Jaeheung Surh

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RESEARCH INTERESTS

- Computational Photography
- Image Processing
- Stereo Matching
- Deep Learning

WORK EXPERIENCE

Center of Human-centered Interaction for Coexistence (CHIC), Seoul, Korea

Research Engineer

- 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

- 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

- Emphasis on network programming
- Early graduation (1 semester)

RESEARCH EXPERIENCE

Human-Centered Interaction for Coexistence Project, Seoul, Korea

Researcher, CHIC

April 2017 - Present

• Researched new computer vision solutions to aid in VR QoE.

National Core Research Center (NCRC), Daejeon, Korea

Researcher, Personal Plug and Play DigiCar Center

Aug 2015 – Feb 2017

• Researched new camera systems for future vehicles.

INTERNATIONAL CONFERENCES

- Jaeheung 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.
- 2. Bokyung Lee, Jiwoo Hong, **Jaeheung 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.
- Bokyung Lee, Jiwoo Hong, Jaeheung 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. **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.

TALKS

• "Fast and Noise Robust Depth from Focus using Ring Difference Filter with Your Mobile Phone," (Naver D²), YouTube video, Sept 2017.

IT SKILLS

- Languages: C/C++, MATLAB, C#, LATEX, Python, JAVA
- Experience with Linux and socket programming
- Experience with Tensorflow
- Experience with Unity (C) and VR development