Jeeseop Kim

Contact Information

Email: jeeseop@vt.edu
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310 Goodwin Hall, Virginia Tech
Blacksburg, VA 24061, USA

Academic History

Ph.D. Candidate in Mechanical Engineering — September 2017 - Expected in 2022
advisor: Prof. Kaveh Akbari Hamed
Virginia Polytechnic Institute and State University, USA

M.S. in Transdisciplinary Studies (Intelligent Systems) — March, 2017
advisor: Prof. Jaeheung Park
Seoul National University, South Korea

B.S. in Mechanical and Aerospace Engineering — March, 2014
Seoul National University, South Korea

Professional Experience

Graduate Research Assistant — Aug. 2019 - Present
Dept. of Mechanical Engineering, Virginia Tech, Blacksburg, USA
Advisor: Prof. Kaveh Akbari Hamed

Graduate Research Assistant — Aug. 2017 - Jul. 2019
Dept. of Mechanical Engineering, Virginia Tech, Blacksburg, USA
Advisor: Prof. Tomonari Furukawa

Graduate Research Assistant — Jan. 2014 - Jul. 2017
Dept. of Transdisciplinary Studies, Seoul National University, South Korea
Advisor: Prof. Jaeheung Park

Undergraduate Research Assistant — Jun. 2013 - Sep. 2013
Dynamic Robotic Systems Lab, Seoul National University, South Korea
Supervisor: Prof. Jaeheung Park

Undergraduate Research Assistant — Mar. 2012 - Feb. 2013
Biorobotics Lab, Seoul National University, South Korea
Supervisor: Prof. Kyu-Jin Cho

Teaching Experience

Teaching Assistant
Dept. of Mechanical Engineering, Virginia Tech, Blacksburg, USA
ME5524: Bayesian Robotics
ME5984: Advanced Experimental Robotics

Teaching Assistant
Dept. of Transdisciplinary Studies, Seoul National University, South Korea
493.601: Convergent Robotics Technology
493.611: Dynamics and Control of Robot-Environment Interaction

Patent

[*P*2] **Jeeseop Kim**, *et al*, Automatic cardiopulmonary resuscitation device and control method therefor, 2019. No. 20190029919A1 (US Patent), No. 108697572A (CN Patent), No. 3409258A1

(EU Patent)

[$P1$] **Jeeseop Kim**, *et al*, Apparatus for automatic cardiovascular pulmonary resuscitation, 2016. Korea Patent No.10-2016-0172286.

Peer-Reviewed Journal Articles

In preparation

[$J5$] **J. Kim**, and K. Akbari Hamed, Collaborative locomotion with communication delay via distributed MPC, In preparation, January, 2022.

Accepted

[$J4$] **J. Kim**, and K. Akbari Hamed, Cooperative locomotion via supervisory predictive control and distributed nonlinear controllers, ASME Journal of Dynamic Systems, Measurement, and Control, Accepted to Appear, October 2021.

Published

[$J3$] R. T. Fawcett, A. Pandala, **J. Kim**, and K. Akbari Hamed, Real-time planning and nonlinear control for quadrupedal locomotion with articulated tails, ASME Journal of Dynamic Systems, Measurement, and Control, Vol. 143, Issue. 7, pp. 071004-1-071004-15, Jul, 2021.

[$J2$] K. A. Hamed, **J. Kim**, A. Pandala, Quadrupedal locomotion via event-based predictive control and QP-based virtual constraints, IEEE Robotics and Automation Letters, Vol. 5, Issue. 3, pp. 4463-4470, Jul, 2020.

[$J1$] **J. Kim**, Y. Omori, A. Sifat, and T. Furukawa, Adjustably designed torque controlled humanoid platform, International Journal of Mechanical and Production Engineering, Vol. 7, Issue. 2, pp. 52-57, May, 2019.

Peer-Reviewed Conference Articles

Published

[$C4$] **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.

[$C3$] **J. Kim**, M. Kim, and J. Park, Improvement of humanoid walking control by compensating actuator elasticity, International Conference on Humanoid Robots (ICHR), Cancun, Mexico, 15-17 Nov, 2016.

[$C2$] 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 (ISER), Tokyo, Japan, 3-6 Oct, 2016.

[$C1$] **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), Seoul, Korea, 10-11 Mar, 2016.

Honors

Awards

The Best Presentation Award, Institute of Control, Robotics and Systems 2016	2016
Darpa Robotics Challenge DRC Finalist	2015
The Best Presentation Award from Bachelor Thesis Presentation, Seoul National University	2012

Graduate Fellowship

Research Assistant Scholarships, Virginia Tech, Blacksburg, USA	Jul. 2017 - present
Gwan-ak Scholarship, Seoul National University, Seoul, South Korea	Mar. 2014 - Feb. 2015

Undergraduate Fellowship
National Scholarship from Korea Student Aid Foundation, South Korea Mar. 2009 - Feb. 2010

Academic Services

Reviewer
IEEE American Control Conference (ACC), 2022
IEEE International Conference on Robotics and Automation (ICRA), 2022
IEEE Conference on Decision and Control (CDC), 2021
IEEE International Conference on Intelligent Robots and Systems (IROS), 2021
IEEE International Conference on Robotics and Automation (ICRA), 2021
IEEE Conference on Decision and Control (CDC), 2020
IEEE International Conference on Robotics and Automation (ICRA), 2020

Professional Skills

- ○ Robotics
- ○ Autonomous Robots
- ○ Robot Locomotion
- ○ Cooperative Robotics
- △ Control Theory
- △ Nonlinear Control
- △ Distributed Control
- □ Hybrid Dynamical Systems
- □ Multiagent Systems
- □ Optimization

Technical skills

Operating Systems: Ubuntu(Linux), ROS
Programming Language: C/C++, Python, MATLAB
Design and Simulation Software: Solidworks, Unigraphics(NX)

References available upon request

last Updated: November 1, 2021