

성균관대학교 로봇공학연구소 전문가 초청 세미나

Dr. 김의겸 (아주대학교 교수)

- 1월 21일 : "Integrated Linkage-Driven Dexterous Anthropomorphic Robotic Hand"
- 10:00am-12:00pm (제1공학관 22319)

Abstract:

Robotic hands perform several amazing functions similar to the human hands, thereby offering high flexibility in terms of the tasks performed. However, developing integrated hands without additional actuation parts while maintaining important functions such as human-level dexterity and grasping force is challenging. The actuation parts make it difficult to integrate these hands into existing robotic arms, thus limiting their applicability. Based on a linkage-driven mechanism, an integrated linkage-driven dexterous anthropomorphic robotic hand called ILDA hand, which integrates all the components required for actuation and sensing and possesses high dexterity, is developed. It has the following features: 15-degree-of-freedom (20 joints), a fingertip force of 34 N, compact size (maximum length: 218 mm) without additional parts, low weight of 1.1 kg, and tactile sensing capabilities. Actual manipulation tasks involving tools used in everyday life are performed with the hand mounted on a commercial robot arm.

Bio:

- B.S. in Mechanical Engineering, Sungkyunkwan University (SKKU), Aug. 2011.
- Ph.D. in Mechanical Engineering, Sungkyunkwan University (SKKU), Aug. 2017.
- Senior Researcher in Robotics & Mechatronics Lab., Korea Institute of Machinery & Materials (KIMM), Oct. 2017 – Aug. 2021.
- Assistant Professor in Mechanical Engineering, Ajou University, Sept. 2021 – Current.



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