



# Seongchang Park

Robotics Engineer,  
Multi-Robot System

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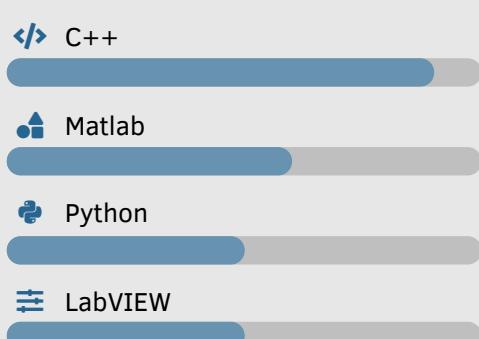
## Social Network

Github  
 Instagram  
 Youtube

## Languages

Korean      ● ● ● ● ●  
 English      ● ● ● ● ●

## Tech Skills



## Experience

### Research:

- 2019-2025 **Unmanned Swarm CPS Research Laboratory**  
*Supported by ADD*  
We propose distributed MPC-based formation control algorithm. The multi-agent keeps their formation stably and can change the shape without collision. Our proposed algorithm runs real-time.
- 2020-2021 **Localization of Electrical Vehicle Remote Charge PAD**  
*Supported by Hyundai NGV*  
I joined this localization project with the help of Hyundai NGV. Our team proposed an algorithm that localizes the vehicle position using UWB RF sensors.

### Project:

- 2021 **LiDAR-based Object Detection**      Autonomous Driving Challenge  
*Supported by Hyundai Motor Group*  
I made an algorithm that finds curb, lane and vehicle on road environment. I used two LiDAR, one for nearby curb and lane, the other is for the detection of vehicle
- 2020 **Prediction Traffic Signal using V2X**      Autonomous Vehicle Competition  
*Supported by Ministry of Trade, Industry and Energy*  
I mapped all possible intersection's traffic signal using V2X. Our AV can move flexibly using the predicted traffic signal
- 2020 **Traffic Signal Detection**      International Student AV Car Competition  
*Supported by TS, KATECH*  
Detection which traffic light is red, orange or green and something mixed. I used supervised learning(YOLOv4) using a camera
- 2020 **Design of Remote-controlled Life Tube**      Capstone Design  
*Supported by Keimyung University*  
I was the team leader who is responsible for all software programming and hardware design, especially focused on motor control

## Education

- 2021 – Present **Master's Science Student**      Soonchunhyang University  
in Future Convergence Technology
- 2015 – 2021 **Bachelor's Science Degree**      Keimyung University  
in Electronic Engineering (**GPA: 4.41/4.5**)

## Publications

- 2022 **Distributed model predictive formation control of a UGV swarm guaranteeing collision avoidance**  
*IMEK Journal of Embedded Systems and Applications, in korean*  
**Seongchang Park and Seungmok Lee**
- 2021 **Distributed model predictive formation control for unmanned ground vehicles via real-time optimization**  
*International Conference on Control, Automation and Systems (IC-CAS)*  
**Seongchang Park and Seungmok Lee**

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## Honors

2022-2023	<b>Graduate Student Research Scholarship</b> Full Tuition	Soonchunhyang University
2020-2	<b>Academic Excellent Scholarship</b> One-third Tuition	Keimyung University
2020-1	<b>Academic Excellent Scholarship</b> One-third Tuition	Keimyung University
2020-1	<b>Principle Special Scholarship</b> For the students who got great scores	Keimyung University
2019-2	<b>K-STAR T Scholarship</b> For K-STAR Members in the school	Keimyung University
2019-2	<b>Academic Excellent Scholarship</b> Half Tuition	Keimyung University
2019-2	<b>Principle Special Scholarship</b> For the students who got great scores	Keimyung University
2019-1	<b>Academic Excellent Scholarship</b> Full Tuition ( <b>Top</b> student in the department)	Keimyung University
2019-1	<b>Language Skill Improvement Scholarship</b> In the case of TOEIC	Keimyung University
2019-1	<b>Principle Special Scholarship</b> For the students who got great scores	Keimyung University
2018-2	<b>Academic Excellent Scholarship</b> Half Tuition	Keimyung University
2018-1	<b>SAP Overseas Study Scholarship</b> For all possible expenses in Philippines	Keimyung University
2018-1	<b>Principle Special Scholarship</b> For the students who got great scores	Keimyung University
2016-1	<b>Academic Excellent Scholarship</b> Full Tuition ( <b>Top</b> student in the department)	Keimyung University
2015-2	<b>Academic Excellent Scholarship</b> Half Tuition	Keimyung University

## Awards

2021	<b>Challenge Prize</b> for Autonomous Driving Challenge	HMG
2021	<b>Special Prize</b> for Autonomous Driving Challenge	Major in Seoul
2020	<b>3rd Prize</b> International Student AV Car Competition	TS
2020	Special Prize in Capstone Design	Keimyung Univ.
2020	<b>1st Prize</b> at ICT Advanced Future Technology Convergence Camp	Yeungnam Univ.

## Extra-Curricular Activities

Tech Blog Competition	I write things that helpful code, tutorial and software guidance I have a lot of experience for autonomous vehicle competition
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