Calvin Beideman
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505 S Elm St.
Champaign IL, 61820

Education:

University of Illinois at Urbana Champaign, Expected 05/2023
PhD in Computer Science advised by Karthekeyan Chandrasekaran
Courses: Algorithmic Game Theory, Combinatorics, Complexity Theory, Data Mining, Structure of Graphs, Algorithms for Big Data, Randomized Algorithms

Carnegie Mellon University, 05/2018
B.S. in Computer Science, & Discrete Math and Logic (Double Major)
Dean's List—F14, S15, F15, S16, S17, S18

Research:

Broadly interested in CS Theory, particularly algorithm design and combinatorial optimization
Research experience in combinatorial optimization, approximation algorithms, hardness of approximation, combinatorial game theory, communication complexity

Publications:

Approximate Representation of Symmetric Submodular Functions via Hypergraph Cut Functions (FSTTCS 2022)
Counting and enumerating optimum cut sets for hypergraph k-partitioning problems for fixed k (ICALP 2022)
Faster Connectivity in Low-rank Hypergraphs via Expander Decomposition (IPCO 2022)
Deterministic enumeration of all minimum k-cut-sets in hypergraphs for fixed k (SODA 2022)
Multicritera Cuts and Size-Constrained k-cuts in Hypergraphs (RANDOM 2020)

Teaching:

University of Illinois, Urbana, IL

Instructor for CS173 "Discrete Structures"	June 2022-August 2022
Head TA for CS374 "Algorithms and Models of Computation"	August 2022-December 2022
TA for CS586 "Combinatorial Optimization"	January 2022-May 2022
TA for CS374 "Algorithms and Models of Computation"	January 2021-May 2021
	August 2019-December 2019
	August 2018-December 2018
TA for CS473 "Algorithms"	August 2020-December 2022
TA for CS173 "Discrete Structures"	January 2019-May 2019

Carnegie Mellon University, Pittsburgh, PA

Head TA for 15-251 "Great Theoretical Ideas in CS"	August 2017-May 2018
Teaching Assistant for 15-251	August 2015-May 2017

Employment:

Dropbox, San Francisco, CA
Software Engineering Intern
May 2017 – August 2017

- Improve the reliability and speed of the Webhooks system
- Improve data collection and logging for Webhooks

ChemImage Corporation, Pittsburgh PA
Software Intern Summer 2011-2015

- Improved the effectiveness and efficiency of C# algorithms for ink analysis
- Researched, developed, and implemented algorithms for biomedical applications
- Optimized image processing functions for speed and memory use

Honors:

Alan J. Perlis Undergraduate Student Teaching Award (awarded to one CMU CS student per year)
Carnegie Mellon Senior Leadership recognition (for contributions to 15-251)
Saburo Muroga Endowed Fellowship (Awarded to up to 5 UIUC CS grad students per year)