Samuel King

PHD STUDENT · GEORGETOWN UNIVERSITY

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Education

Georgetown University   *Washington D.C.*
PHD, COMPUTER SCIENCE   *Fall 2021 - present*
- Advisor: Sasha Golovnev
- Research Interests: Computational Complexity, Discrete Mathematics, Algorithms

University of Rochester   *Rochester, NY*
HONORS BS, MATHEMATICS   *Fall 2016 - Spring 2021*
- Minor in Computer Science
- Thesis: Sampling Young Tableaux and Contingency Tables
- Thesis Advisors: Daniel Štefankovič and Sevak Mkrtchyan
- Take Five Scholar: The Role of Music in Video Games and Film
- Magna Cum Laude, GPA: 3.96

Publications

[1] Erin Bevilacqua, Samuel King, Jürgen Kritschgau, Michael Tait, Suzannah Tebon, and Michael Young. Rainbow numbers for $x_1 + x_2 = kx_3$ in $\mathbb{Z}_n$. *Integers: Electronic Journal of Combinatorial Number Theory*, 20(A50):A50, 2020.

[2] Aniruddha Bapat, Andrew M. Childs, Alexey V. Gorshkov, Samuel King, Eddie Schoute, and Hrishee Shastri. Quantum routing with fast reversals. *Quantum*, 5, 533, 2021.

IN REVIEW

[1] Karthik Gajulapalli, Alexander Golovnev, Samuel King. On the Power of Adaptivity for Function Inversion. (Preprint) *ECCC* TR24-054.

Research Experience

University of Maryland   *College Park, MD*
REU - COMBINATORICS AND ALGORITHMS FOR REAL PROBLEMS (REU-CAAR)   *Summer 2020*
- Topic: Algorithms for routing qubits via reversals
- Advisors: Andrew Childs and Alexey Gorshkov

University of Rochester   *Rochester, NY*
GRAD STEM FOR ALL   *Summer 2019*
- Topic: Polynomial Methods in Combinatorics, Geometry, and Integer Partitions
- Advisor: Alex Iosevich

Carnegie Mellon University   *Pittsburgh, PA*
SUMMER UNDERGRADUATE APPLIED MATHEMATICS INSTITUTE (SUAMI)   *Summer 2018*
- Topic: Anti-Ramsey theory for colorings of $\mathbb{Z}/n\mathbb{Z}$
- Advisor: Michael Young

Honors and Awards

2024	**Outstanding Teaching Assistant Award**, Georgetown U. Computer Science Department
2020	**Arthur S. Gale Memorial Prize**, University of Rochester Mathematics Department
2019	**Take Five Scholarship**, University of Rochester
	Deans' Award for Symposium Presentation, University of Rochester
	Joint Mathematics Meetings 2019 Outstanding Poster Distinction, JMM 2019
2016	**Wilder Trustee Scholarship**, University of Rochester

Teaching Experience

Spring 2024	**Math Methods for CS**, Teaching Assistant & Lecturer	*Georgetown U*
Fall 2023	**Intro to Databases**, Teaching Assistant & Lecturer	*Georgetown U*
Summer 2023	**New Horizons in Theoretical Computer Science**, Teaching Assistant	*TTIC (Virtual)*
Fall 2020	**Graduate Algebra I**, Teaching Assistant & Lecturer	*U of Rochester*
Fall 2017 - Spring 2020	**Honors Calculus I & II (Freshman Real Analysis)**, Teaching Assistant & Workshop Leader	*U of Rochester*

Professional Development

Algorithms and Theory Seminar Presentation, Boston University, April 2024

DIMACS Workshop on Lower Bounds and Frontiers in Data Structure, Rutgers University, August 2022

University of Rochester Undergraduate Research Exposition Presentation, University of Rochester, April 2019

MAA Student Poster Session, Joint Mathematics Meetings, January 2019