

# Gregory Taylor

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## Education

Ph.D. Mathematics, University of Illinois at Chicago, 2017-2023 (expected).

Advised by Kevin Tucker.

B.S. Mathematics, The College of William & Mary, 2013-2017.

Thesis: "On involutions and indicators of finite orthogonal groups". Advised by Ryan Vinroot.

## Preprints and Papers

1. "Singularities of some nested Hilbert schemes of points on surfaces". (with T. Ryan) To appear in Journal of Algebra.
2. "Asymptotic syzygies of secant varieties of curves". To appear in Journal of Pure and Applied Algebra.
3. "Inversion of adjunction for  $F$ -signature". submitted, available at [arXiv:1909.10436](https://arxiv.org/abs/1909.10436).
4. "Anomalous primes and the elliptic Korselt criterion". (with L. Babinkostova, J. Bahr, Y. Kim, and E. Neyman) *J. Number Theory*. 201(1):108-123, 2019. [Results obtained at the REU at Boise State].
5. "On involutions and indicators of finite orthogonal groups". (with C. R. Vinroot) *J. Austral. Math. Soc.* 105(3):380-416, (2018). [My undergraduate thesis].

## Teaching

### *Instructor of Record*

Math 088 - Intermediate Algebra Workshop (UIC, Fall 2021)

Math 182 - Emerging Scholars Program: Calculus II (UIC, Fall 2020)

### *Teaching Assistant*

Math 210 - Calculus III (UIC, Summer 2022)

Math 181 - Calculus II (UIC, Fall 2020, Spring 2022)

Math 110 - College Algebra (UIC, Fall 2017)

## Grader

At UIC - Graduate Algebra (Fall 2018), Algebraic Geometry I (Fall 2020).

At William & Mary - Foundations of Mathematics, Abstract Algebra, Elementary Analysis, Intermediate Analysis, Topics in Geometry.

## Talks and Presentations

1. GradMoCCA Graduate Meeting on Combinatorial Commutative Algebra, "Asymptotic Syzygies of Secant Varieties of Curves". May 14, 2022.
2. Notre Dame Algebraic Geometry Seminar, "Asymptotic Syzygies of Secant Varieties of Curves". November 28, 2021.
3. UIC Algebraic Geometry Seminar, "Asymptotic Syzygies of Secant Varieties of Curves". November 1, 2021.
4. AMS Sectional Meeting. Special Session on Homological Methods in Commutative Algebra. October 9-10, 2021. "Asymptotic Syzygies of Secant Varieties of Curves".
5. FRG Special Month on Singularities and  $K$ -Stability at University of Utah. June 3, 2021. Poster Session. "Asymptotic Syzygies of Secant Varieties of Curves".
6. University of Utah Commutative Algebra Seminar. February 28, 2020. "Inversion of adjunction for  $F$ -signature".

## Organizing

Organizer, "Midwest Algebraic Geometry Graduate Conference" UIC (conducted online). May 1-3, 2020.

Organizer, "Midwest Algebraic Geometry Graduate Conference" UIC. March 15-18, 2019.

Organizer, "UIC Graduate Algebraic Geometry Seminar" Fall 2018 - Spring 2020.

Organizer, "UIC Graduate Student Colloquium" Spring 2019.

## Conferences and Workshops Attended

"Midwest Algebraic Geometry Graduate Conference" UIC (conducted online). May 1-3, 2020.

"Winter School on Cremona Groups, Geometric Topology, and Algebraic Geometry" Instituto de Matematicas UNAM (Cuernavaca). January 10-15, 2020.

"Midwest Arithmetic Geometry and Number Theory Series" Ohio State. October 12-13, 2019.

"Midwest Algebraic Geometry Graduate Conference" UIC. March 15-18, 2019.

"Chicago Topology and Geometry Workshop" University of Chicago. June 12-15, 2018.

"Moduli of Sheaves and Strange Duality" Penn State. December 8-10, 2017.

## Awards and Fellowships

RTG Fellow at UIC (Spring 2018 - Spring 2020, Spring 2021) - NSF Grant #1246844.

UIC Mathematics, Statistics, and Computer Science Teaching Assistant Award (Fall 2020).

William & Mary Mathematics Prize (May 2017).

Last updated: May 10, 2022