

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,” in 2025 *International Conference on Robotics and Automation (ICRA)*, <https://arxiv.org/abs/2503.05026>
 - Publication
 - Poster presentation
 - Oral presentation
- K. Nagpal, **D. Dong**, J.B. Bouvier, N. Mehr, “Leveraging Large Language Models for Effective and Explainable Multi-Agent Credit Assignment,” in 2025 *Autonomous Agents and Multiagent Systems (AAMAS)*, <https://arxiv.org/abs/2502.16863>
 - Publication

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

Independent, *Academic Tutor*, Virtual November, 2023 – Present

- Tutored high-school students one-on-one in standardized tests (ACT, SAT)
- Coordinated directly with parents to help keep students on track and best prepared for their exams and school

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

- National Defense Science and Engineering Graduate (NDSEG) Fellowship Award
- 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