Hang Liao

Curriculum Vitae
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Ph.D. Student
Department of Computer Science
Dartmouth College
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Research Interests

Broadly in algorithms, recently in algorithms with query models, previously in streaming and sketching algorithms

Education

Ph.D. in Computer Science, Dartmouth College, June 2025 (Expected)
Advisor: Deeparnab Chakrabarty

Master of Science in Computer Science, Research Thesis, Carnegie Mellon University, May 2020
Advisor: David Woodruff

Bachelor of Science in Mathematics with Additional Major in Computer Science, Carnegie Mellon University, May 2019

Research and Publications

Deeparnab Chakrabarty, Hang Liao, A Query Algorithm for Learning a Spanning Forest in Weighted Undirected Graph, ALT 2023

Graph Connectivity Problem under Query Model, Quantitative Group Testing, Submodular Function Testing, advised by Deeparnab Chakrabarty, 2020, 2021

Hang Liao, Barak A. Pearlmutter, Vamsi K. Potluru, David Woodruff, Automatic Differentiation of Sketched Regression, AISTATS 2020

Finding L2 Heavy-Hitter with Optimal Space, advised by David Woodruff, Summer 2018, 2019

Using Fitch Diagram and Classical Set Theory to Prove Pigeonhole Principle, advised by Wilfried Sieg, Summer 2019

Cooperative Species Population Modeling, advised by William Hrusa, Summer 2016

Teaching

Head Teaching Assistant, CS 30 Discrete Mathematics in Computer Science, Spring 2022

Teaching Assistant, CS 39 Theory of Computation, Winter 2022

Head Teaching Assistant, CS 31 Algorithms, Winter 2021

Head Teaching Assistant, CS 30 Discrete Mathematics in Computer Science, Fall 2020

Teaching Assistant, MATH 21-259 Calculus in Three Dimensions, Fall 2019

Teaching Assistant, MATH 21-240 Matrix Algebra with Applications, Spring 2018

Grader, MATH 21240 Matrix Algebra with Applications, Fall 2017

Professional Service

Conference reviewed: SODA 2022

Awards

Dean's Award, University of California, Irvine (declined), 2019

Top 500, Putnam Mathematical Competitions, 2017, 2018

Summer Undergraduate Research Fellowship, Summer 2016

Working Experience

Software Engineer Intern, Cimpress Technology, Summer 2021