
EDUCATION

Ph.D., Computer and Information Sciences, DePaul University 2019 – 2026

Dissertation: *Path Planning for Continuum Arms*. GAANN Fellow.

- Designed path planners for multisection continuum arms, a largely open problem at the time
- Built planners that anticipate moving obstacles; extended them to dual-arm systems
- Wrote the codebase from scratch in C++ and Python, incl. simulators and a Three.js visualizer
- 4 first-author papers (IEEE RA-L, ICRA, RoboSoft); 140+ citations, 90 for the RA-L paper

M.S., Computer Science, DePaul University 2018 – 2019

Thesis: *Machine-Learning Based Approach for Efficient Path Planning of Continuum Co-Robotic Arms*

B.S., Computer Science, DePaul University 2014 – 2018

Software Development concentration; Mathematical Sciences minor

EXPERIENCE

Adjunct Faculty 2024 – 2026

School of Computing, DePaul University, Chicago, IL

- Instructor of record for 6 sections of Introduction to Computer Science I & II
- Also taught Design and Analysis of Algorithms (2021, 2023); CS tutor (2018 – 2019)

Summer Intern, United Airlines – Ansible automation, AWS data gathering 2017, 2018

Research Intern, Discovery Lab Global 2016

SKILLS

Languages: C++, Python, JavaScript, Java, SQL

Libraries: OMPL, CGAL, Boost, Eigen, NLOpt, NumPy, SciPy, PyTorch, OpenCV

Methods: Sampling/graph-based motion planning, inverse kinematics, computational geometry

Tools: Three.js, Matplotlib, MATLAB, Blender, Arduino, Raspberry Pi

SELECTED PUBLICATIONS

- RRT*-Based Path Planning for Continuum Arms. *IEEE RA-L*, 2022.
- Path Planning for Continuum Arms in Dynamic Environments. *IEEE RoboSoft*, 2024.
- Anticipatory Path Planning for Continuum Arms in Dynamic Environments. *IEEE ICRA*, 2021.
- Smooth Path Planning for Continuum Arms. *IEEE ICRA*, 2021.
- Near-optimal Smooth Path Planning for Multisection Continuum Arms. *IEEE RoboSoft*, 2019.