Qunliang Xing · Video Coding and Computer Vision
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# Education

09.2019 - Present
Doctor of Philosophy

**Beihang University** with an Honors Degree
**Adviser** Mai Xu
**Major** Information Systems

09.2015 - 07.2019
Bachelor of Engineering

**Beihang University** with an Honors Degree
**Major** Information Systems

# Publications

CVPR 2024

**Enhancing Quality of Compressed Images by Mitigating Enhancement Bias Towards Compression Domain**

Q. Xing, M. Xu, S. Li, X. Deng, M. Zheng, H. Liu, Y. Chen

*Identified and mitigated enhancement bias, thereby improving the quality of enhanced compressed images.*

TPAMI 2023

**DAQE: Enhancing the Quality of Compressed Images by Exploiting the Inherent Characteristic of Defocus**

Q. Xing, M. Xu, X. Deng, Y. Guo

*Proposed an intra-image divide-and-conquer enhancement strategy based on defocus, which indicates region-wise compression quality.*

CVPRW 2022

**Progressive Training of a Two-stage Framework for Video Restoration**

Q. Xing*, M. Zheng*, M. Qiao*, M. Xu, L. Jiang, H. Liu, Y. Chen

*NTIRE winning solution: Integrated a series of contributions on dataset construction, inference architecture design, and training strategy optimization.*

TIP 2021

**DeepQTMT: A Deep Learning Approach for Fast QTMT-based CU Partition of Intra-mode VVC**

T. Li, M. Xu, R. Tang, Y. Chen, Q. Xing

*Proposed a multi-level partitioning architecture that can be prematurely terminated for the CU partitioning task, effectively accelerating partition inference.*

ECCV 2020

**Early Exit or Not: Resource-efficient Blind Quality Enhancement for Compressed Images**

Q. Xing, M. Xu, T. Li, Z. Guan

*Proposed a multi-level early-exit enhancement strategy based on real-time quality assessment for the blind quality enhancement challenge.*

TPAMI 2019

**MFQE 2.0: A New Approach for Multi-frame Quality Enhancement on Compressed Video**

Q. Xing, Z. Guan, M. Xu, R. Yang, T. Liu, Z. Wang

*Enhanced low-quality frames using key frames in hierarchical encoding, effectively improving compressed video quality and mitigating quality fluctuations.*

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## Work Experience

12.2021 - 12.2023 | **Alibaba** Tao Technology
Research Intern
*Acted as the main contributor in the NTIRE CVPR 2022 Video Quality Enhancement Challenge, responsible for dataset construction, inference architecture design, and training strategy optimization. The proposed solution won the competition, competing against teams from ETH, CUHK's XPixel lab, Tencent's GY-Lab, and others.*

07.2021 - 09.2021 | **Tencent** Rhino-bird Open-source Training Program
Research Intern
*Selected as one of the 127 participants out of more than 1800 candidates; replicated recent work based on the high-performance graph computing platform Angel.*

12.2018 - 12.2019 | **Huawei** 2012 Lab
Research Intern
*Served as the main contributor for multi-frame decoding quality optimization on Huawei's proprietary encoder HW.265; achieved over a 10% BD-BR gain on a real business dataset covering a large volume of UGC and live game streaming videos.*

## Community Service

02.2021 - Present | **Reviewer**
CVPR ('24), TCSVT ('22-), JAS ('22-), TIP ('21-), TMM ('21-), ICME ('21)

## Honors and Awards

2023 | China National Scholarship
2023 | Beihang Academic Excellence Foundation for Ph.D. Candidates
2022 | Glarun Scholarship by the 14TH Research Institute, CETC
2022 | Winner of the CVPR NTIRE challenge
2019 | Beihang Excellent Graduate
2015/18/21/22 | Beihang Outstanding/Merit Student
2014 | Shenzhen Merit Student