

Alexander (Zander) Kelley

CONTACT INFORMATION

Department of Computer Science email: awk2@illinois.edu
University of Illinois at Urbana-Champaign web: <https://zanderkelley.com>
201 N. Goodwin Ave., Urbana, IL 61801

RESEARCH INTERESTS

computational complexity, pseudorandomness, communication complexity,
extremal and additive combinatorics, number theory

EDUCATION

University of Illinois at Urbana-Champaign

Ph.D., Computer Science, May 2024 (expected)

- Advisor: Michael A. Forbes

Texas A&M University

B.S. Computer Science, May 2017

- Honors Distinction

B.S. Mathematics, May 2017

- Honors Distinction

POSITION

Teaching/Research Assistant, Aug 2017 - Present

Department of Computer Science,
University of Illinois Urbana-Champaign

HONORS AND AWARDS

Best Paper Award, FOCS 2023

SELECTED PUBLICATIONS

Zander Kelley, Shachar Lovett, Raghu Meka
Explicit Separations Between Randomized and Deterministic Number-on-Forehead Communication
arXiv preprint, 2023

Zander Kelley, Raghu Meka
Strong Bounds for 3-Progressions
FOCS 2023

Zander Kelley, Raghu Meka
Random Restrictions and PRGs for PTFs in Gaussian Space
CCC 2022

Zander Kelley
An Improved Derandomization of the Switching Lemma
STOC 2021

Michael Forbes, Zander Kelley
Pseudorandom Generators for Read-once Branching Programs, in Any Order
FOCS 2018

Zander Kelley, Sean W. Owen
Estimating the Number of Roots of Trinomials Over Finite Fields
Journal of Symbolic Computation 2017

Zander Kelley
Roots of Sparse Polynomials Over a Finite Field
ANTS 2016

PROFESSIONAL
ACTIVITIES

Conference Reviews

ITCS 2024, SODA 2024, STOC 2023, ICALP 2023, CCC 2022, STOC 2022, STOC 2020,
ICLR 2020, FOCS 2019

Journal Reviews

Theory of Computing

Invited Talks

Atlanta Discrete Analysis Seminar (Georgia Institute of Technology, 2023)

Shandong University Number Theory and Combinatorics Seminar (Shandong University, 2023)

Cornell Junior Theorists' Workshop (Cornell University, 2023)

Theoretical Computer Science and Discrete Mathematics Seminar (Institute for Advanced Study, 2023)

TEACHING
EXPERIENCE

Graduate Teaching Assistant

University of Illinois Urbana-Champaign

Fall 2018 - Present

- CS473: Algorithms
- CS374: Introduction to Algorithms
- CS579: Computational Complexity

Undergraduate Teaching Assistant

Texas A&M University

Fall 2015

- MATH170: Calculus Retention Lab