

Jaeheung Surh

CONTACT INFORMATION	NAVER Green Factory, 6 Buljeong-ro Bundang-gu, Seongnam-si, Gyeonggi-do 13561 Republic of Korea	Tel.: +82-10-9868-8239 E-mail: jae.surh@navercorp.com Website: jaeheungs.github.io
RESEARCH INTERESTS	<ul style="list-style-type: none">• Computational Photography• Image Processing• Stereo Matching• SLAM / SfM• Deep Learning	
WORK EXPERIENCE	Clova AI Research (OCR), NAVER Corp , Seongnam, Korea <i>Research Engineer</i> , March 2019 – Present <ul style="list-style-type: none">• Development of computer vision and image processing algorithms for OCR solutions• Development of deep learning models for OCR solutions• Development of lightweight deep learning models Center of Human-centered Interaction for Coexistence (CHIC) , Seoul, Korea <i>Researcher</i> , April 2017 – March 2019 <ul style="list-style-type: none">• Development of a high volume data transfer network framework for interactive and cooperative experience in networked VR• Development of computer vision solutions to aid in VR QoE	
EDUCATION	KAIST , Daejeon, Korea M.S., Electrical Engineering, Mar 2015 – Feb, 2017 <ul style="list-style-type: none">• Thesis: “Fast and Robust Depth from Focus using Ring Difference Filter”• Advisor: Prof. In So Kweon• Area of Study: Computer Vision KAIST , Daejeon, Korea B.S., Electrical and Electronic Engineering, Sept 2011 – Feb 2015 <ul style="list-style-type: none">• Thesis: “Multi-Threading for Accelerated Belief Propagation on Bipartite Graphs”• Emphasis on computer science and network programming• Early graduation (1 semester)	
RESEARCH EXPERIENCE	Clova AI Research , Seoul, Korea <i>Research Engineer</i> , Clova AI Research (OCR) March 2019 – Present <ul style="list-style-type: none">• Researched new computer vision solutions for document analysis and OCR.• Researched novel deep learning training methods.• Researched efficient deep learning model representations and inference methods. Human-Centered Interaction for Coexistence Project , Seoul, Korea <i>Researcher</i> , CHIC April 2017 – March 2019 <ul style="list-style-type: none">• Researched new computer vision solutions to aid in VR QoE.• Researched novel synchronization protocols to aid in networked multimedia QoE. National Core Research Center (NCRC) , Daejeon, Korea <i>Researcher</i> , Personal Plug and Play DigiCar Center Aug 2015 – Feb 2017 <ul style="list-style-type: none">• Researched new camera systems for future vehicles.	

INTERNATIONAL
JOURNALS

1. **Jaheung Surh**, Hae-Gon Jeon, Sunghoon Im, and In So Kweon, “Ring Difference Filter for Fast and Noise Robust Depth from Focus,” *IEEE Transactions on Image Processing (TIP)*, Accepted.

INTERNATIONAL
CONFERENCES

1. Tae-Young Lee, Eunmi Lee, **Jaheung Surh**, Joong-Jae Lee, Bum-Jae You, “Balanced Clock Skew Compensation for Immersive Networked Interactions Based on Inter Media Synchronization Level,” *In Proc. of the IEEE Computer science and Electronic Engineering Conference (CEEC)* [**Oral Presentor**], September 2018.
2. **Jaheung Surh**, Hae-Gon Jeon, Hyowon Ha, Sunghoon Im and In So Kweon, “Noise Robust Depth from Focus using a Ring Difference Filter,” *In Proc. of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* – 29% acceptance rate) [**Spotlight Presentation – 5% of submissions**], July 2017.
3. Bokyoung Lee, Jiwoo Hong, **Jaheung Surh** and Daniel Saakes, “Ori-mandu: Korean Dumpling into Whatever Shape You Want,” *In Proc. of the ACM SIGCHI Conference on Designing Interactive Systems (DIS)* – 22% acceptance rate) [**Pictorial**], June 2017.
4. Bokyoung Lee, Jiwoo Hong, **Jaheung Surh** and Daniel Saakes, “Ori-mandu: Korean Dumpling into Whatever Shape You Want,” *In Proc. of the ACM CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI)* – 25% acceptance rate) [**Video Showcase**], May 2017.

OTHER
PUBLICATIONS

1. **Jaheung 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.

TALKS

- “Fast and Noise Robust Depth from Focus using Ring Difference Filter with Your Mobile Phone,” (**Naver D²**), YouTube video: <https://bit.ly/RDFNaver>, Sept 2017.

IT SKILLS

- Languages: C/C++, MATLAB, C#, \LaTeX , Python, JAVA
- Experience with Linux and socket programming
- Experience with Tensorflow, PyTorch, and MXNet
- Experience with Unity (C#) and VR development
- Computer hardware enthusiast