

Sunghoon Im

CONTACT INFORMATION	Room 211, Bldg N1, KAIST 291 Daehak-ro, Yuseong-gu, Daejeon 305-701 Republic of Korea	Tel.: +82-42-350-5465 E-mail: sunghoonim27@gmail.com Homepage: https://sunghoonim.github.io/
RESEARCH INTERESTS	<ul style="list-style-type: none">• 3D Computer Vision• Machine Learning• Computational Photography	
EDUCATION	KAIST , Daejeon, Korea Ph.D. Student, Electrical Engineering, Mar 2016 - Aug 2019 (Expected) <ul style="list-style-type: none">• Advisor: Prof. In So Kweon M.S., Electrical Engineering, Feb 2016 <ul style="list-style-type: none">• Thesis: "Structure from Small Motion for Hand-held Cameras"• Advisor: Prof. In So Kweon• GPA: 3.81/4.3 Sogang University , Seoul, Korea B.S., Electronic Engineering, Feb 2014 <ul style="list-style-type: none">• Summa cum laude (GPA: 3.91/4.3)	
RESEARCH EXPERIENCES	Microsoft Research Asia , Beijing, China <i>Research Intern</i> , Internet Graphics Group	Feb 2018 – Aug 2018
	KAIST , Daejeon, Korea <i>Research Assistant</i> , Robotics and Computer Vision Lab.	Mar 2014 – Present
PUBLICATIONS	International Journal <ol style="list-style-type: none">1. Sunghoon Im, Hae-Gon Jeon and In So Kweon, "Robust Depth Estimation using Auto-Exposure Bracketing", <i>IEEE Transactions on Image Processing (TIP)</i>, May 2019.2. Sunghoon Im, Hyowon Ha, Gyeongmin Choe, Hae-Gon Jeon, Kyungdon Joo and In So Kweon, "Accurate 3D Reconstruction from Small Motion Clip for Rolling Shutter Cameras", <i>IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)</i>, Apr 2019.3. Gyeongmin Choe, Seong-heum Kim, Sunghoon Im, Joon-Young Lee, Srinivasa Narasimhan and In So Kweon, "RANUS: RGB and NIR Urban Scene Dataset for Deep Scene Parsing", <i>IEEE Robotics and Automation Letters (RAL)</i>, Feb 2018.4. Seunghak Shin, Sunghoon Im, Inwook Shim, Hae-Gon Jeon, and In So Kweon, "Geometry Guided 3D propagation for Depth from Small Motion", <i>IEEE Signal Processing Letters (SPL)</i>, Dec 2017.	

International Conference

1. Hae-Gon Jeon, **Sunghoon Im**, Byeong-Uk Lee, Dong-Geol Choi, Martial Hebert and In So Kweon, “DISC: A Large-scale Virtual Dataset for Simulating Disaster Scenarios”, *IEEE/RSJ International Conference on Intelligence Robots and System (IROS)*, Nov 2019.
2. Seokju Lee, **Sunghoon Im**, Stephen Lin and In So Kweon, “Learning Residual Flow as Dynamic Motion from Stereo Video”, *IEEE/RSJ International Conference on Intelligence Robots and System (IROS)*, Nov 2019.
3. **Sunghoon Im**, Hae-Gon Jeon, Stephen Lin and In So Kweon, “DPSNet: End-to-end Deep Plane Sweep Stereo”, *International Conference on Learning Representations (ICLR)*, May 2019.
4. Byeong-Uk Lee, Hae-Gon Jeon, **Sunghoon Im** and In So Kweon, “Depth Completion with Deep Geometry and Context Guidance”, *IEEE International Conference on Robotics and Automations (ICRA)*, May 2019.
5. **Sunghoon Im**, Hae-Gon Jeon and In So Kweon, “Robust Depth Estimation from Auto Bracketed Images”, *In Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun 2018.
6. Jaeheung Surh, Hae-Gon Jeon, Yunwon Park, **Sunghoon Im**, Hyowon Ha and In So Kweon, “Noise Robust Depth from Focus using a Ring Difference Filter”, *In Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR) [Spotlight]*, Jul 2017.
7. **Sunghoon Im**, Hyowon Ha, Francois Rameau, Hae-Gon Jeon, Gyeongmin Choe and In So Kweon, “All-around Depth from Small Motion with A Spherical Panoramic Camera”, *In Proc. of European Conference on Computer Vision (ECCV)*, Oct 2016.
8. Hyowon Ha, **Sunghoon Im**, Jaesik Park, Hae-Gon Jeon and In So Kweon, “High-quality Depth from Uncalibrated Small Motion Clip”, *In Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR) [Oral]*, Jun 2016.
9. Hae-Gon Jeon, Joon-Young Lee, **Sunghoon Im**, Hyowon Ha and In So Kweon, “Stereo Matching with Color and Monochrome Cameras in Low-light Conditions”, *In Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun 2016.
10. **Sunghoon Im**, Hyowon Ha, Gyeongmin Choe, Hae-Gon Jeon, Kyungdon Joo and In So Kweon, “High Quality Structure from Small Motion for Rolling Shutter Cameras”, *In Proc. of IEEE International Conference on Computer Vision (ICCV)*, Dec 2015.
11. **Sunghoon Im**, Gyeongmin Choe, Hae-Gon Jeon and In So Kweon, “Depth from Accidental Motion using Geometry Prior”, *In Proc. of IEEE International Conference on Image Processing (ICIP) [Top 10% paper]*, Sep 2015.

Other Publications

1. Jaeheung Surh, Hae-Gon Jeon, Hyowon Ha, **Sunghoon Im** and In So Kweon, “Fast Depth from Defocus with Your Mobile Phone for Synthetic Defocus”, *In Proc. of the 28th Workshop on Image Processing and Image Understanding (IPIU)*, Feb 2016.
2. **Sunghoon Im**, Hae-Gon Jeon, Hyowon Ha and In So Kweon, “Depth Estimation from Light Field Cameras”, *In Proc. of the 12th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI)*, Oct 2015.

3. Dong-jin Kim, Donggeun Yoo, **Sunghoon Im**, Namil Kim, T. Sirinukulwattana and In So Kweon, “Relative Attributes with Deep Convolutional Neural Network”, *In Proc. of the 12th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI)*, Oct 2015.

REVIEWER	<ul style="list-style-type: none"> • Neurocomputing 2019 • IEEE International Conference on Computer Vision (ICCV) 2019 • IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019 • International Journal of Computer Vision (IJCV) • IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2017 • Journal of Institute of Control, Robotics and Systems (ICROS)
AWARDS	<ul style="list-style-type: none"> • Excellent Student Award, 2018 Research Performance Evaluation, KAIST EE, Apr 2019 • Best Poster Award, 2018 Samsung AI Forum, Samsung Research, Sep 2018 • Excellent Intern Award, Microsoft Research Asia (MSRA), Aug 2018 • Honor Student Award, 2017 Research Performance Evaluation, KAIST EE, Apr 2018 • Kim Choong-Ki Award, 2016 Research Performance Evaluation, KAIST EE, Apr 2017 • Best Poster Presentation Award, IPIU 2017 Feb 2017 • Qualcomm Innovation Award 2016, Qualcomm Korea Corp. and KAIST Mar 2016 • Silver prize, 22th HumanTech Paper Award, Samsung Electronics Co., Ltd. Feb 2016 • Best Poster Award, IWRCV 2015 General Chair Nov 2015 • Official Best 10% Paper Selection, ICIP 2015 Organizing Committee Sep 2015 • Design Project Competition(Silver Prize), Sogang University Nov 2013 • Prize for the top first percentile GPA, Sogang University Sep 2011, Feb 2012, Sep 2012
HONORS	<ul style="list-style-type: none"> • CVPR 2019 Doctoral Consortium Jun 2019 • ICLR 2019 Travel Award May 2019 • Microsoft Research Asia (MSRA) fellowship 2018 Winner Oct 2018 • Global Ph.D. Fellowship, National Research Foundation of Korea Aug 2016 - Present (about 20K USD/year + Full scholarship for 2+1 years) • International Computer Vision Summer School (ICVSS 2016), Sicily, Italy July 2016 • Summa Cum Laude, Sogang University Feb 2014 • Academic Excellence Scholarship, Sogang University Sep 2012 – Feb 2013 • Scholarship, Korea Scholarship Foundation Feb 2012 – Feb 2014
IT SKILLS	<ul style="list-style-type: none"> • Languages: Python, MATLAB, C, C++, \LaTeX • Deep Learning Framework: Pytorch, Torch, Tensorflow

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