



손 동 훈 교수

기계공학부

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연구분야

소형 소프트 의료 로봇 설계
 자력 기반 무선 로봇 시스템 설계 및 구동원리 연구
 머신러닝 기반 마이크로 스트러처 설계

수상

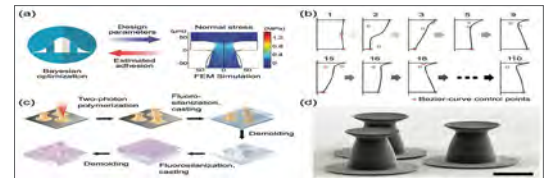
Best Paper Award Finalist in Medical Robotics, IEEE ICRA, 2017
 Max Planck Society Scholarship(for 3 years), Max Planck Society, 2015
 Fulbright Scholarship(for 2 years), KAEC, 2013

대표연구

- Magnetically actuated soft capsule endoscope
 - Remote control of magnetic robots
 - Soft Robot design for biopsy
 - Design of multi-axis magnetic actuation system



- Adhesive fibril design by machine-learning methods
 - Design microscale adhesive fibrils based on Bayesian optimization and finite element methods
 - Experimental verification of the design methodology using microfabrication techniques



주요 연구실적

- Machine Learning-Based and Experimentally Validated Optimal Adhesive Fibril Designs, *Small*, Vol. 202102867, 2021
- Adaptive Self-Sealing Suction-Based Soft Robotic Gripper, *Advanced science*, Vol. 2100641, 2021
- Liquid-Superrepellent Bioinspired Fibrillar Adhesives, *Advanced Materials*, Vol. 32, No. 19, 2020
- Magnetically actuated soft capsule endoscope for fine-needle biopsy, *Soft robotics*, Vol. 7, No. 1, 2020
- A simultaneous calibration method for magnetic robot localization and actuation systems, *IEEE Transactions on Robotics*, Vol. 35, No. 2, 2018