# Hyungseop Yu

Curriculum Vitae Last updated : Dec. 2023

#### PERSONAL DATA

Birth 7th, Jul, 2000, in Republic of Korea

Nationality Korean

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Yongbong-ro, Buk-Gu Gwangju, Republic of Korea

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#### **EDUCATION**

Mar. 2024 Gwangju Institute of Science and Technology(GIST), Republic of Korea

~ M.S. & Ph.D. in School of Mechanical Engineering

(Upcoming) - Advisor : Prof. Hyo-Sung, Ahn

Distributed Control and Autonomous Systems Laboratory(DCASL)

Mar. 2020 Chonnam National University, Republic of Korea

~ Present B.S. in Department of Electrical Engineering(Major)

Department of Electronic Engineering(Minor)

Mar. 2016 Damyang High School, Republic of Korea

~ Feb. 2019 (SUMMA CUM LAUDE)

# RESEARCH INTEREST

- Nonlinear Control Theory
- Automatic Control
- Distributed Control System
- Robust Control
- Robotics

#### **PUBLICATIONS & CONFERENCES**

- [2] (In progress) **H.Yu**\*, Y.Lee, "Control Performance Enhancement of Time-Delayed Robot Manipulator via Reference Modulation".
- [1] G.H. Park, H. Yu\*, T.S. Jang, Y. Lee, W. Kim, and D. Won, "Compensation for Time Delay of Robot Manipulator using Deep Reinforcement Learning", 2023 Conference on Information and Control Systems(CICS 2023).

#### RESEARCH EXPERIENCES

- Programming or Software Skills : MATLAB / Simulink / Arduino / C / Python
- Distributed Control and Autonomous Systems Laboratory (Jan. 2024 ~ Feb. 2024, Upcoming)

(School of Mechanical Engineering - Gwangju Institute of Science and Technology, Gwangju)

- Advisor : Prof. Hyo-Sung, Ahn
- Control and Embedded System Laboratory(CESL) (Sep. 2023 ~ Dec. 2023, Research Intern)

(School of Electrical Engineering - Hanyang University, Ansan)

- Advisor : Associate Prof. Youngwoo, Lee

Reference Modulation, Deep Reinforcement Learning, Robust Control

• Embedded Control System Laboratory (Oct. 2022 ~ Aug. 2023, Undergraduate Student Researcher)

(Department of Electrical Engineering - Chonnam National University, Gwangju)

- Advisor : Associate Prof. Youngwoo, Lee

PID Controller, Automatic Control, State Feedback Control, State Observer, Nonlinear Control Robot Manipulator, Time Delay Control, Disturbance Observer, System Analysis

• Intelligent Control Project (Nov. 2023 ~ Dec. 2023)

Reinforcement Learning for Super Mario, Python

• Engineering Software Application Project (Nov. 2023 ~ Dec. 2023)

Point to Point Trajectory Planning for Robot Manipulator, MATLAB & Simulink

• Capstone Design Project (Mar. 2023 ~ Jun. 2023, Team Leader)

Intelligent Platooning Vehicle, PID, Arduino

• Electric Power IoT & Sensor Engineering Project (Jun. 2023)

Emergency Alarm Helmet, Arduino

• **Microprocessor Project** (May. 2022 ~ Jun. 2022)

Digital Doorlock, C

## AWARDS & HONORS

2020 -2022	Truth Scholarship(Total 5 Semesters), Department of Electrical Engineering
2021	Scholarship & Commendation, Gwangju Jeonnam Regional Innovation Platform
2021	Gwangju Electric Company Scholarship, Korea Electrical Contractors Association (KECA)
2022	Grade Scholarship, Gwangju Buk-gu Office

2022	Challenge Scholarship, CNU
2022	Gwangju Electric Company Scholarship, Korea Electrical Contractors Association (KECA)
2022	Studying Abroad Scholarship, College of Engineering
2023	Electrical Engineering Scholarship, Korea Electric Power Corporation (KEPCO)
2023	Participation Award, Gwangju LINC 3.0 Sharing & Collaboration Capstone Design Competition
2023	Participation Award, CNU LINC 3.0 Capstone Design Competition
2023	Honorable Mention, CNU Student Portfolio Contest
2023	Job Plus Scholarship, CNU
2023	Silver Award, 2023 KIPE Jeolla Branch Capstone Design Competition.
2024	Government Scholarship, GIST

## **ACTIVITIES**

(Oct.  $2020 \sim Dec. 2022$ )

Mathematics Teacher in Private Institute.

(Sep. 2021 ~ Nov. 2021)

CNU Energy+AI Education Program.

(Sep. 2021 ~ Dec. 2021)

Tennis Club & Volunteer Club.

(Sep. 2021 ~ Dec. 2021)

Engineering School Mentoring Program (Mentee, BIXPO 2021).

(Oct. 2021 ~ Jan. 2022)

Energy Transition College Student Academy and Living Lab (Photovoltaics).

(Feb. 2022)

ROTC Basic Military Training.

(Nov. 2021 ~ May.2022)

Hyundai NGV Campus Courses (EV/HEV/PHEV/New Energy Car/Motor).

(Jun. 2022)

DB Business Management School.

(Jan. 2023)

Experiential and Cultural Program, University of Nevada - Las Vegas (Dept of E.C.E., CES 2023).

(Feb. 2023) Robotics Boot Camp 2, Seoul National University DYROS. (Jun. 2023) "Robust Control: Parametric Approach" Short-term Course, Seoul National University CDSL. (Jul. 2023 ~ Aug. 2023) Coursera Class "Writing in the Sciences", Stanford University. (Jul. 2023) MATLAB Student AI Challenge 2023(DDPG, Robot Manipulator) (Jul. 2023) Simulation Summer School, CPIS (CATIA V6) (Sep. 2023) Kwon Lecture 2023: Tamer Basar (Games, Decisions, and Control), Seoul National University. (Oct. 2023) 2023 Conference on Information and Control Systems, KIEE & IEIE. (Sep.  $2023 \sim \text{Nov. } 2023$ ) Engineering School Mentoring Program (Mento). (Nov. 2023) 2023 KIPE Jeolla branch General Meeting & Autumn Conference. (Aug.  $2023 \sim Dec. 2023$ ) International Student Buddy Program. (Dec. 2023 ~ Jan. 2024, Upcoming) 2023 ICOOS Winter Europe Dreamers (Lecture on Culture & Arts, University of West London).