

Andrew Stout


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RESEARCH INTERESTS

Algebraic Geometry, Commutative Algebra, Computer Algebra, Combinatorics.

EXPERIENCE

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

EDUCATION

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

PUBLICATIONS & ABSTRACTS






A=ABSTRACT, C=CODE, J=JOURNAL ARTICLE, S=IN SUBMISSION, T=THESIS

- [S.3] Stout, A. (2025). *A note on the stabilization of some deformed motivic volumes*, 9pp. Submitted to Arch. Math. (Basel), Under-review.
- [S.2] Stout, A. (2025). *On a new singular library for computing generalized jet schemes with fast partial reduction and selected applications*, 37pp. Submitted to J. Comput. Algebra, Under-review.
- [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.
- [C.2] Stout, A. (2025), **arc.lib: A Singular library for generalized jet schemes computations**, Version 1.0.0, June 2025. Additional repository at <https://github.com/infinity-groupoids/arc.lib>
- [C.1] Stout, A. (2014), **A sage script entitled "NFT.PY" which computes generalized jet schemes**, Version 1.0.0, May 2014. Additional repository at <https://github.com/infinity-groupoids/NFT.py>
- [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

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

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