Adam Pratt
Curriculum Vitae

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▬▬▬ Education

2017–present	**Ph.D. Candidate in Mathematics**, *University of Illinois at Chicago*. Expected May 2024, Advisor: Brooke Shipley
2013–2017	**B.S. in Mathematics**, *Birmingham-Southern College*. Minor in Studio Art, *cum laude*, Phi Beta Kappa, Harrison Honors Scholar
2010–2013	**High School Diploma**, *Homewood High School*. with Highest Honors

▬▬▬ Experience

2021, 2023	**Instructor, Summer Enrichment Workshop**, *University of Illinois at Chicago*, Chicago, IL. Instructor of record for an intensive summer workshop in college algebra (2021, 100% pass rate) and intermediate algebra (2023, 94% pass rate).
2020–present	**Private tutor**. Tutored for the following undergraduate courses: ○ Precalculus ○ Calculus I ○ Discrete Structures
2020–2022	**Research Assistant**, *University of Illinois at Chicago*, Chicago, IL. Assisted in research administrative duties including aiding in advising students in reading courses, and performed research in algebraic topology (including equivariant homotopy theory, stable homotopy theory, and derived algebraic geometry).
2018–2019	**Grader**, *University of Illinois at Chicago*, Chicago, IL. Graded homework for an undergraduate course in mathematical writing and an introductory graduate course in algebraic topology.
2017–present	**Teaching Assistant**, *University of Illinois at Chicago*, Chicago, IL. Led discussion sections and tutored for undergraduate courses including: ○ Precalculus ○ Mathematical Reasoning ○ Differential Equations ○ Applied Linear Algebra ○ College Algebra ○ Calculus for the Life Sciences
2014–2015, 2016	**Distinguished Vail Fellow**, *Birmingham-Southern College*, Birmingham, AL. Worked on research projects in algebraic number theory and mathematical biology, including extensive work with the computer algebra system PARI/gp and the agent-based modeling software NetLogo, one of which lead to the publication below.
2015–2016	**Teaching Assistant**, *Birmingham-Southern College*, Birmingham, AL. Graded homework and held problem-solving sessions for upper-level undergraduate courses in abstract algebra and probability theory.
2014–2017	**Quantitative Resource Center Tutor**, *Birmingham-Southern College*, Birmingham, AL. Worked as a mathematics tutor for all undergraduate mathematics courses at BSC.

▬▬▬ Leadership and Service

2022–2023	Organizer, Graduate Topological Data Analysis Seminar, UIC.
2022	Organizer, Graduate Algebraic K-theory Seminar, UIC.
2020–2022	Co-President, Graduate Employees' Organization, Local 6297, AFT-IFT, AFL-CIO.
2019	IFT Delegate, Graduate Employees' Organization, Local 6297, AFT-IFT, AFL-CIO.
2019–2020	Chief Steward, Graduate Employees' Organization, Local 6297, AFT-IFT, AFL-CIO.
2018–2019	Co-President, Mathematics Graduate Student Association, UIC.
	Co-organizer, Graduate Homotopy Theory Seminar, UIC.

Co-organizer, Graduate Student Colloquium, UIC.

2016–2017 President, Kappa Mu Epsilon AL Zeta Chapter, BSC.

President, Math Club, BSC.

Papers and Preprints

A. Pratt, M. Stadnik, and M. Wachter, *Units in Quadratic and Multi-Quadratic Fields*, Alabama Journal of Mathematics **41**, 2017.

Talks and Poster Sessions

2023 "Persistent homology analysis of protein structure" PHYS 450 Molecular Biophysics of the Cell, UIC.

2022 "Simplicial homology," Graduate Topological Data Analysis Seminar, UIC.

"Simplicial complexes, Alpha Shapes, and Manifold Sweeps," Graduate Topological Data Analysis Seminar, UIC.

"Mackey functors and equivariant algebraic K-theory," Graduate Algebraic K-theory Seminar, UIC.

"G-spectra and Mackey functors," Graduate Algebraic K-theory Seminar, UIC.

"Stable ∞-categories, Weinstein manifolds, and the Fukaya Category," Graduate Geometry and Topology Seminar, UIC.

"Spaces with symmetry and their cohomology," Graduate Student Colloquium, UIC.

"Stable homotopy groups of spheres and the Adams spectral sequence," Graduate Geometry and Topology Seminar, UIC.

2021 "Algebraic Models in Stable Homotopy Theory," Graduate Geometry and Topology Seminar, UIC.

2020 "p-Divisible Groups I," Graduate Number Theory Seminar, UIC.

2019 "Cohomologie étale: les points de départ," Graduate Algebraic Geometry Seminar, UIC.

"Landweber Exactness and Morava E-Theory", Graduate Homotopy Theory Seminar, UIC.

"Stacks?", Graduate Homotopy Theory Seminar, UIC.

2017 "$(\infty, 1)$-Topoi: A Primer," Graduate ∞-Categories Seminar, UIC.

"Topological and Combinatorial Characterizations of Factorization in Integral Domains," MAA Southeast Section Meeting, Mercer University.

"Units in Quadratic and Multi-Quadratic Fields," MAA Undergraduate Poster Session, Joint Mathematics Meetings.

2016 "Units in Quadratic and Multi-Quadratic Fields", MathFest, Troy University.

2015 "An Agent-Based Model of Yellow-Bellied Marmots (*Marmota flaviventris*)," 7th International Symposium on Biomathematics and Ecology: Education and Research, Harvey Mudd College.

Certifications

2023 **Data Science Bootcamp**, *The Erdős Institute*, Columbus, OH.

An intensive bootcamp leading to a certification in data science, covering basic Python, various data analytics/visualization packages, collecting/organizing data, applied machine learning, and statistical analysis, culminating in a group data analysis project that utilized the skills we learned.

Selected Conferences Attended

Summer 2021 Transchromatic Homotopy Online Conference, University of Regensburg.

Summer 2021 Viva Talbot!, MIT.

Fall 2019 Midwest Topology Seminar, University of Chicago.

Spring 2019 Arizona Winter School on Topology and Arithmetic, University of Arizona.

Introductory Workshop: Derived Algebraic Geometry and Birational Geometry and Moduli Spaces, MSRI.

Summer 2018 Young Topologists Meeting, University of Copenhagen.

Spring 2018 Vitamin K_1: Kerz–Strunk–Tamme, UIC.

Winter 2018 Midwest Topology Seminar, Northwestern University.

Honors and Awards

2017	Math Faculty Outstanding Senior Award, BSC.
	Phi Beta Kappa, BSC.
2014–2017	Distinguished Vail Fellow (awarded twice during this time period), BSC.
2016	Kappa Pi Art Honor Society, BSC.
2013–2016	Dean's List (awarded multiple semesters during this time period), BSC.
	Louise Hall and Robert W. Echols Mathematics Award, BSC.
2015	Kappa Mu Epsilon Mathematics Honor Society, BSC.
2014	National Merit Corporate Scholar, Southern Company.
	Alpha Lambda Delta Honor Society, BSC.
2013-2017	Harrison Honors Program, BSC.
2013	BSC Achievement Scholarship, BSC.
	Dow-GLAD Scholarship, PFLAG.

Grants

2018	Received funding for the 2018 Young Topologists Meeting in Copenhagen, NSF.
2016, 2014	rise^3 Initiative Housing Grant, BSC.
	Charles B. Vail Distinguished Research Fellowship, BSC.
2014	SGA Travel Grant, BSC.
	Office of the Provost Student Travel Grant, BSC.

Computer skills

Intermediate	Python, UNIX, NetLogo, PARI/gp
Basic	Java, Sage, Maple, MATLAB

Languages

English	Native language
French	Intermediate