Jaesung Rim

Ph.D. student
POSTECH
jsrim123[at]postech.ac.kr
Webpage: https://rimchang.github.io

Education

Sep. 2020 ~ Present	**Pohang University of Science and Technology**	Pohang, Korea
	Ph.D. Student in Graduate School of Artificial Intelligence	
	Advisor: Sunghyun Cho	

Sep. 2018 ~ Aug. 2020	**Daegu Gyeongbuk Institute of Science and Technology**	Daegu, Korea
	M.S. in Information and Communication Engineering	
	Thesis: Real-World Blur Dataset for Learning and Benchmarking Deblurring Algorithms	
	Advisor: Sunghyun Cho	

Mar. 2011 ~ Aug. 2017	**Kwangwoon University**	Seoul, Korea
	B.S. in Industrial Psychology	

Experience

May. 2024 ~ Aug. 2024	**Huawei Finland Research Center**	Tampere, Finland
	Research Intern at Camera AI Solutions Team	
	Topic: Video deblurring utilizing dual cameras on smartphones	
	Mentor: Erman Acar	

Research Interests

- Computational Photography
- Image/video restoration
- Deblurring
- Mobile imaging

Publications

1. **Jaesung Rim**, Junyong Lee, Heemin Yang, Sunghyun Cho, "Deep Hybrid Camera Deblurring for Smartphone Cameras", SIGGRAPH 2024

2. Sanghyun Kim*, Min Jung Lee*, Woohyeok Kim, Deunsol Jung, **Jaesung Rim**, Sunghyun Cho, Minsu Cho, "Burst Image Super-Resolution with Base Frame Selection", CVPRW NTIRE 2024

3. Dongwoo Lee, Jeongtaek Oh, **Jaesung Rim**, Sunghyun Cho, Kyoung Mu Lee, "ExBluRF: Efficient Radiance Fields for Extreme Motion Blurred Images", ICCV 2023

4. Sohyun Lee*, **Jaesung Rim***, Boseung Jeong, Geonu Kim, ByungJu Woo, Haechan Lee, Sunghyun Cho, Suha Kwak, "Human Pose Estimation in Extremely Low-Light Conditions", CVPR 2023

5. **Jaesung Rim**, Geonung Kim, Jungeon Kim, Junyong Lee, Seungyong Lee, Sunghyun Cho, "Realistic Blur Synthesis for Learning Image Deblurring", ECCV 2022

6. Junyong Lee, Hyeongseok Son, **Jaesung Rim**, Sunghyun Cho, Seungyong Lee, "Iterative Filter Adaptive Network for Single Image Defocus Deblurring.", CVPR 2021

7. **Jaesung Rim,** Haeyun Lee, Jucheol Won, Sunghyun Cho, "Real-World Blur Dataset for Learning and Benchmarking Deblurring Algorithms.", ECCV 2020

Publications (Domestic)

1. **Jaesung Rim**, Sunghyun Cho, "Per-pixel Blur Kernel Estimation Network", IPIU 2021

2. Kiyeon Kim, **Jaesung Rim**, Sunghyun Cho, "Light-weight Image Restoration Network for Image Recognition", KCC 2021

Patents

1. Sanghyun Kim, Minjung Lee, Woohyeok Kim, Deunsol Jung, **Jaesung Rim**, Manjin Kim, Sunghyun Cho, Minsu Cho, "Base Frame Selection for Burst Image Enhancement on Multiple Exposure-Time Images", (KR, filing for a patent)

2. Sohyun Lee, **Jaesung Rim**, Boseung Jeong, Geonu Kim, ByungJu Woo, Haechan Lee, Sunghyun Cho, Suha Kwak, "Method and Apparatus for Learning Human Pose Estimation In Low-light Conditions", 10-2023-0154857 (KR, issued), 18/364,823 (US, issued)

Professional Activities

Invited talk

- Realistic Blur Synthesis for Learning Image Deblurring, KCCV 2023, Poster

- Programming Practice of the State of the Arts, KCCV 2023, Tutorial

- Real-World Blur Dataset for Learning and Benchmarking Deblurring Algorithms, KCGS 2020, Poster

Reviewer

- IEEE Computer Vision and Pattern Recognition (CVPR)

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)

- The Association for the Advancement of Artificial Intelligence (AAAI)

- The Visual Computer (TVC)

Projects

- Development of Neural Camera ISPs for Multi-Degradation Restoration and Perceptual Image Enhancement, MSIT, Korea (Mar. 2023 ~ Present)

- eXVision: Visual Recognition in Extreme Conditions, Samsung Research Funding & Incubation Center for Future Technology, Korea (May. 2018 ~ Present)

- Extreme Exploitation of Dark Data Research Center, MSIT, Korea (Aug. 2018 ~ Present)

- End-to-end wide-baseline enhancement via robust alignment from raw image bursts with multiple degradation, Samsung Advanced Institute of Technology, Korea (Nov. 2022 ~ Oct. 2023)

- Real and realistic-looking synthetic data generation for low-light image enhancement and recognition, MSIT, Korea (Mar. 2020 ~ Feb. 2023)

Teaching Experiences

- Teaching assistance for Objective-Oriented Programming, Mar. 2023 ~ Jun. 2023

- Teaching assistance for Computer Vision (Hyundai AI Academy), Dec. 2020 ~ Dec. 2020

- Teaching assistance for Programming Practice, Mar. 2020 ~ Jun. 2020

References

- **Prof. Sunghyun Cho**, *Professor @ POSTECH*

  Relationship: Ph.D. advisor

  Email: s.cho[at]postech.ac.kr

- **Prof. Seungyong Lee**, *Professor @ POSTECH*

  Relationship: Collaborator / Mentor during the doctoral study

  Email: leesy[at]postech.ac.kr

- **Dr. Junyong Lee**, *Research Scientist @ Samsung AI Center - Toronto*

  Relationship: Collaborator / Lab colleague during the doctoral study

  Email: j.lee8[at]samsung.com