

Chunyi Li

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EDUCATION BACKGROUND

The Experimental High School Attached to Beijing Normal University Sep.2013-Jun.2019
Studying in the math competition class, devoted to math competition for nearly 6 years.

- First prize of National High School Mathematics League in Beijing

Shanghai Jiao Tong University, Information Engineering Sep.2019-Jun.2023

Outstanding Undergraduate Student

Outstanding Undergraduate Thesis of SJTU (Top 1%)

- Panasonic Scholarship (5k, 5%) B-level Scholarship (1k, 10%) Zhanjiajun Scholarship (1.5w)
- First prize of National College Mathematical Competition in Shanghai Zhangxu Fellow Scholarship(1w)

National University of Singapore, Computer Science Aug.2022-Dec.2022

Selected in the SJTU-NUS semester NGNE program, conducting research in the school of computing. Focus on real-time video quality assessment and HTTP adaptive streaming.

SCIENTIFIC RESEARCH

Works as 1st/co-1st author:

Cooperative Media-net Innovation Center | AI-Generated content Mar.2023-Now

Exploring the generation or quality model of AI-Generated Images (AGIs) to optimize the human perceptual experience in the AIGC service. Constructed the first perceptual quality database ‘AGIQA-1k’ and the evolved version ‘AGIQA-3k’.

- **Chunyi Li**, Zicheng Zhang, Haoning Wu, et. al. AGIQA-3K: An Open Database for AI-Generated Image Quality Assessment. IEEE TCSVT. 2023. **(Top Journal, CCF-B)**
- Zicheng Zhang*, **Chunyi Li***, Wei Sun, Xiaohong Liu, Xiongkuo Min, and Guangtao Zhai. A Perceptual Quality Assessment Exploration for AIGC Images. IEEE ICMEW. 2023.
- **Chunyi Li**, Zicheng Zhang, Haoning Wu, et. al. PAPS-OVQA: Projection-Aware Patch Sampling for Omnidirectional Video Quality Assessment. IEEE ISCAS. 2024. **(CCF-C, under review)**
- **Chunyi Li**, Zicheng Zhang, Wei Sun, Xiongkuo Min, and Guangtao Zhai. A Full-Reference Quality Assessment Metric for Cartoon Images. IEEE Workshop on Multimedia Signal Processing. 2022. **(oral)**

NUS Media Management Research Lab | Quality of Experience Aug.2022-Now

Objectively evaluate the Quality of Experience (QoE) for visual communication system through Image/Video Quality Assessment (IQA/VQA) metrics. Analyze streaming QoE and propose a low-latency, high-accuracy quality model. A CCF-B conference paper has been accepted.

- **Chunyi Li**, May Lim, Abdelhak Bentalab, and Roger Zimmermann. A Real-Time Blind QoE Assessment Metric for HTTP Adaptive Streaming. IEEE ICME. 2023. **(oral, CCF-B)**
- Xinhui Huang*, **Chunyi Li***, Abdelhak Bentalab, Roger Zimmermann, and Guangtao Zhai. XGC-VQA: A Unified VQA Model for User Professionally and Occupationally Generated Content. IEEE ICMEW. 2023.

Cooperative Media-net Innovation Center | Multimedia and 5G Broadcasting Feb.2021-Now

Participating in the research about Aliasing-Elimination CHE algorithm/Cell Acquisition Structure (CAS) reception in 3GPP standard, improves the overall robustness of the 5G broadcast receiver.

- **Chunyi Li**, Haoyang Li, Ning Yang, and Dazhi He. A PBCH Reception Algorithm in 5G Broadcasting. IEEE International Symposium on Broadband Multimedia Systems and Broadcasting. 2022. **(oral)**

Other works as a contributor:

- Advancing Zero-Shot Digital Human Quality Assessment through Text-Prompted Evaluation (IEEE TIP, under review)
- Aliasing-Elimination Channel Estimation for CAS Reception (IEEE TBC)
- GMS-3DQA: Projection-based Grid Mini-patch Sampling for 3D Model Quality Assessment (ACM TOMM, under review)
- MM-PCQA+: Advancing Multi-Modal Learning for Point Cloud Quality Assessment (IEEE TNNLS, under review)
- On the Aliasing-Elimination for CAS Channel Estimation (IEEE BMSB)
- Quality-of-Experience Evaluation for Digital Twins in 6G Network Environments (IEEE JSTSP, under review)
- Q-Bench: A Benchmark for General-Purpose Foundation Models on Low-level Vision (ICLR, under review)

PROJECTS

National University Internet of Things (IoT) Designing Competition	Grand Prize	2022
Designed the “Harclass” project funded by Huawei, a smart classroom based on Harmony OS, OpenHarmony demo board, and Huawei Cloud. Using distributed network, support Huawei mobile phones, smart wearables, TVs, and other Harmony OS devices to achieve real-time classroom interaction. The above classroom information and the environmental information collected by OpenHarmony are uploaded to the cloud. This project won the National First Prize and the Harmony OS Grand Prize (1/1400+), which was highly evaluated by Huawei and invited to give a report at their Developer Conference.		
The Mathematical Contest in Modeling	Meritorious	2021
Planned drone routes, built mathematical models to cover all the fire risk areas in Australia, and calculated the minimum requirement for the number of drones/base stations.		
Shanghai AI Lab	Internship	2023
Focused on AI-generated content. Designing a classification strategy to distinguish them from normal content. Improve the safety and reliability of AIGC.		

OTHER SKILLS

Tools: c, c++, MATLAB, python, latex Language: Chinese & English CET-6: 562

Social work: Shanghai International Marathon volunteer, investigation on Poverty Alleviation in Guangxi Province

Art: Chamber group member in Shanghai Jiao Tong University choir, music minister in school musical club