

DIANCHENG LI

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EDUCATION

Queen's University, Canada

Direct-entry PhD (Withdrew due to visa processing delays; resumed studies after approval.)
Supervisor: Dr. Matthew Robertson

Sept. 2022 - Jun. 2023

Jan. 2024 -

Harbin Institute of Technology (Shenzhen), China

Bachelor of Mechanical Engineering
GPA: 3.5/4

Aug. 2017 - Jun. 2021

University of Illinois at Urbana-Champaign, U.S.A

Exchange Student
GPA: 4.0/4

Jul. 2019 - Aug. 2019

SELECTED PUBLICATIONS

Thin Bistable Valves for Origami Robots

*Diancheng Li† and Matthew A. Robertson**

The International Journal of Robotics Research (Under Review)

FlipWalker: Jacob's Ladder toy-inspired robot for locomotion across diverse, complex terrain

*Diancheng Li†, Nia Ralston, Bastiaan Hagen, Phoebe Tan, Matthew A. Robertson**

2025 IEEE/RSJ International Conference on Intelligent Robotics and Systems (IROS 2025)

IROS Best Paper Award finalist & Best Entertainment and Amusement paper finalist.

Origami-inspired soft twisting actuator

*Diancheng Li†, Dongliang Fan, Renjie Zhu, Qiaozhi Lei, Yuxuan Liao, Xin Yang, Yang Pan, Zheng Wang, Yang Wu, Sicong Liu, Hongqiang Wang**

Soft Robotics, 2023, 10(2): 395-409.

Most cited article published in this journal in the last 3 years - Sage Journals 2025.

A Soft Gripper Driven by Bellow Actuators and Twist Actuators for Dexterous Grasping

*Diancheng Li†, Liangmin Zhou†, Renjie Zhu, Jintao Yin, Zhengbai Liu, Han Yuan, Hongqiang Wang**

2021 IEEE International Conference on Robotics and Biomimetics (ROBIO 2021).

† First author * Corresponding author

AWARDS

2025

· IEEE IROS 2025: IROS-SDC Travel Award.

2022

· IEEE Robosoft 2022: Winner of Locomotion Competition; Co-Advisor.

2021

· IEEE Robosoft 2021: Winner of Locomotion Competition; Team Leader.

2020

· The 9th National Student Competition of Innovative Mechanical Design: National Second Prize/ Provincial First Prize of Guangdong.

2019

· Highest Distinction Scholarship for International Exchange from Harbin Institute of Technology, Shenzhen.

· Contemporary Undergraduate Mathematical Contest in Modeling: Provincial Second Prize of Guangdong.

· ABU Asia-Pacific Robot Contest (Robocon 2019): National Second Prize.

2018

· The 8th National Student Competition of Innovative Mechanical Design: Provincial Third Prize of Guangdong.

RESEARCH EXPERIENCE

Ph.D. student, Queen's University & Ingenuity Labs Research Institute *Jan. 2024 – Present*

Supervisor: Dr. Matthew Robertson

-Developing deployable and reconfigurable robotic platforms inspired by unique mechanisms, with a focus on origami and novel joint structures.

Research Assistant, Southern University of Science and Technology *Jul. 2021 - Jul. 2022*

Advisor(s): Assoc.Prof. Hongqiang Wang

- Implementation of multi-DOFs actuators using electroadhesion structures as the limiting layer of soft pneumatic origami.

Undergraduate Dissertation, Harbin Institute of Technology, Shenzhen *Oct. 2020 - Jun. 2021*

Advisor(s): Asst.Prof. Yang Wu and Assoc.Prof. Hongqiang Wang

- Designed a prototype of origami-inspired soft total artificial heart.

Visiting Student, Southern University of Science and Technology *Sept. 2019 - Jun. 2021*

Advisor(s): Assoc.Prof. Hongqiang Wang

- Developed and optimized a soft-twist actuator capable of 435° rotation, validating its versatility through integration into a soft gripper, a robotic arm, and a snake robot for complex manipulation and locomotion tasks.

Engineering Research Program, University of Illinois at Urbana-Champaign *Jul. 2019 - Aug. 2019*

Advisor(s): Prof. Srinivasa Salapaka

- Conducted extensive data analysis via MATLAB and completed some dynamical system simulations with Simulink.

Undergraduate Research Program, Harbin Institute of Technology, Shenzhen *Sept. 2017 - Jan. 2021*

Advisor(s): Assoc.Prof. Hailing Huang and Assoc.Prof. Han Yuan

- Participated in a study of thermally-activated artificial muscles based on the nylon coil actuators.

TEACHING ASSISTANT / GRADER

MECH 210 Electronic Circuits & Motors for Mechatronics	<i>W'24, W'25, W'26 - Queen's</i>
MECH 310 Digital Systems Mechatronics	<i>F'24 - Queen's</i>
MECH 350 Automatic Control	<i>F'25 - Queen's</i>

ACADEMIC ACTIVITY & SERVICE

Workshop on Soft Robotics Meets the Sea - IEEE RoboSoft 2026 *Apr. 2026*

- Co-organizer of the workshop "Soft Robotics Meets the Sea: Novel Robot Design for Harsh Environments" in Kanazawa, Japan, coordinating invited speakers and managing poster sessions.

Academic Paper Reviews *Jan. 2020 -*

- Reviewer for robotics journals and conferences including RA-L and IROS.

HKUST & Cambricon Tech ACM Training Camp *Jan. 2018 - Feb. 2018*

- Assisted in the organization of the joint training camp for the Robotics and Multi-Perception Lab (HKUST).

SKILLS

Languages:	English (IELTS 7.0), Mandarin (Native)
Programming:	C, C++, Python, MATLAB, L ^A T _E X, HTML, CSS, JavaScript
Software & Tools:	Mechanical Design: SOLIDWORKS, AutoCAD, Keyshot FEA Simulation: Abaqus, COMSOL PCB Design: EasyEDA, Cadence Allegro, Autodesk Eagle