIVE

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

## RESEARCH INTERESTS

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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

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**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

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**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\*, Xinchun 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

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<b>Research Scientist Intern, at Meta</b>	Present
<ul style="list-style-type: none"><li>• <b>Efficient</b> high-resolution video generation.</li></ul>	
<b>Research Collaborator, with Netflix Eyeline Studios</b>	Feb 2025 - May 2025
<ul style="list-style-type: none"><li>• <b>CineScale</b>. Proposed a method for higher-resolution visual generation, unlocking the <b>4k</b> video generation (in submission).</li></ul>	
<b>Research Collaborator, with Alibaba TongYi Vision Intelligence Lab</b>	July 2024 - Jan 2025
<ul style="list-style-type: none"><li>• <b>FreeScale</b>. Proposed a method for higher-resolution visual generation, unlocking the <b>8k</b> image generation (published in ICCV).</li></ul>	
<b>Research Collaborator, with Tencent AI Lab</b>	June 2023 - June 2024
<ul style="list-style-type: none"><li>• <b>FreeNoise</b>. Proposed a tuning-free and time-efficient paradigm for longer video generation based on pre-trained video diffusion models (published in ICLR).</li><li>• <b>FreeTraj</b>. Proposed a tuning-free method for trajectory-controllable video generation (in submission).</li></ul>	
<b>Research Consultant, at SenseTime</b>	Nov 2020 - July 2021
<ul style="list-style-type: none"><li>• Proposed the first benchmark of the few-shot forgery detection and a novel SOTA method for this task (published in PR).</li></ul>	
<b>Research Collaborator, with Professor Bo Li at UIUC</b>	May 2019 - Nov 2020
<ul style="list-style-type: none"><li>• <b>SemanticAdv</b>. Achieved semantic attack by <b>feature-space interpolation</b>, which owned the <b>strongest</b> attack performance compared to all other semantic attack methods (published in ECCV).</li></ul>	

## ACADEMIC REVIEWERS

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### Journal

TPAMI, IJCV

### Conference

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

## TEACHING EXPERIENCE

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### Teaching Assistant at NTU

SC1005: Digital Logic	Fall 2023
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SC2006: Software Engineering	Spring 2023
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### Undergraduate Teaching Assistant at CUHK(SZ)

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

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