

# Curriculum Vitae

## Kang-Won Lee

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### EDUCATION

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#### **Dongguk University, Republic of Korea**

- *Ph.D. in Mechanical Engineering* Fed. 2021 - Present  
*Advisor:* Prof. Soo-Chul Lim
- *M.S in Mechanical Engineering* Mar.2019 - Fed.2021  
*Advisor:* Prof. Soo-Chul Lim  
*Thesis:* Developing a Robotics Device Assessing Proprioception Position Sense under External Torque  
*Cumulative GPA:* 4.33/4.5
- *B.S in Mechanical, Robotics, and Engineering* Mar.2013 - Fed.2019  
*Cumulative GPA:* 4.0/4.5

#### **University of California San Diego, United States of America**

- *Visiting Graduate Student in Electrical & Computer Engineering* Mar.2022 - Dec.2022  
*Advisor:* Prof. Xiaolong Wang

### RESEARCH INTEREST

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- Robotics, Machine learning, Human Robot Interaction (HRI), Teleoperation System, Haptics

### PUBLICATIONS

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#### **International Journal**

- Dae-Kwan Ko, **Kang-Won Lee**, Dong Han Lee, Soo-Chul Lim, "Vision-Based Interaction Force Estimation for Robot Grip Motion without Tactile/Force Sensor" *Expert Systems with Applications*, 211 (2023): 118441. (IF(%) 8.152)

- **Kang-Won Lee**, Sang Hoon Kang, and Soo-Chul Lim. "Simple and Reliable Position Sense Assessment Under Different External Torques: Toward Developing a Post-Stroke Proprioception Evaluation Device" *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 30 (2022): 823-832. (IF(%) 9.559)
- **Kang-Won Lee**, Seung-Chan Kim, and Soo-Chul Lim. "DeepTouch: Enabling Touch Interaction in Underwater Environments by Learning Touch-Induced Inertial Motions" *IEEE Sensors Journal*, 22.9 (2022): 8924-8932. (IF(%) 21.094)
- **Kang-Won Lee**, Dae-Kwan Ko, Soo-Chul Lim, "Toward vision-based high sampling interaction force estimation with master position and orientation for teleoperation", *IEEE Robotics and Automation Letters*, 6.4 (2021): 6640-6646. (IF(%) 30.357)  
[Oral presentation]  
*IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2021)*

### **Patent (Korea-Granted)**

- 임수철, 이정아, 조윤정, 임우철, **이강원**, 전준하, "고유수용성 측정 장치 및 그 방법," 10-2068878, 2020.01.15

## **RESEARCH ACTIVITY**

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**Dongguk University** 2016 - Present

- Development of a High-Performance Multimodal Electronic Skin Sensor of Hybrid-Type and Intelligent module for robot manipulation 2021 - 2023  
*Sponsor* : Korea Ministry of Trade, Industry and Energy
- Real-time Image Generation without Time Delay using GAN Network based on Robot Status Information and User Input during Robot Teleoperation 2020 - 2023  
*Sponsor* : National Research Foundation of Korea
- Development of the artificial electronic skin that mimics human skin structure and functions for tactile and kinesthetic feedback in robotic surgery or prosthetic arm 2017 - 2019  
*Sponsor* : Korea Ministry of Trade, Industry and Energy
- Development of proprioception measurement system 2017  
*Sponsor* : National Rehabilitation Center of Korea

## **HONORS, AWARDS & SCHOLARSHIPS**

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- Magna Cum Laude (Dongguk Univ.) 2019
- Global Talent Cultivation Scholarship (Dongguk Univ.) 2021