



BO DING

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Education

City University of Hong Kong

Ph.D. in Electrical Engineering (UGC-funded)

Sept. 2024 - Present

Hong Kong, China

- **Advisor:** Professor Haoliang Li
- **Areas of Study:** Generative Model, Domain Generalization

Institute of Computing Technology, Chinese Academy of Sciences

Master in Computer Application Technology (Being recommended for admission)

Sept. 2021 - July 2024

Beijing, China

- **GPA:** 3.71 / 4.00
- **Advisor:** Professor Shihong Xia
- **Areas of Study:** Face Forgery Detection, Talking Face Generation

Beijing University of Posts and Telecommunications

Bachelor in Communication Engineering (Class for Talents)

Sept. 2017 - July 2021

Beijing, China

- **GPA:** 3.79 / 4.00 **Ranking:** 11 / 495
- **Math-Related Courses:** Discrete Mathematics (100), Digital Signal Processing (98), Linear Algebra (96)

Publications

- **Bo Ding**, Zhenfeng Fan, Shuang Yang, Shihong Xia, MyPortrait: Morphable Prior-Guided Personalized Portrait Generation (Under review)
- **Bo Ding**, Zhenfeng Fan, Zejun Zhao, Shihong Xia, Mining Collaborative Spatio-Temporal Clues for Face Forgery Detection, *Multimedia Tools and Applications* (JCR Q2, CCF-C), 2023
- Zejun Zhao, Zhenfeng Fan, **Bo Ding**, Shihong Xia, Deepfake Detection Based on Incremental Learning, *Frontiers of Data & Computing* (In Chinese), 2023
- Junhao Dong, Bo Xiao, **Bo Ding**, Haoyu Wang, GT-GAN: A General Transductive Zero-Shot Learning Method Based on GAN, *IEEE Access* (JCR Q2), 2020

Research Experience

Research on Controllable Talking Face Generation method

Feb. 2023 - July 2024

Institute of Computing Technology, Chinese Academy of Sciences

Beijing, China

- **Background:** Monocular video-based portrait generation methods can generate realistic neutral portraits. However, due to limited training data, they generate low-quality images when confronted with unseen face parameters.
- **Contribution:** (1) Implemented an identity-specific neural portrait generation method based on the monocular video capable of generating high-quality talking face videos. (2) Extended the learned face parameter manifolds by introducing auxiliary training data to generate personalized neural portraits.
- **Result:** Completed a first-authored paper.

Research on Face Forgery Detection method

Sept. 2021 - Feb. 2023

Institute of Computing Technology, Chinese Academy of Sciences

Beijing, China

- **Background:** The lack of generalization ability is a challenge for existing face forgery detection methods. Recently, mining low-level features with strong generalization ability for face forgery detection received extensive attention.
- **Contribution:** (1) Proposed a multi-branch spatio-temporal difference network for face forgery detection by capturing complementary low-level spatio-temporal features in videos, which can enhance the generalization ability of the model. (2) Involved in the design of a face forgery detection system based on incremental learning, which reduces the training cost of the model when introducing new forgery samples.
- **Result:** Completed a first-authored SCI paper and a co-authored Chinese paper.

Research on Deep Learning based Face Swapping method

Nov. 2020 - May 2021

Institute of Computing Technology, Chinese Academy of Sciences

Beijing, China

- **Background:** The traditional Deepfake method based on autoencoders enables face swapping by simply exchanging encoders and decoders from different branches, but there is still room for improvement in the image quality.
- **Contribution:** (1) Proposed a deep learning face swapping method with an improved auto-encoder structure, which improves the quality of the generated images to a certain extent. (2) Implemented a face swapping system, including a face extraction module, a face swapping module, and a face fusion module.
- **Result:** Completed the bachelor thesis and won the Excellent Bachelor Thesis Award.

Internships

ByteDance

Research on AI for Digital Human

Research Intern

Beijing, China

Denso

Research on AI for Driver Assistance System

Research Intern

Beijing, China

Talks

Developing a Self-Managed Lifestyle: An Example of Career Planning

Advanced Computing Technology Seminar, ICT, CAS

June 2024

Beijing, China

Academic Services

- **Conference Reviewer:** ACM MM 2024, WWW 2024

Honors and Awards

- Postgraduate Studentship Hong Kong Government funds (2024)
- Excellent Prize of the President Scholarship Institute of Computing Technology, CAS (2024)
- Excellent Research Assistant Institute of Computing Technology, CAS (2023)
- The First Prize Scholarship Institute of Computing Technology, CAS (2023)
- The Second Prize Scholarship Institute of Computing Technology, CAS (2021, 2022)
- Outstanding Student Leader University of Chinese Academy of Sciences (2022, 2023)
- Merit Student University of Chinese Academy of Sciences (2022, 2023, 2024)
- Excellent League Leader University of Chinese Academy of Sciences (2022)
- Excellent Bachelor Thesis Beijing University of Posts and Telecommunications (2021)
- Honorable Mention Mathematical Contest In Modeling (2020)
- Second Prize The Chinese Mathematics Competitions (2019)
- The Enterprise Scholarship Beijing University of Posts and Telecommunications (2019)
- Excellent League Member Beijing University of Posts and Telecommunications (2019)
- National Encouragement Scholarship Beijing University of Posts and Telecommunications (2018, 2020)

Technical Skills

- **Programming:** Familiar with Python, and know about C/C++, MATLAB
- **Frameworks:** Familiar with Pytorch, Opencv, Pillow, Numpy

Association Experience

- Secretary of the Youth League Branch ICT, CAS (2023 - 2024)
- Class President, School of Computer Science and Technology ICT, CAS (2022 - 2024)
- Minister of the Organization Department, Student Career Development Association ICT, CAS (2022 - 2023)
- Campus Broadcasting Station Announcer BUPT (2018 - 2020)