Joseph Beckmann

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EDUCATION AND EMPLOYMENT

Lecturer *August 2026-Present*
Texas State University

PhD Mathematics, Algebraic Geometry *August 2026*
Syracuse University, Advised by Steven Diaz

BS Mathematics *May 2020*
Drake University, Des Moines, Iowa

- Minor in Biology

TEACHING EXPERIENCE

- Mathematics for Business and Economics II (MATH 1329), Instructor of Record, Fall '26, two sections
- Calculus for Life Sciences I (MATH 2321), Instructor of Record, Fall '26, two sections
- Algebraic Geometry, Spring '26
- Calculus I (MAT 295), Instructor of Record, Spring '26
- Calculus I (MAT 295), recitation leader, Fall '25
- Probability and Statistics for the Liberal Arts I (MAT 121), recitation leader, Fall '20
- Calculus III (MAT 397), recitation leader, Fall '21
- Business Calculus (MAT 284), recitation leader, Spring '22
- Life Sciences Calculus II (MAT 286), Instructor of Record, Fall '22
- Calculus II (MAT 296), recitation leader, Spring '21, Spring '24
- Life Sciences Calculus I (MAT 285), Instructor of Record, Spring '23, Fall '23, Fall '24, Spring '25

PUBLICATIONS AND PREPRINTS

"Generalizing M. Dale's results from secants to joins", submitted. URL: https://arxiv.org/abs/2512.03268

"An upper bound on the number of points of excess intersection of nondegenerate varieties in $\mathbb{P}^n$", PhD thesis, in preparation.

RESEARCH PROJECTS

Algebraic Geometry Research *July 2023-Present*
Syracuse University

- Advisor: Dr. Steven Diaz
- Research question: How many times can space curves intersect?

Undergraduate Research Projects *Academic Years 2018–20*
Drake University

- Commutative Algebra, mentored by Neil Steinburg
- Neuromathematics, mentored by Vira Babenko
- Biomathematics, mentored by Terrance Pendleton

PRESENTATIONS

The Excess Intersection Problem *March 2026*
Annual New York State Regional Graduate Mathematics Conference (ANYSRGMC), Syracuse University

The Algebraic Fundamental Group I *March 2026*
Working Algebra Knowledge Seminar (WALKS), Syracuse University

The Algebraic Fundamental Group II *March 2026*
WALKS, Syracuse University

Chow Ring Basics *February 2026*
Mathematics Graduate Organization Colloquium, Syracuse University

What's the most times that two curves in $\mathbb{P}^3$ can intersect? *September 2025*
Route 81 Conference, Queens University

What's the most times that two curves in $\mathbb{P}^3$ can intersect? *September 2025*
Syracuse University Algebra Seminar

Bounding Intersections Using Intersection Theory *March 2025*
ANYSRGMC, Syracuse University

Galois: Legends and Lore *March 2025*
Mathematics Graduate Organization Colloquium, Syracuse University

Moduli Space Basics I *February 2025*
Working Algebra Knowledge Seminar (WALKS), Syracuse University

Moduli Space Basics II *February 2025*
WALKS, Syracuse University

The Chow Ring and Basic Intersection Theory *Spring 2024*
WALKS, Syracuse University

Numerical Semigroups and Their Binomial Ideals *Spring 2022*
Mathematics Graduate Organization Colloquium, Syracuse University

CONFERENCES AND WORKSHOPS

Joint Math Meetings *January 4-7, 2026*

AGNES *November 21-23, 2025*
Algebraic Geometry Northeastern Series, UMass Amherst

Route 81, Invited Speaker *September 27, 2025*
Conference on Commutative Algebra and Algebraic Geometry, Queens University

ANYSRGMC *Spring 2025*

Annual New York State Regional Graduate Mathematics Conference, Syracuse University

AGNES *November 8-10, 2024*
Algebraic Geometry Northeastern Series, Dartmouth University

Route 81 *November 2, 2024*
Conference on Commutative Algebra and Algebraic Geometry, Cornell University

Math Department Teaching Seminar *Fall 2023*
Syracuse University

Introduction to the Theory of Algebraic Curves *July 2024*
SLMath Summer School, hosted at UC Berkeley

Fairfax Algebra Days *March 2024*
George Mason University

ANYSRGMC *Spring 2024*
Syracuse University

Route 81 *November 2023*
Syracuse University

Morgantown Algebra Days *April 2023*
West Virginia University

ANYSRGMC *Spring 2023*
Syracuse University

ANYSRGMC *Spring 2020*
Syracuse University

LEADERSHIP, COMMUNITY ENGAGEMENT, AWARDS

Directed Reading Program *Spring 2026*
- Extracurricular reading project with two undergraduate students on Diophantine equations.

Graduate Student Organization (GSO) Vice President *June 2025–Present*

GSO Senate Parliamentarian *June 2024–May 2025*

GSO Outstanding Committee Member Award *May 2025*

Directed Reading Program *Spring 2024*
- Extracurricular reading project with two undergraduate students on neuromathematics.

GSO Senator *Academic Year 2023–24*

Syracuse Graduate Employees United (SGEU) Bargaining Committee Member *May 2023-April 2024*
- Negotiated with representatives of Syracuse University to decide protections for graduate employees.
- Fastest known graduate student contract negotiation.

Chair of the SGEU Community Building Committee *Fall 2023*

SGEU Department Mobilizer *Academic Year 2022-23*
- Achieved 100% knowledge of turnout results for graduate students in the math department (54 people) during the unionization election.

Directed Reading Program *Fall 2021*
- Extracurricular reading project with an undergraduate student on numerical semigroups.