CALVIN GEORGE

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Citizenship: United States

EDUCATION

Dartmouth College, Hanover NH
B.A., Mathematics; Asian Societies, Cultures, and Languages   (*Expected*) June 2024
Math GPA: 3.93   General GPA: 3.92

RELEVANT COURSEWORK

Multilinear Algebra, Honors Number Theory (Cryptography), Abstract Algebra – Rings and Fields*, Abstract Algebra – Groups and Rings, Algebraic Topology, Topology II, Topology I, Metric Spaces and Measure Theory, Complex Analysis, Linear Algebra, Shape of Space (Topology), Probability, Differential Equations, Multivariable Calculus, Intro Programming and Computation (Python)
*Currently enrolled

PUBLICATIONS AND PREPRINTS

(1) *An approach to normal polynomials through symmetrization and symmetric reduction* (with Darien Connoly, Xiang-Dong Hou, Adam Madro, and Vincenzo Pallozzi Lavorante), submitted. preprint arXiv: 2309.05470

RESEARCH EXPERIENCE AND INDEPENDENT STUDY

Undergraduate Thesis: Genera of Modular Curves   March 2022 -
Advisor: John Voight
- For every nonnegative integer g, is there a torsion-free congruence subgroup such that the Riemann surface obtained as the quotient of the completed upper half-plane by the subgroup has genus g?

University of South Florida Cryptography REU   May - August 2023
Advisors: Xiang-Dong Hou, Vincenzo Pallozzi Lavorante
- Discovered simple conditions on specific polynomials over finite fields that are sufficient to show normality; preprint listed in section above

Independent Research   March 2022 -
Advisor: John Voight
Topic: Conditionally bounding the rank of Elliptic Curves
- Read through *Rational Points on Elliptic Curves* (Silverman, Tate)
- Adapted the algorithm outlined in "Conditionally Bounding Analytic Ranks of Elliptic Curves" (Bober) to the Gaussian

Directed Reading Program, Dartmouth College   March – May 2023
Advisor: Eran Assaf
Topic: Modular Forms

- Read from *A First Course in Modular Forms* (Diamond and Shurman)

Directed Reading Program, Dartmouth College   January - March 2023
Advisor: Lizzie Buchanan
Topic: Knot Theory
- Presented a [poster](#) on knot theory and an original knot characteristic

Directed Reading Program, Dartmouth College   March - June 2022
Advisor: Alex Wilson
Topic: Ehrhart theory
- Delivered a 20-minute presentation on key concepts of integer-point enumeration in polyhedra

HONORS AND AWARDS

Jack Byrne Scholars Program	September 2020 - June 2024
Citation in Math 54, Topology	August 2022
Citation in Math 75, Number Theory: Honors	June 2022

WORK AND TEACHING EXPERIENCE

Math with Friends, Co-founder / Tutor   October 2023-
- Co-founded "Math with Friends," an organized tutoring group that encourages collaboration and inclusivity in introductory pure math courses.

Dartmouth College, Grader: Math 31, Algebra	September - November 2023
Dartmouth College, Grader: Math 43, Complex Analysis	March – June 2023
Dartmouth College, Grader: Math 31, Algebra	June - August 2022
Dartmouth College, Instructor: Japanese 3 Drill Class	March - June 2022
Branch Metrics, Data Analysis Intern	June - September 2021

SKILLS AND LANGUAGES

Programming: SageMath, Magma, Mathematica, Python,

Japanese: Proficient