

# Yaesol Kim

COMBINED M.S./PH. D. STUDENT IN COMPUTER GRAPHICS LAB AT EWHA WOMANS UNIVERSITY

25, Nambusunhwan-ro 381-gil, Gangnam-gu, Seoul, Rep. of KOREA, 06274

☎ (+82) 10-3073-0715 | ✉ kimyaesol@gmail.com

## Research Interests

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**Human Robot Interaction, Haptics, Virtual Reality, Robot Motion Planning, Human Computer Interaction**

## Education

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### Ewha Womans University

COMBINED M.S./PH.D IN COMPUTER SCIENCE AND ENGINEERING

Seoul, Korea

Mar. 2016 - CURRENT

### Ewha Womans University

B.S. IN COMPUTER SCIENCE AND ENGINEERING

Seoul, Korea

Mar. 2012 - Feb. 2016

## Experience

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### Ewha Womans University

TEACHING ASSISTANT – “NUMERICAL METHODS”

Seoul, Korea

Spring 2017, Spring 2016

- Graded all written assignments and responded to the questions of the students.

### Ewha Womans University

RESEARCH ASSISTANCE (PROF. YOUNG J. KIM)

Seoul, Korea

Jan. 2016 - Dec. 2016

- Implemented a virtual moon experience system as a part of the virtual space exploration project.
- Researched encountered-type haptic display using 7-DoF manipulator.

### Ewha Womans University

TEACHING ASSISTANT – “COMPUTER GRAPHICS”

Seoul, Korea

Fall 2016

- Gave lectures on OpenGL basis.
- Graded all programming assignments and responded to the questions of the students.

### Computer Graphics Lab, Ewha Womans University

UNDERGRADUATE INTERN

Seoul, Korea

Mar. 2015 - Feb. 2016

- Researched virtual moon experiences with video-based crowd animation.

### Embedded Software Lab, Ewha Womans University

UNDERGRADUATE INTERN

Seoul, Korea

Dec. 2014 - Feb. 2015

- Worked on long-tail watchdog timer for high availability on STM32F4-based real-time embedded system.

### SAMSUNG Electronics

INTERN AT VISUAL DISPLAY BUSINESS

Suwon, Korea

Jan. 2014 - Aug. 2014

- Developed testing application for validating Tizen API on SAMSUNG Smart TV.

## Publications

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### International Journal

**Yaesol Kim**, Siyeon Kim, Uran Oh, and Young J. Kim, Synthesizing the Roughness of Textured Surfaces for an Encountered-type Haptic Display using Spatiotemporal Encoding (**under review**).

**Yaesol Kim**, Hyun Jung Kim, Young J. Kim, Encountered-type haptic display for large VR environment using per-plane reachability maps, Computer Animation and Virtual Worlds (CASA 2018 Special Issue), 2018 (cover image).

### Domestic Patent

Young J. Kim, **Yaesol Kim**, 2016, Virtual space experiencing apparatus, Registration No. 1017511760000

### Domestic Conference

**Yaesol Kim**, Gahye Park, Yun-hyeong Kim, Young J. Kim, Virtual Moon Experiences with Video-based Crowd Animation, HCI Korea, Jan 2016.

### Domestic Journal

Hayeon Choi, Jiwan Yun, Seoyeon Park, **Yaesol Kim**, Sangsoo Park, Long-Tail Watchdog Timer for High Availability on STM32F4-Based Real-Time Embedded Systems, Journal of Korea Multimedia Society Vol. 18, No. 6, June 2015, pp. 723-733.

## Presentation

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### Korea Haptics Community Workshop

POSTER PRESENTATION

*Korea*

*Aug. 2019*

- **Yaesol Kim**, Young J. Kim, Encountered-type Haptic Texture Display using Collaborative Robot

### Korea Robotics Society Annual Conference

POSTER PRESENTATION

*Korea*

*Jan. 2018*

- **Yaesol Kim**, Young J. Kim, Encountered-type Haptic Display for VR Environment using Per-plane Reachability Maps

### Korea Haptics Community Workshop

POSTER PRESENTATION

*Korea*

*Nov. 2016*

- **Yaesol Kim**, Young J. Kim, Versatile Encountered-type Haptic Display for VR Environment using a 7-DoF Manipulator

### International Conference on Intelligent Robots and Systems

POSTER PRESENTATION

*Korea*

*Oct. 2016*

- **Yaesol Kim**, Young J. Kim, Versatile Encountered-type Haptic Display for VR Environment using a 7-DoF Manipulator

### HCI Korea

ORAL PRESENTATION

*Korea*

*Jan. 2016*

- **Yaesol Kim**, Gahye Park, Yun-hyeong Kim, Young J. Kim, Virtual Moon Experiences with Video-based Crowd Animation

### Korea Software Conference

POSTER PRESENTATION

*Korea*

*Oct. 2015*

- Jaen Ku, **Yaesol Kim**, Yoonsun Lim, Sooyeol Yang, Real-time Compensation Algorithm for Localization Using iBeacon

### Korea Computer Graphics Society

POSTER PRESENTATION

*Korea*

*Jul. 2015*

- Yun-hyeong Kim, **Yaesol Kim**, Gahye Park, Young J. Kim, Video-based Crowd Animation on Moon Surface

## Technical Skills

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**Programming Languages:** C, C++, C, Java, Python, Matlab, LaTeX, R, HTML

**Robotic Programming:** ROS, OMPL, Gazebo, Rviz, KUKA IIWA

**Motion Capture:** Kinect v1, Kinect v2, Leap Motion, OpenCV

**Virtual Reality:** Unity3D, Oculus SDK

**Others:** Experience with OpenGL, RaspberryPi, Arduino, Android

## Honors & Awards

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2015	<b>Bronze Prize and Scholarship for Portfolio Contest</b> , Accreditation Board for Engineering Education of Korea	Seoul, Korea
2015	<b>Gold Prize for Portfolio Contest</b> , Dep of CSE, Ewha Womans University	Seoul, Korea
2015	<b>Bronze Prize for Capstone Design Contest</b> , Dep of CSE, Ewha Womans University	Seoul, Korea

## Extracurricular Activity

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### Deep Learning Tutorials, National Association of Cognitive Science Industries

Seoul, Korea

STUDENT

Apr. 2016

- Solve the given problems using deep learning tools such as Caffe, Theano, and TensorFlow.

### Arduino Tutorial, Rnu Corporation

Seoul, Korea

STUDENT

Jan. 2016

- Complete the curriculum on Arduino & IoT sensing and wireless control.

### Seoul Accord Tutor Program

Seoul, Korea

TUTOR

Jun. 2015 - Aug. 2015

- Acted as a tutor on embedded system and experiments.

### YDP Education for scientifically gifted student

Seoul, Korea

TEACHING ASSISTANT

Jun. 2015

- Gave a lecture on virtual reality and tutorial class about Unity 3D.

### E-COPS Security club

Seoul, Korea

MEMBER

Sep. 2013 - Jun. 2015

- Gained knowledge about information security and cryptography.

### Hansori Band club

Seoul, Korea

MEMBER

Mar. 2012 - Sep. 2012

- Took an electronic guitar session.