

Yongseok Kwon

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EDUCATION

University of Michigan, Ann Arbor, MI

M.S.E in Mechanical Engineering

Aug. 2020 – Present

Ulsan National Institute of Science and Technology (UNIST), Ulsan, Republic of Korea

B.S. in Mechanical and Aerospace Engineering, Human Factors Engineering

Mar. 2016 – Feb. 2020

- Honors: *Summa Cum Laude*
- Thesis: *Decoupling Mechanism for Tendon-Driven Robot Leg*

University of California, Irvine, CA

Exchange Student in Mechanical and Aerospace Engineering

Jun. 2018 – Aug. 2018

RESEARCH EXPERIENCE

Locomotor Control Systems Lab, University of Michigan

Jan. 2021 – Present

Graduate Student Researcher

Advisor: Prof. Robert D. Gregg IV

- Tested the extended Kalman filter-based gait state estimator on the open-source robotic leg
 - Incorporated task variables on the gait state variable
 - Built two different measurement model of gait analysis with basis function and neural network

Bio-Robotics and Control (BiRC) Lab, UNIST

Mar. 2019 – Jul. 2019

Undergraduate Research Intern

Advisor: Prof. Joonbum Bae

- Assisted cooperative robot in tendon-driven system project
- Dealt with components of hydraulic robot; manipulated electric circuit, assembled parts, and examined encoder

TEACHING EXPERIENCE

Teaching Assistant on Cognitive Science, UNIST

Spring 2018, Fall 2018

- Graded quizzes, helped write exams, and contributed to curriculum design

HONORS & AWARDS

National Science and Engineering Scholarship, Korea Student Aid Foundation (KOSAF)

2018 – 2019

- Full-tuition scholarship for the last two years of undergraduate studies

Living Scholarship, UNIST

2016 – 2019

- Received \$110 of stipend for a month

Semester Award, UNIST

2016 – 2019

- Awarded for superior semester grades

Overseas Studies Scholarship, UNIST

2018

- Received \$4,200 as a financial support for a summer session at UC Irvine

Academic Performance Scholarship, UNIST

2016 – 2017

- Full-tuition scholarship for the first two years of undergraduate studies

SKILLS

Programming MATLAB & Simulink, Python, C++, LabView, JavaScript

Software CATIA, SolidWorks, ANSYS, 3DSSPP

Others HTML, CSS, \LaTeX

TECHNICAL COURSES

Graduate Linear System Theory, Intermediate Dynamics, Machine Learning, Math for Robotics, Nonlinear Systems & Control, Robot Kinematics & Dynamics

Undergraduate Solid Mechanics, Thermodynamics, Fluid Mechanics, Dynamics, Mechanical Drawing & Lab, Heat Transfer, Dynamic Systems & Control, Manufacturing Processes & Lab, Intro. to Electric-Electronic Engineering, Vibration, Intro. to Robotics, Numerical Analysis, Mechanical Engineering Lab, Machine Element Design, UAV Flight Control & Simulation, Intro. to Finite Element Method, Intro. to MEMS, Science of Human Behavior, Cognitive Science, Color Science & Engineering, Physical Ergonomics, Brain & Human Behavior, Sensation & Perception, Decision making & the Brain, Safety Engineering, Calculus, Differential Equations, Applied Linear Algebra, Engineering Programming, Intro. to AI Programming