

Changyeob Shin

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Fourth year Ph.D. candidate who studies and performs research on Robotics at UCLA. Generally interested in Robotics, Control, Computer Vision, Optimization, Machine Learning, and their applications to automation.

EDUCATION

University of California, Los Angeles (UCLA)

Ph.D. in Mechanical Engineering
Robotics, Systems and Control
Expected Grad. June 2020

Korea University (KU)

M.E. in Mechanical Engineering
Grad. Aug 2015

Korea University (KU)

B.E. in Electrical Engineering
Grad. Aug 2013

SKILLS

C/C++, Python, MATLAB
OpenCV, TensorFlow, VRML
SOLIDWORKS, DSP

LANGUAGES

English (Fluent)
Korean (Native)

COURSEWORK

Robot Dynamics & Control
Optimal Control
Stochastic Estimation
Linear Programming
Convex Optimization
Adaptation and Learning
Computer Vision

AWARDS

- National Sci/Eng Undergraduate 4 years Full Scholarship, Korean Gov.
- RAS Travel Grant, ICRA 2019
- Undergraduate internship paper award, Korea University

Last Update: 03.16.2019

EXPERIENCE

UCLA Bionics Lab

Graduate Student Researcher

Sep 2015 – present

Los Angeles, USA

Project: Automation of Surgical Subtasks

- Develop path planning algorithms of surgical robots with optimization and machine learning algorithms
- Visual servo control of surgical robots with computer vision and sensor fusion algorithms

KU Mechatronics and Field Robotics Lab

Graduate Student Researcher

July 2013 – Aug 2015

Seoul, South Korea

Project: Supernumerary Robotic Limbs

- Build shoulder mountable wearable robotic arms that help human worker during ceiling work. Implement position and force regulation control.

Project: Building Maintenance Robot

- Design a building window cleaning robotic system and implement force control of the cleaning tool system with DSP embedded systems.

KU Intelligent Signal Processing Lab

Undergrad. research Intern

Mar 2011 – Aug 2011

Seoul, South Korea

Project: Image Processing Algorithm in Surveillance System

- Learn the background subtraction algorithm used in an elevator and propose a post-processing algorithm for finding floor area.

FEATURED PUBLICATIONS

- Learning Soft Tissue Dynamics in Image Space for Automated Bimanual Tissue Manipulation with Surgical Robots, ICRA 2019, Accepted.
- Position Holding and Force Regulation Control of Supernumerary Robotic Limbs for Ceiling Work, MS Thesis, Korea University, 2015.
- Window Cleaning System with Water Circulation for Building Facade Maintenance Robot and its Efficiency Analysis, International Journal of Precision Engineering and Manufacturing-Green Technology, 2015.