Biography

Qunliang Xing is currently a Ph.D. student at Beihang University advised by Professor Mai Xu. He obtained his BEng and Honors degrees at Beihang University in 2019.

His research interests include Computer Vision and Multimedia. He has published several papers in top journals and conferences such as TPAMI and CVPR, including a top 1% highly cited paper recognized by the Essential Science Indicators (ESI). His papers have received over 570 citations. He has won two NTIRE championships. His open-source projects have received more than 770 stars. He was selected for the Tencent Rhino-bird Open-source Training Program. He is awarded the OpenMMLab Active Contributor. He serves as a reviewer for CVPR, TIP, TMM, and others.

He also excels in sports, having won second place in the Beihang 100m final and the Beihang soccer championship as the school team captain twice.

Education

09.2019 - Present Doctor of Philosophy	**Beihang University** with an Honors degree Advisor: Professor Mai Xu Major: Communication and Information Systems
09.2015 - 07.2019 Bachelor of Engineering	**Beihang University** with an Honors degree Major: Communication and Information Systems

Selected Publications

IEEE/CVF 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.
IEEE 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.
IEEE/CVF 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.
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.
IEEE 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.

Community Service

02.2021 - Present | **Reviewer**
IEEE TIP ('21-), IEEE TMM ('21-), IEEE TCSVT ('22-), IEEE/CAA JAS ('22-)
IEEE/CVF CVPR ('25, '24), AAAI ('25), IEEE ICME ('21)

Work Experience

12.2021 - 12.2023
Research Intern
Alibaba Tao Technology
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
Research Intern
Tencent Rhino-bird Open-source Training Program
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
Research Intern
Huawei 2012 Lab
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.

Honors and Awards

2023 | **China National Scholarship**
Highest national award available to graduate students.

2023 | **Beihang Academic Excellence Foundation for Ph.D. Candidates**
Ranked 1st/96 in the college.

2022 | **Glarun Scholarship by the 14TH Research Institute, CETC**
Among four awardees from 96 college students.

2022 | **Winner of the CVPR NTIRE challenge on Super-Resolution and Quality Enhancement of Compressed Video**
Ranked 1st/8 in the final.

2019 | **Beihang Excellent Graduate**
Top 20% in the university.

2015/18/21/22 | **Beihang Outstanding/Merit Student**
Top 5% in the university.

2014 | **Shenzhen Merit Student**
Sole awardee in the school.