Thomas Cohn

Email: cohnt@umich.edu Website: http://tommycohn.com

EDUCATION Massachusetts Institute of Technology, Cambridge, USA

2022 - Present

Computer Science PhD Program

Advisor: Russ Tedrake

University of Michigan, Ann Arbor, USA

2017 - 2022

College of Engineering: Computer Science BSE with Honors, Magna cum Laude

College of LSA: Honors Mathematics BS

Minors: Statistics, Music

GPA: 3.74/4.00

RESEARCH Articles

- Thomas Cohn, Nikhil Devraj, Odest Chadwicke Jenkins, "Topologically-Informed Atlas Learning," Proceedings of the 2022 IEEE International Conference on Robotics and Automation (ICRA).
- Thomas Cohn, Odest Chadwicke Jenkins, Karthik Desingh, Zhen Zeng, "TSBP: Tangent Space Belief Propagation for Manifold Learning," *Robotics and Automation: Letters 2020.*

Presentations

- "Topologically-Informed Atlas Learning," *IEEE International Conference on Robotics and Automation (ICRA) 2022.* (Technical Talk and Poster Presentation)
- "Topologically-Informed Atlas Learning," University of Michigan Engineering Research Symposium Fall 2021. (Poster Presentation) - 1st Place Award
- "Coordinate Chart Particle Filter for Deformable Object Pose Estimation," University of Michigan Engineering Research Symposium Winter 2021. (Poster Presentation)
- "TSBP: Tangent Space Belief Propagation for Manifold Learning," International Conference on Intelligent Robots and Systems (IROS) 2020. (Technical Talk)
- "TSBP: Tangent Space Belief Propagation for Manifold Learning," University of Michigan Engineering Research Symposium 2019. (Poster Presentation)

TEACHING

University of Michigan, Ann Arbor, Michigan, USA Instructor Aide, Introduction to Autonomous Robotics

Winter 2022

University of Michigan, Ann Arbor, Michigan, USA Instructor Aide, Introduction to AI and Programming Fall 2021

University of Michigan, Ann Arbor, Michigan, USA Instructor Aide, Introduction to Microprocessor Computing Systems

University of Michigan, Ann Arbor, Michigan, USA

Winter 2019

Winter 2020

Instructor Aide, Introduction to Microprocessor Computing Systems

WORK **EXPERIENCE** Laboratory for Progress, University of Michigan

Ann Arbor, MI, USA

Research Advisor: Professor Chad Jenkins

Research Assistant 2016 - 2022

Curriculum Designer

Robotics @ Marygrove, University of Michigan Ann Arbor, MI, USA

2021

2017 - 2022

Number DNA Software Developer

Ann Arbor, MI, USA 2017 - 2018

Center for Healthcare Engineering and Patient Safety Software Developer

Ann Arbor, MI, USA 2017

Green Ladder Technologies LLC Embedded Systems Developer

2015 - 2016 Batavia, IL, USA

EXTRA-ACTIVIES

Michigan Marching Band, University of Michigan

CURRICULAR Cymbal section leader 2019 - 2022

2017 - 2022 Michigan Hockey Pep Band, University of Michigan

Michigan Percussion Chamber Ensemble, University of Michigan 2018 - 2020

HONORS AND University of Michigan College of Engineering Honors Program (Computer Science)

AWARDS University of Michigan College of Literature, Science, and the Arts Honors Program (Math-

ematics)

Member: Tau Beta Pi Honor Society Member: Phi Kappa Phi Honor Society

Dean's List x7

University Honors x7

The Gloria Wille Bell and Carlos R. Bell Scholarship

Raab Family Scholarship Regents Merit Scholarship Wanda W. Lincoln Scholarship

Detroit News/CATCH Scholarship for Mathematics

RELEVANT COURSE-WORK

Computer Science: Object-Oriented Programming, Data Structures and Algorithms, Algorithms for Data Science, Autonomous Robotics, Computer Security, Machine Learning, Computer Vision, Computational Statistics

Mathematics: Multivariable Calculus, Differential Equations, Abstract Algebra (Group Theory, Ring/Module Theory), Probability Theory, Graph Theory, Linear Algebra, Numerical Methods, Topology, Differentiable Manifolds, Riemannian Geometry, Convex Optimization