

Abdullah Nazir

Postdoctoral Fellow
Hong Kong Center for Construction Robotics
E-mail: anazir@ust.hk
Phone: (+852) 6219 5349

Research interest

My research interest is in robotic manipulation. Specifically, the development of robot hands and planning/control software to skilfully handle objects, for applications in domestic and industrial scenarios.

Employment

- Postdoctoral Fellow, December 2023 - Present
Hong Kong Center for Construction Robotics
- Postdoctoral Fellow, October 2021 - November 2023
Hong Kong Centre for Logistics Robotics
- Research Intern, June 2016 - August 2016
Bosch GmbH

Education

- PhD in Electronics and Computer Engineering, 2017 - 2021
Hong Kong University of Science and Technology (HKUST)
Advisor: Dr Jungwon Seo
- Bachelor in Mechanical Engineering, 2013 - 2017
University of Hong Kong (HKU)

Publications

• Journal Papers

- J.1 Abdullah Nazir, Xu Pu and Jungwon Seo, "Rock-and-Walk Manipulation: Object Locomotion by Passive Rolling Dynamics and Periodic Active Control," *IEEE Transactions on Robotics*, 2022.
King-Sun Fu Memorial Best Paper Honorable Mention
Project page: <https://github.com/HKUST-RML/rockwalk>

• Conference Papers

- C.4 Yanshu Song, Abdullah Nazir, Darwin Lau, and Yun-Hui Liu, "Picking by Tilting: In-Hand Manipulation for Object Picking using Effector with Curved Form," *International Conference on Robotics and Automation (ICRA)*, London, UK, 2023.
Project page: https://github.com/HKCLR-Manipulation/dexterous_picking
- C.3 Abdullah Nazir, Xu Pu, Juan Rojas, and Jungwon Seo, "Learning to Rock-and-Walk: Dynamic, Non-Prehensile, and Underactuated Object Locomotion through Reinforcement Learning," *International Conference on Robotics and Automation (ICRA)*, Philadelphia, USA, 2022.
Project page: https://github.com/HKUST-RML/learn_rockwalk
- C.2 Chunli Jiang, Abdullah Nazir, Ghasem Abbasnejad and Jungwon Seo, "Dynamic Flex-and-Flip Manipulation of Deformable Linear Objects," *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Macau, China, 2019.
Project page: <https://github.com/nazir-hk/flexflip>

C.1 Abdullah Nazir and Jungwon Seo, "Passive Dynamic Object Locomotion by Rocking and Walking Manipulation," *International Conference on Robotics and Automation (ICRA)*, Montreal, Canada, 2019.

- **Workshop Papers**

W.1 Abdullah Nazir, "A Dexterous Robotic Hand for In-Hand Manipulation of Long, Thin Objects." *2nd Workshop on Dexterous Manipulation: Design, Perception and Control (RSS)*, 2024.

W.2 Abdullah Nazir, Xu Pu, and Jungwon Seo, "Rock-and-Walk Manipulation: Robotic Object Transport through Passive Dynamic and Quasistatic Manipulation." *Bulletin of the American Physical Society 66, March Meeting*, 2021.

Teaching

- MAEG5090 Topics in Robotics, Fall 2023, CUHK (Co-teaching)
- ELEC4010 Robotic Manipulation and Mobility, Spring 2018, HKUST (Teaching Assistant)
- ELEC1100 Introduction to Electro-Robot Design, Fall 2018, HKUST (Teaching Assistant)

Awards

- IEEE T-RO King-Sun Fu Memorial Best Paper Award Finalist, 2023
- HKSAR Government Fellowship Award, from 2013-17
- HKU Foundation Fellowship Award for Outstanding International Students, 2013-17
- HKU Dean's Honors List Award, 2013-15
- Chiap Hua Cheng's Foundation Fellowship, 2014

News

- "Robots Get Some Inspiration From the Moai Statues of Easter Island: They can move an object bearing a fraction of its weight," *IEEE Spectrum*, 01 March 2022.