

Chendi Lin

chendil@alumni.cmu.edu | <https://chendilin.com>

EDUCATION

CARNEGIE MELLON UNIVERSITY

School of Computer Science

MS in Robotics

Full Research Assistant Scholarship in:
Advanced Agent-Robotics Technology
Lab

May 2020 | Pittsburgh, PA

Overall GPA: 4.13/4.0

UNIVERSITY OF ILLINOIS, AT URBANA - CHAMPAIGN

College of Engineering

BS in Engineering Mechanics

Minor: Computer Science & Math

Conc. in Computational Mechanics

May 2018 | Urbana, IL

Overall GPA: 3.97 / 4.0 (Highest Distinction)

PUBLICATIONS

C.Lin et al., Online Connectivity-aware
Dynamic Deployment for Heterogeneous
Multi-Robot Systems. In ICRA 2021.

C.Lin et al., Attitude Control System
Complexity Reduction via Tailored
Viscoelastic Damping Co-Design. In 2018
AAS GNC, Breckenridge, CO, Feb 2018.

C.Lin et al., Efficient Optimal Surface
Texture Design Using Linearization. In
ISSMO 12th World Congress of Structural
and Multidisciplinary Optimisation,
Braunschweig, Germany, Jun 2017.

SKILLS

PROGRAMMING

C++ • Matlab • Python • ROS

Java • \LaTeX • Clojure • C#

COMPUTER-AIDED DESIGN

Creo • Solidworks • Simulink

AWARDS

2018 Bronze Tablet (University Honor)

2018 Fred B. Seely Award

2017 Seichi Konzo Memorial Award

2016 Honorable Mention in MCM

WORK EXPERIENCE

WAYMO (EX GOOGLE'S SELF DRIVING CAR PROJECT)

Software Engineer

Feb 2022 - Present | San Francisco, CA

- Work on behavior planning of autonomous trucks
- Build a new technology framework that unifies the planning of robotaxi and trucking
- Serve as one of the main persons of contact for route selection debugging issues and feature requests, and improve the performance and reliability of route selections
- Inject features to improve the safety and smoothness of lane change behaviors both on freeways and urban streets and boost the capabilities of lane change completion by 10% - 20%
- Design, implement, and test the new collision and kinematic features in route and path selection that reduce 50% of collision events, 60% - 80% harsh reactions like swerves and harsh brakes, and other safety related metrics
- Lead the trucking severe events triage team

MATHWORKS Software Engineer 2

August 2020 - Feb 2022 | Natick, MA

- Worked as one of the main contributors in Simulink Code Inspector team
- Designed and migrate a new storage infrastructure to improve the computational efficiency and backwards compatibility
- Owned the full responsibility of developing new features and maintaining the inspection for MATLAB Function Block, e.g., support of eps function, manual review option, etc.

UBER ATG Software Engineering Intern

May 2019 - August 2019 | Pittsburgh, PA

- Worked on path optimization in motion planning team
- Designed and implemented path planner V2.0 used in the car currently
- Improved the robustness of the path planner to fix the failure modes. The planning tests that were impossible to solve previously can be passed now

RESEARCH EXPERIENCE

MOTION PLANNING FOR MULTI-ROBOT SYSTEMS

Advised by Prof. Katia Sycara

September 2018 - May 2020 | Carnegie Mellon University

- Studied motion and behavior planning problems for multi-robot and swarm systems with various graph and tree searching methods
- Generating plans that restrict the risk of energy depletion while guaranteeing the targets' visitations
- Developed a novel connectivity-aware multi-robot redistribution approach that accounts for exploration, dynamic task allocation, and connectivity maintenance for a heterogeneous robot team. 20 times faster than state-of-art mixed integer non-linear optimization solver and 300 times faster than Genetic Algorithms with the same performance
- Simulated the planning results on RVIZ and Gazebo ROS
- Published a paper on ICRA 2021 and serves as a reviewer in the area of multi-robot system task allocation and motion planning