

## Sunghoon Im

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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: <a href="mailto:sunghoonim27@gmail.com">sunghoonim27@gmail.com</a> Homepage: <a href="https://sunghoonim.github.io/">https://sunghoonim.github.io/</a>
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RESEARCH INTERESTS	<ul style="list-style-type: none"><li>• 3D Computer Vision</li><li>• Computational Photography</li><li>• Deep Learning</li></ul>
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EDUCATION	<p><b>KAIST</b>, Daejeon, Korea</p> <p>Ph.D. Student, Electrical Engineering, Mar 2016 - Present</p> <ul style="list-style-type: none"><li>• Advisor: Prof. In So Kweon</li></ul> <p>M.S., Electrical Engineering, Feb 2016</p> <ul style="list-style-type: none"><li>• Thesis: "Structure from Small Motion for Hand-held Cameras"</li><li>• Advisor: Prof. In So Kweon</li><li>• GPA: 3.81/4.3</li></ul> <p><b>Sogang University</b>, Seoul, Korea</p> <p>B.S., Electronic Engineering, Feb 2014</p> <ul style="list-style-type: none"><li>• Summa cum laude (GPA: 3.91/4.3)</li></ul>
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RESEARCH EXPERIENCES	<p><b>Microsoft Research Asia</b>, Beijing, China <i>Research Intern</i>, Internet Graphics Group Feb 2018 – Aug 2018</p> <p><b>KAIST</b>, Daejeon, Korea <i>Research Assistant</i>, Robotics and Computer Vision Lab. Mar 2014 – Present</p>
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PUBLICATIONS	<p><b>International Journal</b></p> <ol style="list-style-type: none"><li>1. <b>Sunghoon Im</b>, Hae-Gon Jeon and In So Kweon, "Robust Depth Estimation using Auto-Exposure Bracketing", <i>IEEE Transactions on Image Processing (TIP)</i>, Dec 2018.</li><li>2. <b>Sunghoon Im</b>, 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>, Mar 2018.</li><li>3. Gyeongmin Choe, Seong-heum Kim, <b>Sunghoon Im</b>, 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.</li><li>4. Seunghak Shin, <b>Sunghoon Im</b>, 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.</li></ol>
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### International Conference

1. **Sunghoon Im**, Hae-Gon Jeon, Steve Lin and In So Kweon, "DPSNet: End-to-end Deep Plane Sweep Stereo", *International Conference on Learning Representations (ICLR)*, May 2019.

2. **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.
3. 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.
4. **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.
5. 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.
6. 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.
7. **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.
8. **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

- 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

- 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

- 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 Seb 2012 – Feb 2013
- Scholarship, Korea Scholarship Foundation Feb 2012 – Feb 2014

#### IT SKILLS

- Languages: C, C++, MATLAB, L<sup>A</sup>T<sub>E</sub>X, Python, Lua