### QUNLIANG XING · COMPUTER VISION AND MULTIMEDIA

RYANXINGQL.GITHUB.IO · RYANXINGQL@GMAIL.COM · October, 2024

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

### **Selected Publications**

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.				
$\begin{array}{c} \text{IEEE TPAMI} \\ 2019 \end{array}$	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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# 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

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.

#### Honors and Awards

2023	China	National	Scho	larchin
ZUZ3	Unina	inational	- 5cno	iarsnib

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.