

# Frederick Stock

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tba  
<https://scholar.google.com/citations?user=VzJruXwAAAAJ>

## Experience

### University of Massachussets Lowell

Fall 2023 – Spring 2024

Teaching Assistant

- Three sections
- Recitation, Office hours, Grading, Managing graders

## Education

### University of Massachussets Lowell

2022 – 2026

Ph.D. in Computer Science

### Rochester Institute of Technology

2017 – 2021

Bachelor of Science in Applied Mathematics


## Service

Reviewer/Sub-reviewer: International Symposium on Computational Geometry (SoCG)

2025

## Publications

### Preprints

Reconfiguration of 3D Pivoting Modular Robots  DOI

2023

### Conference Papers

Input-Sensitive Reconfiguration of Sliding Cubes

2025

The Canadian Conference on Computational Geometry (CCCG) 

Quasigeodesics on the Cube

2025

The Canadian Conference on Computational Geometry (CCCG) 

On Inside-out Dissections of Polygons and Polyhedra

2025

The Canadian Conference on Computational Geometry (CCCG)  DOI

Brief Announcement: Broadcast via Mobile Agents in a Dynamic Network: Interplay of Graph Properties & Agents

2025

4th Symposium on Algorithmic Foundations of Dynamic Networks (SAND)  DOI

Finding Shortest Reconfiguration Sequences for Modular Robots

2025

41st International Symposium on Computational Geometry Media Exposition (SoCG:ME 2025)   DOI

Navigation in dynamic graphs: How to defeat the Acme Graph Exploder

2025

2025 Spring Eastern Sectional Meeting of the American Mathematical Society (AMS Spring 2025)

Minimum Plane Bichromatic Spanning Trees





2024

35th International Symposium on Algorithms and Computation (ISAAC)  DOI



Easier Ways to Prove Counting Hard: A Dichotomy for Generalized #SAT, Applied to Constraint Graphs

2024

35th International Symposium on Algorithms and Computation (ISAAC)  DOI

<b>Agent Motion Planning as Block Asynchronous Cellular Automata: Pushing, Pulling, Suplexing, and More</b>	2024
21st International Conference on Unconventional Computation and Natural Computation (UCNC)	 DOI
<b>A Universal In-Place Reconfiguration Algorithm for Sliding Cube-Shaped Robots in a Quadratic Number of Moves</b>	2024
40th International Symposium on Computational Geometry (SoCG)	 DOI
<b>Super Guarding and Dark Rays in Art Galleries</b>	2023
The Canadian Conference on Computational Geometry (CCCG)	
<b>Blockchain Ensured Physical Visitor Access Control and Authentication</b>	2022
IEEE International Conference on Mobile Ad Hoc and Smart Systems, REUNS (REUNS)	

Journal Papers

<b>Minimum Plane Bichromatic Spanning Trees</b>	2025
ACM Transactions on Algorithms (Transactions on Algorithms)	 DOI
<b>Physical Visitor Access Control and Authentication Using Blockchain, Smart Contracts and Internet of Things</b>	2022
Cryptography (MDPI), Special Issue on Emerging Topics in Blockchain Security and Privacy (Cryptography)	 DOI

Presentations

	2020
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Accolades

<b>Magnum Cum Laude</b>	2021
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