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EDUCATION

The University of Hong Kong (HKU), Hong Kong SAR, China Sep. 2015 – Jan. 2021

Ph.D. Computer Science

- Supervisor: Dr. Kenneth K.Y. Wong
- PhD Dissertation: Face Sketch Synthesis and Face Super Resolution in the Wild with Deep Learning

Huazhong University of Science and Technology (HUST), Wuhan, China Sep. 2011 – Jun. 2015

B.Eng. Computer Science

- GPA: 92.3/100; Rank: Top 1% out of 300

RESEARCH INTERESTS

Computer Vision: Low-level vision, including image/video quality assessment, image restoration and enhancement; Visual content generation; Image-to-image translation; 3D-aware image rendering; Face related tasks

RESEARCH/WORKING EXPERIENCE

- Postdoctoral research fellow at S-Lab in NTU, working with Prof. Weisi Lin Sep. 2021 – Present
- Research Assistant at GAP Lab CUHKSZ, worked with Prof. Xiaoguang Han Mar. 2021 – Aug. 2021
- Research Intern at Alibaba DAMO Academy, worked with Prof. Lei Zhang and Dr. Xiaoming Li Nov. 2019 – Mar. 2021
- Research Visitor at VLLab UC Merced, worked with Prof. Ming-Hsuan Yang May. 2019 – Oct. 2019
- Research Intern at Tencent AI Lab, worked with Prof. Zhifeng Li and Dr. Dihong Gong Jun. 2018 – Mar. 2019

PUBLICATIONS (GOOGLE SCHOLAR, >1500 CITATIONS)

(# corresponding author, * equal contribution)

Conference Papers

- [1] **[ICLR 2024]** Haoning Wu*, Zicheng Zhang*, Erli Zhang*, **Chaofeng Chen**, Liang Liao, Annan Wang, Chunyi Li, Wenxiu Sun, Qiong Yan, Guangtao Zhai, Weisi Lin. “Q-Bench: A Benchmark for General-Purpose Foundation Models on Low-level Vision.” *International Conference on Learning Representations (ICLR)*, 2024.
- [2] **[AAAI 2024]** **Chaofeng Chen**, Shangchen Zhou, Liang Liao, Haoning Wu, Wenxiu Sun, Qiong Yan, Weisi Lin. “Iterative Token Evaluation and Refinement for Real-World Super-Resolution.” *Association for the Advancement of Artificial Intelligence (AAAI)*, 2024.
- [3] **[ICME 2023]** Haoning Wu, Liang Liao, Jingwen Hou, **Chaofeng Chen**, Erli Zhang, Annan Wang, Wenxiu Sun, Qiong Yan, and Weisi Lin. “Exploring Opinion-Unaware Video Quality Assessment with Semantic Affinity Criterion.” *IEEE International Conference on Multimedia and Expo*, 2023.
- [4] **[ICCV 2023]** Haoning Wu*, Erli Zhang*, Liang Liao*, **Chaofeng Chen**, Jingwen Hou, Annan Wang, Wenxiu Sun, Qiong Yan, Weisi Lin. “Exploring Video Quality Assessment on User Generated Contents from Aesthetic and Technical Perspectives” *International Conference on Computer Vision (ICCV)*, 2023.
- [5] **[AAAI 2023]** Shuliang Ning*, Mengcheng Lan*, Yanran Li, **Chaofeng Chen**, Qian Chen, Xunlai Chen, Xiaoguang Han, Shuguang Cui. “MIMO Is All You Need: A Strong Multi-In-Multi-Out Baseline for Video Prediction.” *Association for the Advancement of Artificial Intelligence (AAAI)*, 2023.
- [6] **[NeurIPS 2022]** Wenqi Yang, Guanying Chen, **Chaofeng Chen**, Zhenfang Chen, Kwan-Yee K. Wong. “S³-NeRF: Neural Reflectance Field from Shading and Shadow under a Single Viewpoint.” *Conference on Neural Information Processing Systems (NeurIPS)*, 2022.
- [7] **[ECCV 2022]** Haoning Wu, **Chaofeng Chen**, Jingwen Hou, Liang Liao, Annan Wang, Wenxiu Sun, Qiong Yan, Weisi Lin. “FAST-VQA: Efficient End-to-end Video Quality Assessment with Fragment Sampling.” *European Conference on Computer Vision (ECCV)*, 2022.
- [8] **[ECCV 2022]** Wenqi Yang, Guanying Chen, **Chaofeng Chen**, Zhenfang Chen, Kwan-Yee K. Wong. “PS-NeRF: Neural Inverse Rendering for Multi-view Photometric Stereo.” *European Conference on Computer Vision (ECCV)*, 2022.
- [9] **[ECCV2022]** Xiaoming Li, **Chaofeng Chen**, Xianhui Lin, Wangmeng Zuo, Lei Zhang. “From Face to Natural Image: Learning Real Degradation for Blind Image Super-Resolution.” *European Conference on Computer Vision (ECCV)*, 2022.

- [10] **[MM 2022 Oral] Chaofeng Chen***, Xinyu Shi*, Yipeng Qin, Xiaoming Li, Tao Yang, Xiaoguang Han, Shihui Guo. “Real-World Blind Super-Resolution via Feature Matching with Implicit High-Resolution Priors.” *ACM Multimedia*, 2022.
- [11] **[MM 2022 Oral]** Liang Liao, Kangmin Xu, Haoning Wu, **Chaofeng Chen**, Wenxiu Sun, Qiong Yan, Weisi Lin. “Exploring the Effectiveness of Video Perceptual Representation in Blind Video Quality Assessment.” *ACM Multimedia*, 2022.
- [12] **[ICIP 2022]** Shaozhe Hao, **Chaofeng Chen**, Zhenfang Chen, Kwan-Yee K. Wong. “A Unified Framework for Masked and Mask-Free Face Recognition via Feature Rectification.” *IEEE International Conference on Image Processing (ICIP)*, 2022.
- [13] **[ICCV 2021]** Guanying Chen, **Chaofeng Chen**, Shi Guo, Zhetong Liang, K.-Y. K. Wong, Lei Zhang. “HDR Video Reconstruction: A Coarse-to-fine Network and A Real-world Benchmark Dataset.” *International Conference on Computer Vision (ICCV)*, 2021.
- [14] **[CVPR 2021]** **Chaofeng Chen**, Xiaoming Li, Lingbo Yang, Xianhui Lin, Lei Zhang, Kwan-Yee K. Wong. “Progressive Semantic-Aware Style Transformation for Blind Face Restoration.” *Computer Vision and Pattern Recognition (CVPR)*, 2021.
- [15] **[ECCV 2020]** Xiaoming Li, **Chaofeng Chen**, Shangchen Zhou, Xianhui Lin, Wangmeng Zuo, Lei Zhang. “Blind Face Restoration via Deep Multi-scale Component Dictionaries.” *European Conference on Computer Vision (ECCV)*, 2020.
- [16] **[ACCV 2018]** **Chaofeng Chen**, Liu Wei, Xiao Tan, K.-Y. K. Wong. “Semi-Supervised Learning for Face Sketch Synthesis in the Wild.” *Asia Conference on Computer Vision (ACCV)*, 2018.
- [17] **[ACCV 2018]** Wei Liu, **Chaofeng Chen**, K.-Y. K. Wong. “SAFE: Scale Aware Feature Encoder for Scene Text Recognition.” *Asia Conference on Computer Vision (ACCV)*, 2018.
- [18] **[WACV 2018]** **Chaofeng Chen***, Xiao Tan*, K.-Y. K. Wong. “Face Sketch Synthesis with Style Transfer using Pyramid Column Feature.” *Winter Conference on Applications of Computer Vision (WACV)*, 2018.
- [19] **[AAAI 2018 Oral]** Wei Liu, **Chaofeng Chen**, K.-Y. K. Wong. “Char-Net: A Character-Aware Neural Network for Distorted Scene Text Recognition.” *AAAI Conference on Artificial Intelligence (AAAI)*, 2018.
- [20] **[BMVC 2016]** Wei Liu, **Chaofeng Chen**, K.-Y. K. Wong, Z. Su and J. Han. “STAR-Net: A SpaTial Attention Residue Network for Scene Text Recognition.” *British Machine Vision Conference (BMVC)*, 2016.

Journal Papers

- [21] **[TIP2024]** **Chaofeng Chen**, Jiadi Mo, Jingwen Hou, Haoning Wu, Liang Liao, Wenxiu Sun, Qiong Yan, Weisi Lin. “TOPIQ: A Top-down Approach from Semantics to Distortions for Image Quality Assessment.” *IEEE Transactions on Image Processing (TIP)*, 2024.
- [22] **[TPAMI 2023]** Haoning Wu, **Chaofeng Chen**, Liang Liao, Jingwen Hou, Wenxiu Sun, Qiong Yan, Weisi Lin. “Neighbourhood Representative Sampling for Efficient End-to-end Video Quality Assessment.” *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2023.
- [23] **[CVIU 2023]** **Chaofeng Chen**, Wei Liu, Xiao Tan, Kwan-Yee K. Wong. “Semi-supervised Cycle-GAN for face photo-sketch translation in the wild.” *Computer Vision and Image Understanding (CVIU)*, 2023.
- [24] **[TCSVT 2023]** Haoning Wu, **Chaofeng Chen**, Liang Liao, Jingwen Hou, Wenxiu Sun, Qiong Yan, Weisi Lin. “DisCoVQA: Temporal Distortion-Content Transformers for Video Quality Assessment.” *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, 2023.
- [25] **[TIP 2023]** Wenqi Yang, Zhenfang Chen, **Chaofeng Chen**, Guanying Chen, Kwan-Yee K. Wong. “Deep Face Video Inpainting via UV Mapping.” *IEEE Transactions on Image Processing (TIP)*, 2023.
- [26] **[TIP 2020]** **Chaofeng Chen**, Dihong Gong, Hao Wang, Zhifeng Li, Kwan-Yee K. Wong. “Learning Spatial Attention for Face Super-Resolution.” *IEEE Transactions on Image Processing (TIP)*, 2020.

In submission & Preprints

- [27] **[In submission]** **Chaofeng Chen***, Annan Wang*, Haoning Wu, Liang Liao, Wenxiu Sun, Qiong Yan, Weisi Lin. “Enhancing Diffusion Models with Text-Encoder Reinforcement Learning.” *arXiv:2311.15657*, 2023.

PROFESSIONAL ACTIVITIES

- Conference Reviewer
 - IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
 - International Conference on Computer Vision (ICCV)
 - European Conference on Computer Vision (ECCV)
 - International Conference on Learning Representations (ICLR)
 - Neural Information Processing Systems (NeurIPS)
 - International Conference on Machine Learning (ICML)
 - Association for the Advancement of Artificial Intelligence (AAAI)
 - ACM International Conference on Multimedia (ACM MM)

- Journal Reviewer
 - IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
 - International Journal of Computer Vision (IJCV)
 - IEEE Transactions on Image Processing (TIP)
 - IEEE Transactions on Multimedia (TMM)
 - IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
 - Elsevier Journal of Neurocomputing (Neurocomputing)

TEACHING EXPERIENCE

- Teaching Assistant at Department of Computer Science, HKU
 - COMP3317 Computer Vision Spring, 2017 – 2018
 - COMP2396 Object-Oriented Programming and Java Fall, 2016 – 2017
 - COMP2396 Object-Oriented Programming and Java Spring, 2015 – 2016

HONORS AND AWARDS

- Hong Kong PhD Fellowship (*HKPF, Highest Distinction in Hong Kong*) 2015 – 2018
- National Scholarship (*Top Distinction in China*) 2013 – 2014
- National Encouragement Scholarship (*Top Distinction in China*) 2012 – 2014
- Excellent Student for Academic Performance of Qiming College (*Top Distinction in HUST*) 2012 – 2013

SKILLS

- Programming in: Python, C/C++, Java, Matlab
- Language: Mandarin (native speaker), English (working proficiency)
- Tools: PyTorch, LaTeX, OpenCV, Linux, Vim, Git, etc.