Dingqi Zhang Ph.D. candidate

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https://dz298.github.io/website/

Education

University of California, Berkeley　　　　　　　　　　　Berkeley, CA
Ph.D. in Control and Robotics　　　　　　　　Aug 2021 - May 2026 *(expected)*
- Advisor: Prof. Mark W. Mueller, Prof. Jitendra Malik
- Research area: Learning-based adaptive control for agile low-level motor skills

Cornell University　　　　　　　　　　　　　　　　　Ithaca, NY
B.S. in Computer Science and Mechanical Engineering　　Aug 2017 - May 2021

Experience

RAI Institute (formerly known as the Boston Dynamics AI Institute)　Boston, MA
Research Intern on Dexterous Mobile Manipulation　　　　　　Summer 2025
- **Research focus:** real-time adaptation for agile, contact-rich robotic manipulation using reinforcement learning, adaptive MPC, and world model learning, demonstrated on pen spinning tasks with the Allegro Hand

University of California, Berkeley　　　　　　　　　　　Berkeley, CA
Graduate Researcher　　　　　　　　　　　　　　　Aug 2021 - present
- **Research focus:** developing a single learning-based controller for cross-embodiment adaptation with imitation and reinforcement learning, demonstrated on aerial vehicles with 10x–100x parameter variations

The Chinese University of Hong Kong　　　　　　　　　Hong Kong
Visiting Researcher, advised by Prof. Ben M. Chen　　　　　Summer 2024

Zipline International Inc.　　　　　　　　　South San Francisco, CA
Engineer Intern on Guidance, Navigation, and Control　　　　Summer 2023

Publications

D. Zhang, A. Loquercio, J. Tang, T.-H. Wang, J. Malik, and M. W. Mueller, "A learning-based quadcopter controller with extreme adaptation," *IEEE Transactions on Robotics*, vol. 41, pp. 3948–3964, 2025. DOI: 10.1109/TRO.2025.3577037

R. Zhang, **D. Zhang**, M. W. Mueller, "ProxFly: Robust Control for Close Proximity Quadcopter Flight via Residual Reinforcement Learning," in *2025 IEEE International Conference on Robotics and Automation (ICRA)*, IEEE, 2025

D. Zhang, A. Loquercio, X. Wu, A. Kumar, J. Malik, and M. W. Mueller, "Learning a single near-hover position controller for vastly different quadcopters," in *2023 IEEE International Conference on Robotics and Automation (ICRA)*, IEEE, 2023, pp. 1263–1269

Fellowship and Grant

Ignite Grant, the Jacobs Institute Innovation Catalysts, UC Berkeley　　Jan 2024
- Top 3% award for advanced student-led design and technology projects.

Spark Grant, the Jacobs Institute Innovation Catalysts, UC Berkeley　　Sept 2023
- Top 7% award for early-stage innovative ideas in design and technology.

Graduate Division Block Grant Award, UC Berkeley　　　　　Aug 2021
- Fellowship recognizing academic excellence and research potential.

Academic Service

Reviewer for:

Journals: IEEE Transactions on Robotics (T-RO), IEEE Robotics and Automation Letters (RA-L), IEEE/ASME Transactions on Mechatronics (TMECH)

Conferences: Robotics: Science and Systems (RSS), International Conference on Robotics and Automation (ICRA), International Conference on Intelligent Robots and Systems (IROS)

EDUCATIONAL ACTIVITIES	ME136/236 Dynamics and Control of Autonomous Flight	Fall 2024
	Teaching Assistant, UC Berkeley	
	Master of Future Energy Systems and Technology degree program	Jan 2023 - Sept 2024
	Teaching Assistant, Dubai Electricity and Water Authority (DEWA) and UC Berkeley	
	ME136/236 Dynamics and Control of Autonomous Flight	Fall 2023
	Teaching Assistant, UC Berkeley	

INVITED SPEAKER	**Keynote:** A Learning-based Quadcopter Controller for Extreme Adaptation, Control Seminar, UC Berkeley	Apr 2025
	Poster and Keynote: Bay Area Robotics Symposium, UC Berkeley	Oct 2024
	Presentation at Prof. Ben M. Chen's group, Chinese University of Hong Kong	July 2024
	Presentation at the Intelligent Positioning and Navigation Laboratory, Hong Kong Polytechnic University	July 2024
	Poster and Keynote: Bay Area Robotics Symposium, UC Berkeley	Oct 2022

MEDIA COVERAGE	**IEEE Spectrum,** Video Friday: Your weekly selection of awesome robot [link]	Oct 4, 2024

TECHNICAL SKILLS	**Core Expertise:** control theory, reinforcement learning, model-based planning, adaptive systems, sim-to-real transfer, deep dynamics modeling
	Frameworks: PyTorch, ROS, IsaacGym, MuJoCo, WandB, Git
	Languages: Python, C/C++, MATLAB, Julia, Bash
	Other: real-time systems, trajectory optimization, system identification, hardware deployment
	Research Areas: aerial robotics, dexterous manipulation, adaptive control, cross-embodiment learning
	Applications: quadrotor control, robotic manipulation, autonomous systems, dynamic environments