Dongmyoung Lee

Personal info

✉ d.lee20@imperial.ac.uk

📍 Imperial College, London, UK

Links

🔗 Google Scholar

in Linkedin

Skills

</> Python, C++, Matlab, Arduino

⚙ Linux, Windows

🧰 AutoCAD, Solidworks, ROS

Education

**Imperial College, UK
(PhD Degree in Robotics)**
Oct 2020 – June 2025

- Dexterous Manipulation of Deformable Objects

**KAIST, South Korea
(M.S. Degree in Robotics)**
Mar 2014 – Feb 2016

- Haptic Interface Design for Simulation of Needle Intervention

**KAIST, South Korea
(B.S. Degree in Mechanical Engineering)**
Feb 2010 – Feb 2014

- Design of Omnidirectional Walking Aids for Toilet Use

Work Experience

TU Wien, Austria
Autonomous Systems Lab
Postdoctoral Researcher   June 2025 – Present

- Human-Robot Interaction for Long-Horizon Manipulation Tasks

KIST, South Korea
Center of Human-centered Interaction for Coexistence (CHIC)
Researcher   Jan 2018 – July 2019

- Development of Hand Motion-capturing Exoskeleton Device
  - Design an exoskeleton device for capturing hand motions
  - Implement inverse kinematics algorithms for accurate finger joint pose estimation

XAVIS, South Korea
Researcher   June 2016 – Dec 2017

- Development of Industrial X-ray Inspector
  - Industrial X-ray inspection system design

Awards

2023

- **Design Award - IEEE International Conference of Robotics and Automation (ICRA 7th Robotics Grasping and Maniputation Competition)**

Research Interest

- **Dexterous Gripper Design and Robot Manipulation**
  - Design and control of versatile robotic grippers for complex tasks such as deformable object manipulation.

- **Multi-Modal Perception and Control**
  - Integration of vision and tactile data for robust perception and feedback for precise manipulation tasks.

- **AI-Driven Robotic Systems**
  - Application of AI techniques, including generative models and foundation models for robust control in cluttered environment.

- **Human-Robot Interaction (HRI)**
  - Research on haptic interfaces, motion capture, and control algorithms for intuitive human-robot collaboration in domestic and industrial applications.

Selected Publications

2025

- **Touch G.O.G: Vision-based Tactile Gripper for Dexterous Cloth Manipulation**
  D Lee, W Chen, N Rojas, P Kormushev (IEEE Transactions on Robotics, *In Preparation*)

- **A Backbone for Long-Horizon Robot Task Understanding**
  X Chen, W Chen, *D Lee*, Y Ge, N Rojas, P Kormushev (IEEE Robotics and Automation Letters)

2024

- **GOG: A Versatile Gripper-On-Gripper Design for Bimanual Cloth Manipulation with a Single Robotic Arm**
  D Lee*, W Chen*, X Chen, N Rojas (IEEE Robotics and Automation Letters, presented in IEEE IROS 2024)

- **A Soft Continuum Robot With Self-Controllable Variable Curvature**
  X Wang, Q Lu, *D Lee*, Z Gan, N Rojas (IEEE Robotics and Automation Letters, presented in IEEE RoboSoft 2024)

- **Synthetic data enables faster annotation and robust segmentation for multi-object grasping in clutter**
  D Lee, W Chen, N Rojas (IEEE ICMRE 2024)

2023

- **Learning to grasp clothing structural regions for garment manipulation tasks**
  W Chen, *D Lee*, D Chappell, N Rojas (IEEE IROS 2023)

Patents

2021

- **Method and apparatus for motion capture interface using multiple fingers**
  D Lee, M Kim, J Lee, B You (US Patent)

2020

- **Method And Apparatus For Manipulating Object In Virtual Or Augmented Reality Based On Hand Motion Capture Apparatus**
  Y Lee, *D Lee*, Y Kim, J Kim, H Kim, B You (US Patent)

- **Method And Apparatus For Providing Realistic Feedback During Contact With Virtual Object**
  Y Lee, *D Lee*, M Kim, B You (US Patent)

2019

- **An X-ray Apparatus Having a Structure of a Rotating or Horizontal Displacement**
  H Kim, B Choi, *D Lee* (KR Patent)

- **An X-Ray Investigating Apparatus with Nano Scale Resolution and a Method for Correcting an Error of the Same**
  H Kim, H Kim, B Choi, *D Lee* (KR Patent)

Others

2021-Present

- **Peer Review - Conferences and Journals**
  - Conference: IEEE ICRA, IROS, ICMRE, and etc
  - Journal: IEEE RA-L

Dongmyoung Lee

Languages

- 🅰🈁 Korean (Native)
- 🅰🈁 English (Fluent)

Experiences

2022-2023

- Teaching Assistant
  - Gizmo-Physical Computing
    * Design and develop complex machines, integrating hardware, and high-level programming languages