Andrew Stout

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199 Chambers St., Rm N563, NY, New York - 10007, USA

Research Interests

Algebraic Geometry, Commutative Algebra, Computer Algebra, Combinatorics.

Experience

- **BMCC - CUNY [🌐]** *Aug 2023 - Current*
  Associate Professor, Tenured NYC, NY
- **BMCC - CUNY [🌐]** *Aug 2016 - Aug 2023*
  Assistant Professor, Tenure-Track NYC, NY
- **BCC - CUNY [🌐]** *Aug 2014 - Aug 2016*
  Substitute Assistant Professor NYC, NY
- **UMPC - Sorbonne Université [🌐]** *Aug 2012 - Aug 2013*
  Chateaubriand Fellowship Paris, Fr
- **Graduate Center - CUNY [🌐]** *Aug 2008 - Aug 2011*
  Enhanced Chancellor's Fellowship NYC, NY

Education

- **Graduate Center - CUNY** *May 2014*
  Ph.D., Mathematics NYC, NY
- **Graduate Center - CUNY** *May 2011*
  M.A., Mathematics NYC, NY
- **NC State** *May 2008*
  B.Sc., Mathematics Raleigh, NC

Publications & Abstracts

A=Abstract, J=Journal Article, S=In Submission, T=Thesis

[S.2] Stout, A. (2025). *On a new singular library for computing generalized jet schemes with fast partial reduction and selected applications*, 35pp. Preprint.

[S.1] Stout, A. (2025). *Jets of local complete intersection morphisms*, 20pp. Submitted to Bull. Lond. Math. Soc., Under-review.

[J.4] Stout, A. (2024). **Jet schemes over auto-arc spaces and deformations of locally complete intersection varieties**, J. Algebra, Volume 659, 361-394

[J.3] Stout, A. (2019). **The auto Igusa-zeta function of a plane curve singularity is rational.** Proc. Amer. Math. Soc., 147, no. 5, 1825–1838.

[J.2] Stout, A. (2019). **Formal deformations of algebraic spaces and generalizations of the motivic Igusa-zeta function.** Algebraic curves and their applications, 137–147, Contemp. Math., 724, Amer. Math. Soc.,

[J.1] Stout, A. (2017). **On the auto Igusa-zeta function of an algebraic curve.** J. Symbolic Comput. 79, part 1, 156–185.

[T.1] Stout, A. (2014). **Motivic Integration over Nilpotent Structures.** Thesis (Ph.D.)–City University of New York. 179 pp. ISBN: 978-1321-30704-7, ProQuest LLC

[A.3] Stout, A., **The jet operator: from local to global deformations.** AMS Special Session on Integer Partitions, Arc Spaces and Vertex Operators, Joint Mathematics Meeting, San Francisco, CA, United States. Jan. 2024

[A.2] Stout, A. with Iarmolenko, A., Legaspi, M., Vaiciulis, P., **Using the Gini Coefficient to rank AI systems: a case study using Rubik's cube AI solvers.** AMS - PME Undergraduate Student Poster Session, American Mathematical Society, Joint Mathematics Meeting, San Francisco, CA, United States. Jan. 2024

[A.1] Stout, A., **The auto Igusa-zeta function of a plane curve singularity is rational.** Special Session on Algebraic Curves and their Applications, American Mathematical Society, Fall Southeastern Sectional Meeting, University of Central Florida Orlando, FL, United States. Sept. 2017.

Teaching Experience

- **BMCC - CUNY:** MAT 415: Linear Algebra for Data Science, MAT 320: Abstract Algebra, MAT 315: Linear Algebra, MAT 301: Analytic Geometry & Calculus I, MAT 209: Statistics, Mat 206: Pre-Calculus, MAT 150: Introduction to Statistics, MAT 56: Intermediate Algebra and Trigonometry
- **BCC - CUNY:** Mat 23: Introduction to Statistics, Mat 05: Remedial Algebra, Mat 01: Remedial Arithmetic
- **Stevens Institute of Technology:** MA 530: Applied Mathematics for Engineers & Scientists II
- **NYU:** Introduction to Statistics
- **Hunter College - CUNY:** Calculus 1, Precalculus
- **City Tech - CUNY:** Calculus 1, Precalculus
- **CCNY - CUNY:** Precalculus, College Algebra

Grants & Awards

- **PSC- CUNY Award #67566-00 Cycle 55 (Trad B), PI** *Fall 2024*
  Mathematics Research, PSC-CUNY [🌐]
- **Creating Data Science Pathways for STEM Student Success, Co-PI** *Spring 2024 - Present*
  Program Advisor, NSF Grant [🌐]
- **Creating Data Science Pathways for STEM Student Success Summer Grant, PI** *Summer 2023*
  Guiding Student Research, NSF Grant [🌐]
- **PSC- CUNY Award #66024-00 Cycle 54 (Trad A), PI** *Summer 2023*
  Mathematics Research, PSC-CUNY [🌐]
- **PSC- CUNY Award #60784-00 Cycle 48 (Trad B), PI** *Fall 2017*
  Mathematics Research, PSC-CUNY [🌐]

Selected Department, College & University Service

- **Member of Focus Group** *Jan 2025 - Present*
  Shape NYCPS + CUNY Data Science Pathways, University Service [🌐]
- **Program Advisor** *Dec 2023 - Dec 2024*
  Data Science Program, Department Service [🌐]
- **Chair** *Aug 2023 - Dec 2024*
  Data Science Committee, Department Service [🌐]
- **Member** *Aug 2023 - Dec 2024*
  Data Science Team, Department Service [🌐]
- **Member** *Aug 2022 - Present*
  AcMo 2.0 Committee, College Service [🌐]
- **Event Organizer** *Aug 2019 - Present*
  Event planning for talks and research symposiums, Department & College Service [🌐]

Student Mentorship

- **Guiding Student Research in Math & Data Science** *Aug 2017 - Present*
  Organization/Institution Name [🌐]
  - Mentored one student for honors contract and research (Spring 2024).
  - One student in my research team presented our work at JMM 2024 in the AMS-PME Poster Session.
  - Guiding students on where to apply for research funding and other academic programs.
  - During Summer 2023, I mentored three students in research in Artificial Intelligence and Deep Learning which resulted in Poster Presentation at the Data Science Symposium.
  - During Fall 2023 and Spring 2024, I mentored one of the students for BMCC Foundation Fellowship to continue to conduct research in Data Science and present at BARs Conferences.
  - Mentored one student for honors contract and research (AY 2017). This student continued on to a four-year school, and I continued to mentor him in research for future Poster Presentations in Mathematics.
- **Mentor** *Aug 2023 - Dec 2024*
  NOYCE Student Fellowships [🌐]
  - Met regularly with an advanced student to discuss teaching mathematics (Calculus 1) and how to mentor/guide students learning new content.
  - Scheduled specific tutoring times for students who are struggling in the course to meet with my mentee.
  - Guided my student through the process of creating a short lesson plan for Calculus I in order to prepare for a teaching session in my class.
  - Provided instructional feedback after their brief teaching session to help improve their instructional abilities and confidence.
- **Faculty Student Advisor** *Aug 2016 - Present*
  Various Activities [🌐]
  - Advised students (from Fall 2023 to Present) in Data Science in terms of which class to take.
  - Faculty Chaperone for 1 day student club trip to Brooklyn Botanical Gardens during Fall 2019.
  - Faculty Chaperone for 3 day trip student club trip to University Of Pennsylvania during Spring 2019.
  - Faculty club advisor: Chess Club during Spring 2019.
  - Faculty club advisor: Investment Club during Spring 2019.
  - Advised students of all majors in terms of which classes to take from Fall 2016 to Fall 2018.

Recent Talks

- **Intro to Jet Schemes:** Math Lounge Colloquium, BMCC, CUNY *May 2025*
- **Jets of lci morphisms:** Algebra Seminar, Rutgers University *April 2025*
- **Intro to Jet Schemes:** Mathematical Research Series, Kean University *March 2025*
- **Jets of lci morphisms:** CAAG Seminar, Graduate Center, CUNY *Feb. 2025*
- **Using the Gini coefficient to rank AI systems:** Joint Mathematics Meeting, San Francisco *Jan. 2024*
- **Jet Spaces: from local to global deformations:** CAAG Seminar, Graduate Center, CUNY *Oct. 2023*
- **Using the Gini coefficient to rank AI systems:** Annual Data Science Symposium, BMCC, CUNY *Sep. 2023*

Professional Memberships

- **American Mathematical Society**
- **Mathematical Association of America**

Selected Service to Mathematical Community

- **Reviewer for Mathematical Reviews, American Mathematical Society: mathscinet.ams.org (2017 - Present)**
- **Referee for Journal de l'École Polytechnique - Mathématiques**
- **Postdoctoral Grant Evaluator for European Science Foundation - Research Foundation Flanders' (FWO)**

Additional Information

Programming Languages: Python, R, Singular, Sage, Macaulay, Magma, Latex, Java, HTML