HUBERT KIM

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SUMMARY

Ph.D. candidate trained for 4+ years in the start-up robotics laboratory, with hands-on experience of the robot development and ability to lead a project independently. Expertise in the following fields:

- Embedded Systems Programming
- Signal Processing
- Fast Prototyping Wearable Device
- Human Subject Research

EDUCATION

Virginia Polytechnic Institute and State University *Blacksburg, VA*
Ph.D., Mechanical Engineering Expected 2020
- Dissertation: *Joint Torque Feedback for Arm Motion Training*
- ICTAS Doctoral Scholarship (4-year graduate fellowship)

New York University Tandon School of Engineering *Brooklyn, NY*
B.S., *cum laude*, Mechanical Engineering (Minor in Mathematics) May 2015
- Thesis: *Voltage attenuation along the electrodes of ionic polymer metal composites*
- Awarded for Best Mechanical Engineering Experience for Undergraduate

RESEARCH EXPERIENCE

Ph.D. Researcher | Virginia Polytechnic Institute and State University *Blacksburg, VA*
- Explore kinesthetic cue as a means of haptic information transfer May 2015 - Present
- Fabricated a direct-driving haptic exoskeleton
- Realized psychophysics tools in GUI and conducted human subject testing
- Supervised 3 senior design teams (including Cornell Cup Robotics) and trained 2 M.S. Students

Undergraduate Researcher | New York University Tandon School of Engineering *Brooklyn, NY*
- Built various testbeds on signal processing applications for smart materials 2013 - 2015
- Analyzed transfer functions of the smart materials in oscillatory motion
- Published 5 journal papers (1 first-author, 1 co-author, 3 second-author)
- Passed NCEES: FE exam, NY 2015

Undergraduate Student | New York University Tandon School of Engineering *Brooklyn, NY*
Capstone Project 2014 - 2015
- Built a tendon-actuated manipulator to detect and grab the spinning object
- Developed an Arduio-based robotic arm with a flex sensor
- Presented at AerosPACE Epic Challenge Student Exposition, NASA Langley Research Center

SKILLS

Embedded systems programming	Code Composer Studio, C++, JavaScript
Data analysis & Numerical simulation	MATLAB
3D CAD	NX, Solidworks
Language	Korean, English (dual citizenship: ROK and USA)

PUBLICATIONS AND PRESENTATIONS

- 2 first-author PUB: ICRA(2019, Accepted), J.of Intell Mater Syst Struct(2016)
- 1 poster PRESN: IROS(2016)
- 4 co-author PUB: Renew. Energy(2015), Smart Mater Struct(2014, 2013), Mater(2014)