

Dayi Ethan Dong

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EDUCATION

University of California Berkeley, Berkeley, CA

August, 2024 – Present

Ph.D., Mechanical Engineering

- Advisor: Dr. Negar Mehr

Yale University, New Haven, CT

August, 2020 – May, 2024

B.S., Major(s): Engineering Sciences (Mechanical) – with Distinction, Computer Science – with Distinction

- Magna Cum Laude
- Cumulative GPA: 3.95; Major GPA: 3.99
- Relevant Coursework: Robot Learning; Introduction to Embedded Robotic Systems; Introduction to Robotics, Control, and Learning; Automated Decision Systems; Artificial Intelligence; Intelligent Robotics; Applied Planning and Optimization

TECHNICAL SKILLS

- Programming Languages: Python, C, Java, ROS, ROS2
- Software: Solidworks, Fusion 360
- Languages: English (Native), Mandarin (Fluent), Spanish (Basic)

RESEARCH EXPERIENCE

Carnegie Mellon University, *Biorobotics Lab*, Pittsburgh, PA

May, 2023 – August, 2023

Undergraduate Research Assistant

- Carnegie Mellon University's Robotics Institute for Summer Scholars (RISS) program
- Researched ergodic search and modular robotics under Dr. Howie Choset

Yale University, *Intelligent Autonomy Lab*, New Haven, CT

November, 2021 – Present

Undergraduate Research Assistant

- Conducted research on multi-agent robotic experiments and validating algorithms for search and exploration under Dr. Ian Abraham
- Collaborated with undergraduate students, graduate students, and other senior researchers on work related to ergodic search

PUBLICATIONS AND PRESENTATIONS

- C. Lerch, **D. Dong**, I. Abraham, "Safety-Critical Ergodic Exploration in Cluttered Environments via Control Barrier Functions," in *2023 International Conference on Robotics and Automation (ICRA)*, arxiv.org/abs/2211.04310.
 - Publication
 - Poster presentation
- **D. Dong**, H. Berger, I. Abraham, "Time Optimal Ergodic Search," in *2023 Robotics: Science and Systems (RSS)*, arxiv.org/abs/2305.11643.
 - **Best Paper Award**
 - Publication
 - Poster presentation
 - Spotlight talk
- **D. Dong**, H. Berger, I. Abraham, "Time Optimal Ergodic Search: Multiscale Coverage in Minimum Time," in *International Journal of Robotics Research*, doi.org/10.1177/02783649241273597
 - Publication
 - Journal extension of previous work
- **D. Dong**, A. Xu, G. Gutow, H. Choset I. Abraham, "Ergodic Exploration over Meshable Surfaces".

- Preprint
- Submitted to ICRA 2025

LEADERSHIP/WORK EXPERIENCE

Yale Code Haven, Treasurer, Classroom Lead, Mentor, New Haven, CT August, 2020 – May, 2023

- Managed finances and purchases for the organization while coordinating with Yale financial offices
- Planned large interactive events for middle-school students and educators
- Led a class of peer mentors to teach middle-school students Computer Science

Alexander Academy/Ivy Tutors, Academic Tutor, Virtual March, 2021 – November, 2023

- Tutored high-school students one-on-one in standardized tests (ACT, SAT) and academic subjects (Physics, Calculus)
- Created an online, recorded curriculum for students and tutors to use as a resource

Paschar Consulting, College Application Mentor, Virtual August, 2022 – Present

- Guided high school juniors and seniors through the US college application process by helping them create an application that best reflects their motivations, accomplishments, and ambitions

IEEE Robotics and Automation Society, Student Representative, Virtual April, 2024 – Present

- Multi-Robot System Technical Committee
- Coordinated with the Chair and Co-Chairs to organize committee events like meetings, workshops
- Facilitated communication between members and students around the world
- Represented the student perspective within the committee

FIRST Robotics Competition Team 5419 Berkelium, Mentor, Berkeley, CA September, 2024 – Present

- Worked with the high school robotics team to help them throughout their competition and off season

HONORS AND AWARDS

- Best Paper Award (Robotics: Science and Systems 2023)
- 2024 Honorable Mention for Computing Research Association's Outstanding Undergraduate Researcher Award
- Donald Warren McCroskey Memorial Prize
 - Awarded to a senior who is deserving of the greatest distinction for scholarly achievement in fields related to mechanics and its applications
- 2020 U.S. Presidential Scholar

GRANTS AND FELLOWSHIPS

- Berkeley Fellowship
- Society of American Military Engineers Gift Fund for Scholarships
- Dr. Claire A. Colman Scholarship Fund
- Morton Butler Ryerson Memorial Scholarship Fund
- Robert B. Dodds (M.S.E.E. 1928) Scholarship Fund
- Dean's Research Fellowship
- Yale Summer Experience Award

SOCIETIES

- Phi Beta Kappa Honor Society
- Tau Beta Pi Engineering Honor Society
- IEEE Membership
- IEEE Robotics and Automation Society Membership
- ASME Membership