Robert J. Lemke Oliver

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Present Position:

- Associate Professor, Tufts University (2022-)

  – Assistant Professor (2016-2022)

Previous Position:

- NSF Postdoc, Stanford University (2013-2016)

Education:

- Ph.D., Emory University (2013)

- M.A., University of Wisconsin-Madison (2010)

- B.S., Summa Cum Laude, Rose-Hulman Institute of Technology (2008)

Research Interests:

- Analytic number theory, arithmetic statistics, elliptic curves and modular forms, the distribution of primes, L-functions

Grants:

- Simons Fellowship in Mathematics. $89,429. (January 2023–January 2024)

- NSF DMS-2200760, *Applications of analytic uniformity in arithmetic statistics.* $145,260. (September 2022-July 2025)

- NSF DMS-1802058, *Workshop on Automorphic Forms and Related Topics.* $21,000. (March 2018) (Co-PI's: Michael Chou, Amanda Folsom, Steven J. Miller)

- NSF DMS-1601398, *Concrete arithmetic applications of analytic number theory.* $127,374. (August 2016-July 2020)

- NSF DMS-1303913, Mathematical sciences postdoctoral research fellowship. $150,000. (August 2013-June 2016)

Mathematical Publications:

(Note: In mathematics, authors are listed alphabetically.)

Published papers, listed chronologically by time of publication:

1. (With R. Daileda, J. Jou, E. Rossolimo, and E. Trevino) *On the counting function for the generalized Niven numbers.* Journal de Théorie des Nombres de Bordeaux, 21 no. 3 (2009), 503-515.

2. (With C. Alfes and M. Jameson) *Proof of the Alder-Andrews Conjecture.* Proceedings of the American Mathematical Society, 139 no. 1 (2011), 63-78.

3. (With M. Jameson) *On a conjecture of Andrews.* Mathematical Research Letters, 17 no. 6 (2010), 1151-1154.

4. *Almost-primes represented by quadratic polynomials.* Acta Arithmetica, 151 (2012), 241-261.

5. *Gauss sums over finite fields and roots of unity.* Proceedings of the American Mathematical Society, 139 no. 4 (2011), 1273-1276.

6. *Eta-quotients and theta functions.* Advances in Mathematics, 241 (2013), 1-17.

7. (With J. Jung) *Pretentiously detecting power cancellation.* Mathematical Proceedings of the Cambridge Philosophical Society, 154 no. 3 (2013), 481-498.

8. *Multiplicative functions dictated by Artin symbols.* Acta Arithmetica, 161 (2013), 21-31.

9. *Representation by ternary quadratic forms.* Bulletin of the London Mathematical Society, 46 no. 6 (2014), 1237-1247.

10. (With Z. Klagsbrun) *The distribution of 2-Selmer ranks of quadratic twists of elliptic curves with partial two-torsion.* Mathematika, 62 no. 1 (2016), 67-78.

11. (With A. Castillo, C. Hall, P. Pollack, and L. Thompson) *Bounded gaps between primes in number fields and function fields.* Proceedings of the American Mathematical Society, 143 no. 7 (2015), 2841-2856.

12. (With Z. Klagsbrun) *The distribution of the Tamagawa ratio in the family of elliptic curves with a two-torsion point.* Research in the Mathematical Sciences, **1:**15, 2014.

13. (With F. Thorne) *The number of ramified primes in number fields of small degree.* Proceedings of the American Mathematical Society, 145 no. 8 (2017), 3201-3210.

14. (With A. Granville, D. M. Kane, and D. Koukoulopoulos) *Best possible densities of Dickson m-tuples, as a consequence of Zhang-Maynard-Tao.* Analytic Number Theory, in honor of Helmut Maier's 60th Birthday, Springer (eds. C. Pomerance and M. Rassias).

15. (With J. Thorner) *Effective log-free zero density estimates for automorphic L-functions and the Sato-Tate conjecture.* International Mathematics Research Notices, 22 (2019), 6988-7036.

16. (With K. Soundararajan) *Unexpected biases in the distribution of consecutive primes.* Proceedings of the National Academy of the Sciences, 113 no. 31 (2016), E4446-E4454.

17. (With A. Bridy, A. Shallit, J. Shallit) *The Generalized Nagell-Ljunggren Problem: Powers with Repetitive Representations*, Experimental Mathematics, 28 no. 4 (2019), 428-439.

18. (With K. Soundararajan) *The distribution of consecutive prime biases and sums of sawtooth random variables*, Mathematical Proceedings of the Cambridge Philosophical Society, 168 no. 1 (2020), 149-169.

19. (With M. Bhargava, Z. Klagsbrun, A. Shnidman) *Three-isogeny Selmer groups and ranks of abelian varieties in quadratic twist families.* Duke Mathematical Journal, 168 no. 15 (2019), 2951-2989.

20. (With F. Thorne) *Upper bounds on polynomials with small Galois group.* Mathematika, 66 no. 4 (2020), 1054-1059.

21. (With M. Bhargava, Z. Klagsbrun, A. Shnidman) *Elements of given order in Tate–Shafarevich groups of abelian varieties in quadratic twist families.* Algebra & Number Theory, 15 no. 3 (2021), 627-655.

22. (With A. Landesman and F. Thorne) *Improved lower bounds for the number of fields with alternating Galois group.* Bulletin of the London Mathematical Society, 53 no. 4 (2021), 1159-1173.

23. (With F. Thorne) *Rank growth of elliptic curves in nonabelian extensions.* International Mathematics Research Notices, 24 (2021), 18411-18441.

24. (With F. Thorne) *Upper bounds on number fields of given degree and bounded discriminant.* Duke Mathematical Journal, 171 (2022), no. 15, 3077-3087.

25. (With T. Anderson, A. Gafni, D. Lowry-Duda, G. Shakan, R. Zhang) *Quantitative Hilbert irreducibility and almost prime values of polynomial discriminants.* International Mathematics Research Notices, 2023 no. 3, 2188-2214.

26. (With S. Shrestha, F. Thorne) *Asymptotic identities for additive convolutions of sums of divisors functions.* Mathematical Proceedings of the Cambridge Philosophical Society, 174 (2023) no. 1, 59-78.

Accepted papers, listed chronologically by time of acceptance:

27. (With J. Thorner) *Zeros of twisted L-functions near $\Re(s) = 1$.* Appendix to *Shimura curves and the abc conjecture*, by H. Pasten. Journal of Number Theory, Prime. Accepted.

28. (With J. Thorner, A. Zaman) *An approximate form of Artin's holomorphy conjecture and non-vanishing of Artin L-functions.* Inventiones Mathematicae. Accepted.

Submitted papers, listed chronologically by time of writing:

29. (With J. Wang, M. Wood) *The average size of 3-torsion in class groups of 2-extensions.*

30. (With T. Anderson, A. Gafni, K. Hughes, D. Lowry-Duda, F. Thorne, J. Wang, R. Zhang) *Improved bounds on number fields of small degree.*

31. (With D. Loughran, A. Shnidman) *Normal distribution of bad reduction.*

32. *Uniform exponent bounds on the number of primitive extensions of number fields.*

Preprints:

32. (With B. Alberts, J. Wang, M. Wood) *Inductive methods for counting number fields.*

Recent/Scheduled talks (given within the last year):

1. *Faithful induction theorems and the Chebotarev density theorem*, Harvard University number theory seminar. (November 2023)

2. *Uniform exponent bounds on the number of primitive extensions of number fields*, Around Frobenius Distributions and Related Topics IV. (Online) (October 2023)

3. *Uniform exponent bounds on the number of primitive extensions of number fields*, Maine–Québec Number Theory Conference. (October 2023)

4. *Simple ways of encoding roots of polynomials and bounds on number fields*, Mathematics Colloquium, Tulane University. (April 2023)

5. *An approximate form of Artin's holomorphy conjecture and zeros of Artin L-functions*, University of South Carolina number theory seminar. (March 2023)

6. *Simple ways of encoding roots of polynomials and bounds on number fields*, Mathematics Colloquium, University of South Carolina. (March 2023)

7. *Uniform exponent bounds on the number of primitive extensions of number fields*, Southern Regional Number Theory Conference, Baton Rouge, Louisiana. (March 2023)

8. *Uniform exponent bounds on the number of primitive extensions of number fields*, University of Georgia number theory seminar. (February 2023)

9. *Uniform exponent bounds on the number of primitive extensions of number fields*, Emory University number theory seminar. (February 2023)

10. *Uniform exponent bounds on the number of primitive extensions of number fields*, Simons Collaboration meeting on arithmetic geoemetry. (January 2023)

11. *Uniform exponent bounds on the number of primitive extensions of number fields*, special session on Rethinking Number Theory, Joint Mathematics Meetings. (January 2023)

12. *Uniform exponent bounds on the number of primitive extensions of number fields*, Number Theory Web Seminar. (December 2022)

13. *Upper bounds on number fields*, VaNTAGe online number theory seminar. (July 2022)

Ph.D. Students:

1. Matthew Friedrichsen (2017-2022)

2. Daniel Keliher (2017-2022)

3. Vittoria Cristante (2023-)

Undergradute students advised/mentored:

1. Shayla Lawrence, Adrienne Nolt, Eduardo Pareja Lema. Tufts VERSEIM-REU. (Summer 2022)

2. Fabio Vera-Crespo. *Identifying structure in maximal prime patterns.* Tufts Visiting and Emerging Research Scholars Experience. (Summer 2018)

3. Christopher Keyes. *Point growth on hyperelliptic curves.* Tufts summer scholars, senior honors thesis. (2017-18)

4. Christian Testa. *Elliptic curves.* Tufts senior honors thesis. (2016-17) (co-advised with George McNinch)

Undergraduate Astronomy Publications:

1. J. Sauppe, S. Torno, R. Lemke Oliver, and R. Ditteon, *Asteroid Lightcurve Analysis at the Oakley Observatory: March/April 2007.* Minor Planet Bulletin, 34 no. 4 (2007), p. 119.

2. S. Torno, R. Lemke Oliver, and R. Ditteon, *Asteroid Lightcurve Analysis at the Oakley Southern Sky Observatory: October 2007.* Minor Planet Bulletin, 35 no. 2 (2008), p. 54.

3. R. Lemke Oliver, H. Shipley, and R. Ditteon, *Asteroid Lightcurve Analysis at the Oakley Southern Sky Observatory: 2008 March.* Minor Planet Bulletin, 35 no. 4 (2008), p. 149.

Fellowships and Awards:

- Emory University, Department of Mathematics and Computer Science, Marshall Hall, Jr. Award for outstanding teaching as a graduate student (Spring 2013)

- NSF RTG Research Fellowship (Fall 2009, Spring and Summer 2010)

- UW-Madison VIGRE Fellowship (Spring and Summer 2009)

- Heminway Medal for highest GPA for a graduating senior (Rose-Hulman, Spring 2008)

- Clarence P. Sousley Award for a graduating mathematics student (Rose-Hulman, Spring 2008)

- Paul N. Bogart Prize for highest GPA following the sophomore year (Rose-Hulman, Spring 2008)

- Heminway Bronze Medal for highest GPA following the freshman year (Rose-Hulman, Spring 2007)

- Theodore Paine Palmer Award for a freshman mathematics student (Rose-Hulman, Spring 2006)

Teaching Experience: *Tufts University:*

- Math 32, Calculus I: Fall 2020

- Math 34, Calculus II: Fall 2016, Spring 2018

- Math 51, Differential Equations: Spring 2020

- Math 63, Number Theory: Spring 2017, Fall 2022

- Math 70, Linear Algebra: Fall 2019 (two sections), Fall 2021

- Math 135, Real Analysis I: Spring 2021

- Math 136, Real Analysis II: Fall 2021, Fall 2022

- Math 145, Abstract Algebra I: Fall 2016, Fall 2020

- Math 150, Elliptic Curves: Spring 2018

- Math 240, Arithmetic Statistics: Spring 2022

- Math 250, The Distribution of Primes: Fall 2017

Experience prior to Tufts:

- Instructor for Math 19 (Calculus 1) at Stanford University (Winter 2015)

- Instructor for Math 108 (Introduction to Combinatorics) at Stanford University (Winter 2015)

- Project leader at 2013 Emory REU in Number Theory (Summer 2013). Resulted in two publications. One mentee was an honorable mention for the Alice T. Schafer prize.

- Project leader at 2012 Emory REU in Number Theory (Summer 2012). Resulted in a publication. One mentee won the Alice T. Schafer prize.

- Instructor for Math 111 (Calculus 1) at Emory University (Fall 2010, 2011, 2012)

- Instructor for Math 112 (Calculus 2) at Emory University (Spring 2011, 2013)

- Teaching Assistant for Math 221 (Calculus 1) at UW-Madison (Fall 2008)

Service activities:

Committees:

- Member of department graduate committee (AYs 2017-18, 2019-20, 2020-21, 2021-22, 2022-23)

- Member of department graduate admissions committee (AY 2020-21)

- Member of department diversity, equity, and inclusion committee (AY 2020-21)

- Member of university undergraduate admissions and financial aid committee (AY 2020-21)

- Member of American Mathematical Society Young Scholars Awards Committee (AY's 2019-22; chair 2022)

- Member of American Mathematical Society ParaDIGMS working group (AY 2020-21)

- Member of department outreach committee (AYs 2017-18, 2019-20)

Additional advising and mentorship:

- Project leader at the online *Rethinking number theory workshop*

- Advisor to three masters' students (AY 2020-21)

- Pre-major advisor to 10 undergradutes (AY 2020-21)

- Mentor for Norbert Wiener Assistant Professor (2017-19)

- Led evening sessions on GRE subject test review (Fall 2017)

Seminar and conference organization:

- Organizer of Tufts Algebra, Geometry, and Number Theory Seminar (2017-); total of 56 external speakers

- (Canceled due to COVID-19) Co-organizer of a special session at the Spring American Mathematical Society meeting at Purdue University, on *The interface of analytic number theory and harmonic analysis.* (April 2020)

- Co-organizer of a special session at the 2019 Joint Mathematics Meetings in Baltimore on *Arithmetic Statistics.* (January 2019)

- Lead organizer of the Automorphic Forms Workshop at Tufts University in March 2018. 130 participants, 80 talks.

- Co-organizer of a special session at the 2017 Joint Mathematics Meetings in Atlanta on *Analytic number theory and arithmetic.*

Older Seminars and Invited Talks :

- *Upper bounds on number fields of bounded discriminant*, Stanford University student analytic number theory seminar. (May 2022)

- *The average size of 3-torsion in class groups of 2-extensions*, Princeton University/IAS number theory seminar. (April 2022)

- *Imprimitive arithmetic statistics*, University of Virginia number theory seminar. (February 2022)

- *Imprimitive arithmetic statistics*, Boston University number theory seminar. (February 2022)

- *Imprimitive arithmetic statistics*, Québec–Vermont Number Theory Seminar. (February 2022)

- *Bounds on the number of number fields of given degree and bounded discriminant*, University of Mississippi number theory seminar. (January 2022)

- *The average size of 3-torsion in class groups of 2-extensions*, Boston University number theory seminar. (March 2021)

- *An overview of arithmetic statistics*, AIM workshop on *Arithmetic statistics, discrete restriction, and Fourier analysis.* (February 2021)

- *An effective Chebotarev density theorem for fibers*, Front Range Number Theory Day. (Online, April 2020)

- *Algebraic points on elliptic curves*, plenary lecture at *Modular forms, arithmetic, and women in mathematics* conference at Emory University. (November 2019)

- *Number fields and class groups*, Brown University number theory seminar. (April 2019)

- *Number fields and class groups*, Upstate New York Number Theory Conference. (April 2019)

- *Growth of rational points on curves*, University of Toronto number theory seminar. (April 2019)

- *Growth of rational points on curves*, Hawaii Number Theory Conference. (March 2019)

- *Number fields and class groups*, Automorphic Forms Workshop. (March 2019)

- *Why do modular forms have L-functions?*, Automorphic Forms Workshop graduate bootcamp. (March 2019)

- *Class group averages*, Stanford University analytic number theory seminar. (February 2019)

- *Number fields and class groups*, Stanford University number theory seminar. (February 2019)

- *Rank growth of elliptic curves in nonabelian extensions*, Joint Mathematics Meetings Special Session on Counting Methods in Number Theory. (January 2019)

- *Ranks of elliptic curves over varying number fields*, Emory University number theory seminar. (December 2018)

- *Rank growth of elliptic curves in nonabelian extensions*, Palmetto Number Theory Series, University of South Carolina. (December 2018)

- *Prime numbers, randomness, and the gambler's fallacy*, Duquesne University colloquium. (November 2018)

- *Inductive methods for counting number fields*, Yale University number theory seminar. (November 2018)

- *Inductive methods for counting number fields*, Dartmouth College number theory seminar. (October 2018)

- *Inductive methods for counting number fields*, Québec–Maine Number Theory Conference. (October 2018)

- *Counting finite towers of number fields*, CNTA 2018. (July 2018)

- *Selmer groups and Tate-Shafarevich groups in quadratic twist families*, Connecticut Number Theory Conference. (June 2018)

- *Selmer groups and Tate-Shafarevich groups in quadratic twist families*, Conference on modular forms and related topics. American University of Beirut. (May 2018)

- *Quadratic twists of abelian varieties with a 3-isogeny*, Upstate New York Number Theory Conference. (April 2018)

- *Prime numbers, randomness, and the gambler's fallacy*, Williams College colloquium. (April 2018)

- *Selmer groups and Tate-Shafarevich groups in quadratic twist families*, University of Wisconsin number theory seminar. (December 2017)

- *Tate-Shafarevich groups of abelian varieties in quadratic twist families*, Harvard University number theory seminar. (December 2017)

- *Selmer groups and Tate-Shafarevich groups in quadratic twist families*, MIT number theory seminar. (October 2017)

- *Three-isogeny Selmer groups and ranks of abelian varieties in quadratic twist families*, Georgia Tech algebra seminar. (October 2017)

- *Three-isogeny descent for quadratic twists of abelian varieties*, Maine-Québec Number Theory Conference. (October 2017)

- *Three-isogeny Selmer groups and ranks of abelian varieties in quadratic twist families*, Tufts University algebra, geometry, and number theory seminar. (October 2017)

- *Prime numbers, randomness, and the gambler's fallacy*, University of Vermont colloquium. (September 2017)

- *Selmer groups and ranks of elliptic curves*, Brigham Young University number theory seminar. (September 2017)

- *Three torsion in Tate-Shafarevich groups*, University of Bristol Heilbronn number theory seminar. (June 2017)

- *Ranks of elliptic curves, Selmer groups, and Tate-Shafarevich groups*, University of Illinois-Urbana Champaign graduate student number theory seminar. (April 2017)

- *The distribution of consecutive prime biases*, University of Illinois-Urbana Champaign number theory seminar. (April 2017)

- *Prime numbers, randomness, and the gambler's fallacy*, University of Connecticut colloquium. (April 2017)

- *Ranks of elliptic curves, Selmer groups, and Tate-Shafarevich groups*, Five Colleges number theory seminar, Amherst, MA. (April 2017)

- *Unexpected biases in the distribution of consecutive primes*, Boston College number theory seminar. (March 2017)

- *Prime numbers, randomness, and the gambler's fallacy*, Bryn Mawr-Haverford bi-college colloquium. (February 2017)

- *Quadratic twists of elliptic curves with 3-torsion*, Mathematical Sciences Research Institute. (February 2017)

- *The distribution of consecutive prime biases*, Mathematical Sciences Research Institute. (February 2017)

- *What to expect when you're unexpecting: The distribution of consecutive prime biases*, Emory University number theory seminar. (January 2017)

- *Prime numbers, randomness, and the gambler's fallacy*, Tufts University colloquium. (November 2016)

- *Unexpected biases in the distribution of consecutive primes*, Boston University number theory seminar. (November 2016)

- *Unexpected biases in the distribution of consecutive primes*, Oberwolfach, Germany. (November 2016)

- *The distribution of consecutive primes*, University of California-San Diego number theory seminar. (May 2016)

- *The distribution of consecutive primes*, University of California-Irvine number theory seminar. (May 2016)

- *The distribution of consecutive primes*, University of California-Santa Cruz number theory seminar. (May 2016)

- *The distribution of consecutive primes*, University of Oregon number theory seminar. (April 2016)

- *Unexpected biases in the distribution of consecutive primes, parts I and II*, Krishna Alladi 60th birthday conference, University of Florida. (Joint with K. Soundararajan) (March 2016)

- *Analytic questions about the Sato-Tate conjecture*, Carl Pomerance 70th birthday conference, University of Georgia. (June 2015)

- *Singular behavior in the distribution of elliptic curves*, Tufts University colloquium. (January 2015)

- *p-Selmer groups of elliptic curves with p-level structure*, AMS Special Session on Selmer Groups, Joint Math Meetings, San Antonio, TX. (January 2015)

- *Distribution problems for number fields and elliptic curves*, Université de Montréal Analytic Number Theory Seminar. (October 2014)

- *2-Selmer ranks of elliptic curves with two-torsion*, University of Wisconsin, Number Theory Seminar. (August 2014)

- *2-Selmer ranks of elliptic curves with two-torsion*, Universität zu Köln, Algebra and Number Theory Seminar. (July 2014)

- *Conspiracies and collusion among the primes*, Portland State University, Discrete Mathematics Seminar. (June 2014)

- *The distribution of 2-Selmer ranks and additive functions*, Québec-Vermont Number Theory Seminar. (April 2014)

- *The distribution of 2-Selmer ranks and additive functions*, Emory University, Algebra and Number Theory Seminar. (November 2013)

- *The distribution of 2-Selmer ranks and additive functions*, University of California-Berkeley, Number Theory Seminar. (November 2013)

- *The distribution of 2-Selmer ranks and additive functions*, Stanford University, Number Theory Seminar. (October 2013)

- *Multiplicative functions dictated by Artin symbols*, University of South Carolina, Number Theory Seminar. (April 2013)

- *Multiplicative functions dictated by Artin symbols*, AMS Special Session, University of Mississippi. (March 2013)

- *The pretentious view of analytic number theory*, Dartmouth College Colloquium. (February 2013)

- *Multiplicative functions with small sums*, University of Wisconsin-Madison, Number Theory Seminar. (November 2012)

- *Multiplicative functions dictated by Artin symbols*, Ramanujan 125, University of Florida. (November 2012)

- *New results in the pretentious analytic number theory of Granville and Soundararajan*, AMS Special Session, University of Arizona. (October 2012)

- *New results in the pretentious analytic number theory of Granville and Soundararajan*, Dartmouth College, Number Theory Seminar. (May 2012)

- *Eta-quotients and theta functions*, University of Florida, Number Theory Seminar. (April 2012)

- *New results in the pretentious analytic number theory of Granville and Soundararajan*, Texas A&M, Number Theory Seminar. (March 2012)

- *New results in the pretentious analytic number theory of Granville and Soundararajan*, Hawaii Conference in Algebraic Number Theory, Arithmetic Geometry, and Modular Forms. (March 2012)

- *Eta-quotients and theta functions*, AMS Sectional Meeting, University of Hawaii. (March 2012)

- *Pretentiously detecting power cancellation*, Georgia Tech, Algebra Seminar. (November 2011)

- *Pretentiously detecting power cancellation*, University of South Carolina, Number Theory Seminar. (October 2011)

- *Eta-quotients and theta functions*, q-Series 2011, Georgia Southern University. (March 2011)

- *Eta-quotients and theta functions*, Emory University Conference on q-Series, Partitions, and Maass Forms. (January 2011)

- *Almost-primes represented by irreducible polynomials*, Penn State University, Algebra and Number Theory Seminar. (November 2010)

- *Eta-quotients and theta functions*, Penn State University, q-Series Seminar. (November 2010)

Contributed Talks:

- *Unexpected biases in the distribution of consecutive primes*, Automorphic Forms Workshop, Wake Forest University. (March 2016)

- *Elliptic curves and the Erdős-Kac theorem*, ENFANT, Hausdorff Center for Mathematics, Bonn, Germany. (July 2014)

- *The distribution of the Tamagawa ratio in the family of elliptic curves with a two-torsion point*, Automorphic Forms Workshop XXVIII, Moab, Utah. (May 2014)

- *Representations by ternary quadratic forms*, PANTS XIX, University of South Carolina. (December 2012)

- *Multiplicative functions dictated by Artin symbols*, PANTS XVIII, Wake Forest University. (September 2012)

- *New results in the pretentious analytic number theory of Granville and Soundararajan*, SERMON 2012, Western Carolina University. (April 2012)

- *Pretentiously detecting power cancellation*, Integers 2011, University of West Georgia. (October 2011)

- *Pretentiously detecting power cancellation*, Palmetto Number Theory Series XVI, Emory University. (September 2011)

- *Eta-quotients and theta functions*, Palmetto Number Theory Series XIV, University of South Carolina. (December 2010)

- *Almost-primes represented by irreducible polynomials*, Palmetto Number Theory Series XIII, University of North Carolina-Greensboro. (September 2010)

- *Almost-primes represented by irreducible polynomials*, Canadian Number Theory Association XI, Acadia University, Wolfville, Canada. (July 2010)

- *The distribution of primes: An introduction to analytic number theory*, REU at Rose-Hulman Institute of Tehcnology. (June 2010)

- *Almost primes represented by irreducible polynomials*, Illinois Number Theory Conference. (May 2010)

- *Almost primes represented by irreducible polynomials*, UW-Madison number theory seminar. (April 2010)

- *Proof of Alder's Conjecture*, UW-Madison student number theory seminar. (September 2009)

- *Proof of Alder's Conjecture*, Conference on Number Theory, Carleton University, Ottawa, Canada. (June 2009)

- *Partitions in number theory*, REU at Rose-Hulman Institute of Technology. (June 2009)

- *The congruent number problem*, UW-Madison student number theory seminar. (December 2008)

- *Generalized Niven numbers*, Illiana Undergraduate Mathematics Research Conference, Wabash College. (November 2007)

- Mathematics colloquium, Rose-Hulman Institute of Technology. (Multiple occasions)