



**Hai Jiang**

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## EDUCATION

- **Ph.D. - Sichuan University** 2023-present  
*Aeronautical and Astronautical Science and Technology* Supervisor: Prof. Songchen Han
- **Master - Sichuan University** 2020-2023  
*Aeronautical and Astronautical Science and Technology* Supervisor: Prof. Songchen Han
- **Bachelor - Sichuan University** 2016-2020  
*Aircraft Control and Information Engineering* Supervisor: Prof. Songchen Han

## PROFESSIONAL EXPERIENCES

- **Research Inter - Megvii Technology** Jan. 2022-present  
*Research area: Homograph Estimation and Low-Light Image Enhancement* Supervisor: Prof. Shuaicheng Liu

## PUBLICATIONS-JOURNAL

•\*: Equal contributions, †: Corresponding author

- [1]. **Hai Jiang**, Yang Ren, Songchen Han<sup>†</sup>. “Revisiting Coarse-to-fine Strategy for Low-Light Image Enhancement with Deep Decomposition Guided Training”. *Computer Vision and Image Understanding (CVIU)*, 2024. [\[PDF\]](#) [\[GitHub\]](#)
- [2]. Haipeng Li, **Hai Jiang**, Ao Luo, Ping Tan, Haoqiang Fan, Bing Zeng, Shuaicheng Liu<sup>†</sup>. “DMHomo: Learning Homography with Diffusion Models”. *ACM Transactions on Graphics (ToG, Presented at SIGGRAPH)*, 2024. [\[PDF\]](#) [\[GitHub\]](#)
- [3]. **Hai Jiang**, Ao Luo, Haoqiang Fan, Songchen Han, Shuaicheng Liu<sup>†</sup>. “Low-Light Image Enhancement with Wavelet-based Diffusion Models”. *ACM Transactions on Graphics (ToG, Proceedings of SIGGRAPH Asia)*, 2023. [\[PDF\]](#) [\[GitHub\]](#)
- [4]. Shuaicheng Liu<sup>†</sup>, Yuhang Lu, **Hai Jiang**, Nianjin Ye, Chuang Wang, Bing Zeng. “Unsupervised Global and Local Homography Estimation with Motion Basis Learning”. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2023. [\[PDF\]](#) [\[GitHub\]](#)
- [5]. **Hai Jiang**, Xuan Zhu, Yang Ren, Yutong Hao, Fengzhu Zou, Lin Fang, Songchen Han<sup>†</sup>. “R2RNet: Low-Light Image Enhancement via Real-low to Real-normal Network”. *Journal of Visual Communication and Image Representation (JVCIR)*, 2023. [\[PDF\]](#) [\[GitHub\]](#) (Best Paper Runner-Up for 2024, ESI Highly Cited Paper)
- [6]. **Hai Jiang**, Yutong Hao, Fengzhu Zou, Lin Fang, Songchen Han<sup>†</sup>. “Advanced RetinexNet: A Fully Convolutional Network for Low-light Image Enhancement”. *Signal Processing: Image Communication (SPIC)*, 2023. [\[PDF\]](#)
- [7]. **Hai Jiang**, Yang Ren, Yaqi Yu, Songchen Han<sup>†</sup>. “Combining Spatial and Frequency Information for Image Deblurring”. *IEEE Signal Processing Letters (SPL)*, 2022. [\[PDF\]](#)
- [8]. **Hai Jiang**, Yutong Hao, Fengzhu Zou, Lin Fang, Songchen Han<sup>†</sup>. “A Visual Navigation System for UAV Under Diverse Illumination Conditions”. *Applied Artificial Intelligence (UAAI)*, 2021. [\[PDF\]](#)

## PUBLICATIONS-CONFERENCE

•\*: Equal contributions, †: Corresponding author

- [1]. **Hai Jiang**, Ao Luo, Xiaohong Liu, Songchen Han, Shuaicheng Liu<sup>†</sup>. “LightenDiffusion: Unsupervised Low-Light Image Enhancement with Latent-Retinex Diffusion Models”. *European Conference on Computer Vision (ECCV)*, 2024. [\[PDF\]](#) [\[GitHub\]](#)
- [2]. **Hai Jiang\***, Haipeng Li\*, Songchen Han<sup>†</sup>, Haoqiang Fan, Bing Zeng, Shuaicheng Liu<sup>†</sup>. “Supervised Homography Learning with Realistic Dataset Generation”. *International Conference on Computer Vision (ICCV)*, 2023. [\[PDF\]](#) [\[GitHub\]](#)
- [3]. **Hai Jiang\***, Haipeng Li\*, Yuhang Lu, Songchen Han<sup>†</sup>, Shuaicheng Liu<sup>†</sup>. “Semi-supervised Deep Large-Baseline Homography Estimation with Progressive Equivalence Constraint”. *Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI)*, 2023. [\[PDF\]](#) [\[GitHub\]](#)

ACADEMIC SERVICES

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- Conference Reviewer:** IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), European Conference on Computer Vision (**ECCV**), ACM SIGGRAPH Annual Conference (**SIGGRAPH**), AAAI Conference on Artificial Intelligence (**AAAI**), ACM International Conference on Multimedia (**ACM MM**), IEEE International Conference on Multimedia and Expo (**ICME**), IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**).
- 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 Circuits and Systems for Video Technology (**TCSVT**), IEEE Signal Processing Letters (**SPL**), Computer Vision and Image Understanding (**CVIU**), Computers & Graphics (**CG**).

TECHNICAL SKILLS

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**Languages:** CET-4, CET-6  
**Skills:** Office, Python, Matlab

ACHIEVEMENTS

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|---|------------------|
| •National Scholarship   | <i>Nov. 2024</i> |
| •Outstanding Master’s Thesis of Sichuan University                                | <i>Jun. 2023</i> |
| •First Prize of China Aerospace Foundation-Romax Technology Aerospace Scholarship | <i>Oct. 2022</i> |
| •Third Prize of Undergraduate Graduation Design (Thesis) of Sichuan University    | <i>Jun. 2020</i> |