

YAKUN JU

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👤 EXPERIENCE

Nanyang Technological University, Singapore 09/2023 – Present

Research Fellow at the School of Electrical and Electronic Engineering, [Rapid-Rich Object Search \(ROSE\)](#) Lab, working with [Prof. Alex C. Kot](#)

The Hong Kong Polytechnic University, Hong Kong SAR 09/2022 – 09/2023

Postdoctoral Fellow at the Dept. of Electrical and Electronic Engineering, working with [Prof. Kin-Man Lam](#)

The Hong Kong Polytechnic University, Hong Kong SAR 01/2021 – 07/2021

Research Assistant at the Dept. of Electrical and Electronic Engineering, working with [Prof. Kin-Man Lam](#)

Peking University, Beijing, China 09/2020 – 12/2020

Visiting Scholar at the Wangxuan Institute of Computer Technology, Working with [Prof. Yuxin Peng](#)

🎓 EDUCATION

Ocean University of China, Qingdao, China 09/2016 – 06/2022

Ph.D. in Computer Science, supervised by [Prof. Junyu Dong](#)

Sichuan University, Chengdu, China 09/2012 – 06/2016

Bachelor Degree of Engineering

🔍 RESEARCH INTERESTS

3D Reconstruction, Computational Imaging, Medical Image Processing, and Underwater Vision.

🎵 ACADEMIC SERVICE

- **Editorial Board (Associate Editor)** of PLOS ONE, 04/2024-Present
- **Editorial Board (Associate Editor)** of Intelligent Marine Technology and Systems, 11/2023-Present
- **Guest Editor** of Computer Vision and Image Understanding (CCF-B journal), [SI: Advanced Computational Imaging and Photography Measurement](#), Present-09/2024
- **Guest Editor** of Photonics, SI: Advanced Photometric 3D Reconstruction and beyond, 10/2022-09/2023
- **Conference Program Committee** of the IEEE ICIP 2024 Workshop: [AI4IPo Workshop](#)
- **Session Chair** of the IEEE ICME 2023

❤️ JOURNAL

1. **Yakun Ju**, Kin-Man Lam, Wuyuan Xie, Huiyu Zhou, Junyu Dong and Boxin Shi. “Deep Learning Methods for Calibrated Photometric Stereo and Beyond”, *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2024. (IF: 23.6)
2. **Yakun Ju**, Boxin Shi, Muwei Jian, Lin Qi and Kin-Man Lam. “Normattention-PSN: A High-Frequency Region Enhanced Photometric Stereo Network with Normalized Attention”, *International Journal of Computer Vision (IJCV)*, 2022. (IF: 19.5)
3. **Yakun Ju**, Junyu Dong and Sheng Chen. “Recovering Surface Normal and Arbitrary Images: A Dual Regression Network for Photometric Stereo”, *IEEE Transactions on Image Processing (TIP)*, 2021. (IF: 10.6)
4. **Yakun Ju**, Boxin Shi, Yang Chen, Huiyu Zhou, Junyu Dong and Kin-Man Lam. “GR-PSN: Learning to Estimate Surface Normal and Reconstruct Photometric Stereo Images”, *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2023. (IF: 5.2)

5. **Yakun Ju**, Muwei Jian, Cong Wang, Cong Zhang, Junyu Dong and Kin-Man Lam. “Estimating High-resolution Surface Normals via Low-resolution Photometric Stereo Images”, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, 2023. (IF: 8.4)
6. **Yakun Ju**, Muwei Jian, Shaoxiang Guo, Yingyu Wang, Huiyu Zhou and Junyu Dong. “Incorporating Lambertian Priors into Surface Normals Measurement”, *IEEE Transactions on Instrumentation and Measurement (TIM)*, 2021. (IF: 5.6)
7. **Yakun Ju**, Yuxin Peng, Muwei Jian, Lin Qi and Junyu Dong. “Learning Conditional Photometric Stereo with High-resolution Features”, *Computational Visual Media (CVMJ)*, 2022. (IF: 6.9)
8. **Yakun Ju**, Xinghui Dong, Yingyu Wang, Lin Qi and Junyu Dong. “A Dual-cue Network for Multispectral Photometric Stereo”, *Pattern Recognition (PR)*, 2020. (IF: 8.0)
9. Yanru Liu, **Yakun Ju***, Muwei Jian, Feng Gao, Yuan Rao, Yeqi Hu, Junyu Dong. “A Deep-shallow and Global-local Multi-feature Fusion Network for Photometric Stereo”, *Image and Vision Computing (IVC)*, 2022. (IF: 4.7)
10. Yuan Rao, **Yakun Ju**, Cong Li, Eric Rigall, Jian Yang, Hao Fan, Junyu Dong. “Learning General Descriptors for Image Matching with Regression Feedback”, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, 2023. (IF: 8.4)
11. Yuan Rao, **Yakun Ju**, Sen Wang, Hao Fan, Junyu Dong. “Learning Enriched Feature Descriptor for Image Matching and Visual Measurement”, *IEEE Transactions on Instrumentation and Measurement (TIM)*, 2023. (IF: 5.6)
12. Shaoxiang Guo, Eric Rigall, **Yakun Ju** and Junyu Dong. “3D Hand Pose Estimation from Monocular RGB with Feature Interaction Module”, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, 2022. (IF: 8.4)
13. Cong Zhang, Jingran Su, **Yakun Ju**, Kin-Man Lam and Qi Wang. “3D Hand Pose Estimation from Monocular RGB with Feature Interaction Module”, *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2023. (IF: 8.2)
14. Yuan Rao, Jian Yang, **Yakun Ju**, Cong Li, Eric Rigall, Hao Fan and Junyu Dong. “Learning General Feature Descriptor for Visual Measurement with Hierarchical View Consistency”, *IEEE Transactions on Instrumentation and Measurement (TIM)*, 2022. (IF: 5.6)
15. Muwei Jian, Xiangwei Lu, Xiaoyang Yu, **Yakun Ju**, Hui Yu and Kin-Man Lam. “Flow-Edge-Net: Video Saliency Detection Based on Optical Flow and Edge-Weighted Balance Loss”, *IEEE Transactions on Computational Social Systems (TCSS)*, 2023. (IF: 5.0)

♥ CONFERENCE

1. **Yakun**, Kin-Man Lam, Yang Chen, Lin Qi and Junyu Dong. “Pay Attention to Devils: A Photometric Stereo Network for Better Details”, in *International Conference on International Joint Conferences on Artificial Intelligence (IJCAI)*, 2020.
2. **Yakun**, Kin-Man Lam, Jun Xiao, Cong Zhang, Cuixin Yang and Junyu Dong. “Efficient Feature Fusion for Learning-Based Photometric Stereo”, in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2023.
3. **Yakun Ju**, Cong Zhang, Songsong Huang, Yuan Rao and Kin-Man Lam. “Learning Deep Photometric Stereo Network with Reflectance Priors”, in *IEEE International Conference on Multimedia and Expo (ICME)*, 2023.
4. **Yakun Ju**, Muwei Jian, Junyu Dong and Kin-Man Lam. “Learning Photometric Stereo via Manifold-based Mapping”, in *IEEE International Conference on Visual Communications and Image Processing (VCIP)*, 2020.
5. Hao Xie, Zixun Huang, Frank H.F. Leung, **Yakun Ju***, Yong-Ping Zheng and Sai Ho Ling. “A Structure-Affinity Dual Attention-based Network to Segment Spine for Scoliosis Assessment”, in *IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, 2023.
6. Wuyuan Xie, Kaimin Wang, **Yakun Ju** and Miaohui Wang. “pmBQA: Projection-based Blind Point Cloud Quality Assessment via Multimodal Learning”, in *ACM International Conference on Multimedia (MM)*, 2023.
7. Cong Zhang, Tianshan Liu, **Yakun Ju** and Kin-Man Lam. “Pyramid Masked Image Modeling for Transformer-Based Aerial Object Detection”, in *IEEE International Conference on Image Processing (ICIP)*, 2023.
8. Cuixin Yang, Jun Xiao, **Yakun Ju**, Guoping Qiu and Kin-Man Lam. “Improving Robustness of Single Image Super-Resolution Models with Monte Carlo Method”, in *IEEE International Conference on Image*

Processing (ICIP), 2023.

9. Cong Wang, Jinshan Pan, Wei Wang, Jiangxin Dong, Mengzhu Wang, **Yakun Ju**, Junyang Chen and Xiaoming Wu. "PromptRestorer: A Prompting Image Restoration Method with Degradation Perception", in *Conference on Neural Information Processing Systems (NeurIPS)*, 2023.

♡ INVENTION PATENT

1. **Yakun Ju**, Junyu Dong, Lin Qi, Liang Lu. *A Single Frame Image 3D Reconstruction Device and Method Based on Deep Learning*. Granted invention patent in China, 2017113024008.
2. **Yakun Ju**, Junyu Dong, Feng Gao. *High-frequency Region Enhancement Photometric Stereo Method Based on Deep Learning*. Granted invention patent in China, 202111524515.
3. **Yakun Ju**, Junyu Dong, Lin Qi. *Multispectral Photometric Stereo Surface Normal Recovery Method Based on Deep Learning*. Granted invention patent in China, 201910208408.

👤 JOURNAL REVIEWER

- International Journal of Computer Vision
- ISPRS Journal of Photogrammetry and Remote Sensing
- IEEE/CAA Journal of Automatica Sinica
- IEEE Transactions on Visualization and Computer Graphics
- IEEE Transactions on Multimedia
- IEEE Transactions on Circuits and Systems for Video Technology
- IEEE Transactions on Industrial Electronics

👤 CONFERENCE REVIEWER

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2024
- IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2024
- IEEE International Symposium on Circuits & Systems (ISCAS), 2024

👤 TALK

- **China3DV 2023**: Deep Learning-based Calibrated Photometric Stereo: Review & Future. *Beijing, China, 23. Apr. 2023*
- **CCF China Intelligent Robot Academic Annual Conference 2021**: Data-Driven Photometric Stereo. *Qingdao, China, 11. Dec. 2021*
- **Vision And Learning SEminar (VALSE) 2021**: Top Journal Spotlight: 3D Vision Technology. *Hangzhou, China, 10. Oct. 2021*

🎁 HONORS AND AWARDS

- ACM Qingdao Chapter Outstanding Doctoral Dissertation Award, 2022.
- Outstanding Graduates of Shandong Province (for top 5% graduates), 2022.
- National Scholarship for Doctoral Students (for top 1% Ph.D. students), 2020.