

Xinya Wang

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BIOGRAPHY

I am a Ph.D. student in the Lab of Multi-Spectral Vision Processing, Wuhan University, advised by Prof. Jiayi Ma. My research focuses on developing novel algorithms for high-resolution image enhancement and restoration. My work has been applied to several real-world applications, including blind super-resolution, hyperspectral sharpening, light field super-resolution and infrared image enhancement.

Research Interests: Computer Vision; Imaging Processing; Machine Learning.

EDUCATION

Wuhan University, Wuhan, China Sep. 2018 - Dec.2023

Ph.D. in Signal and Information Processing

Advisor: Prof. [Jiayi Ma](#)

Wuhan University, Wuhan, China Sep. 2014 - Jun. 2018

B.S. in Communication Engineering

PUBLICATIONS

- [1] **Xinya Wang**, Jiayi Ma, Qian Hu and Yingsong Cheng, "Hyperspectral Image Super-resolution Meets Deep Learning: A Survey and Perspective," IEEE/CAA Journal of Automatica Sinica, 2023.
- [2] **Xinya Wang**, Qian Hu, Junjun Jiang and Jiayi Ma, "A Group-Based Embedding Learning and Integration Network for Hyperspectral Image Super-Resolution," IEEE Transactions on Geoscience and Remote Sensing, 2022.
- [3] **Xinya Wang**, Jiayi Ma and Junjun Jiang, "Contrastive Learning for Blind Super-Resolution via a Distortion-Specific Network", IEEE/CAA Journal of Automatica Sinica, 2022.
- [4] **Xinya Wang**, Yingsong Cheng, Xiaoguang Mei, Junjun Jiang and Jiayi Ma, "Group Shuffle and Spectral-Spatial Fusion for Hyperspectral Image Super-Resolution," IEEE Transactions on Computational Imaging, 2022.
- [5] **Xinya Wang**, Jiayi Ma, Peng Yi, Xin Tian, Junjun Jiang and Xiaoping Zhang, "Learning an Epipolar Shift Compensation for Light Field Image Super-Resolution," Information Fusion, 2022.
- [6] **Xinya Wang**, Jiayi Ma and Junjun Jiang, "Hyperspectral Image Super-Resolution via Recurrent Feedback Embedding and Spatial-Spectral Consistency Regularization," IEEE Transactions on Geoscience and Remote Sensing, 2022. **[ESI Highly Cited Paper]**
- [7] Yong Ma, **Xinya Wang**, Wenjing Gao, You Du, Jun Huang and Fan Fan, "Progressive Fusion Network Based on Infrared Light Field Equipment for Infrared Image Enhancement," IEEE/CAA Journal of Automatica Sinica, 2022.
- [8] **Xinya Wang**, Jiayi Ma, Junjun Jiang and Xiaoping Zhang, "Dilated Projection Correction Network based on Autoencoder for Hyperspectral Image Super-Resolution Neural Networks," Neural Networks, 2022.

- [9] Han Xu, **Xinya Wang** and Jiayi Ma, “DRF: Disentangled Representation for Visible and Infrared Image Fusion,” IEEE Transactions on Instrumentation and Measurement, 2021.
- [10] Jiayi Ma, **Xinya Wang** and Junjun Jiang, “Image Super-Resolution via Dense Discriminative Network,” IEEE Transactions on Industrial Electronics, 2019.
- [11] **Xinya Wang**, Jiayi Ma and Junjun Jiang, “Image Super-resolution via Deep Aggregation Network,” IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2019. [Oral]

TECHINICAL STRENGTHS

Programming: Python; Matlab; LATEX

DL Framework: PyTorch; Tensorflow; Keras

Language: Chinese (native); English (fluent)

PROFESSIONAL SERVICES

Journal Reviewer: Information Fusion, IEEE/CAA Journal of Automatica Sinica, IEEE Transactions on Geoscience and Remote Sensing, IEEE Transactions on Circuits and Systems for Video Technology, IEEE Transactions on Instrumentation and Measurement, Neurocomputing

Conference Reviewer: IJCAI, ICCV

Teaching: Natural Science Introductory Course (Undergraduate course, TA, 2022 Fall)

HONORS AND AWARDS

National Graduate Scholarship, Ministry of Education	Sep. 2022
Academic Innovation Scholarship, Second Prize, Wuhan University	Sep. 2020
Outstanding Scientific Research Achievements, First Prize, Hubei Province	Dec. 2018
Excellent Student Scholarship, Wuhan University	2015-2017

REFEREES

Prof. Jiayi Ma, Wuhan University

Prof. Junjun, Jiang, Harbin Institute of Technology