Qunliang Xing · Video Coding and Enhancement
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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

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** CVPR ('24), TCSVT ('22-), JAS ('22-), TIP ('21-), TMM ('21-), 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.