CHEN Chaofeng (陈 超锋)

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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)

Highlight summary: CVPR (1), ICCV (2), ECCV (4), NeurIPS (1), MM (2), AAAI (2), TIP (2) — Orals x3
($^\#$ corresponding author, * equal contribution)

Conference Papers

[1] [**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.

[2] [**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.

[3] [**NeurIPS 2022**] Wenqi Yang, Guanying Chen, **Chaofeng Chen**, Zhenfang Chen, Kwan-Yee K. Wong. "S^3-NeRF: Neural Reflectance Field from Shading and Shadow under a Single Viewpoint." *Conference on Neural Information Processing Systems (NeurIPS)*, 2022.

[4] [**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.

[5] [**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.

[6] [**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.

[7] [**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.

[8] [**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.

[9] [**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.

[10] [**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.

[11] [**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.

[12] [**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.

[13] [**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.

[14] [**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.

[15] [**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.

[16] [**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.

[17] [**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

[18] [**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.

[19] [**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.

[20] [**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.

[21] [**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

[22] [**In submission**] **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." *arXiv:2308.03060*, 2023.

[23] [**In submission**] **Chaofeng Chen**, Shangchen Zhou, Liang Liao, Haoning Wu, Wenxiu Sun, Qiong Yan, Weisi Lin. "Iterative Token Evaluation and Refinement for Real-World Super-Resolution." 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)
    - 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)
    - 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.