

# Yaesol Kim

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

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**Human Robot Interaction, Haptics, Virtual Reality, 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 rendering 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.
- Implemented motion-based character controller which maps the user motion and pre-computed 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.

## Technical Skills

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**Programming Languages:** Experience with C, C++, C#, Java, Python, Matlab

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

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

**Virtual Reality:** Experience with Unity3D, Oculus SDK

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

## Publications

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### International Journal

**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 (appeared as the cover image of CAVW).

### Domestic Patent

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

### Domestic Conference Paper

**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

Seoul, Korea

POSTER PRESENTATION

Aug. 2019

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

### Korea Robotics Society Annual Conference

Gangwon-do, Korea

POSTER PRESENTATION

Jan. 2018

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

### IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

Daejeon, Korea

POSTER PRESENTATION

Oct. 2016

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

### Korea Software Conference

Gangwon-do, Korea

POSTER PRESENTATION

Oct. 2015

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

### Korea Computer Graphics Society

Gangwon-do, Korea

POSTER PRESENTATION

Jul. 2015

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

## 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.