

FATING HONG

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INTRODUCTION

I am a final-year Ph.D. student in Computer Science at the Hong Kong University of Science and Technology (HKUST). My primary research interests lie in the areas of video generation and diffusion models, with a particular focus on image-driven and audio-driven digital human generation. My work aims to enhance the capabilities of deep learning models to generate high-fidelity and temporally coherent digital human animation videos. By contributing to advancements in these fields, I hope to make a significant impact on applications such as teleconferencing, virtual reality, filmmaking, and the gaming industry.

RESEARCH INTEREST

- 2D & 3D & 4D Face Reenactment
- 2D & 3D & 4D Talking Head Generation
- Novel view human generation

EDUCATION

Hong Kong University of Science and Technology

Aug. 2021 - Now

- Supervisor: Prof. Dan XU

Sun Yat-sen University

Aug. 2018 - Jul. 2021

- M.Sc. in Computer Science and Technology
- Supervisor: Prof. Wei-Shi Zheng

South China University of Technology

Aug. 2014 - Jul. 2018

- B.Sc in Computer Science and Technology
- Supervisor: Prof. Sheng Bi

EXPERIENCE

RL Research Gemini, Meta

June. 2025 - Dec. 2025 (Upcoming)

- Research Intern, 4D Avatar & Hair modelling
- Mentor: Dr. Aljaz Bozic

Hunyuan Lab, Tencent

Oct. 2024 - Mar. 2025

- Research Intern, Human Video Generation
- Mentor: Qinglin Lu

Media Intelligence Lab, Adobe

May. 2024 - Aug. 2024

- Research Intern, Human Video Generation
- Mentor: Dr. Zhan Xu, Dr. Yang Zhou, Dr. Zhixin Shu and Dr. Dugyu Ceylan

PUBLICATIONS

- **Fa-Ting Hong**, Zunnan Xu, Zixiang Zhou, Jun Zhou, Xiu Li, Qin Lin, Qinglin Lu, Dan Xu “Audio-visual Controlled Video Diffusion with Masked Selective State Spaces Modelling for Natural Talking Head Generation”, *Under review* 2025.

- Runzhen Liu, Qinjie Lin, Yunfei Liu, Lijian Lin, Ye Zhu, Yu Li, Chuhua Xian, **Fa-Ting Hong**[✉] “Identity-Preserving Video Dubbing Using Motion Warping”, *Under review* 2025.
- Haiyang Liu, Zhan Xu, **Fa-Ting Hong**, Hsin-Ping Huang, Yi Zhou, Yang Zhou “Video Motion Graph”, *Under review* 2025.
- Shuling Zhao, **Fa-Ting Hong**, Xiaoshui Huang, Dan Xu “Synergizing Motion and Appearance: Multi-Scale Compensatory Codebooks for Talking Head Video Generation”, *CVPR* 2025.
- Zunnan Xu, Zhentao Yu, Zixiang Zhou, Jun Zhou, Xiaoyu Jin, **Fa-Ting Hong**, Xiaozhong Ji, Junwei Zhu, Chengfei Cai, Shiyu Tang, Qin Lin, Xiu Li, Qinglin Lu “ImPortrait: Implicit Condition Control for Enhanced Portrait Animation”, *CVPR* 2025.
- Jun Zhou, Jiahao Li, Zunnan Xu, Hanhui Li, Yiji Cheng, **Fa-Ting Hong**, Qin Lin, Qinglin Lu, Xiaodan Liang “FireEdit: Fine-grained Instruction-based Image Editing via Region-aware Vision Language Model”, *CVPR* 2025.
- **Fa-Ting Hong**, Zhan Xu, Haiyang Liu, Qinjie Lin, Luchuan Song, Zhixin Shu, Yang Zhou, Duygu Ceylan, and Dan Xu “Free-viewpoint Human Animation with Pose-correlated Reference Selection”, *CVPR* 2025 (*Spotlight*).
- **Fa-Ting Hong**, Yunfei Liu, Yu Li, Changyin Zhou, Fei Yu, Dan Xu “DreamHead: Learning Spatial-Temporal Correspondence via Hierarchical Diffusion for Audio-driven Talking Head Synthesis”, *Arxiv* 2024.
- Yu Wang, Yunfei Liu, **Fa-Ting Hong**, Meng Cao, Lijian Lin, Yu Li “AnyTalk: Multi-modal Driven Multi-domain Talking Head Generation”, *AAAI* 2025.
- **Fa-Ting Hong**, and Dan Xu, “Learning Online Scale Transformation for Talking Head Video Generation”, *arXiv* 2024.
- Jia-Run Du, Jia-Chang Feng, Kun-Yu Lin, **Fa-Ting Hong**, Xiao-Ming Wu, Zhongang Qi, Ying Shan, Wei-Shi Zheng “Weakly-Supervised Temporal Action Localization by Progressive Complementary Learning”, *TCSVT* 2024.
- **Fa-Ting Hong**, Li Shen, and Dan Xu, “DaGAN++: Depth-Aware Generative Adversarial Network for Talking Head Video Generation”, *TPAMI (Regular Paper)*, *Accepted* 2023.
- **Fa-Ting Hong**, and Dan Xu, “Implicit Identity Representation Conditioned Memory Compensation Network for Talking Head video Generation”, *ICCV* 2023.
- Yu-Kun Qiu, **Fa-Ting Hong**, Wei-Hong Li, and Wei-Shi Zheng, “Learning Relation Models to Detect Important People in Still Images”, *TMM* 2022.
- **Fa-Ting Hong**, Longhao Zhang, Li Shen, and Dan Xu, “Depth-Aware Generative Adversarial Network for Talking Head Video Generation”, *CVPR* 2022.
- **Fa-Ting Hong**, Jia-Chang Feng, Dan Xu, Ying Shan, and Wei-Shi Zheng, “Cross-modal Consensus Network for Weakly Supervised Temporal Action Localization”, *ACM MM* 2021, Chengdu, China.
- **Fa-Ting Hong**, Xuan-Teng Huang, Wei-Hong Li and Wei-Shi Zheng, “MINI-Net: Multiple Instance Ranking Network for Video Highlight Detection”, *ECCV* 2020, Glasgow, UK.
- **Fa-Ting Hong**^{*}, Wei-Hong Li^{*}, and Wei-Shi Zheng, “Learning to Detect Important People in Unlabelled Images for Semi-supervised Important People Detection”, *CVPR* 2020, Seattle, USA.
- Wei-Hong Li^{*}, **Fa-Ting Hong**^{*}, and Wei-Shi Zheng, “Learning to Learn Relation for Important People Detection in Still Images”, *CVPR* 2019, Long Beach, USA. (***Equal first author**)
- Jia-Chang Feng, **Fa-Ting Hong**, and Wei-Shi Zheng, “MIST: Multiple Instance Self-Training Framework for Video Anomaly Detection”, *CVPR* 2021, Virtual, USA.

- Ling-An Zeng, **Fa-Ting Hong**, Wei-Shi Zheng, Qi-Zhi Yu, Wei Zeng, Yao-Wei Wang, and Jian-Huang Lai, “Hybrid Dynamic-static Context-aware Attention Network for Action Assessment in Long Videos”, *ACM MM* 2020, Seattle, USA.
- Yuhong Liang, **Fa-Ting Hong**, Qinjie Lin, Sheng Bi, and Liqian Feng, “Optimization of Robot Path Planning Parameters Based on Genetic Algorithm”, in IEEE International Conference on Real-time Computing and Robotics (*RCAR*) 2017, Okinawa, Japan.

AWARDS

- Chinese Graduate Student National Scholarship, by Minister of Education of China, 2020
- Chinese National Scholarship (1/80), by Minister of Education of China, 2017

PROJECT

National Innovation and Entrepreneurship Project

2016 - 2018

- Title: Research on Robot Autonomous Navigation Based on Lidar
- Role: Team leader
- Duties included: Mainly conducted research on the local path planning of the robot, which makes the robot avoid obstacles, and walk more smoothly in different environments. In particular, we use genetic algorithms to search an optimal parameter set, enabling the robot to act with ideal behaviors in a specific environment.
- Project Acceptance Evaluation: Excellent.

MORE DETAILS

For more information, please visit my personal page at: <https://harlanhong.github.io>.