

# Andrew Stout

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## RESEARCH INTERESTS

Algebraic Geometry, Commutative Algebra, Computer Algebra, Combinatorics.

## EXPERIENCE

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

## EDUCATION

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

## PUBLICATIONS & ABSTRACTS

A=ABSTRACT, 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 Archiv der Mathematik, 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. Symbolic Computation, 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.
- [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

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- **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

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- **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

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- **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

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

## PROFESSIONAL MEMBERSHIPS

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- American Mathematical Society
- Mathematical Association of America

## SELECTED SERVICE TO MATHEMATICAL COMMUNITY

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- Reviewer for Mathematical Reviews, American Mathematical Society: [mathscinet.ams.org](https://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

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