

Dylan Costa

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RESEARCH INTERESTS

My research interests are in Algebraic Number Theory and Arithmetic Geometry. Specifically, my interests surround the topics of elliptic curves, modular curves, and Galois representations attached to abelian varieties.

EDUCATION

2021 - present	University of Connecticut, Ph.D in Mathematics Research Advisor: Alvaro Lozano-Robledo	(GPA: 3.9/4.0)
2017 - 2021	Ithaca College, BA in Mathematics with Honors Research Advisors: Emilie Wiesner, Ted Galanthay	(GPA: 3.98/4.0)

INVITED TALKS

A Computational Prospective on Modular Curves Number Theory Seminar, University of Connecticut	November 2025
Rank Growth of Elliptic Curves over Quadratic Extensions SIGMA Graduate Seminar, University of Connecticut	August 2025
Elliptic Curves and their Applications in Mathematics and Beyond Mathematics Colloquium, Ithaca College	April 2025
Pontryagin Duality and Applications to Tate's Thesis Number Theory Seminar, University of Connecticut	March 2025
Rank Growth of Elliptic Curves over Quadratic Extensions Graduate Research Forum, University of Connecticut	January 2025
On ℓ -adic Images of Galois Attached to Elliptic Curves over the Rationals General Exam Presentation, University of Connecticut	November 2024
On The Euclidean Embedding and Adeles/Ideles of a Number Field Number Theory Seminar, University of Connecticut	October 2024
Construction of High Rank Elliptic Curves over Quadratic Fields Number Theory Seminar, University of Connecticut	April 2024
Elliptic Curves and their Applications Mathematics Continued Conference, University of Connecticut	March 2024
On Meromorphic Differentials and Riemann-Roch Number Theory Seminar, University of Connecticut	April 2023

PUBLICATIONS

Classification of Isogeny-Torsion Graphs in Quadratic Fields (Joint Work with Rakvi)	In Progress
Ranks Growth of Elliptic Curves in Quadratic Extensions (Joint Work with Alvaro Lozano-Robledo)	In Progress

TEACHING EXPERIENCE

MATH 2410: Elementary Differential Equations Fall 2025, Spring 2026	Instructor of Record
MATH 1071: Calculus for Business and Economics Spring 2025, Spring 2024, Fall 2023	Instructor of Record
MATH 2110: Multivariable Calculus Summer 2024, Fall 2024	Graduate Teaching Assistant
MATH 1132: Calculus II Spring 2023, Summer 2023, Fall 2022, Summer 2022, Spring 2022	Graduate Teaching Assistant
MATH 1131: Calculus I Fall 2021	Graduate Teaching Assistant

AWARDS

Oracle Honors Society Fall 2019-Spring 2021	Ithaca College
Summer Scholar Fellowship Summer 2020	Ithaca College
Ramanujan Award in Mathematics Fall 2019	Ithaca College

RELEVANT SKILLS

Programming	MAGMA, SAGE, Java (advanced), Python, MATLAB (intermediate), HTML (novice)
Software	Latex, Office Programs (Excel), Google Programs (Sheets)