

D Ellis Hershkowitz

CMU PH.D. STUDENT IN THEORETICAL COMPUTER SCIENCE

5000 Forbes Ave, Computer Science Department, GHC 6105, Pittsburgh, PA

☎ 703-965-4979 | ✉ delhersh@gmail.com | 🏠 dhershko.github.io

Education

Carnegie Mellon University

PH.D. IN COMPUTER SCIENCE

- Advised by Professors Bernhard Haeupler and R Ravi.
- Research in: approximation algorithms; distributed graph algorithms.

Pittsburgh, PA

Fall 2016 - Present

Brown University

M.S. IN COMPUTER SCIENCE

- GPA: 4.0/4.0
- Advised by Professor Michael Littman.
- Research in: abstraction in reinforcement learning.

Providence, RI

Fall 2015 - Spring 2016

B.A. IN COMPUTER SCIENCE AND PHILOSOPHY

- GPA: 4.0/4.0
- Advised by Professor Stefanie Tellex.
- Research in: Humans to Robots Lab in reinforcement learning as applied to robotics.

Fall 2012 - Spring 2015

Publications

Tree Embeddings for Hop-Constrained Network Design

WITH BERNHARD HAEUPLER, GORAN ZUZIC

(ACM Symposium on Theory of Computing 2021)

STOC 2021

District-Fair Participatory Budgeting

WITH ANSON KAHNG, DOMINIK PETERS, ARIEL D. PROCACCIA

(AAAI Conference on Artificial Intelligence 2021)

AAAI 2021

An Optimal Rounding for Half-Integral Weighted MSCSS

WITH GREGORY KEHNE, R. RAVI

(Information Processing Letters 2020)

IPL 2020

Reverse Greedy is Bad for k -Center

WITH GREGORY KEHNE

(Information Processing Letters 2020)

IPL 2020

Computation-Aware Data Aggregation

WITH BERNHARD HAEUPLER, ANSON KAHNG, ARIEL PROCACCIA

(Innovations in Theoretical Computer Science 2020)

ITCS 2020

Erasure Correction for Noisy Radio Networks

WITH KEREN CENSOR-HILLEL, BERNHARD HAEUPLER, GORAN ZUZIC

(International Symposium on Distributed Computing 2019)

DISC 2019

Prepare for the Expected Worst: New Two-Stage Covering Models and Algorithms

WITH R. RAVI, SAHIL SINGLA

(International Workshop on Approximation Algorithms for Combinatorial Optimization Problems)

APPROX 2019

Finding Options that Minimize Planning Time

WITH YUU JINNAI, DAVID ABEL, MICHAEL LITTMAN, GEORGE KONIDARIS

(International Conference on Machine Learning 2019)

ICML 2019

Round- and Message-Optimal Distributed Graph Algorithms	<i>PODC 2018</i>
WITH BERNHARD HAEUPLER, DAVID WAJC (Symposium on Principles of Distributed Computing 2018)	
Broadcasting in Noisy Radio Networks	<i>PODC 2017</i>
WITH KEREN CENSOR-HILLEL, BERNHARD HAEUPLER, GORAN ZUZIC (Symposium on Principles of Distributed Computing 2017)	
Near Optimal Behavior via Approximate State Abstraction	<i>ICML 2016</i>
WITH DAVID ABEL, MICHAEL LITTMAN (International Conference on Machine Learning 2016)	
Goal-based Action Priors	<i>ICAPS 2015</i>
WITH DAVID ABEL, GABRIEL BARTH-MARON, STEPHEN BRAWNER, KEVIN O'FARRELL, JAMES MACGLASHAN, STEFANIE TELLEX (International Conference on Automated Planning and Scheduling 2015)	
Deterministic Tree Embeddings with Copies for Algorithms Against Adaptive Adversaries	<i>Preprint</i>
WITH BERNHARD HAEUPLER, GORAN ZUZIC	
Near-Optimal Schedules for Simultaneous Multicasts	<i>Preprint</i>
WITH BERNHARD HAEUPLER, DAVID WAJC	

Teaching Experience

Spring 2019	Algorithmic Superpower Randomization (15-859) , 3 Hour Lecture on Lovász Local Lemma	<i>Carnegie Mellon</i>
Fall 2017	Graduate Complexity Theory (15-855) , Graduate Teaching Assistant	<i>Carnegie Mellon</i>
Spring 2017	Undergraduate Complexity Theory (15-455) , Graduate Teaching Assistant	<i>Carnegie Mellon</i>
Spring 2016	Introduction for Non-Majors (CS8) , Teaching Assistant	<i>Brown</i>
Fall 2014	Artificial Intelligence (CS141) , Teaching Assistant	<i>Brown</i>
Spring 2014	An Integrated Introduction to Computer Science (CS18) , Teaching Assistant	<i>Brown</i>
Fall 2013	An Integrated Introduction to Computer Science (CS17) , Teaching Assistant	<i>Brown</i>

Awards

2019	Best Review , given "Best Review" award for my peer review of submitted papers	<i>DISC 2019</i>
2019	\$400,000 NSF Grant , helped write "Distributed Optimization Beyond Worst Case Topologies"	<i>NSF</i>
2018-2019	Pradeep Sindhu and Marie-Francoise Bertrand Fellowship , School of Computer Science	<i>Carnegie Mellon</i>
2016	NSF Graduate Research Fellowships Program , honorable mention	<i>NSF</i>
2015	Magna Cum Laude , highest university honors	<i>Brown</i>
2015	Computer Science Honors Degree , department-level honors	<i>Brown</i>
2015	Sigma Xi Honors Society , member	
2014	Great TA Award , elected "Great Teaching Assistant" for my work in Artificial Intelligence	<i>Brown</i>

Professional Service

Ongoing	Program Committees , AAAI 2021.	
Ongoing	Reviewer , DIST 2020; ICALP 2020; ITCS 2020; DIST 2019; DISC 2019; ESA 2019; FOCS 2019; STOC 2019; SODA 2019; DISC 2018; STACS 2018.	
2018-Present	Open House Coordinator , helped organize department open house for admitted students	<i>Carnegie Mellon</i>
2017-Present	Introductory Course Coordinator , helped organize department orientation for new students	<i>Carnegie Mellon</i>
2017-2018	Theory Lunch Organizer , organized Carnegie Mellon University Theory Lunch	<i>Carnegie Mellon</i>
2014-2016	Lab Organizer , managed weekly Humans to Robots lab meetings: e.g. scheduling talks	<i>Brown</i>

Industry Experience

Google Inc.	<i>Mountain View, CA</i>
SOFTWARE ENGINEERING INTERN IN APPS DISCOVERY TEAM	<i>Summer 2015</i>

Chai Energy

BACKEND DATA ANALYST (PART TIME)

Los Angeles, CA

Spring 2014-Fall 2014

Additional Research Experience

National Institutes of Health

SUMMER RESEARCH INTERN IN SECTION ON INTEGRATIVE NEUROIMAGING AND MOLECULAR GENETICS UNIT

Bethesda, MD

Summers 2010, 2012, 2013