Max Ovsiankin

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Research interests

I am broadly interested in mathematics and theoretical computer science. My research focuses on using tools from probability, geometry, and analysis to design efficient algorithms for combinatorial optimization.

Education

2020 – 2026 (expected) PhD in Computer Science, TTIC
Advisor: Yury Makarychev

2020 – 2022 MS in Computer Science, TTIC

2016 – 2020 BA in Mathematics and Computer Science, UC Berkeley

Preprints

"Approximation Algorithms for ℓ_p-Shortest Path and ℓ_p-Group Steiner Tree" with Yury Makarychev, Erasmo Tani.
"The Change-of-Measure Method, Block Lewis Weights, and Approximating Matrix Block Norms" with Naren Manoj.

Publications

"Near-Optimal Streaming Ellipsoidal Rounding for General Convex Polytopes" with Yury Makarychev, Naren Manoj. *STOC 2024*
"Streaming Algorithms for Ellipsoidal Approximation of Convex Polytopes" with Yury Makarychev, Naren Manoj. *COLT 2024*
"Efficient Post-Quantum SNARKs for RSIS and RLWE and their Applications to Privacy" with Cecilia Boschini, Jam Camenisch, Nicholas Spooner. *PQCrypto 2020*

Service

Reviewer

STOC (2024)

Organizer

2023 TTIC Student Workshop

Other

2023-2024 TTIC Student Body Representative

Teaching

Autumn 2022	TA, TTIC 31200 Information and Coding Theory
Winter 2022	TA, TTIC 31010 Algorithms
Spring 2018 - Spring 2020	TA, Berkeley CS 170 Algorithms
Summer 2019	TA, Berkeley CS 189 Intro to Machine Learning

Honors

2022-2023	Best TA Award, TTIC
2020	Phi Beta Kappa, Upsilon Pi Epsilon

Talks

Feb 2024	"The Change-of-Measure Method, Block Lewis Weights, and Approximating Matrix Block Norms". *NSF TRIPODS Workshop*
Mar 2022	"Streaming algorithms for ellipsoidal approximation of convex polytopes". *UChicago Theory Lunch*
Jul 2018	"Validating Typechecking Changes with SemanticDB". *ICFP*
May 2018	"Cracking RSA with Quantum Computing". *Berkeley Mathematics Directed Reading Program*

Industry Experience

May - Aug 2018	Software Engineering Intern, *Twitter*
May - Aug 2017	Data Science Intern, *Salesforce Einstein*
Jun - Sep 2015	Software Engineering Intern, *Kifi*

Volunteering

Mar - Jun 2022	Volunteer, *Code Nation Chicago*
Jan 2018 - May 2019	Mentor, Co-Coordinator, *Berkeley CS Mentors*

Last updated: February 18, 2024