JONATHAN PARLETT

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EDUCATION

University of Georgia *2025-Present*
Ph.D Mathematics

Drexel University *2020-2025*
B.S. Mathematics
B.S. Computer Science
GPA: 3.8

RESEARCH INTERESTS

Algebra, Number theory and combinatorics.

PUBLICATIONS

2025 Top to random and reverse: analysis of a new descent algebra shuffle, joint with Darij Grinberg. Preprint, available on arxiv.

2024 Fixed Point Homing Shuffles.

2023 Subnet Communicability: Diffusive Communication Across the Brain Through a Backbone Subnetwork, joint with Abhishek Jeyapratap, Ali Shokoufandeh, Birkan Tunc, and Yusuf Osmanlioglu

PRESENTATIONS/TALKS

2025 At the 2025 Joint Mathematics Meetings, poster on Long Paths in Polynomial Divisor Graphs, joint with Nicole Froitzheim.

2024 At YMC 2024 hosted by Ohio State University, on Long Paths in Polynomial Divisor Graphs, joint with Kayla Traxler.

2023 At CDMRI 2023 Subnet Communicability: Diffusive Communication Across the Brain Through a Backbone Subnetwork, joint with Abhishek Jeyapratap.

2023 At Drexel week of undergraduate excellence Subnet Communicability: Diffusive Communication Across the Brain Through a Backbone Subnetwork.

TEACHING EXPERIENCE

Univeristy of Georgia

Grader August 2025 - Present
Applied Linear Algebra: Graded homeworks and held office hours. A standard first course in linear algebra using Dr. Strang's *Introduction to linear Algebra.*

Math Tutor August 2025 - Present
I work in the study hall at UGA helping students with course work across the undergraduate curriculum including Precalc, Calc I-III, Linear Algebra, and Combinatorics.

Drexel University

Course Assistant June 2022 - Jan 2024
Data Structures: Created presentations on memory semantics and C programming to prepare students to implement data Structures in C. Graded all written and programming assignments which covered implementations, and introductory algorithmic problem solving, and analysis. Held offices hours, and recitations to assist students in understanding course material

Programming Language Concepts: Created scripts to automate grading of students programming assignments. Held offices hours to assist students in understanding course material, to include, functional programming in haskell, scheme interpreter implementation, and program testing

Algorithmic Number Theory & Cryptography: Held offices hours to assist students in understanding course material, as well as, administer make up quizzes. Graded all assignments which covered analysis, implementation, and breaking of various cryptosystems

Math Tutor Jan 2024 - March 2024
Held offices hours to assist students with problem solving in 1st year math courses, and to help students develop good learning, strategies, and habits.

Math Grader Sept 2024 - Mar 2025
Abstract Algebra I (Fall 2024): Covers the theory of groups, rings, and fields.

Abstract Algebra II (Winter 2025): Covers rings, fields, modules, and algebras, with applications to number theory.

Linear Algebra II (Winter 2025): A second course in linear algebra, covers vector spaces over arbitrary fields, linear maps, Jordan cononical form, spectral theorem, inner product, and normed spaces.

PROFESSIONAL EXPERIENCE

SRI International March - September 2022
Intern, Data Analysis and Software Engineering *Princeton, NJ*

Worked under Principal Research Engineer Norman Hurst, to develop a technology to allow for recovery of time from video streams, robust against framerate conversions.

Conducted statistical analysis of system performance to facilitate improvement and validation of functionality, as well as develop methods to further improve accuracy of this system. Contributions lead to inclusion as co-inventor on patent.

Worked primarily in the C programming language, with performance analysis through python and pandas.

United States Marine Corp October 2015 - February 2020
Data Systems Administrator *Camp Pendleton, CA*

Configured and maintained information systems networks to facilitate communication between military units in remote locales.

Provided services such as voice, video, email, file sharing, and internet, through a combination of Cisco, and Microsoft software and hardware solutions.

Trained peers and subordinates in occupational skills.

AWARDS

Robert J. Bickel Endowed Scholorship, Spring 2025

Outstanding Undergraduate Teaching Assistant Award, Spring 2024

Yilin Yang Outstanding Undergraduate Math Research Award, Spring 2024

Undergraduate Research Mini-Grant, Winter 2023

Deans list, Drexel University

Navy, and Marine Corp Achievement Medal, United States Marine Corp 2018,2020

MEMBERSHIPS

Computer Science Theory Reading Group (2022-Present)

Institute of Electrical and Electronics Engineers (IEEE) (2020-Present)

Mathematics Student Organization (2022 - Present)