# Kwanyong Park

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## Research Interests

- **Deep Learning**; Learning with multiple dataset, Learning with minimal human supervision
- **Computer Vision**; Image/Video understanding and processing

## Research Experiences

**Adobe Research** (Remote) — San Jose, CA
Research Intern, Deep Learning Group, Creative Intelligence Lab — Apr.2021–Dec.2021

**Korea Advanced Institute of Science and Technology (KAIST)** — Daejeon, Korea
Research Assistant, Robotics and Computer Vision Lab — Mar.2018–Present

## Education

**Korea Advanced Institute of Science and Technology (KAIST)** — Daejeon, Korea
Ph.D. in Electrical Engineering — Sep.2019–Aug.2023
Advisor: Prof. In So Kweon

**Korea Advanced Institute of Science and Technology (KAIST)** — Daejeon, Korea
M.S. in Electrical Engineering — Mar.2018–Aug.2019
Advisor: Prof. In So Kweon

- Thesis: "Learning unpaired video-to-video translation for domain adaptation"

**Korea Advanced Institute of Science and Technology (KAIST)** — Daejeon, Korea
B.S., double major in Mechanical Engineering and Electrical Engineering — Mar.2013–Feb.2018

## Publications

(* indicates equal contributions)

- Test-time Adaptation in the Dynamic World with Compound Domain Knowledge Management
  *Junha Song, **Kwanyong Park**, Inkyu Shin, Sanghyun Woo, Chaoning Zhang, and In So Kweon*
  Robotics and Automation Letters (RA-L), 2024
  International Conference on Robotics and Automation (ICRA), 2024

- Joint Self-supervised Learning and Adversarial Adaptation for Monocular Depth Depth Estimation from Thermal Image
  *Ukcheol Shin, **Kwanyong Park**, Byeong-Uk Lee, Kyunghyun Lee, In So Kweon*
  Machine Vision and Applications (MVA), 2023

- Mask-guided Matting in the Wild
  ***Kwanyong Park**, Sanghyun Woo, Seoung Wug Oh, In So Kweon, Joon-Young Lee*
  Conference on Computer Vision and Pattern Recognition (CVPR), 2023

- Bidirectional Domain Mixup for Domain Adaptive Semantic Segmentation
  *Daehan Kim*, Minseok Seo*, **Kwanyong Park**, Inkyu Shin, Sanghyun Woo, In So Kweon, Dong-Geol Choi*
  Association for the Advancement of Artificial Intelligence (AAAI), 2023

- Learning Classifiers of Prototypes and Reciprocal Points for Universal Domain Adaptation
  *Sungsu Hur, Inkyu Shin, **Kwanyong Park**, Sanghyun Woo, In So Kweon*
  Winter Conference on Applications of Computer Vision (WACV), 2023

- Self-supervised Monocular Depth Estimation from Thermal Images via Adversarial Multi-spectral Adaptation
  *Ukcheol Shin, **Kwanyong Park**, Byeong-Uk Lee, Kyunghyun Lee, In So Kweon*
  Winter Conference on Applications of Computer Vision (WACV) (**Best Student Paper**), 2023

- A Unified Learning Framework for Large Vocabulary Video Object Detection
  *Sanghyun Woo, **Kwanyong Park**, Seoung Wug Oh, In So Kweon, Joon-Young Lee*
  European Conference on Computer Vision (ECCV), 2022

- Tracking by Associating Clips
  *Sanghyun Woo, **Kwanyong Park**, Seoung Wug Oh, In So Kweon, Joon-Young Lee*
  European Conference on Computer Vision (ECCV), 2022

- Per-Clip Video Object Segmentation
  ***Kwanyong Park**, Sanghyun Woo, Seoung Wug Oh, In So Kweon, Joon-Young Lee*
  Conference on Computer Vision and Pattern Recognition (CVPR), 2022

- Unsupervised Domain Adaptation for Video Semantic Segmentation
  ***Kwanyong Park*****, Inkyu Shin*, Sanghyun Woo, In So Kweon*
  arXiv, 2021

- LabOR: Labeling Only if Required for Domain Adaptive Semantic Segmentation
  *Inkyu Shin, Dong-Jin Kim, Jae Won Cho, Sanghyun Woo, **Kwanyong Park**, In So Kweon*
  International Conference on Computer Vision (ICCV) (**Oral**), 2021
  - *Received Qualcomm Innovation Award 2021.*

- Discover, Hallucinate, and Adapt: Open Compound Domain Adaptation for Semantic Segmentation
  ***Kwanyong Park**, Sanghyun Woo, Inkyu Shin, In So Kweon*
  Neural Information Processing Systems (NeurIPS), 2020
  - *Received Qualcomm Innovation Award 2021.*

- Align-and-Attend Network for Globally and Locally Coherent Video Inpainting
  *Sanghyun Woo, Dahun Kim, **Kwanyong Park**, Joon-Young Lee, In So Kweon*
  British Machine Vision Conference (BMVC), 2020

- Preserving Semantic and Temporal Consistency for Unpaired Video-to-Video Translation
  ***Kwanyong Park**, Sanghyun Woo, Dahun Kim, Donghyeon Cho and In So Kweon*
  ACM Multimedia (MM), 2019

## Reviewer Experiences

- Conference on Computer Vision and Pattern Recognition (CVPR): 2022,2023
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI): 2022
- European Conference on Computer Vision (ECCV): 2022
- Association for the Advancement of Artificial Intelligence (AAAI): 2023
- British Machine Vision Conference (BMVC): 2020,2021

## Awards & Honors

- WACV Best Student Paper Awards — Jan.2023
- Qualcomm Innovation Fellowship — Nov.2021
- KAIST Scholarship — Sep.2019–Present
- SIGMM Student Travel Grants — Nov.2019
- Korea Government Scholarship — Mar.2018–Aug.2019
- Best M.S students, Eun Chong-Kwan Scholarship — Mar.2018

## Teaching

**Teaching Assistant at KAIST EE**

- EE405 Electronics Design Lab.<Network of Smart Things> (Spring, 2019)
- EE209 Programming Structure for Electrical Engineering (Fall, 2018)
- EE305 Introduction to Electronics Design Lab. (Fall, 2018)

## Computer Skills

- **Language:** Python, Matlab, C
- **Libraries:** PyTorch

## References

**Prof. In So Kweon** (M.S. - Ph.D. advisor at KAIST)
KEPCO Chair Professor, School of Electrical Engineering, KAIST
Email: iskweon77@kaist.ac.kr

**Dr. Joon-Young Lee** (Internship mentor)
Senior Research Scientist, Adobe Research
Email: jolee@adobe.com

**Dr. Seoung Wug Oh** (Internship mentor)
Research Scientist, Adobe Research
Email: seoh@adobe.com