

CONTACT INFORMATION	Department of Mathematics Boyd Research and Education Center Athens, GA 30602	tylergenao@uga.edu tylergenao.com github.com/tgenao
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RESEARCH INTERESTS      Number theory + arithmetic geometry

EDUCATION	<b>University of Georgia</b> , Athens, GA Ph.D. Candidate <span style="float: right;"><i>August 2017-</i></span> Adviser: Pete L. Clark
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<b>Florida Atlantic University</b> , Boca Raton, FL B.Sc., Mathematical Sciences with high honors <span style="float: right;"><i>May 2017</i></span>
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HONORS AND AWARDS	<b>National Science Foundation Graduate Research Fellowship</b> <span style="float: right;"><i>2017-2022</i></span> <b>NSF RTG Graduate Student Fellowship</b> <span style="float: right;"><i>2018-2019</i></span>
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PREPRINTS	9. <b>Polynomial bounds on torsion from a fixed geometric isogeny class.</b> Submitted. <a href="#">Copy</a> . 8. <b>Growth of torsion groups of elliptic curves upon base change from number fields.</b> Submitted. <a href="#">Copy</a> .
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ACCEPTED AND/OR PUBLISHED	7. <b>Typically bounding torsion on elliptic curves isogenous to rational <math>j</math>-invariant.</b> Accepted to <i>Proc. Amer. Math. Soc.</i> <a href="#">Copy</a> . 6. <b>Computational study of non-unitary partitions</b> , with A.P. Akande, S. Haag, M.D. Hendon, N. Pulagam, R. Schneider and A.V. Sills. Accepted to <i>J. Ramanujan Math. Soc.</i> <a href="#">Copy</a> . 5. <b>Typically bounding torsion on elliptic curves with rational <math>j</math>-invariant.</b> <i>J. Number Theory</i> 238 (2022), 823–841. <a href="#">Journal</a> . <a href="#">Copy</a> . 4. <b>The least degree of a CM point on a modular curve</b> , with P.L. Clark, P. Pollack and F. Saia. <i>J. Lond. Math. Soc. (2)</i> 105 (2022), no. 2, 825–883. <a href="#">Journal</a> . <a href="#">Copy</a> . <a href="#">Code</a> . 3. <b>Chevalley-Waring at the boundary</b> , with P.L. Clark and F. Saia. <i>Expo. Math</i> 39 (2021), no. 4, 604–623. <a href="#">Journal</a> . <a href="#">Copy</a> . <a href="#">Code</a> . 2. <b>Faltings heights of CM elliptic curves and special gamma values</b> , A. Barquero-Sanchez, L. Cadwallader, O. Cannon, and R. Masri. <i>Res. Number Theory</i> 3 (2017), Paper No. 13, 16 pp. <a href="#">Journal</a> . <a href="#">Copy</a> . 1. <b>The density of primes dividing a particular non-linear recurrence sequence</b> , with A. Block Gorman, H. Hwang, N. Kantor, S. Parsons and J. Rouse. <i>Acta Arith.</i> 175 (2016), no. 1, 71–100. <a href="#">Journal</a> . <a href="#">Copy</a> .
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## TALKS

1. *Bounds on torsion subgroups from geometric isogeny classes of elliptic curves*  
Joint Mathematics Meetings (upcoming) *January 2023*
2. *Bounds on torsion from isogeny classes of elliptic curves*  
Number Theory Seminar, UGA *September 2022*
3. *Typically bounding torsion on special subfamilies of  $F_0$ -curves*  
CTNT 2022 *June 2022*
4. *Typically bounding torsion on elliptic curves:  $j(E) \in F$  and beyond*  
Maine-Québec Number Theory Conference *October 2021*
5. *Typically bounding torsion on elliptic curves:  $j(E) \in F$  and beyond*  
Number Theory Seminar, UGA *September 2021*
6. *Cyclic isogenies under isogenous elliptic curves*  
Graduate Summer Conference, UGA *August 2021*
7. *Entanglements of Galois representations of CM elliptic curves*  
CRAAG II, UGA *July 2021*
8. *Serre's adelic open image theorem for non-CM elliptic curves*  
SeZoom, UGA *April 2021*
9. *Torsion, bounds and typically bounding torsion*  
Graduate Student Seminar, UGA *October 2020*
10. *Number theory through inquiry*  
SUMR Conference, UGA *July 2020*
11. *Foray into Galois representations*  
Graduate Summer Conference, UGA *July 2020*
12. *Constructible numbers, division points and class field theory*  
Graduate Student Seminar, UGA *April 2020*
13. *What are inseparable and transcendental extensions?*  
SMARTS Seminar, UGA *February 2020*
14. *Why is  $e^{\pi\sqrt{163}}$  almost an integer?*  
Graduate Summer Conference, UGA *July 2019*
15. *Faltings heights of CM elliptic curves and special gamma values*  
Joint Mathematics Meetings, Atlanta, GA *January 2017*
16. *Elliptic curves and their Faltings height*  
Texas A&M University *July 2016*
17. *The density of primes dividing a particular non-linear recurrence sequence*  
Joint Mathematics Meetings, Seattle, WA *January 2016*
18. *Describing the density of primes dividing a point on a particular elliptic curve*  
Graduate Summer Conference, UGA *July 2015*

PROGRAMS I'VE  
ATTENDED

1. CTNT 2022  
*June 9-11, 2022*
2. Maine-Québec Number Theory Conference  
*October 2-3, 2021*
3. PAJAMAS III  
*September 25-26, 2021*
4. YRANT III (**Y**oung **R**esearchers in **A**lgebraic **N**umber **T**heory)  
*August 18-20, 2021*
5. PCMI Summer School: Number Theory Informed by Computation  
*July 26-30, 2021*
6. Around Frobenius distributions and related topics II  
*June 28-29, 2021*
7. CMS 75th+1 Anniversary Summer Meeting  
*June 7-11, 2021*
8. Workshop on Rational Points and Galois Representations  
*May 10-12, 2021*
9. Front Range Number Theory Day  
*April 24, 2021*
10. JMM 2021  
*January 6-9, 2021*
11. PAJAMAS II  
*December 5-6, 2020*
12. Madison Moduli Weekend  
*September 26-27, 2020*
13. PAJAMAS I (**P**almetto **J**oint **A**rithmetic, **M**odularity, and **A**nalysis **S**eries)  
*September 19-20, 2020*
14. CTNT 2020  
*June 8-14, 2020*
15. Arizona Winter School 2020: Nonabelian Chabauty  
*March 7-11, 2020*
16. MAAIM (**M**odular **F**orms, **A**rithmetic, and **W**omen in **M**athematics)  
*November 1-3, 2019*
17. MAGNTS (**M**idwest **A**rithmetic **G**eometry and **N**umber **T**heory **S**eries)  
*October 12-13, 2019*
18. AIM: LMFDB as a Microscope and a Telescope  
*September 4-6, 2019*
19. CTNT 2018  
*May 28-June 3, 2018*
20. JMM 2017  
*January 2017*

21. CTNT (Connecticut Summer School in Number Theory)  
*August 8-14, 2016*
22. Texas A&M REU in Mathematics  
*May-July 2016*
23. JMM (Joint Mathematics Meetings)  
*January 2016*
24. WADE INTO Research REU at Wake Forest University  
*June-August 2015*

PROGRAMMING  
EXPERIENCE

Have experience with Magma, Python and Sage. See [github.com/tgenao](https://github.com/tgenao) for some of my projects.

TEACHING  
EXPERIENCE

1. **Instructor of record** for one section of MATH 2250 (Calculus I).  
*Fall 2022*
2. **Instructor of record** for one section of MATH 1113E (Virtual Precalculus).  
*Summer 2022*
3. **Instructor of record** for two sections of MATH 1113 (Precalculus).  
*Spring 2021*
4. **Instructor of record** for one section of MATH 1113 (Precalculus).  
*Fall 2020*

SERVICE &  
OUTREACH

1. Course assistant for the 2021 Arizona Winter School.
2. REU project assistant during Summer 2020, for a project on non-unitary partitions. One paper from our REU can be found [here](#).
3. Mentor for the math Directed Reading Program (DRP) at UGA for the Fall 2019, Spring 2020, Fall 2020, Spring 2021, Spring 2022 and Summer 2022 semesters.
4. Organizer of the math DRP at UGA since Summer 2021.
5. Organized a prep course on the UGA graduate algebra qualifying exam during Summer 2020.
6. Participated as a peer mentor for first year UGA math graduate students.