Wenbin Zou

South China University of Technology

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Education

South China University of Technology   **Guangzhou, China**
Ph.D. Student in *School of Automation Science and Engineering*   *Sept. 2022 - Now*

Fujian Normal University   **Fuzhou, China**
M.Sc. in *Information and Communication Engineering*   *Sept. 2019 - July 2022*

Hefei Normal University   **Hefei, China**
B.Sc. in *Electronic Information Engineering*   *Sept. 2015 - June 2019*

Research Interest

- **Computer Vision, Deep Learning, Image Restoration, Image Generation.**

Publications

- **Google Scholar** ↗ Citation:198 (up to Nov.2023)

[1]. **Wenbin Zou**, Liang Chen*, Yi Wu, Yunchen Zhang, Yuxiang Xu, Jun Shao, "Joint Wavelet Sub-bands Guided Network for Single Image Super-Resolution", **IEEE Transactions on Multimedia.** (**CCF B**)[**PDF**]

[2]. **Wenbin Zou**, Mingchao Jiang, Yunchen Zhang, Liang Chen*, Zhiyong Lu, Yi Wu, "SDWNet: A Straight Dilated Network with Wavelet Transformation for image Deblurring", Proceedings of the IEEE/CVF international conference on computer vision. 2021: 1895-1904, pp. 1895-1904, **ICCVW 2021.** (**CCF A**)[**PDF**, **Code**]

[3]. **Wenbin Zou**, Tian Ye, Weixin Zheng, Yunchen Zhang, Liang Chen*, Yi Wu, "Self-Calibrated Efficient Transformer for Lightweight Super-Resolution", Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition. 2022: 930-939, **CVPRW 2022.** (**CCF A**)[**PDF**, **Code**]

[4]. **Wenbin Zou**, Hongxia Gao*, Liang Chen, et al. "Cross-View Hierarchy Network for Stereo Image Super-Resolution", Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition. 2023: 1396-1405. **CVPRW 2023.** (**CCF A**)[**PDF**, **Code**]

[5]. Shasha Huang, **Wenbin Zou**, Hongxia Gao*, et al. "Joint Edge-Guided and Spectral Transformation Network for Self-supervised X-Ray Image Restoration", International Conference on Artificial Neural Networks, 2023: 409-420, **ICANN 2023.** (**CCF C**)[**PDF**]

[6]. Hongsheng Chen, **Wenbin Zou**, HongxiaGao*, et al. "Joint Priors-Based Restoration Method for Degraded Images Under Medium Propagation", **PRCV 2023.** (**CCF C**)

[7]. Weipeng Yang, Hongxia Gao*, **Wenbin Zou**, et al., "Enhancing Low-Light Images: A Variation-based Retinex with Modified Bilateral Total Variation and Tensor Sparse Coding". **PG 2023**. (**CCF B**)[**PDF**]

[8]. Tian Ye, SiXiang Chen, Yun Liu, Wenhao Chai, Jinbin Bai, **Wenbin Zou**, et al., "Sequential Affinity Learning for Video Restoration", **ACM MM 2023.** (**CCF A**)[**PDF**]

[9]. Ru Li, Junwei Xie, Yuyang Xue, **Wenbin Zou**, et al., "Enhanced multi-stage network for defocus deblurring using dual-pixel images", Thirteenth International Conference on Signal Processing Systems (**ICSPS 2021**). SPIE, 2022, 12171: 162-168. [**PDF**]

[10]. Peijie Dong, Xin Niu, Lujun Li, Linzhen Xie, **Wenbin Zou**, et al., "Prior-guided one-shot neural architecture search". arXiv preprint arXiv:2206.13329, 2022. [**PDF**]

Manuscripts

[11]. **Wenbin Zou**, Hongxia Gao*, et al., "Multi-Scale Gamma Enhancement Network for Low-light Image Enhancement", **review by IEEE Transactions on Multimedia.**

[12]. **Wenbin Zou**, Hongxia Gao*, Liang Chen, et al., "VQCNIR: Clearer Night Image Restoration with Vector-Quantized Dictionary", **review by AAAI 2024.**

[13]. **Wenbin Zou**, Weipeng Yang, Hongxia Gao*, et al., "A3Net: Artifacts-aware Attention Network for Compressed Input Super-Resolution", **review by ICASSP 2024.**

[14]. Weipeng Yang, Hongxia Gao*, **Wenbin Zou**, et al., "Low-Light Image Enhancement via Weighted Low-Rank Tensor Regularized Retinex Model", **review by ICASSP 2024.**

Patents

[15]. Wenbin Zou, Jiaqi Pu, Wei De, Ru Li, Weixin Zheng, Zhiping Yao, Tong Tong, Qinquan Gao, An image defocus deblur method based on blur conditional residual networks, Grant No. CN114418878A.

[16]. Liang Chen, Yi Wu, Zhexin Xu, Guannan Chen; Wenbin Zou, Yuxiang Xu, Yuhang Xie; Robust face super-resolution processing method based on degradation classification and directional data augmentation. Grant No. CN112233021A.

Intership

Fujian Imperial Vision Information Technology Co., Ltd. **Fuzhou, China**

Research Intern *May 2021 - Oct. 2021*

- Developed a deep convolutional neural network for image deblurring that achieves state-of-the-art performance. Utilized LBP estimation from traditional algorithms to design a novel network architecture that effectively restores blurred images. This method achieves 0.23 PSNR improvement over the previous best method. Write and apply for invention patents and paper [**9**][**15**].

Student Awards

- *Outstanding graduates of Fujian Normal University, School* *April 2022*
- *The First Prize Scholarship of Fujian Normal University, School* *Nov. 2020*
- *The First Prize Scholarship of Hefei Normal University, School* *Nov. 2018*
- *National Scholarship for Bachelor Students, Ministry of Education* *Nov. 2017*
- *National Endeavor Scholarship, Anhui Provincial Education Department* *Nov. 2016*

Competition Awards

- *The 1st of Citrus Flower and Fruit Shoot Semantic Segmentation Challenge Based on Visible Light Images.* **(1/238)**
  Organizer: iFLYTEK Co., Ltd. *Oct. 2023*
- *The 1st of Baidu Netdisk AI Competition: Beauty, freckle and acne removal.* **(1/100)**
  Organizer: Baidu Netdisk Co., Ltd. *Sept. 2023*
- *The 1st award of China International Big Data Industry Expo: Data Scenario Application Innovation Contest.* **(1/100)**
  Organizer: Guiyang Big Data Exchange *May 2023*
- *The 8th of the NTIRE 2023 Challenge on Stereo Image Super-Resolution, Track 1.* **(8/180)**
  Organizer: CVPR 2023 *April 2023*
- *The 5th of the NTIRE 2023 Challenge on Stereo Image Super-Resolution, Track 2.* **(5/96)**
  Organizer: CVPR 2023 *April 2023*
- *The 4th of the NTIRE 2023 Challenge on Stereo Image Super-Resolution, Track 3.* **(4/106)**
  Organizer: CVPR 2023 *April 2023*
- *The 2nd award of "Xingzhi Cup" National Artificial Intelligence Innovation and Application Competition.* **(6/150)**
  Organizer: China information and Communication Research Institute. *Feb. 2023*
- *The 1st of Baidu Netdisk AI Competition: Document Image Deblurring.* **(1/110)**
  Organizer: Baidu Netdisk Co., Ltd. *Sept. 2022*
- *The 6th of Baidu Netdisk AI Competition: Image Processing Challenge-Document Image Direction Recognition.* **(6/140)**
  Organizer: Baidu Netdisk Co., Ltd. *Sept. 2022*
- *The 7th of AIM 2022 Compressed Input Super-Resolution Challenge, Track 1.* **(7/157)**
  Organizer: ECCV 2022 *July 2022*
- *The 3rd of 2022 CVPR Neural Architecture Search (NAS) Track 1: Supernet Track.* **(3/50)**
  Organizer: CVPR 2022 *May 2022*
- *The 1st award of AI Innovation and Application Competition.* **(10/300)**
  Organizer: China information and Communication Research Institute. *Dec. 2021*
- *The 10th of NTIRE 2021 challenge on image deblurring, Track 2.* **(10/238)**
  Organizer: CVPR 2021 *April 2021*
- *The 12th "Challenge Cup" College Student Entrepreneur Competition, Bronze award.* **(15/200)**
  Organizer: Ministry of Education *November 2020*

Reviewer

- IEEE Trans. on Circuits and Systems for Video Technology
- IEEE Trans. on Neural Networks and Learning Systems.
- IEEE/CVF International Conference on Computer Vision Workshop. 2021.