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

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

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.

Honors and Awards

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

Presentations

Samuel King. 2019. Rainbow numbers for $x_1 + x_2 = kx_3$ in $\mathbb{Z}_n$. Oral Presentation: University of Rochester Undergraduate Research Exposition, Rochester, NY.

Erin Bevilacqua, Samuel King, Suzannah Tebon. 2019. Rainbow numbers for $x_1 + x_2 = kx_3$ in $\mathbb{Z}_n$. Poster: Joint Mathematics Meetings 2019, Baltimore, MD.

Teaching Experience

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 & Memberships

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

Phi Beta Kappa Honor Society