Jeeseop Kim

CURRENT
AFFILIATION

Ph.D. Student at the Department of Mechanical Engineering,
Virginia Polytechnic Institute and State University

CONTACT
INFORMATION

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EDUCATION

Seoul National University, Seoul, Korea

M.S., Dept. of Transdisciplinary Studies, March, 2017
Major in Intelligent Systems

- Lab: Dynamic Robotic Systems Lab (DYROS Lab)
- Advisor: Professor Jaeheung Park

Seoul National University, Seoul, Korea

B.S., Mechanical Engineering, March, 2014

RESEARCH
EXPERIENCE

During Ph.D. student

Graduate Research Assistant   **2017 - Presence**
- funded project from Office of Naval Research (ONR)
- Newly designed easy handling humanoid robot
- Developing the whole body controller that can perform multi contact

Graduate Research Assistant   **2018 - Presence**
- funded project from Mahindra & Mahindra
- Newly designed grape harvesting robot

Graduate Research Assistant   **2018 - Presence**
- Participating MBZIRC 2020 as a Virginia tech student member

During M.S. student

Development of humanoid state estimation system   **2015 - 2017**
- Propose the speed reduction gear elasticity model
- Propose the compensation technique to reduce the gear elasticity impact

Artificial intelligence robot CPR system   **2014 - 2017**
- Robot manipulator to perform CPR in emergency situations
- Automatic System based biological data from a patient
- Simulation on mannequin and animal test

Development of humanoid systems for DARPA Robotics Challenge qualification   **2014 - 2015**
- Affiliated in Team SNU
- Development of basic humanoid control framework and balancing library
- No falling down during the competitions and 12th in DRC Finals 2015

Performance Team Leader of the Robot Part   **Aug 2014 - Oct 2014**
- Title: Moon, The Thousand Visages - 2014 Seoul Performing Arts Festival
- Conducted a study for walking on the deformable floor of the theater

INTERNSHIP EXPERIENCE	**Dynamic Robotic systems Laboratory, Seoul National University**, Seoul Korea

INTERNSHIP
EXPERIENCE

Dynamic Robotic systems Laboratory, Seoul National University, Seoul Korea
Walking trajectory planning based on inverse kinematics   **June 2013 - Sept 2013**
- walking simulation using Inverse Kinematics based on Windows
- Planning COM trajectory from ZMP trajectory using differential equations

TECHNICAL SKILLS

- Using C/C++ and Matlab for programming and verifying control frameworks.
- Using ROS for research platform and hardware implementation.
- RBDL, Eigen Library

HONORS AND
AWARDS

Best presentation award in Institute of Control, Robotics and Systems (ICROS), 2016.

INTERNATIONAL
CONFERENCE
ARTICLES

J. Kim, Y. Omori, A. Sifat, and T. Furukawa. Adjustably Designed Torque Controlled Humanoid Platform, International Conference on Control, Automation, Robotics and Vision Engineering, Washington DC, USA, 21-22 Nov, 2018.

J. Kim, M. Kim, and J. Park. Improvement of Humanoid Walking Control by Compensating Actuator Elasticity, International Conference on Humanoid Robots, Cancun, Mexico, 15-17 Nov, 2016.

J. Jung, **J. Kim**, S. Kim, W. Kwon, S. Na, K. Kim, J. Lee, G. Suh, and J. Park. Application of Robot Manipulator for Cardiopulmonary Resuscitation, International Symposium on Experimental Robotics, Tokyo, Japan, 3-6 Oct, 2016.

DOMESTIC
CONFERENCE
ARTICLES

J. Kim, M. Kim, and J. Park, Improvement of Humanoid gait stability using reduction gear deformation model, The 31st Institute of Control, Robotics and Systems (ICROS), Korea, 2016.