

Jinsun Park, Ph.D.

CONTACT INFORMATION	Post-doctoral Researcher Room 212, IT Convergence Bldg. (N1), KAIST 291 Daehak-ro, Yuseong-gu, Daejeon 34141 Republic of Korea (South Korea)		zzangjinsun@kaist.ac.kr https://zzangjinsun.github.io/
RESEARCH INTERESTS	<ul style="list-style-type: none"> • Computer Vision • Deep Learning • Multi-Modal Sensor Systems • Depth Completion / Depth Estimation • Image Processing 		
EDUCATION	KAIST , Daejeon, Republic of Korea Ph.D., School of Electrical Engineering, Mar. 2016 – Feb. 2021 <ul style="list-style-type: none"> • Dissertation: “Multi-Sensor Systems for Robust Visual Perception in Traffic Environment” • Advisor: Prof. In So Kweon KAIST , Daejeon, Republic of Korea M.S., School of Electrical Engineering, Mar. 2014 – Feb. 2016 <ul style="list-style-type: none"> • Thesis: “A Unified Approach of Deep and Hand-crafted Features for Defocus Estimation” • Advisor: Prof. In So Kweon (Sep. 2015 – Feb. 2016) • Advisor: Prof. Yu-Wing Tai (Mar. 2014 – Aug. 2015) Hanyang University , Seoul, Republic of Korea B.S., Department of Electronic Engineering, Mar. 2007 – Feb. 2014		
RESEARCH EXPERIENCE	KAIST , Daejeon, Korea Mar. 2021 – Present <i>Post-doctoral Researcher</i> , Information and Electronics Research Institute <ul style="list-style-type: none"> • Advisor: Prof. In So Kweon • Researched multi-sensor system for robust depth estimation in changing environment. HikVision USA , CA, USA Jul. 2019 – Jan. 2020 <i>Research Intern</i> , HikVision Research America, Santa Clara, CA <ul style="list-style-type: none"> • Advisor: Dr. Zhe Hu • Researched RGB and LiDAR based non-local spatial propagation network for depth completion. KAIST , Daejeon, Korea Sep. 2017 – Dec. 2020 <i>Researcher</i> , Korea Electric Power Corporation (KEPCO) <ul style="list-style-type: none"> • Advisor: Prof. In So Kweon • Researched vehicular multi-sensor system for robust electric supply equipments detection and state inference. KAIST , Daejeon, Korea Jun. 2017 – Jan. 2018 <i>Researcher</i> , Electronics and Telecommunications Research Institute (ETRI) <ul style="list-style-type: none"> • Advisor: Prof. In So Kweon • Researched robust pose estimation under changing environment using deep local features. KAIST , Daejeon, Korea Jan. 2017 – Jan. 2018 <i>Researcher</i> , Electronics and Telecommunications Research Institute (ETRI) <ul style="list-style-type: none"> • Advisor: Prof. In So Kweon • Researched single image depth estimation using convolutional neural networks (CNN). 		

KAIST, Daejeon, Korea

Jul. 2016 – Aug. 2018

Researcher, Bosch Shared Sensing for Cooperative Cars

- Advisor: Prof. In So Kweon
- Researched place recognition algorithm using convolutional neural networks (CNN).

KAIST, Daejeon, Korea

Mar. 2014 – Dec. 2015

Researcher, Samsung Electronics (DMC research center)

- Advisor: Prof. In So Kweon (Sep. 2015 – Feb. 2016)
- Advisor: Prof. Yu-Wing Tai (Mar. 2014 – Aug. 2015)
- Researched depth distortion estimation and compensation for a commercial light-field camera
- Researched high-quality image generation from asymmetric stereo with catadioptric lens.

INTERNATIONAL JOURNALS

1. Donggeun Yoon*, **Jinsun Park*** and Donghyeon Cho, “Lightweight Deep CNN for Natural Image Matting via Similarity-Preserving Knowledge Distillation”, *IEEE Signal Processing Letters (SPL)*, Nov 2020. [* Equal Contribution]
2. Hae-Gon Jeon, Jaesik Park, Gyeongmin Choe, **Jinsun Park**, Yunsu Bok, Yu-Wing Tai and In So Kweon, “Depth from a Light Field Image with Learning-Based Matching Costs”, *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, Feb 2019.
3. Oleksandr Bailo, Francois Remeau, Kyungdon Joo, **Jinsun Park**, Oleksandr Bogdan and In So Kweon, “Efficient Adaptive Non-Maximal Suppression Algorithms for Homogeneous Spatial Keypoint Distribution”, *Pattern Recognition Letters (PRL)*, Apr 2018.

INTERNATIONAL CONFERENCES

1. **Jinsun Park**, Kyungdon Joo, Zhe Hu, Chi-Kuei Liu, In So Kweon, “Non-Local Spatial Propagation Network for Depth Completion”, *European Conference on Computer Vision (ECCV)*, Aug 2020.
2. Gyumin Shim, **Jinsun Park** and In So Kweon, “Robust Reference-based Super-Resolution with Similarity-Aware Deformable Convolution”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun 2020.
3. Ho-Deok Jang, Sanghyun Woo, Philipp Benz, **Jinsun Park** and In So Kweon, “Propose-and-Attend Single Shot Detector”, *IEEE Winter Conference on Applications of Computer Vision (WACV)*, Mar 2020.
4. **Jinsun Park**, Ukcheol Shin, Gyumin Shim, Kyungdon Joo, Francois Rameau, Junhyeok Kim, Dong-Geol Choi and In So Kweon, “Vehicular Multi-Camera Sensor System for Automated Visual Inspection of Electric Power Distribution Equipment”, *IEEE / RSJ International Conference on Intelligent Robots and Systems (IROS)*, Nov 2019.
5. Ukcheol Shin, **Jinsun Park**, Gyumin Shim, Francois Rameau and In So Kweon, “Camera Exposure Control for Robust Robot Vision with Noise-Aware Image Quality Assessment”, *IEEE / RSJ International Conference on Intelligent Robots and Systems (IROS)*, Nov 2019.
6. Donghyeon Cho, **Jinsun Park**, Tae-Hyun Oh, Yu-Wing Tai and In So Kweon, “Weakly- and Self-Supervised Learning for Content-Aware Deep Image Retargeting”, *IEEE International Conference on Computer Vision (ICCV)*, Oct 2017. [Spotlight Presentation]
7. **Jinsun Park**, Yu-Wing Tai, Donghyeon Cho and In So Kweon, “A Unified Approach of Multi-scale Deep and Hand-crafted Features for Defocus Estimation”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Jul 2017.

	<ol style="list-style-type: none"> 8. Donghyeon Cho, Jinsun Park, Yu-Wing Tai and In So Kweon, “Asymmetric stereo with catadioptric lens: High quality image generation for intelligent robot”, <i>IEEE International Conference on Ubiquitous Robots and Ambient Intelligence (URAI)</i>, Aug 2016. 9. Hae-Gon Jeon, Jaesik Park, Gyeongmin Choe, Jinsun Park, Yunsu Bok, Yu-Wing Tai and In So Kweon, “Accurate Depth Map Estimation from a Lenslet Light Field Camera”, <i>IEEE Conference on Computer Vision and Pattern Recognition (CVPR)</i>, Jun 2015.
OTHER PUBLICATIONS	<ol style="list-style-type: none"> 1. Francois Rameau, Oleksandr Bailo, Jinsun Park, Kyungdon Joo, Jaesung Choe and In So Kweon, “Real-time Demonstration of Collaborative Localization of a Swarm of Connected Vehicles ”, <i>International Workshop on Frontiers of Computer Vision (FCV)</i>, Feb 2018. [Best Demo Presentation Award] 2. Ole Johannsen, Katrin Honauer, Bastian Goldluecke, Anna Alperovich, Federica Battisti, Yunsu Bok, Michele Brizzi, Marco Carli, Gyeongmin Choe, Maximilian Diebold, Marcel Gutsche, Hae-Gon Jeon, In So Kweon, Jaesik Park, Jinsun Park, Hendrik Schilling, Hao Sheng, Lipeng Si, Michael Strecke, Antonin Sulc, Yu-Wing Tai, Qing Wang, Ting-Chun Wang, Sven Wanner, Zhang Xiong, Jingyi Yu, Shuo Zhang and Hao Zhu, “A Taxonomy and Evaluation of Dense Light Field Depth Estimation Algorithms ”, <i>IEEE Conference on Computer Vision and Pattern Recognition Workshop - Light Fields for Computer Vision (CVPRW-LF4CV)</i>, Jul 2017. 3. Jinsun Park and In So Kweon, “Single Image Depth Estimation using Convolutional Neural Networks with NCC-based Loss”, <i>International Workshop on Frontiers of Computer Vision (FCV)</i>, Feb 2017.
AWARDS	<ul style="list-style-type: none"> • Winner, Qualcomm Innovation Fellowship Korea Dec. 2020 • Best Demo Presentation Award, International Workshop on Frontiers of Computer Vision (FCV) Feb. 2018 • Academic Achievement Award, Hanyang University Jul. 2013 • National Full Scholarship, Korea Student Aid Foundation Mar. 2007 – Feb. 2014
IT SKILLS	<ul style="list-style-type: none"> • C, C++, Python, MATLAB, \LaTeX • PyTorch, TensorFlow, ROS
LANGUAGES	<ul style="list-style-type: none"> • Korean, English
TEACHING EXPERIENCE	<ul style="list-style-type: none"> • TA for Programming Structure for EE Sep. 2014 – Jun. 2019 • TA for Advanced Topics in Deep Learning for Robotics and Computer Vision Mar. 2018 – Jun. 2018 • TA for Signals and Systems Mar. 2017 – Aug. 2017 • TA for Signals and Systems Mar. 2014 – Aug. 2014