

Jaesik Park

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WORKING EXPERIENCES

Assistant Professor <i>Seoul National University</i>	Seoul, Republic of Korea <i>Sep. 2023 – Present</i>
Associate Professor <i>Pohang University of Science and Technology (POSTECH)</i>	Pohang, Republic of Korea <i>Sep. 2022 – Aug. 2023</i>
Assistant Professor <i>Pohang University of Science and Technology (POSTECH)</i> <ul style="list-style-type: none">Advised about 20 masters and Ph.D. studentsSelected as one of the POSTECH's Representative Research Achievements (2021)Received Outstanding Online Class Award (2020) and the Best EduTech Award (2021)	Pohang, Republic of Korea <i>April. 2019 – Aug. 2022</i>
Staff Research Scientist <i>Intelligent Systems Lab, Intel (Manager: Dr. Vladlen Koltun)</i> <ul style="list-style-type: none">Advised intern students from Stanford University, U.C. Berkeley, and Carnegie Mellon UniversityCo-creator of Open3D: open-sourced 3D vision library that is built from scratch (8.6+1.3k GitHub stars)	Santa Clara, CA, USA <i>Dec. 2015 – March 2019</i>
Post-Doc. Researcher <i>KAIST. (Mentor: Prof. In So Kweon)</i>	Daejeon, Republic of Korea <i>Aug. 2015 – Nov. 2015</i>
Research Intern <i>Microsoft Research. (Mentor: Dr. Sudepta N. Sinha)</i>	Redmond, WA, USA <i>June 2013 – Sep. 2013</i>
Research Intern <i>Microsoft Research Asia. (Mentor: Prof. Y. Matsushita)</i>	Beijing, China <i>April 2012 – Oct. 2012</i>

EDUCATION

Ph.D. and M.S. in Electrical Eng. <i>Korea Advanced Institute of Science and Technology (KAIST)</i> <ul style="list-style-type: none">Ph.D. thesis: Image-based 3D Modeling via Constrained Optimization (Advisor: Prof. In So Kweon, Co-advisor: Dr. Yu-Wing Tai)Master's thesis: Upsampling Low-resolution Image using Heterogeneous High-resolution Image (Advisor: Prof. In So Kweon)	Daejeon, Republic of Korea <i>Feb. 2009 – Aug. 2015</i>
B.E. in Media Communication Eng. <i>Hanyang University (Summa cum laude)</i>	Seoul, Republic of Korea <i>March. 2005 – Feb. 2009</i>

PUBLICATIONS

International

- [1] MinGuk Kang, Joonghyuk Shin, and **Jaesik Park**
StudioGAN: A Taxonomy and Benchmark of GANs for Image Synthesis
Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2023
- [2] Jaesung Choe, Christopher Choy, **Jaesik Park**, In So Kweon, and Animashree Anandkumar
Spacetime Surface Regularization for Neural Dynamic Scene Reconstruction
Int. Conf. on Computer Vision (**ICCV**), 2023
- [3] Joonghyuk Shin, Minguk Kang, and **Jaesik Park**
Fill-Up: Balancing Long-Tailed Data with Generative Models
2306.07200 (arXiv), 2023
- [4] Seungjoo Shin and **Jaesik Park**
Binary Radiance Fields
2306.07581 (arXiv), 2023

- [5] Seoyeon Kim, Minguk Kang, and **Jaesik Park**
RISCLIP: Referring Image Segmentation Framework using CLIP
2306.08498 (arXiv), 2023
- [6] Seungwook Kim, Chunghyun Park, Yoonwoo Jeong, **Jaesik Park**, and Minsu Cho
Stable and Consistent Prediction of 3D Characteristic Orientation via Invariant Residual Learning
Int. Conf. on Machine Learning (**ICML**), 2023
- [7] Minguk Kang, Jun-Yan Zhu, Richard Zhang, **Jaesik Park**, Eli Shechtman, Sylvain Paris, and Taesung Park
Scaling up GANs for Text-to-Image Synthesis
Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2023
(Accepted as a highlight paper (review score 5,5,5) - top 2.5% among 9,155 submissions)
- [8] Kwonyoung Ryu, Soonmin Hwang, and **Jaesik Park**
Instant Domain Augmentation for LiDAR Semantic Segmentation
Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2023
- [9] Kanghee Lee, Junha Lee, and **Jaesik Park**
Learning to Register Unbalanced Point Pairs
3D Vision and Robotics **CVPR workshop**, 2023
- [10] Jinoh Cho, Minguk Kang, Vibhav Vineet, and **Jaesik Park**
Instance-Aware Image Completion
AI for Content Creation (AI4CC) **CVPR workshop**, 2023
- [11] Rongrong Gao, Tian-Zhu Xiang, Chenyang Lei, **Jaesik Park**, and Qifeng Chen
Scene-level Point Cloud Colorization with Semantic-and-Geometric-aware Networks
IEEE Int. Conf. on Robotics and Automation (**ICRA**), 2023
- [12] Seungjoo Shin*, Min Woo Kim*, Kyong Hwan Jin, Kwang Moo Yi, Yoshiki Kohmura, Tetsuya Ishikawa, Jung Ho Je, and **Jaesik Park**
Deep 3D Reconstruction of Synchrotron X-ray Computed Tomography for Intact Lungs
published by Nature Research (**Scientific Reports**), 2023
(*Equal contribution)
- [13] Seokjun Ahn, Jungtaek Kim, Minsu Cho, and **Jaesik Park**
Sequential Brick Assembly with Efficient Constraint Satisfaction
2210.01021 (arXiv), 2022
- [14] Hyomin Kim, Hyeonseo Nam, Jungeon Kim, **Jaesik Park**, and Seungyong Lee
LaplacianFusion: Detailed 3D Clothed-Human Body Reconstruction
ACM (**SIGGRAPH Asia**), 2022
(Accepted as a journal track paper)
- [15] Yoonwoo Jeong*, Seungjoo Shin*, Junha Lee*, Christopher Choy, Animashree Anandkumar, Minsu Cho, and **Jaesik Park**
PeRFception: Perception using Radiance Fields
Conf. on Neural Information Processing Systems (**NeurIPS**) Datasets and Benchmarks Track, 2022
(*Equal contribution)
- [16] Nayeong Kim, Sehyun Hwang, Sungsoo Ahn, **Jaesik Park**, and Suha Kwak
Learning Debaised Classifier with Biased Committee
Conf. on Neural Information Processing Systems (**NeurIPS**), 2022
- [17] Seunghyuk Cho, Juyong Lee, **Jaesik Park**, and Dongwoo Kim
A Rotated Hyperbolic Wrapped Normal Distribution for Hierarchical Representation Learning
Conf. on Neural Information Processing Systems (**NeurIPS**), 2022
- [18] Seungwook Kim, Yoonwoo Jeong, Chunghyun Park, **Jaesik Park**, and Minsu Cho
SeLCA: Self-Supervised Learning of Canonical Axis
Symmetry and Geometry in Neural Representations (NeurReps), **NeurIPS workshop**, 2022
- [19] Jiye Kim, Seungbeom Lee, Dongwoo Kim, Sungsoo Ahn, and **Jaesik Park**
Substructure-Atom Cross Attention for Molecular Representation Learning
AI for Science: Progress and Promises (AI4Science) **NeurIPS workshop**, 2022

- [20] Juyong Lee*, Seokjun Ahn*, and **Jaesik Park**
Style-Agnostic Reinforcement Learning
 European Conf. on Computer Vision (**ECCV**), 2022
 (*Equal contribution)
- [21] Jaesung Choe*, Chunghyun Park*, Francois Rameau, **Jaesik Park**, and In So Kweon
PointMixer: MLP-Mixer for Point Cloud Understanding
 European Conf. on Computer Vision (**ECCV**), 2022
 (*Equal contribution)
- [22] Jaewon Kam, Jungeon Kim, Soongjin Kim, **Jaesik Park**, and Seungyong Lee
CostDCNet: Cost Volume based Depth Completion for a Single RGB-D Image
 European Conf. on Computer Vision (**ECCV**), 2022
- [23] Jinhwi Lee, Jungtaek Kim, Hyunsoo Chung, **Jaesik Park**, and Minsu Cho
Learning to Assemble Geometric Shapes
 Int. Joint Conf. on Artificial Intelligence (**IJCAI**), 2022
- [24] Hyunmin Lee and **Jaesik Park**
Instance-wise Occlusion and Depth Orders in Natural Scenes
 Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2022
- [25] Chunghyun Park, Yoonwoo Jeong, Minsu Cho, and **Jaesik Park**
Fast Point Transformer
 Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2022
- [26] Jaebong Jeong, Janghun Jo, Sunghyun Cho, and **Jaesik Park**
3D Scene Painting via Semantic Image Synthesis
 Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2022
- [27] Jungeon Kim, Hyomin Kim, Hyeonseo Nam, **Jaesik Park**, and Seungyong Lee
TextureMe: High-quality Textured Scene Reconstruction in Real-time
 ACM Transactions on Graphics (**ToG**), 2022
 (also presented at **SIGGRAPH2022**)
- [28] Jaesung Choe, Byeongin Joung, Francois Rameau, **Jaesik Park**, and In So Kweon
Deep Point Cloud Reconstruction
 Int. Conf. on Learning Representations (**ICLR**), 2022
- [29] Jae Shin Yoon, Zhixuan Yu, **Jaesik Park**, and Hyun Soo Park
HUMBI: A Large Multiview Dataset of Human Body Expressions and Benchmark Challenge
 Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2021
- [30] Junha Lee, Christopher Choy, and **Jaesik Park**
Putting 3D Spatially Sparse Networks on a Diet
 2112.01316 (arXiv), 2021
- [31] Wei Dong*, Kwonyoung Ryu*, Michael Kaess, and **Jaesik Park**
Revisiting LiDAR Registration and Reconstruction: A Range Image Perspective
 2112.02779 (arXiv), 2021
 (*Equal contribution)
- [32] Jinsoo Choi, **Jaesik Park**, and In So Kweon
Self-Supervised Real-time Video Stabilization
 British Machine Vision Conference (**BMVC**), 2021
- [33] Minguk Kang, Woohyeon Shim, Minsu Cho, and **Jaesik Park**
Rebooting ACGAN: Auxiliary Classifier GANs with Stable Training
 Conf. on Neural Information Processing Systems (**NeurIPS**), 2021
- [34] Hyunsoo Chung, Jungtaek Kim, Boris Knyazev, Jinhwi Lee, Graham W. Taylor, **Jaesik Park**, and Minsu Cho
Brick-by-Brick: Combinatorial Construction with Deep Reinforcement Learning
 Conf. on Neural Information Processing Systems (**NeurIPS**), 2021

- [35] Yoonwoo Jeong, Seokjun Ahn, Christopher Choy, Animashree Anandkumar, Minsu Cho, and **Jaesik Park**
Self-Calibrating Neural Radiance Fields
Int. Conf. on Computer Vision (**ICCV**), 2021
- [36] Junha Lee, Seungwook Kim, Minsu Cho, and **Jaesik Park**
Deep Hough Voting for Robust Global Registration
Int. Conf. on Computer Vision (**ICCV**), 2021
- [37] Hyomin Kim, Jungeon Kim, Jaewon Kam, **Jaesik Park***, and Seungyong Lee*
Deep Virtual Markers for Articulated 3D Shapes
Int. Conf. on Computer Vision (**ICCV**), 2021
(*Joint corresponding authors, **Oral** Presentation, 3.4% acceptance rate)
- [38] Hyunmin Lee and **Jaesik Park**
STAD: Stable Video Depth Estimation
IEEE Int. Conf. on Image Processing (**ICIP**), 2021
- [39] Taewon Jin, Taesoo Park, Ina Park, **Jaesik Park***, and Ji Hoon Shim*
Accelerated Crystal Structure Prediction of Multi-elements Random Alloy using Expandable Features
published by Nature Research (**Scientific Reports**), 2021
(*Joint corresponding authors)
- [40] Hyomin Kim, Jungeon Kim, Hyeonseo Nam, **Jaesik Park**, and Seungyong Lee
Spatiotemporal Texture Reconstruction for Dynamic Objects Using a Single RGB-D Camera
42nd Annual Conference of the European Association for Computer Graphics (**EuroGraphics**), 2021
- [41] Jinsoo Choi, **Jaesik Park**, and In So Kweon
High-quality Frame Interpolation via Tridirectional Inference
Winter Conf. on Applications of Computer Vision (**WACV**), 2021
- [42] Minguk Kang and **Jaesik Park**
ContraGAN: Contrastive Learning for Conditional Image Generation
Conf. on Neural Information Processing Systems (**NeurIPS**), 2020
- [43] Jungtaek Kim, Hyunsoo Chung, Minsu Cho, and **Jaesik Park**
Combinatorial 3D Shape Generation via Sequential Assembly
Machine Learning for Engineering Modeling, Simulation, and Design (ML4Eng), **NeurIPS workshop**, 2020
- [44] Jinhwi Lee*, Jungtaek Kim*, Hyunsoo Chung, **Jaesik Park**, and Minsu Cho
Fragment Relation Networks for Geometric Shape Assembly
Learning Meets Combinatorial Algorithms (LMCA), **NeurIPS workshop**, 2020
(*Equal contribution)
- [45] Zhixuan Yu, Jaeshin Yoon, Inkyu Lee, Prashanth Venkatesh, **Jaesik Park**, Jihun Yu, and Hyunsoo Park
HUMBI: A Large Multiview Dataset of Human Body Expressions
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2020
- [46] Christopher Choy, Junha Lee, Rene Ranftl, **Jaesik Park**, and Vladlen Koltun
High-Dimensional Convolutional Networks for Geometric Pattern Recognition
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2020
(**Oral** Presentation, 5.7% acceptance rate)
- [47] Yue Wu, Rongrong Gao, **Jaesik Park**, and Qifeng Chen
Future Video Synthesis with Object Motion Predictions
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2020
- [48] Christopher Choy*, **Jaesik Park***, and Vladlen Koltun
Fully Convolutional Geometric Features
Int. Conf. on Computer Vision (**ICCV**), 2019
(*Equal contribution)
- [49] Jungeon Kim, Hyomin Kim, **Jaesik Park**, and Seungyong Lee
Global Texture Mapping for Dynamic Objects
Pacific Graphics (**PG**), 2019

- [50] Wei Dong, **Jaesik Park**, Yi Yang, and Michael Kaess
GPU Accelerated Robust Scene Reconstruction
IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (**IROS**), 2019
- [51] 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**), 2019
- [52] Maxim Tatarchenko*, **Jaesik Park***, Vladlen Koltun, and Qian-Yi Zhou
Tangent Convolutions for Dense Prediction in 3D
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2018
(*Equal contribution. **Spotlight Oral** Presentation)
- [53] Qian-Yi Zhou, **Jaesik Park**, and Vladlen Koltun
Open3D: A Modern Library For 3D Data Processing
1801.09847 (arXiv), 2018
- [54] Byungtae Ahn, Dong-Geol Choi, **Jaesik Park**, and In So Kweon
Real-time Head Pose Estimation using Multi-task Deep Neural Network
Robotics and Autonomous Systems (**RAS**), 2018
- [55] **Jaesik Park**, Qian-Yi Zhou, and Vladlen Koltun
Colored Point Cloud Registration Revisited
Int. Conf. on Computer Vision (**ICCV**), 2017
- [56] Arno Knapitsch, **Jaesik Park**, Qian-Yi Zhou, and Vladlen Koltun
Tanks and Temples: Benchmarking Large-Scale Scene Reconstruction
ACM Transactions on Graphics (**SIGGRAPH**), 2017
- [57] Gyeongmin Choe, **Jaesik Park**, Yu-Wing Tai, and In So Kweon
Refining Geometry from Depth Sensors using IR Shading Images
International Journal of Computer Vision (**IJCV**), 2017
- [58] Seong heum Kim, Yu Wing Tai, Joon Young Lee, **Jaesik Park**, and In So Kweon
Category Specific Salient View Selection via Deep Convolutional Neural Networks
Computer Graphics Forum (**CGF**), 2017
- [59] **Jaesik Park**, Sudipta N. Sinha, Yasuyuki Matsushita, Yu-Wing Tai, and In So Kweon
Robust Multiview Photometric Stereo using Planar Mesh Parameterization
IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2016
- [60] Qian-Yi Zhou, **Jaesik Park**, and Vladlen Koltun
Fast Global Registration
European Conf. on Computer Vision (**ECCV**), 2016
(**Oral** Presentation, 1.8% acceptance rate)
- [61] **Jaesik Park**, Yu-Wing Tai, Sudipta N. Sinha, and In So Kweon
Efficient and Robust Color Consistency for Community Photo Collections
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2016
- [62] Hyowon Ha, Sunghoon Im, **Jaesik Park**, Hae-Gon Jeon, and In So Kweon
High-quality Depth from Uncalibrated Small Motion Clip
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2016
(**Oral** Presentation, 3.9% acceptance rate)
- [63] Inwook Shim, Seunghak Shin, Yunsu Bok, Kyungdon Joo, Dong-Geol Choi, Joon-Young Lee, **Jaesik Park**, Jun Ho Oh, and In So Kweon
Vision System and Depth Processing for DRC-HUBO+
IEEE Int. Conf. on Robotics and Automation (**ICRA**), 2016
(Depth processing algorithm of Team KAIST (winner of DARPA robotics challenge finals 2015))
- [64] Seong-Heum Kim, Yu-Wing Tai, **Jaesik Park**, and In So Kweon
Multi-view Object Extraction with Fractional Boundaries
IEEE Transaction on Image Processing (**TIP**), 2016

- [65] Hyowon Ha, **Jaesik Park**, and In So Kweon
Dense Depth and Albedo from a Single-shot Structured Light
Int. Conf. on 3D Vision (**3DV**), 2015
- [66] 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
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2015
- [67] SoonMin Hwang, **Jaesik Park**, Namil Kim, Yukyung Choi, and In So Kweon
Multi-modal Pedestrian Detection: Benchmark Dataset and Baselines
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2015
- [68] **Jaesik Park**, Hyeongwoo Kim, Yu-Wing Tai, Michael S. Brown, and In-So Kweon
High Quality Depth Map Upsampling and Completion for RGB-D Cameras
IEEE Transaction on Image Processing (**TIP**), 2014
- [69] Byungtae Ahn, **Jaesik Park**, and In So Kweon
Real-time Head Orientation from a Monocular Camera using Deep Neural Network
Asian Conf. on Computer Vision (**ACCV**), 2014
- [70] Jinsoo Choi, Byungtae Ahn, **Jaesik Park**, and In So Kweon
GMM-based Saliency Aggregation for Calibration-free Gaze Estimation
Int. Conf. on Image Processing (**ICIP**), 2014
- [71] Gyeongmin Choe*, **Jaesik Park***, Yu-Wing Tai, and In So Kweon
Exploiting Shading Cues in Kinect IR Images for Geometry Refinement
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2014
(*Equal contributions. Received 20th **HumanTech Paper Award (Silver Prize)**, Samsung Electronics Corp.)
- [72] **Jaesik Park**, Sudipta N. Sinha, Yasuyuki Matsushita, Yu-Wing Tai, and In So Kweon
Calibrating a Non-isotropic Near Point Light Source using a Plane
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2014
- [73] **Jaesik Park**, Sudipta N. Sinha, Yasuyuki Matsushita, Yu-Wing Tai, and In So Kweon
Multiview Photometric Stereo using Planar Mesh Parameterization
Int. Conf. on Computer Vision (**ICCV**), 2013
(Received 19th **HumanTech Paper Award (Silver Prize)**, Samsung Electronics Corp.)
- [74] **Jaesik Park**, Tae Hyun Oh, Jiyoung Jung, Yu-Wing Tai, and In So Kweon
Tensor Voting Approach for Multi-View 3D Scene-flow Estimation and Refinement
European Conf. on Computer Vision (**ECCV**), 2012
- [75] **Jaesik Park**, Joon-Young Lee, Yu-Wing Tai, and In So Kweon
Modeling Photo Composition and Its Application to Photo Re-arrangement
Int. Conf. on Image Processing (**ICIP**), 2012
- [76] **Jaesik Park**, Yu-Wing Tai, and In-So Kweon
Identigram/Watermark removal using cross-channel correlation
Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2012
- [77] Jiyoung Jung, Yekeun Jeong, **Jaesik Park**, Hyowon Ha, J. D. Kim, and In-So Kweon
A Novel 2.5D Pattern for Extrinsic Calibration of ToF and Camera Fusion System
IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (**IROS**), 2011
- [78] **Jaesik Park***, Hyeongwoo Kim*, Yu-Wing Tai, Michael S. Brown, and In-So Kweon
High Quality Depth Map Upsampling for 3D-TOF Cameras
Int. Conf. on Computer Vision (**ICCV**), 2011
(*Equal contributions)

Domestic

- [1] Jiye Kim, Seungbeom Lee, Dongwoo Kim, Sungsoo Ahn, and **Jaesik Park**
분자 표현학습을 위한 하부구조 인식 그래프 트랜스포머
한국멀티미디어학회 추계학술대회, Nov. 2022

- [2] Kanghee Lee, Junha Lee, and **Jaesik Park**
비균등 점군집 정합을 위한 계층적인 매칭 모듈
한국멀티미디어학회 추계학술대회, Nov. 2022
- [3] Jinoh Cho, Minguk Kang, and **Jaesik Park**
맥락에 부합하는 영상 완성 기법
한국멀티미디어학회 추계학술대회, Nov. 2022
- [4] Seokjun Ahn, Jinwhi Lee, Jungtaek Kim, Suhyeon Jeong, Seungwook Kim, **Jaesik Park**, and Minsu Cho
탐색 알고리즘을 활용한 순차적 조각 조립
제 34회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2022
- [5] Jaewon Kam, Jungeon Kim, Soongjin Kim, **Jaesik Park**, and Seungyoung Lee
실내 깊이 완성을 위한 3D 합성곱 기반의 절두체 합성곱
제 34회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2022
- [6] Wonjun Jin, Soongjin Kim, **Jaesik Park**, Seungyoung Lee, and Sunghyun Cho
GC-NeRF: 형상 제약을 활용한 효율적인 NeRF 학습
제 34회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2022
- [7] Junha Lee, Seungwook Kim, Minsu Cho, and **Jaesik Park**
계층적 허프 변환을 통한 포인트 클라우드 정합
제 33회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2021
(Received The Gold Prize)
- [8] Hyunmin Lee and **Jaesik Park**
일관된 비디오 뎀스 맵 추정을 위한 시간 어텐션 모듈
제 33회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2021
(Received The Silver Prize)
- [9] Hyunsoo Chung, Jungtaek Kim, Jinhwi Lee, **Jaesik Park**, and Minsu Cho
강화학습을 이용한 그래프 표현 기반의 3차원 물체 생성
제 33회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2021
- [10] Jungeon Kim, Hyomin Kim, **Jaesik Park**, and Seungyong Lee
동적 객체에 대한 전역 텍스처 맵 생성
제 32회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2020
- [11] Jungeon Kim, Hyomin Kim, **Jaesik Park**, and Seungyong Lee
메시 피라미드를 활용한 3차원 비강체 모델 텍스처 맵 생성
한국컴퓨터그래픽스학회, July 2019
- [12] Min-Hyun Kim, **Jaesik Park**, and In So Kweon
깊이 영상 처리를 위한 학습기반 신뢰도 추정 및 재질 분류
제 27회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2014
- [13] Junsik Kim, Kyungdon Joo, Tae-Hyun Oh, **Jaesik Park**, and In So Kweon
시야 공유가 없는 다중 카메라를 이용한 사람 추적
제 27회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2014
- [14] SoonMin Hwang, **Jaesik Park**, Namil Kim, Yukyung Choi, and In So Kweon
컬러-열영상 퓨전을 통한 강인한 보행자 검출 기법
제 27회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2014
- [15] Hae-Gon Jeon, **Jaesik Park**, Gyeongmin Choe, Jinsun Park, Yunsu Bok, Yu-Wing Tai, and In So Kweon
마이크로 렌즈 기반의 휴대용 라이트필드 카메라를 이용한 정확한 깊이 정보 추정방법
한국멀티미디어학회 춘계학술발표대회, May 2014
(Received the Best Paper Award)
- [16] Gyeongmin Choe, **Jaesik Park**, Hyowon Ha, and In So Kweon
키넥트 깊이 정밀도 개선을 위한 적외선 패턴 영상의 스테레오 정합
2013년도 한국 멀티미디어 학회 춘계학술 발표대회 논문집 제 16권 1호, May 2013

- [17] **Jaesik Park**, Tae Hyun Oh, Jiyoung Jung, Yu-Wing Tai, and In So Kweon
다시점 영상기반 3차원 움직임 추정기법
제 25회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2013
- [18] **Jaesik Park**, Yu-Wing Tai, and In So Kweon
컬러 영상의 홀로그램 및 워터마크 제거 기법
제 25회 영상처리 및 이해에 관한 워크샵 (IPIU), Feb. 2013
(Received the Best Paper Award)

PROGRAM COMMITTEE

- **Associate Editor**, Int. Conf. on Robotics and Automation (**ICRA**), 2024
- **Area Chair**, Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2024
- **Technical Papers Committee**, ACM (**SIGGRAPH Asia**), 2023
- **Area Chair**, Conf. on Neural Information Processing Systems (**NeurIPS**), 2023
- **Area Chair**, Int. Conf. on Computer Vision (**ICCV**), 2023
- **Associate Editor**, Int. Conf. on Robotics and Automation (**ICRA**), 2023
- **Area Chair**, Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2023
- **Area Chair**, European Conf. on Computer Vision (**ECCV**), 2022
- **Associate Editor**, IEEE Int. Conf. on Robotics and Automation (**ICRA**), 2022
- **Associate Editor**, IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (**IROS**), 2021
- **Area Chair**, Machine Vision Applications (MVA) conference, 2021
- **Area Chair**, Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2021
- **Area Chair**, Int. Conf. on Computer Vision (**ICCV**), 2021
- **Senior Program Committee**, Int. Joint Conf. on Artificial Intelligence (**IJCAI**), 2021
- **Senior Program Committee**, Assoc. for the Advancement of Artificial Intelligence (**AAAI**), 2021
- **Area Chair**, Int. Conf. on Computer Vision and Pattern Recognition (**CVPR**), 2020
- **Senior Program Committee**, Int. Joint Conf. on Artificial Intelligence (**IJCAI**), 2020
- **Area Chair**, Int. Conf. on Computer Vision (**ICCV**), 2019
- **Session Chair**, Int. Conf. on Computer Vision (**ICCV**), 2019
- Have been served as a reviewer for international conferences, such as **CVPR**, **ICCV**, **ECCV**, **ICLR**, **NeurIPS**, **AAAI**, **ICRA**, **IROS**, **SIGGRAPH**, **SIGGRAPH Asia**, **BMVC**, **3DV**, **ACCV**, **WACV**, and so on.
- Have been served as a reviewer for international journals, such as **TPAMI**, **TIP**, **TVCG**, **TRO**, **IJCV**, **CVIU**, **SPL**, **IVC**, **Neurocomputing**, and so on.

AWARDS

- **Representative ICT RnD Projects** in Recent Five Years (ICT RnD 사업 성과 중 우수과제), IITP (정보통신기획평가원), Republic of Korea, May 2022
- **CSE Young Scholar**, POSTECH Computer Science Engineering Department, Apr. 2022
- **Google Cloud Platform Credit Award**, Google LLC, USA, March 2022
- **28th HumanTech Paper Award (Silver Prize)**, Samsung Electronics Corp., Feb. 2022
- **Best EduTech Class Award**, POSTECH, *Awarded to the one online class among 480 classes*, Nov. 2021
- **Representative Research Achievements**, POSTECH, July 2021
- **Qualcomm Gift Grant**, Qualcomm Corporation, Dec. 2020

- **The 16th Samsung EM Paper Contest (Silver Prize)**, Samsung Electro-Mechanics, Dec. 2020
- **Outstanding Online Class**, Awarded to five classes among 170 classes, POSTECH, July 2020
- **Faculty Support Program**, Intel Corporation, June 2020
- **Google Season of Docs**, Google Corporation, *Technical writer support for Open3D*, Apr. 2019
- **Qualcomm Gift Grant**, Qualcomm Corporation, Sep. 2019
- Research Velocity Challenge Award, Intel Corporation, Dec. 2018
- Depth Estimation Challenge: Robustness Champion, CVPR workshop on Light Fields for Comp. Vis., July 2017
- **Qualcomm Innovation Award**, Qualcomm Korea Corp., March 2016
- CVPR 2015 Doctoral Consortium, IEEE CVPR, Apr. 2016
- **Honor Prize**, KAIST, *Annual Ph.D. Research Progress Evaluation*, May 2016
- Best Paper Award, Korea Multimedia Society, *2015 Spring Annual Conference*, May 2016
- **Honor Prize**, KAIST, *Annual Ph.D. Research Progress Evaluation*, May 2015
- **20th HumanTech Paper Award (Silver Prize)**, Samsung Electronics Corp., Feb. 2014
- **19th HumanTech Paper Award (Silver Prize)**, Samsung Electronics Corp., Feb. 2013
- Best Paper Award, 25th Workshop on Image Processing and Image Understanding (IPIU2013), Feb. 2013
- Bronze Prize, Samsung Techwin research center conference, Feb. 2012
- Excellent Intern Award, Microsoft Research Asia, Dec. 2012
- **Microsoft Research Asia Fellowship**, Microsoft, *Awarded to 11 Ph.D. students in the top Asian universities.*, Nov. 2011
- **Summa Cum Laude**, Hanyang University, *GPA 4.31/4.5*, Feb. 2009
- **Full Scholarship**, Jeong-Su Scholarship Foundation, Aug. 2006
- **Scholarship for Undergraduate Students**, The Korea Foundation for Advanced Studies (KFAS), June 2006
- **Full scholarship**, Hanyang University, Aug. 2005

PATENTS

- 대조 학습과 적대적 생성 신경망을 활용한 이미지 생성 및 편집 방법과 장치, Patent No. 10-2021-0076556, Republic of Korea (Application granted)
- Tangent Convolutions for 3D Data, US10572770B2, (Application granted)
- 깊이 정보 획득 장치 및 깊이 정보 획득 방법 (Depth Map Acquisition Device And Depth Map Acquisition Method), Patent No. 1018520850000, Republic of Korea, (Application granted)
- 삼차원 영상 정보 획득 방법 및 이를 구현한 컴퓨팅 장치 (Method For Acquiring Three Dimensional Image Information, And Computing Device Implementing The Same Method), Patent No. 1017652570000, Republic of Korea (Application granted)
- 전경 추출 방법 및 장치 (Foreground Area Extracting Method and Apparatus), Patent No. 10-2015-0084331, Republic of Korea.
- 다중 객체 추적 방법 및 이를 위한 장치 (Method Of Tracking Multiple Objects And Apparatus For The Same), Patent No. 10-2015-0070569, Republic of Korea
- 깊이 센서와 적외선 음영 영상을 이용한 고품질 3차원 정보 획득 장치 및 방법 (Device and method for obtaining accurate 3D information using depth sensor and infrared shading cues), Patent No. 1017079390000, Republic of Korea. (Application granted)
- 가려짐이 있는 환경에서 이동표적의 위치를 추정하는 방법 (Method for Estimating Location of Moving Target in Occluded Tracking Environment), Patent No. 1012883880000, Republic of Korea. (Application granted)
- 컬러 이미지의 채널간 상관관계를 이용하는 워터마크 제거 방법 (Method for removing watermark using cross-channel correlation of color image), Patent No. 1013952840000, Republic of Korea. (Application granted)

TEACHING

- CSED233 Data Structure, Spring, 2023
- AIGS537 Artificial Intelligence Data Science, Spring, 2023
- CSED703F Topics in AI: 3D Vision, Fall, 2022
- AIGS101 Artificial Intelligence Basis II, Fall, 2022
- CSED233 Data Structure, Spring, 2022
- AIGS101 Artificial Intelligence Basis I, Spring, 2022
- AIGS101 Artificial Intelligence Basis II, Fall, 2021
- CSED703F Topics in AI: 3D Vision, Fall, 2021
- AIGS101 Artificial Intelligence Basis I, Spring, 2021
- CSED538/AIGS538 Deep learning, **Awarded as the Best EduTech Class** by POSTECH, Spring, 2021
- AIGS101, Artificial Intelligence Basis II, Fall, 2020
- CSED100, Introduction to Computer Science Engineering, Fall, 2020
- CSED703F, 3D Vision, Fall, 2020
- CSED800/AIGS800, CSE/GSAI Colloquium, Fall, 2020
- AIGS101, Artificial Intelligence Basis I, Spring, 2020
- AIGS537/CSED537, Artificial Intelligence and Data Science Spring, Spring, 2020
- CSED233, Data Structure, **Awarded as the Outstanding Online Class** by POSTECH, Spring, 2020
- CSED703F-01 3D Vision, Fall, 2019

FUNDING

- *Few-shot 3D shape reconstruction*, Hyundai Motor Group, 2023.09-2024.08
- *Robust 3D LiDAR perception*, Hyundai Motor Group, 2023.06-2024.05
- 과학기술정보통신부 중견연구자 지원사업, Ministry of Science and ICT, Republic of Korea, 2023.03-2026.02
- *Efficient Neural Radiance Field*, Samsung Advanced Institute of Technology, 2022.12-2023.11
- *3D Perception for Intelligent Robots*, LG Electronics, 2022.06-2022.12
- *Multi-layered Visual Common Sense*, IITP (정보통신기획평가원), Republic of Korea, 2022.04-2026.12
- *3D reconstruction system*, Osstem Implant, Republic of Korea, 2022.07-2023.06
- *Discovering Visual Common Sense*, Qualcomm, USA, 2022.03-2023.03
- *High-fidelity 3D Reconstruction*, Intel Corp., USA, 2022.03-2023.03
- *Google Cloud Platform Credit Award*, Google LLC, USA, 2022.03
- 과학기술정보통신부, 인공지능혁신허브 연구개발, Ministry of Science and ICT, Republic of Korea, 2021.09-current
- *High-quality 3D reconstruction*, Osstem Implant, Republic of Korea, 2021.07-2021.12
- 문화체육관광부, 포스텍-한예중 문화기술선도대학원, Ministry of Culture, Sports and Tourism, Republic of Korea, 2021.06-2023.12
- *Camera localization*, Samsung Electronics Corp., 2021.05-2022.05
- 과학기술정보통신부, 시각적 상식에 기반한 영상 인페인팅, Ministry of Science and ICT, Republic of Korea, 2021.05-2024.05
- *LiDAR data augmentation*, Hyundai Motor Group, 2021.03-2021.09
- *InstaOrder dataset collection*, Select Star, Republic of Korea, 2021.03-2021.11

- *Team Open3D. Contributed Nearest Neighbor Module*, Intel Corp., USA, 2020.04-2022.02
- *3D content creation*, Microsoft Reserach Asia, People's Republic of China, 2020.06-2021.06
- *3D human capturing system*, ETRI, Republic of Korea, 2020.03-2020.10
- *과학기술정보통신부 신진연구자 지원사업 + 신진연구 최초혁신실험실*, Ministry of Science and ICT, Republic of Korea, 2020.03-2023.03
- *과학기술정보통신부, 인공지능대학원 지원사업 (POSTECH)*, Ministry of Science and ICT, Republic of Korea, 2020.02-current
- *Geometric perception from videos and images*, Qualcomm Corp., USA, 2019.10-2021.10
- *포항공과대학교 신임교수 초기정착비*, POSTECH, Republic of Korea, 2019.04-2022.02

TALKS

- *Towards NeRF at scale*, Seoul National University, Seoul, Republic of Korea, Aug. 2023
- *Storage Efficient Radiance Fields*, Electronics and Telecommunications Research Institute (**ETRI**), Daejeon, Republic of Korea, July 2023
- *Social Speed Mentoring, CVPR 2023*, Vancouver, Canada, June 2023
- *Generative AI가 산업에 미치는 영향과 성장 전략 - 패널토론, 인공지능 혁신 허브 콜로키엄*, Jeju, Republic of Korea, May 2023
- *NeRF의 최신 기술 동향, 춘계 방송과 미디어 기술 워크숍*, Seoul, Republic of Korea, May 2023
- *컴퓨터 비전을 위한 딥러닝 프로그래밍, 사단법인 한국컴퓨터비전학회*, Online Lecture, Feb. 2023
- *전자공학회 영상이해 연구회 겨울학교, 대한전자공학회*, Hoengseong, Republic of Korea, Jan. 2023
- *3D Vision and Open3D, Seoul National University*, Seoul, Republic of Korea (offline+online), Oct. 2022
- *Object Detection from Images or Point Clouds, LG Electronics*, Seoul (online), Republic of Korea, Aug. 2022
- *Fast Point Transformer, Harvard University*, Boston, MA, USA (online), June 2022
- *Self-Calibrating Neural Radiance Fields, Seoul National University*, Seoul, Republic of Korea (online), Feb. 2022
- *Self-Calibrating Neural Radiance Fields, DGIST*, Daegu, Republic of Korea (online), Aug. 2021
- *Object Detection from Images or Point Clouds, LG Electronics*, Seoul, Republic of Korea, Aug. 2021
- *Self-Calibrating Neural Radiance Fields, Korea Institute of Science and Technology (KIST)*, Virtual, June 2021
- *Mentor Session: How to Become a Professor, Conf. on Computer Vision and Pattern Recognition (CVPR 2021)*, Virtual, June 2021
- *Recent Work on Image Generation, GIST*, Gwangju, Republic of Korea (online), May 2021
- *Point Cloud Registration using Hierarchical Hough Transform, 33rd Workshop on Image Processing and Image Understanding (IPIU2021)*, Virtual, Feb. 2021
- *3D Representations and Detections, Chungbuk University*, Virtual, Jan. 2021
- *Introduction to Computer Vision, Kyungbuk Science High School*, Pohang, Republic of Korea, Aug. 2020
- *High-Dimensional Convolutional Networks for Geometric Pattern Recognition, KCCV 2020*, Seoul, Republic of Korea, Aug. 2020
- *Object Detection from Images or Point Clouds, LG Electronics*, Seoul, Republic of Korea, Aug. 2020
- *Geometric Pattern Recognition, 32nd Workshop on Image Processing and Image Understanding (IPIU2020)*, Feb. 2020
- *Fully Convolutional Geometric Features, Koh Young Technology, Yongin*, Republic of Korea, Dec. 2019
- *Open3D Tutorial and Fully Convolutional Geometric Features, Korea Electronics Technology Institute (KETI)*, Seongnam, Republic of Korea, Nov. 2019

- *Introduction to Computer Vision and Deep Learning*, **Daegu Science High School**, Daegu, Republic of Korea, Aug. 2019
- *3D Computer Vision and Open3D*, Int. Conf. on Machine Vision Applications (**MVA**), Tokyo, Japan, May 2019
- *3D Computer Vision and Open3D*, **Qualcomm Head Quater**, San Diego, USA, June 2019
- *3D reconstruction using Open3D*, Minneapolis, **University of Minnesota**, invited lecture for Multiview 3D Geometry in Computer Vision (CSCI 5980) Class, Apr. 2018
- *3D reconstruction using Open3D*, **Forma Technology** (now acquired by **Snap Inc.**), San Francisco, USA, March 2018

REFERENCE

- Up on request.