

Taylor Brysiewicz

Mathematics

Texas A&M University

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EDUCATION

- 2014–present **PhD, Mathematics**, Texas A&M University, USA.
2010–2014 **Bachelor of Science**, Northern Illinois University, USA.
- Major: Mathematics, Minor: Philosophy.

PUBLICATIONS

- 2018 *Preprint: Numerical Software to Compute Newton Polytopes and Tropical Membership* Brysiewicz, T., ArXiv:1811.12279
2018 *Preprint: Necklaces Count Polynomial Parametrized Osculants* Brysiewicz, T., ArXiv:1807.03408
2018 *Numerical Software to Compute Newton Polytopes* Brysiewicz, T. ICMS 2018 Proceedings
2017 *The degree of $SO(n)$* . Brandt, M., Bruce, D., Brysiewicz, T., Krone, R., Robeva, E. Combinatorial Algebraic Geometry, 207-224, Fields Inst. Commun. 80, Fields Inst. Res. Math. Sci., 2017.
2014 *Points of Ninth Order on Cubic Curves* Balay-Wilson, L., Brysiewicz T. Rose-Hulman Undergraduate Mathematics Journal. Volume 15, No. 1, Spring 2014.

LONG TERM VISITS

- 2018 **Nonlinear Algebra at ICERM**, Sept 1 - Dec 1.
2017 **Max Planck Institute for Mathematics in the Sciences**, May 25-July 30.
2016 **Max Planck Institute for Mathematics in the Sciences**, October 12 - November 2.
2016 **Fields Institute Semester on Combinatorial Algebraic Geometry**, August 10-December 10.

PRESENTATIONS

- 2018 *The degree of Parseval Frames* ICERM. Nov 28, 2018
2018 *Necklaces Count Polynomial Parametrized Osculants (Poster)* ICERM. October 17, 2018
2018 *Necklaces Count Polynomial Parametrized Osculants (Poster)* ICERM. September 17, 2018
2018 *Numerical Software to Compute Newton Polytopes* ICMS 2018. Notre Dame University. July 24, 2018
2018 *Necklaces Count Polynomial Parametrized Osculants (Poster)* Applications of Polynomial Systems. Texas Christian University. June 4 - 8, 2018
2018 *Necklaces Count Polynomial Parametrized Osculants (Poster)* Texas Algebraic Geometry Symposium. Texas A&M University. April 6, 2018
2018 *Counting Polynomially Parametrized Interpolants via Necklaces* Algebra and Combinatorics Seminar. University of Texas, Dallas. January 19, 2018
2017 *Counting Polynomially Parametrized Interpolants via Necklaces* Applied Algebra Seminar. York University. December 4, 2017
2017 *Counting Polynomially Parametrized Interpolants via Necklaces* Geometry Seminar. Texas A&M University. November 17, 2017
2017 *Degree of $SO(n)$* University of California San Diego. San Diego CA. October 25, 2017
2017 *What is Numerical Algebraic Geometry?* Student Working Seminar in Algebra and Geometry. Texas A&M University. October 23, 2017
2017 *Newton Polytopes via Numerical Algebraic Geometry* AMS Fall Central Sectional Meeting. Denton TX. September 10, 2017.
2017 *Newton Polytopes via Numerical Algebraic Geometry* SIAM AG 17. Atlanta Georgia. August 2, 2017.
2017 *Newton Polytopes via Numerical Algebraic Geometry* Polynomials and Polytopes. TU Berlin. June 10, 2017.
2017 *Enumerating Interpolants via Necklaces* Graduate Students Seminar. Texas A&M University. February 16, 2017.

- 2017 *The Degree of $SO(n)$ Geometry Seminar*. Texas A&M University. January 27, 2017.
- 2016 *Newton Polytopes via Numerical Algebraic Geometry*. Algebraic Geometry Seminar. Technische Universität Berlin. October 26, 2016.
- 2016 *Newton Polytopes via Numerical Algebraic Geometry*. AMS Fall Western Sectional Meeting. University of Denver. October 8, 2016.
- 2016 *Numerically Computing Newton Polytopes (Poster)*. Introductory Workshop. Fields Institute. August 16, 2016.
- 2015 *Newton Polytopes via Numerical Algebraic Geometry*. Graduate Algebra Symposium. University of Texas Arlington. November 14, 2015.
- 2015 *Osculating Conics and Cubics*. Graduate Students Seminar. Texas A&M University. April 16, 2015
- 2014 *Computing Osculating Conics and Cubics* 31st Annual Rose-Hulman Institute of Technology Undergraduate Mathematics Conference. "Best Talk" Session. April 11-12, 2014.
- 2014 *Points of Ninth Order on a Cubic Curve (Poster)* Southwest Local Algebra Meetings, Texas A&M University, March 1, 2014.
- 2014 *Families of Plane Cubic Curves with Nine-Pointic Contact at a Point* AMS Session on Undergraduate Research in Algebra, Combinatorics and Number Theory, Joint Mathematics Meetings, January 17, 2014.
- 2013 *Osculating Cubics and Cubics that Intersect Once* Algebra Seminar, Northern Illinois University, November 26, 2013.
- 2013 *Osculating Conics of Plane Curves in Projective Space* Algebra Seminar, Northern Illinois University, November 19, 2013.
- 2013 *Littlewood Polynomials and Their Roots* Complex Analysis Seminar, Northern Illinois University, April 24, 2013.

AWARDS

- 2018 The Guseman Prize. Texas A&M University
- 2014 Northern Illinois University's Department of Mathematical Sciences Chairman's Award
- 2014 1st Place in Northern Illinois University's Undergraduate Mathematics Contest
- 2013 2nd Place in Northern Illinois University's Undergraduate Mathematics Contest
- 2011 3rd Place in Northern Illinois University's Undergraduate Mathematics Contest

SERVICE

- F2017-S2018 **Treasurer**, AMS Graduate Student Chapter at Texas A&M University.
- 2017 **Assistant**, CIMPA Research School on Combinatorial and Computational Algebraic Geometry. University of Ibadan, Nigeria..
- 2016-2018 **Organizer(Founder)**, Student Working Seminar in Algebra and Geometry. Texas A&M University.
- 2016-2018 **Organizer(Founder)**, Junior Geometry Seminar. Texas A&M University.
- 2016 **Social Coordinator**, AMS Graduate Student Chapter at Texas A &M University.
- 2015 **Helper**, Pi Day of the Century. Texas A&M University.
- 2014 **Grader**, Northern Illinois University High School Mathematics Contest.
- 2013-2014 **President of the NIU Math Club**, Northern Illinois University.

TEACHING

- Fall 2018 **Grader (Distance)**, *A Survey of Mathematical Problems I*.
- Summer 2018 **Help Session**, *Business Calculus*.
- Spring 2018 **Instructor of Record**, *Math 131*.
- Spring 2017 **MATLAB Instructor**, *Math 152*.
- Spring 2017 **Help Session**, *Linear Algebra Courses*.
- Spring 2016 **Help Session**, *Linear Algebra Courses*.
- Fall 2015 **Recitations**, *Math 151. Calculus I for Engineers*.
- Summer 2015 **Help Session**, *Linear Algebra Courses*.
- Spring 2015 **Help Session**, *Linear Algebra Courses*.
- Fall 2014 **Grader**, *Foundations of Mathematics*.
- 2013-2014 **Tutor**, *Club Z! Tutoring Company*.
- Tutoring Calculus and ACT Prep

2010-2011 **Tutor**, *The Tutoring Club*.
- Tutoring Calculus, Geometry, Algebra, and ACT Prep