Haokai Ding

Future Technology School, Shenzhen Technology University · Shenzhen, China
ditang0125@gmail.com | hk_ding@outlook.com | haokaiding.github.io

EDUCATION

Shenzhen Technology University (SZTU) *Sept 2022 – Jul 2026*
B.Eng. in Electronic Science & Technology; GPA: 84.6/100

Research focus: LIBS spectroscopy; robotics systems.

Tsinghua University – Shenzhen X-Institute *Sept 2023 – Present*
Tsien Excellence Engineering Program (TEEP), Joint Training (Underactuated Robotics)

PUBLICATIONS

Legend: † Co-first author; * Corresponding author

An Idle-Stroke Underactuated Gripper with Independent Double-Parallelogram Linkages for Pinching and Adaptive Grasping
Y. Chen, H. Luan, **H. Ding**, W. Zhang*
IEEE RAAI 2025 2025

GLINT: An Idle-Stroke Grasp-and-Lift Hand for In-Hand Manipulation
H. Ding, H. Luan, T. Yang*, W. Zhang*
IEEE ICCMA 2025 2025

BioCrest – A Flexible Adaptive Robotic Hand Based on Idle-Stroke Mechanism
H. Ding†, X. Zhong, W. Huang, T. Yang*, W. Zhang*
IEEE ROBIO 2025 2025

An Underactuated Gripper with Grasshopper-Inspired Linkages and Delay Triggering for Pinching and Adaptive Grasping
H. Ding†, Y. Chen†, D. Jia, W. Zhang*
IEEE ICIA 2025 2025

A Novel Gripper with Semi-Peaucellier Linkage and Idle-Stroke Mechanism for Linear Pinching and Self-Adaptive Grasping
H. Ding†, W. Zhang*
IEEE/RSJ IROS 2025 2025

Semi-Peaucellier Linkage and Differential Mechanism for Linear Pinching and Self-Adaptive Grasping
H. Ding†, Z. Chen, T. Yang*, W. Zhang*
IEEE CASE 2025 2025

Peaucellier Gripper: A Novel Underactuated Gripper for Linear Pinching and Self-Adaptive Grasp
H. Ding†, J. Fan, Z. Zhu, Y. Zhao, K. Chen*, W. Zhang*
IEEE ARM 2025 2025

Rapid Analysis of Heavy Metal Element Adsorption by SCG Based on LIBS Technology
H. Xie, L. You, X. Fang, L. Li, **H. Ding**, Z. Zhou, G. Zhang, D. Zhang
E3S Web Conf., 615 (2025) 02010 2025

Recent Progress on the Research of 3D Printing in Aqueous Zinc-Ion Batteries
Y. Liu†, **H. Ding**†, H. Chen, H. Gao, J. Yu, F. Mo, N. Wang*
Polymers 17(15):2136, 2025. ***[SCI, JCR Q1]*** 2025

RESEARCH & PROJECTS

Underactuated Robotic Gripper Research *2023 – Present*
Shenzhen X-Institute, Tsinghua University

Designed and tested underactuated robotic grippers with semi-Peaucellier linkage. Focus: idle-stroke / delay-triggering mechanisms; validated prototypes via simulation and experiments.

LIBS Spectroscopy for Heavy Metal Analysis *2022 – 2023*
Shenzhen Technology University

Built and optimized LIBS system for rapid adsorption analysis. Focus: improved calibration pipeline and enhanced acquisition accuracy.

EXPERIENCE

Visiting Student – CIUS Lab, Shanghai Jiao Tong University *Feb 2026 – Present*
Research in UAV systems and aerial manipulation

HONORS & AWARDS

National Scholarship, Ministry of Education of China	2025
Undergraduate Champion, ASME Student Mechanism & Robot Design Competition	2025
Conference Session Chair, IEEE/RSJ IROS 2025	2025
President's Award, Shenzhen Technology University	2024
Research and Innovation Award (First Prize), SZTU	2024
Gold Prize, 9th China "Internet+" Innovation Competition (Guangdong)	2023
Second Prize, 17th "Challenge Cup" (Guangdong)	2023
Research and Innovation Award (First Prize), SZTU	2023
Chen Hsong Scholarship, SZTU	2023

SERVICE

- Conference reviewer for IEEE/RSJ IROS and IEEE CASE.
- Conference session chair for IEEE/RSJ IROS 2025.

SKILLS

Programming: C/C++, Python, MATLAB
Tools: SolidWorks, Arduino, Linux, LaTeX
Languages: Chinese (native), English (fluent)