Yong Seok Lee

Personal Data

Graduate Student
MARCH Lab., Department of Mechanical Engineering,
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Nationality	South Korea
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Research Interests

Contact-Rich Robotic Manipulation

- Accurate pushing manipulation under uncertain object properties
- Robot control for a pushing manipulation
- Modeling of multi-contact system

In-hand Manipulation via Learning from Demonstration (LfD)

- Multimodal-based dexterous in-hand manipulation
- Human skill transfer for complex in-hand manipulations
- Bilateral feedback system for robot hand teleoperation

Education & Internship & Studying Abroad

2024.03-	Ph.D Student in Department of Mechanical Engineering, POSTECH **Advisor**: Prof. Kee Hoon Kim
2022.03-2024.02	M.S. in Department of Mechanical Engineering, POSTECH **Advisor**: Prof. Kee Hoon Kim **Thesis**: Robotic Pushing Manipulation through Online Vision-Based Estimation of Unknown Model Parameters
2018.03-2022.02	B.S. in Department of Mechanical Engineering, POSTECH GPA 4.04/4.3
2021.03-2021.12	Internship, MARCH Lab. (POSTECH)

Awards and Honors

2025.02	Silver Prize of *The 31th Humantech Paper Award* by Samsung Electronics 제 31회 휴먼테크논문대상 은상

Publications

International Journal Articles

1. **Yongseok Lee**, and Keehoon Kim, "Accurate Robotic Pushing Manipulation through Online Model Estimation under Uncertain Object Properties," *IEEE Robotics and Automation Letters (2024)*.

International Conference Papers

2. **Yongseok Lee**, and Keehoon Kim, "Dexterous Planar Pushing under Uncertain Object Properties: A Contact-Aware Goal-Oriented Approach," *IEEE International Conference on Robotics and Automation (2026)*.
1. **Yongseok Lee**, and Keehoon Kim, "Goal-Driven Robotic Pushing Manipulation Under Uncertain Object Properties," *IEEE International Conference on Robotics and Automation (2025)*.

Domestic Journal and Conference

3. **Yongseok Lee**, and Keehoon Kim, "Uncertainty-Aware Goal-Oriented Pushing Manipulation," *The 21th Korea Robotics Society Annual Conference (2026)*.
2. **Yongseok Lee**, and Keehoon Kim, "Goal-Driven Robotic Pushing Manipulation through Model Predictive Path Integral," *The 20th Korea Robotics Society Annual Conference (2025)*.
1. **Yongseok Lee**, and Keehoon Kim, "Fast Online Adaptive Model for Robotic Pushing Manipulation in Unknown Parameters," *The 19th Korea Robotics Society Annual Conference (2024)*.

Languages, Skills and Abilities

Languages	Korean (mothertongue) English (intermediate)
Computer Skills	MATLAB, C/C++, Python MFC, Simulink SolidWorks, AutoCAD, Inventor Physics Simulator - PyBullet, IsaacSim/Gym/Lab, Genesis Real-time programming (Xenomai)
Hardware & Equipment	8-channel wireless sEMG-motion sensors (LogonU) sEMG sensors (Delsys, Noraxon, Thalmic MYO) 3D printing, Laser cutting **Embedded** - Arduino **Robot arm** - Indy7 & IndyRP2 (Neuromeka) **Robot arm** - Panda & FR3 (Franka Emika) **Motion tracker** - VIVE (HTC)
Recent Technologies	Deep learning
ETC.	-

Interests and Activities

Guitar