Lola Thompson

BASIC INFORMATION:

Citizenship: United States

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Languages: English (native), Spanish (B2), Dutch (B1), German (A1)

APPOINTMENTS HELD:

Utrecht University
Associate Professor — July 2020 - present

Oberlin College
Associate Professor — July 2019 - April 2020
Assistant Professor — July 2013 - June 2019

The University of Georgia
VIGRE Postdoctoral Fellow — August 2012 - July 2013
Research Mentor: Paul Pollack

RESEARCH VISITS:

Centre de Recherches Mathématiques
Thematic Program Participant — March 1 - July 4, 2026.

Max-Planck-Institut für Mathematik
Guest/Research Visitor — January 1 - February 28, 2026.
Guest/Research Visitor — September 1, 2019 - July 31, 2020
Guest/Research Visitor — August 1, 2016 - December 31, 2016

Hausdorff Institute for Mathematics
Trimester Program Participant — November 23 - December 12, 2025.
Trimester Program Participant — May 1 - 31, 2021

Mathematical Sciences Research Institute
Research Member — January 2017 - May 2017

Dartmouth College
Shapiro Visitor — May 2015

EDUCATION:

Ph.D. in Mathematics, Dartmouth College — June 2012
Adviser: Carl Pomerance
Thesis: *Products of distinct cyclotomic polynomials*

M.A. in Mathematics, Dartmouth College — June 2009

B.S. in Mathematics, University of Chicago — June 2007

B.A. in Economics, University of Chicago — June 2007

I. Research

RESEARCH PUBLICATIONS:

29. Kübra Benli, Cécile Dartyge, Charlotte Dombrowsky, Paul Pollack, and Lola Thompson,
On the digits of the sum of proper divisors.
Submitted for publication.

28. Ivan Aidun and Lola Thompson,
A statistical investigation of a divisor-sum function.
Submitted for publication.

27. Michelle Chu, Plinio G. P. Murillo, Otto Romero, and Lola Thompson,
Counting Salem numbers arising from arithmetic hyperbolic orbifolds.
Submitted for publication.

26. Lola Thompson,
Cyclotomic statistics.
To appear in *Essays in Analytic Number Theory – In Honor of Helmut Maier's 70th Birthday.*
Edited by John Friedlander, Carl Pomerance, and Michael Th. Rassias.

25. Kübra Benli, Giulia Cesana, Cécile Dartyge, and Charlotte Dombrowsky, and Lola Thompson,
Sums of proper divisors with missing digits.
Research Directions in Number Theory, Springer AWMS **32** (2024), 93–110.

24. Harald Andrés Helfgott and Lola Thompson,
Summing $\mu(n)$: a faster elementary algorithm.
Research in Number Theory, **9**, no. 6 (2023), 1–37.

23. Mikhail Belolipetsky, Matilde Lalín, and Plinio G. P. Murillo, and Lola Thompson,
Counting Salem numbers of arithmetic hyperbolic 3-orbifolds.
Bulletin of the Brazilian Mathematical Society, New Series, **53** (2022), 553–569.

22. Lola Thompson,
Counting and effective rigidity in algebra and geometry.
Mathematisches Forschungsinstitut Oberwolfach. Report No. 50/2019, pp. 55–58.
DOI: 10.4171/OWR/2019/50.

21. Benjamin Linowitz and Lola Thompson,
The Fourier coefficients of Eisenstein series newforms.
Contemporary Mathematics, **732** (2019), 169 – 176.

20. Benjamin Linowitz, D. B. McReynolds, Paul Pollack, and Lola Thompson,
Counting and effective rigidity in algebra and geometry.
Inventiones Mathematicae, **213**, no. 2 (2018), 697 – 758.

19. Paul Pollack, Carl Pomerance, and Lola Thompson,
Divisor-sum fibers.
Mathematika, **64**, no. 2 (2018), 330–342.

18. Kevser Aktaş, Shabnam Akhtari, Kirsti Biggs, Alia Hamieh, and Kathleen Petersen, and Lola Thompson,
Lower bounds for heights in relative Galois extensions.
Contributions to Number Theory and Arithmetic Geometry, Springer AWMS **11** (2018), 1–17.

17. Nicholas Schwab and Lola Thompson,
A generalization of the practical numbers.
International Journal of Number Theory, **14**, no. 5 (2018), 1487–1503.

16. Benjamin Linowitz, D. B. McReynolds, Paul Pollack, and Lola Thompson,
Systoles of arithmetic hyperbolic surfaces and 3-manifolds.
Mathematical Research Letters, **24**, no. 5 (2017), p. 1497 – 1522.

15. Benjamin Linowitz, D. B. McReynolds, and Paul Pollack, and Lola Thompson,
Bounded gaps between primes and the length spectra of arithmetic hyperbolic 3-orbifolds.
Comptes Rendus Mathematique, **355**, no. 11 (2017), p. 1121–1126.

14. Carl Pomerance, Lola Thompson, and Andreas Weingartner,
On integers n for which $x^n - 1$ has a divisor of every degree.
Acta Arithmetica **175**, no. 3 (2016), p. 225-244.

13. Paul Pollack and Lola Thompson,
Arithmetic functions at consecutive shifted primes.
International Journal of Number Theory **11**, no. 5 (2015), p. 1477-1498.

12. Abel Castillo, Chris Hall, Robert Lemke Oliver, and Paul Pollack, and Lola Thompson,
Bounded gaps between primes in number fields and function fields.
Proceedings of the American Mathematical Society **143** (2015), p. 2841-2856.

11. Benjamin Linowitz and Lola Thompson,
The sign changes of Fourier coefficients of Eisenstein series.
The Ramanujan Journal **37**, no. 2 (2015), p. 223-241.

10. Chantal David, Derek Garton, Zachary Scherr, Arul Shankar, and Ethan Smith, and Lola Thompson,
Abelian surfaces with prescribed groups.
Bulletin of the London Mathematical Society **46** (2014), p. 779-792.

9. Lola Thompson,
Variations on a question concerning the degrees of divisors of $x^n - 1$.
Journal de Théorie des Nombres Bordeaux. **26**, no. 1 (2014), p. 253-267.

8. Emily Jennings, Paul Pollack, and Lola Thompson,
Variations on a theorem of Davenport concerning abundant numbers.
Bulletin of the Australian Mathematical Society **89**, no. 3 (2014), p. 437-450.

7. Shabnam Akhtari, Chantal David, and Heekyoung Hahn, and Lola Thompson,
Distribution of squarefree values of sequences associated with elliptic curves.
Contemporary Mathematics **606**, Amer. Math. Soc. (2013), p. 171-188.

6. Paul Pollack and Lola Thompson,
Practical pretenders.
Publicationes Mathematicae Debrecen **82** (2013), p. 651-667.

5. Paul Pollack and Lola Thompson,
On the degrees of divisors of $T^n - 1$.
New York Journal of Mathematics **19** (2013), p. 91-116.

4. Lola Thompson,
On the divisors of $x^n - 1$ in $\mathbb{F}_p[x]$.
International Journal of Number Theory **9**, no. 2 (2013), p. 421-430.

3. Lola Thompson,
On the divisors of $x^n - 1$.
Electron. Notes Discrete Math. **43** (2013), 141–149.

2. Lola Thompson,
Polynomials with divisors of every degree.
Journal of Number Theory **132** (2012), p. 1038-1053.

1. Lola Thompson,
Heights of divisors of $x^n - 1$.
Integers **11A.** Proceedings of the Integers Conference 2009 (2011). Article 20, p. 1-9.

0. Lola Thompson,
Products of distinct cyclotomic polynomials.
Ph.D. thesis, Dartmouth College (2012).

OTHER PUBLICATIONS:

6. Lola Thompson,
The Mathematical Tourist: a guide to math-inspired sightseeing around the world.
MAA Focus, **45**, no 1, February/March 2025, p. 18–21.

5. Lola Thompson,
Book review: An introduction to the circle method.
The American Mathematical Monthly, **131**, issue 3 (2024), p. 273–276.

4. Lola Thompson,
(Mind the) gaps between primes.
Nieuw Archief voor Wiskunde, 5/22 no. 4, December 2021, p. 212–218.

3. Lola Thompson,
Changing the center of gravity of mathematics conferences.
Book chapter in *Practices and Policies: Advocating for Students of Color in Mathematics,* edited by Pamela E. Harris and Aris Winger, 2021.

2. Lola Thompson,
Nowhere to go but up.
Living Proof: Stories of Resilience Along the Mathematical Journey. Edited by A. Henrich, E. Lawrence, M. Pons, and D. Taylor. Jointly published by the American Mathematical Society and the Mathematical Association of America, 2019, p. 21–23.

1. Lola Thompson,
An Euler φ-for-all.
Girls' Angle Bulletin, June 2013.

RESEARCH GRANTS/FELLOWSHIPS/AWARDS:

Max Planck Institute for Mathematics Research Fellowship, 2026.
Awarded €7,200 to support my research for two months in 2026.

Selfridge Prize, 2022.
Awarded $1000 for the best contributed paper at ANTS XV (shared with Harald Andrés Helfgott).

Max Planck Institute for Mathematics Research Fellowship, 2019.
Awarded €28,000 to support my research during the 2019-2020 academic year.

AMS ICM Travel Grant, 2018.
Awarded $3300 for travel to the International Congress of Mathematicians in Rio de Janeiro in August 2018.

Mathematical Sciences Research Institute Fellowship, 2017.
Awarded $7,000 to support research during my sabbatical.

Max Planck Institute for Mathematics Research Fellowship, 2016.
Awarded €11,500 to support research during my sabbatical.

AMS Simons Travel Grant, 2014 - 2017.
Awarded $4,000 by the American Mathematical Society and the Simons Foundation.

AWM-NSF Travel Grant, 2014.
Awarded $1,670 for travel to the Hausdorff Center for Mathematics in July 2014.

MRC Collaboration Grant, sponsored by AMS / NSF, 2012 - 2013.

NSF VIGRE Postdoctoral Fellowship, The University of Georgia, August 2012 - July 2013.

NSF GAANN Graduate Fellowship, September 2011 - June 2012.

Award for Best Poster, Dartmouth Graduate Poster Session, April 2012.
Chosen from among 45 presenters across scientific disciplines at Dartmouth for giving a clear presentation aimed at non-mathematicians on my thesis research.

Dartmouth College Graduate Fellowship, September 2007 - August 2011.

CONFERENCE GRANTS:

ICMS "Mathematics for Humanity" grant
Awarded £50,000 to cover travel and lodging expenses for participants in AGRA V (July 27 - August 7, 2026).
Co-PIs: Maria Chara, Michael Harris, Harald Helfgott, Elisa Lorenzo Garcia, Ariel Pacetti, Fernando Rodríguez Villegas, Cecilia Salgado, Gonzalo Tornaría

IMU-CDC
Awarded €2500 to cover travel expenses for researchers from developing countries so that they could attend Number Theory in the Americas 2 (September 8-13, 2024).
Co-PIs: Harald Helfgott, Moubariz Garaev, Plinio Pino Murillo.

Banff International Research Station-Casa Matematica Oaxaca.
Awarded funding to cover lodging, food, and research facilities for a 15-person workshop that took place at the BIRS-CMO facility in Oaxaca, Mexico (September 8-13, 2024).
Co-PIs: Harald Helfgott, Moubariz Garaev, Plinio Pino Murillo.

Banff International Research Station-Casa Matematica Oaxaca.
Awarded funding to cover lodging, food, and research facilities for a 42-person workshop that took place at the BIRS-CMO facility in Oaxaca, Mexico (August 11-16, 2019).
Co-PIs: Harald Helfgott, Moubariz Garaev.

MSRI Summer Research for Women In Mathematics.
Awarded $10,000 for a collaboration workshop on Height Functions and Lehmer-type Problems (July 22 - August 2, 2019).
Co-PIs: Kevser Aktaş, Shabnam Akhtari, Kirsti Biggs, Alia Hamieh, and Kathleen Petersen.

Heilbronn Institute Focused Research Group.
Awarded £7,500 for a workshop on Height Functions and Lehmer-type Problems (October 22-26, 2018).
Co-PIs: Kevser Aktaş, Shabnam Akhtari, Kirsti Biggs, Alia Hamieh, and Kathleen Petersen.

Number Theory Foundation Grant.
Awarded $5,805.20 for the Carl Pomerance 70^{th} Birthday Conference in Athens, GA (June 8-11, 2015).
Co-PIs: Paul Pollack, Robert Rumely, Gang Yu.

NSF Grant DMS1502336.
Awarded $20,576 for the Carl Pomerance 70^{th} Birthday Conference in Athens, GA (June 8-11, 2015).
Co-PIs: Paul Pollack, Robert Rumely, Gang Yu.

NSF Grant DMS1500710.
Awarded \$19,220 for the 29^{th} Automorphic Forms Workshop in Ann Arbor, MI (March 2-5, 2015). Co-PIs: Mahesh Agarwal, Benjamin Linowitz.

Number Theory Foundation Grant.
Awarded \$4,920 for the 29^{th} Automorphic Forms Workshop in Ann Arbor, MI (March 2-5, 2015). Co-PIs: Mahesh Agarwal, Benjamin Linowitz.

NSA Grant #131015.
Awarded \$15,788 for the Carl Pomerance 70^{th} Birthday Conference in Athens, GA (June 8-11, 2015). Co-PIs: Paul Pollack, Robert Rumely, Gang Yu.

Beatrice Yormark Fund For Women In Mathematics.
Awarded \$5,000 for the Women In Sage 5 workshop in Portland, OR (July 28-August 1, 2014). Co-PI: Anna Haensch.

Microsoft Research.
Awarded \$5,000 for the Women In Sage 5 workshop in Portland, OR (July 28-August 1, 2014). Co-PI: Anna Haensch.

CONFERENCES AND SEMINARS ORGANIZED:

AGRA V
Organizer. (with María Chara, Harald Helfgott, Elisa Lorenzo García, Ariel Pacetti, and Gonzalo Tornaría)
Popayán, Colombia, July 27 - August 7, 2026.

Dutch Analytic Number Theory Symposium
Organizer.
Utrecht University, Netherlands, October 24, 2025.

Lorentz Center Workshop on Recurrence, Transcendence, and Diophantine Approximation
Co-organizer (with Valérie Berthé, Peter Koymans, and Emre Sertöz)
Leiden, Netherlands, July 14 - 18, 2025.

CIRM Workshop on Prime Numbers and Arithmetic Randomness
Scientific Committee (with Christoph Aistleitner, Régis de la Breteèche, Cécile Dartyge, Igor Shparlinski)
Marseille, France, June 23 - 27, 2025.

Dutch Analytic Number Theory Symposium
Organizer.
Utrecht University, Netherlands, October 18, 2024.

BIRS-CMO Workshop on *Number Theory In the Americas 2*
Co-organizer (with Moubariz Garaev, Harald Helfgott, and Plinio Pino Murillo).
Oaxaca, Mexico, September 8 - 13, 2024.

Intercity Number Theory Seminar
Organizer.
Utrecht University, Netherlands, May 24, 2024.

Women in Sage Uganda
Scientific Committee (with Betty Kivumbi Nanyonga, Elisa Lorenzo Garcia, Marie Françoise Ouedraogo, David Ssevviiri, Alex Samuel Bamunoba, Olivia Nabawanda, Annet Kyomuhangi)
Makerere University, Uganda, September 4 - 8, 2023.

Intercity Number Theory Seminar
Organizer.
Utrecht University, Netherlands, March 17, 2023.

LENT Seminar (Utrecht University)
Co-organizer with Gunther Cornelissen.
Utrecht University, Netherlands, November 2022 - June 2023.

LatinX in the Mathematical Sciences Conference, Special Session on *Number Theory*
Co-organizer (with Ricardo Conceição).
Institute for Pure and Applied Mathematics, Los Angeles, July 7 - 9, 2022.

Online Number Theory Lunch Seminar
Co-organizer (with Pieter Moree).
Bonn, Germany, July 1 - 31, 2020.

BIRS-CMO Workshop on *Number Theory In the Americas*
Co-organizer (with Moubariz Garaev and Harald Helfgott).
Oaxaca, Mexico, August 11 - 16, 2019.

AMS Special Session on *A Showcase of Number Theory at Undergraduate Institutions*
Co-organizer (with Adriana Salerno).
Joint Mathematics Meetings, Baltimore, January 16, 2019.

AMS Special Session on *A Showcase of Number Theory at Liberal Arts Colleges*
Co-organizer (with Adriana Salerno).
Joint Mathematics Meetings, San Diego, January 10, 2018.

Carl Pomerance 70^{th} Birthday Conference
Co-organizer (with Paul Pollack, Robert Rumeley and Gang Yu).
University of Georgia, June 9 - 11, 2015.

Automorphic Forms Workshop
Co-organizer (with Benjamin Linowitz and Mahesh Agarwal).
University of Michigan, March 2 - 5, 2015.

Cleveland Area Number Theory Seminar
Founder and Co-organizer (with Gang Yu). Cleveland, OH, March 2015 - May 2019.

Sage Days 62: Women in Sage 5
Co-organizer (with Anna Haensch).
Portland, OR, July 28 - August 1, 2014.

Panel Discussion on *Tried and true practices for IBL and active learning*
Panel Moderator and *Co-organizer* (with Susan Crook, William Lindsey and Taylor Martin).
Project NExT, AMS/MAA Joint Mathematics Meetings (2014).

Sage Days 42: Women in Sage 3
Co-organizer (with Jennifer Balakrishnan and Alyson Deines).
University of Washington, July 15 - 19, 2012.

Dartmouth College Number Theory Seminar
Organizer, September 2008 - June 2010.

RESEARCH WORKSHOPS ATTENDED:

Analytic and explicit results of zeros of L-functions
Banach International Center (Bedlewo, Poland), September 23 - 27, 2024.

Women in Sage Uganda
Makerere University, September 4 - 8, 2023.

Workshop on Analytic Number Theory
Mathematisches Forschungsinstitut Oberwolfach (Oberwolfach, Germany), November 6 - 12, 2022.

Women in Numbers Europe 4
Utrecht University, August 29 - September 2, 2022.

ESI Workshop on Arithmetic Statistics and Local-Global Principles
Erwin Schrödinger Institute (Vienna, Austria), September 20 - 24, 2021.

MSRI Introductory Workshop: Random and Arithmetic Structures in Topology
Mathematical Sciences Research Institute (virtually), August 25 - September 11, 2020.

Workshop on Analytic Number Theory
Mathematisches Forschungsinstitut Oberwolfach (Oberwolfach, Germany), November 3 - 9, 2019.

Sarnak's Conjecture
American Institute of Mathematics (San Jose, CA, USA), December 10 - 14, 2018.

Aritmética, Grupos y Analisis III
Academia Nacional de Ciencias (Cordoba, Argentina), July 9-20, 2018.

MSRI Recent Developments in Analytic Number Theory
Mathematical Sciences Research Institute, May 2017.

Workshop on Efficient Congruencing and Translation-invariant Systems
Fields Institute (Toronto, ON, Canada), March 2017.

MSRI Introductory Workshop: Analytic Number Theory
Mathematical Sciences Research Institute, February 2017.

MSRI Connections for Women: Analytic Number Theory
Mathematical Sciences Research Institute, February 2017.

Women in Numbers Europe 2
Lorentz Center (Leiden, Netherlands), September 2016.

re:boot Number Theory 2016
Duke University, March 2016.

Bounded gaps between primes
American Institute of Mathematics, November 2014.

Sage Days 62: Women in Sage 5
Co-organizer (with Anna Haensch), Portland, OR, July 2014.

ELEFANT: Emerging Leaders and Evolving Frontiers in Analytic Number Theory & ENFANT: Exciting New Faces in Analytic Number Theory
Hausdorff Center for Mathematics (Bonn, Germany), July 2014.

Workshop on Polynomials Over Finite Fields
Centre de Recerca Matematica (Barcelona, Spain), May 2014.

Arithmetic Statistics Over Finite Fields and Function Fields
American Institute of Mathematics, January 2014.

AWM Workshop, Joint Mathematics Meetings, January 2013.
One of six recent Ph.D. recipients funded to present a talk at the annual AWM Workshop.

Sage Days 42: Women in Sage 3
Co-organizer (with Jennifer Balakrishnan and Alyson Deines),
University of Washington, July 2012.

Arithmetic Statistics
AMS Mathematics Research Communities, June 2012.

Women In Numbers 2
Banff International Research Station (Banff, Canada), November 2011.

Sage Days 33: Women in Sage 2
University of Washington, September 2011.

AMS MRC Workshop on The Pretentious View of Analytic Number Theory
AMS Mathematics Research Communities, June 2011.

MSRI Introductory Workshop: Arithmetic Statistics
Mathematical Sciences Research Institute, February 2011.

MSRI Connections for Women: Arithmetic Statistics
Mathematical Sciences Research Institute, January 2011.

Sage Days 26: Women in Sage
Microsoft Research & University of Washington, December 2010.

MSRI Graduate Workshop – Sage Days 22: Elliptic Curves
MSRI Graduate Workshop, June 2010.

PLENARY TALKS, PUBLIC LECTURES, AND INVITED LECTURE SERIES:

Number Theory Down Under
University of Canterbury (Christchurch, NZ), August 25 - 29, 2025.
Plenary Talk.
Talk title: "Sums of proper divisors meet integers with missing digits."

Integers Conference
University of Georgia (Athens, GA, USA), May 14 - 17, 2025.
Plenary Talk.
Talk title: "Preimages of the sum of proper divisors function."

Conference on Asymptotic Counting and L-Functions
Max Planck Institute for Mathematics (Bonn, Germany), May 5 - 9, 2025.
Plenary Talk.
Talk title: "Cycling through the landscape of cyclotomic polynomials"

Women in Number Theory and Geometry (WINGs)
Mercure Haydock Hotel, UK, March 31 - April 3, 2025.
Plenary Talk.
Talk title: "Preimages of the sum of proper divisors function"

Analytic Number Theory and Arithmetic Statistics – Celebrating the Mathematical Contributions of Chantal David
Centre de Reserches Mathématiques (Montreal, QC, Canada), August 29, 2024.
Invited talk.
Talk title:"Sums of proper divisors with missing digits."

South Eastern Regional Meeting on Numbers (SERMON)
Wofford College (Spartanburg, SC, USA), April 27, 2024.
Plenary talk.
Talk title: "Preimages of the sum of proper divisor function."

Southern Regional Number Theory Conference
Louisiana State University (Baton Rouge, LA, USA), March 11, 2024.
Plenary talk.
Talk title: "Preimages of the sum of proper divisor function."

Integers Conference
University of Georgia (Athens, GA, USA), May 17-20, 2023.
Plenary talk.
Talk title: "Summing $\mu(n)$: an even faster elementary algorithm."

Novenas Jornadas de Teoría de Números
Universidad de La Rioja (Logroño, Spain), June 29, 2022.
Plenary talk.
Talk title: "Sumar $\mu(n)$: un algoritmo elemental más rápido."

Congreso Multidisciplinario de Matemáticas UNI 2021
Universidad Nacional de Ingeniería (Lima, Peru), March 16, 2021.
Plenary talk.
Talk title: "Sumar $\mu(n)$: un algoritmo elemental más rápido."

Winter Symposium of the Dutch Royal Mathematics Society
Utrecht University (Utrecht, Netherlands), January 9, 2021.
Public Lecture.
Talk title: "(Mind the) gaps between primes."

Number Theory Down Under 2020
University of Melbourne (Melbourne, Australia), October 8, 2020.
Plenary Talk.
Talk title: "Summing $\mu(n)$: an even faster elementary algorithm."

MSRI Introductory Workshop on Random and Arithmetic Structures in Topology
Mathematical Sciences Research Institute (Berkeley, CA, USA), August 31 - September 4, 2020.
Series of invited lectures (3 hours).
Talk titles: "Tools for counting quaternion algebras," "Quantitative questions in spectral geometry," and "Bounded gaps between volumes of orbifolds."

Workshop on advances in the geometry and isospectrality of locally symmetric spaces
Korea Institute of Advanced Study (Seoul, South Korea), April 15 - 19, 2019.
Series of invited lectures (3 hours).
Talk titles: "Counting techniques in number theory, with applications to spectral geometry" and "Counting and effective rigidity in algebra and geometry."

MAA Ohio Section Meeting
Sinclair College (Dayton, OH), March 31 - April 1, 2017.
Series of 2 plenary lectures.
Talk titles: "Twin primes and their kin" and "Bounded gaps between primes."

Southeastern Conference For Undergraduate Women In Mathematics
Clemson University (Clemson, SC), November 16, 2014.
Plenary talk.
Talk title: "Twin primes and their kin."

OTHER RESEARCH TALKS:

Unsinkable numbers
Number Theory Boat Seminar, Max Planck Institute, Bonn, Germany — July 16, 2026.

Patterns and randomness in the digits of $s(n)$
CRM Analytic Number Theory Seminar, Montréal, Canada — June 10, 2026.

Mahler measure and manifolds
MPI Oberseminar, Max Planck Institute for Mathematics, Bonn, Germany — January 22, 2026.

On a conjecture of Erdős, Granville, Pomerance, and Spiro
Mathematics Research Center, Baku, Azerbaijan — November 13, 2025.

Counting Salem numbers
UNSW Number Theory Days, Sydney, Australia — August 14, 2025.

Counting Salem numbers
Mathematical Congress of the Americas,
Special Session on "Number Theory Through The Americas", Miami, Florida, USA — July 22, 2025.

On a conjecture of Erdős, Granville, Pomerance, and Spiro
Workshop on "New trends in arithmetic combinatorics and related fields",
BIRS-IMAG, Granada, Spain — June 7, 2025.

(Mind the) gaps between primes
University of Leiden General Mathematics Colloquium, Leiden, Netherlands — March 13, 2025.

Preimages of the sum of proper divisors function
Max Planck Institute for Mathematics, Bonn, Germany — November 13, 2024.

Preimágines de la función de sumas de divisores propios
Coloquio Latinamericano de Algebra, Santiago, Chile — July 26, 2024.

Salem numbers and short geodesics
University of South Carolina Number Theory Seminar, Columbia, SC, USA — April 26, 2024.

Preimages of the sum of proper divisor function
Baltimore Number Theory Seminar, Towson University, MD, USA — March 14, 2024.

Mahler Measure and Manifolds
MM(P): Mahler Measure of Polynomials, Radboud University, Nijmegen — October 27, 2023.

Sums of proper divisors with missing digits
32èmes Journées Arithmétiques — July 3, 2023.

Summing $\mu(n)$: a faster elementary algorithm
Luxembourg Number Theory Day — December 10, 2022.

Salem numbers and short geodesics
Arithmétique en plat pays/Getaltheorie in het Vlakke land — September 23, 2022.

Summing $\mu(n)$: a faster elementary algorithm
Algorithmic Number Theory Symposium (ANTS) XV — August 10, 2022.

Summing $\mu(n)$: an even faster elementary algorithm
University of Kent Mathematics Colloquium — May 27, 2022.

Summing $\mu(n)$: an even faster elementary algorithm
Heilbronn Seminar, University of Bristol — May 25, 2022.

Summing $\mu(n)$: an even faster elementary algorithm
Warwick Number Theory Seminar — May 23, 2022.

Summing $\mu(n)$: an even faster elementary algorithm
Nancy-Metz Number Theory Seminar — May 12, 2022.

Summing $\mu(n)$: an even faster elementary algorithm
University of Göttingen Oberseminar in Number Theory — November 22, 2021.

Summing $\mu(n)$: an even faster elementary algorithm
Rencontre de théorie analytique des nombres, Institut Henri Poincaré — October 18, 2021.

Summing $\mu(n)$: an even faster elementary algorithm
Séminaire Théorie des Nombres, Institut de Mathématiques de Bordeaux — October 8, 2021.

Summing $\mu(n)$: an even faster elementary algorithm
Kansas State University Number Theory Seminar — April 19, 2021.

Summing $\mu(n)$: an even faster elementary algorithm
Webinar in Additive Combinatorics — April 12, 2021.

Summing $\mu(n)$: an even faster elementary algorithm
DIAMANT session, Nederlands Mathematisch Congres — April 6, 2021.

Sumar $\mu(n)$: un algoritmo elemental más rápido
LaTeN: Seminario Latinoamericano de Teoría de Números — March 11, 2021.

Summing $\mu(n)$: an even faster elementary algorithm
AMS/MAA Joint Meetings (virtual) — January 6, 2021.
AMS Special Session on A Showcase of Number Theory at Undergraduate Institutions

Summing $\mu(n)$: an even faster elementary algorithm
MIT Number Theory Seminar (Cambridge, MA, USA) — December 8, 2020.

Counting quaternion algebras, with applications to spectral geometry
Vanderbilt Number Theory Seminar (Nashville, TN, USA) — December 1, 2020.

Counting quaternion algebras, with applications to spectral geometry
Number Theory seminar of Saint Petersburg State University and
Euler International Mathematical Institute (St. Petersburg, Russia) — November 12, 2020.

Counting quaternion algebras, with applications to spectral geometry
Utrecht Geometry Center Seminar, Utrecht University (Utrecht, Netherlands) — October 27, 2020.

Bounded gaps between primes and volumes of manifolds
Arithmetic groups and 3-manifolds conference,
University of Hagen (Hagen, Germany) – cancelled due to pandemic — March 23 - 27, 2020.

Summing $\mu(n)$: a faster elementary algorithm
Number Theory Lunch Seminar,
Max Planck Institute for Mathematics (Bonn, Germany) February 19, 2020.

Bounded gaps between primes and volumes of manifolds
Colloquium, UC Santa Cruz (Santa Cruz, CA, USA) January 30, 2020.

Summing $\mu(n)$: a faster elementary algorithm
AMS/MAA Joint Meetings (Denver, CO, USA) January 18, 2020.

Bounded gaps between primes and volumes of manifolds
Max Planck Institute for Mathematics (Bonn, Germany) December 5, 2019.

Counting quaternion algebras with applications to spectral geometry
N-cube days XI (Göteborg, Sweden) November 15, 2019.

Counting and effective rigidity in algebra and geometry
Mathematisches Forschungsinstitut Oberwolfach (Oberwolfach, Germany) November 7, 2019.

Counting quaternion algebras with applications to spectral geometry
Seminar ABKLS (Köln, Germany) September 11, 2019.

Sumas de divisores (delivered in Spanish)
XXIII Coloquio Latinamericano de Álgebra (Mexico City, Mexico) August 9, 2019.

Bounded gaps between primes and volumes of manifolds
Colloquium, Utrecht University (Utrecht, Netherlands) April 10, 2019.

The Fourier coefficients of Eisenstein series newforms
33rd Automorphic Forms Workshop, Duquesne University March 8, 2019.

Counting quaternion algebras with applications to spectral geometry
Number Theory Seminar, The Ohio State University January 28, 2019.

Counting quaternion algebras
AMS/MAA Joint Meetings, January 18, 2019.
AMS Invited Paper Session on Counting Methods in Number Theory.

Gaps between primes and the length spectra of arithmetic hyperbolic surfaces
AMS/MAA Joint Meetings, January 17, 2019.
AMS Special Session on Number Theory and Hyperbolic Geometry.

Counting quaternion algebras
Canadian Mathematical Society Winter Meeting, December 9, 2018.
CMS Special Session on Distributions in Analytic Number Theory.
Geometric and Analytic Number Theory (Goettingen, Germany) November 22, 2018.
Max Planck Institute for Mathematics Number Theory Lunch Seminar June 27, 2018.
International Conference On Mathematics and Statistics (Memphis, TN) May 8, 2018.

Bounded gaps between primes and the length spectra of arithmetic hyperbolic 2-orbifolds
Heilbronn Number Theory Seminar (Bristol, UK) October 24, 2018.

Sumas de divisores (delivered in Spanish)
Instituto de Matemática y Ciencias Afines (Lima, Peru) August 17, 2018.

Counting and effective rigidity in algebra and geometry
University of Goettingen Number Theory Seminar June 13, 2018.
University of Wisconsin – Madison Number Theory Seminar April 5, 2018.

Espacios entre primos (delivered in Spanish)
Universidad Mayor de San Andrés (La Paz, Bolivia) July 30, 2018.
Universidad de La Habana (Havana, Cuba) January 4, 2018.
Instituto de Matemática y Ciencias Afines (Lima, Peru) August 21, 2017.

Divisor-sum fibers
Elementare und Analytische Zahlentheorie (ELAZ), Bonn, Germany September 4, 2018.
Combinatorial and Additive Number Theory (CANT), New York, NY May 24, 2018.
University of South Carolina April 13, 2018.
Mid-Atlantic Seminar On Numbers II April 7, 2018.
Number Theory Week 2017 (Poznan, Poland) September 4, 2017.
Vilnius Conference in Combinatorics and Number Theory (Vilnius, Lithuania) July 17, 2017.

Bounded gaps between primes and the length spectra of arithmetic hyperbolic 3-orbifolds
University of Georgia Number Theory Seminar January 24, 2018.
Mathematical Congress of the Americas (Montréal, QC, Canada) July 27, 2017.
Georg-August-Universität zu Göttingen Number Theory Seminar July 10, 2017.
Max Planck Institute Number Theory Seminar (Bonn, Germany). July 5, 2017.

(Mind the) gaps between primes
University of Georgia Graduate Student Seminar. January 23, 2018.
Ross Mathematics Program 60^{th} Reunion and Conference. June 17, 2017.

Sums of distinct divisors
MSRI Connections for Women: Analytic Number Theory February 3, 2017.

Counting quaternion algebras
AMS/MAA Joint Meetings, January 5, 2017.
AMS Special Session on Discrete Structures in Number Theory.

Polynomials with divisors of every degree
Max Planck Institute Number Theory Seminar (Bonn, Germany). December 19, 2016.

Prime gaps
Universität zu Köln Oberseminar Zahlentheorie (Cologne, Germany). December 12, 2016.

Runs of consecutive primes
Heilbronn Number Theory Seminar (Bristol, UK). October 12, 2016.
Max Planck Institute Number Theory Seminar (Bonn, Germany). August 10, 2016.

Heights of algebraic integers
Women In Numbers Europe 2 Conference (Leiden, Netherlands). September 30, 2016.

The sign changes of Fourier coefficients of Eisenstein series.
Building Bridges Workshop (Sarajevo, Bosnia and Herzegovina). July 18, 2016.

On integers n for which $x^n - 1$ has a divisor of every degree
Canadian Number Theory Association Meeting (Calgary, AB, Canada). June 23, 2016.

Bounded gaps between primes
University of Oregon Number Theory Seminar. May 17, 2016.
Central Michigan University Mathematics Department Colloquium. December 17, 2015.
Dartmouth College Mathematics Department Colloquium. May 21, 2015.
Kent State University Mathematics Department Colloquium. April 16, 2015.
North Dakota State University Mathematics Department Colloquium. March 24, 2015.

Polynomials with divisors of every degree
Duke University Number Theory Seminar. November 4, 2015.

Runs of consecutive primes via the Maynard-Tao method
AMS Special Session on Analytic Methods in Elementary Number Theory.
AMS Sectional Meeting (Huntsville, AL), March 28, 2015.

Arithmetic functions at consecutive shifted primes.
American Institute of Mathematics. November 20, 2014.

Applications of the Maynard-Tao method.
AMS Special Session on Interactions between
Geometry, Group Theory, and Number Theory.
AMS Sectional Meeting (East Lansing, MI), March 15, 2015.
Clemson University Number Theory Seminar. November 14, 2014.
Exciting New Faces In Analytic Number Theory (Bonn, Germany). July 12, 2014.

Abelian surfaces over finite fields with prescribed groups.
AMS/MAA Joint Meetings, January 16, 2014.
AMS Special Session on Analytic Number Theory.
AMS Sectional Meeting (Riverside, CA), November 2, 2013.
Special Session on Heights, Diophantine problems, and lattices.

Sums of multiplicative arithmetic functions over abundant numbers.
Integers Conference. October 27, 2013.
Palmetto Number Theory Series XX. September 8, 2013.

Statistical questions about arithmetic objects
University of Georgia Number Theory Seminar. April 10, 2013.
University of South Carolina Number Theory Seminar. April 5, 2013.

The sign changes of Fourier coefficients of Eisenstein series.
27^{th} Automorphic Forms Workshop (Dublin, Ireland). March 12, 2013.
AMS Sectional Meeting (Oxford, MS), March 2, 2013.
Special Session on Modern Methods in Analytic Number Theory.

How often is $\#E(\mathbb{F}_p)$ squarefree?
SouthEastern Regional Meeting On Numbers. April 13, 2013.
AMS/MAA Joint Meetings, January 12, 2013.
AWM Workshop on Number Theory.

On the degrees of divisors of $x^n - 1$.

Max Planck Institute Number Theory Seminar (Bonn, Germany).	June 26, 2013.
Emory University Algebra and Number Theory Seminar.	February 6, 2013.
University of Michigan Group, Lie and Number Theory Seminar.	October 29, 2012.
University of South Carolina Number Theory Seminar.	October 23, 2012.
Québec-Maine Number Theory Conference.	September 29, 2012.
AMS Sectional Meeting (Rochester, NY),	September 23, 2012.
Special Session on Analytic Number Theory	

Sums of distinct divisors.

West Coast Number Theory Conference.	December 17, 2012.
Palmetto Number Theory Series XIX.	December 1, 2012.
Canadian Number Theory Association Conference XII.	June 17, 2012.

Products of distinct cyclotomic polynomials.

University of Georgia AGANT Oberseminar.	September 5, 2012.
University of Washington Number Theory Seminar.	May 3, 2012.
PIMS/SFU/UBC Number Theory Seminar.	April 26, 2012.
CRM Analytic Number Theory Seminar.	April 5, 2012.
Brigham Young University Number Theory Seminar.	February 28, 2012.
West Coast Number Theory Conference.	December 16, 2011.
Brown University Number Theory Seminar.	December 2, 2011.

On the divisors of $x^n - 1$.

Erdős Centennial Conference (Budapest, Hungary). (poster)	July 2, 2013.
AMS/MAA Joint Meetings,	January 5, 2012.
Special Session on New Perspectives in Multiplicative Number Theory	

Polynomials with divisors of every degree.

Integers Conference.	October 27, 2011.
AWM Celebration of Women In Math. (poster)	September 18, 2011.

On the divisors of $x^n - 1$ in $\mathbb{F}_p[x]$.

Maine-Québec Number Theory Conference.	October 2, 2011.

Variations on the practical numbers.

Upstate Number Theory Conference.	April 30, 2011.

Artin's primitive root conjecture.

MIT Seminar on Topics in Arithmetic, Geometry, Etc.	December 3, 2010.

φ-practical numbers.

Québec-Maine Number Theory Conference.	October 3, 2010.
Canadian Number Theory Association Conference XI.	July 13, 2010.

Heights of divisors of $x^n - 1$.

Integers Conference.	October 17, 2009.
Maine-Québec Number Theory Conference.	October 4, 2009.

II. Teaching and Outreach

COURSES TAUGHT:

I was an instructor for the following courses. Responsibilities included preparing a syllabus, choosing a textbook, developing a website, planning and delivering lectures, as well as holding office hours, creating exams, assigning homework and assessing grades. Summaries of student evaluations available upon request.

Associate Professor, Utrecht University

WISL 302: Mastermath course in Diophantine Approximation, Fall 2023.
WISL 329: Mastermath course in Analytic Number Theory, Fall 2022, Fall 2024, Fall 2025.
WISM559: Graduate Seminar on Number Theory and Arithmetic Manifolds, Spring 2022.
WISB321: Elementaire Getaltheorie, Fall 2020, Fall 2021, Fall 2022, Spring 2023, Spring 2024, Spring 2025.
WISB102: Bewijzen in de Wiskunde, Fall 2025.
UCSCIMAT11: Calculus and Linear Algebra, Spring 2021, Spring 2022, Fall 2023.
UCSCIMAT23: Analysis and Algebra, Spring 2025.

Assistant Professor, Oberlin College

FYSP 008: Form and Formula: the Interplay Between Mathematics and the Arts, Fall 2018.
MATH 133: Calculus I, Fall 2013, Spring 2015, Fall 2017.
MATH 134: Calculus II, Fall 2014 (two sections), Fall 2015, Spring 2018 (two sections).
MATH 220: Discrete Mathematics, Fall 2015, Spring 2016, Spring 2019 (two sections).
MATH 232: Linear Algebra, Fall 2013, Spring 2014, Fall 2014.
MATH 317: Number Theory, Spring 2014, Spring 2016, Spring 2018, Fall 2018.
MATH 327: Group Theory, Spring 2015.
MATH 329: Rings and Fields, Fall 2017.

Instructor, The University of Georgia

MATH 2250: Calculus for Science and Engineering I, Fall 2012, Spring 2013.

Instructor, Dartmouth College

MATH 1: Calculus with Algebra, Fall 2009.
MATH 8: Calculus of One and Several Variables, Spring 2012.
MATH 20: Discrete Probability, Fall 2010.
UNSG 100: Graduate Ethics, Fall 2010.

EDUCATION PRIZES AND GRANTS:

Best Teacher, 2025 - 2026.

Was elected Best Teacher of small-scale classes in the Mathematics Department at Utrecht University by the bachelor's students.

Teacher of the Year, 2023.

Received the "teacher of the year" award by A-Eskwadraat, the mathematics and physics student association at Utrecht University.

Senior Teaching Qualification, 2023.

The Dutch Senior Teaching Qualification is awarded to senior academics who design, innovate and ensure quality education at the curriculum level.

Howard Hughes Medical Institute Inclusive Excellence Grant, 2017 - 2022.

I contributed to a successful proposal for a $1,000,000 grant, funded by the Howard Hughes Medical Institute, aimed at increasing success rates for students from underrepresented groups within STEM fields at Oberlin College.

Oberlin College Curriculum Development Grant, 2018.

Awarded $3500 to develop a new course on mathematics and the arts. The course was called "Form and Formula," and it was developed in collaboration with a professor of music theory at the Oberlin Conservatory of Music and with the director of the Allen Memorial Museum of Art.

MAA Project NExT Leitzel Fellowship, 2013 - 2014.

Awarded $3000 to participate in Project NExT, a highly-selective professional development program for new mathematics teachers at the university-level, sponsored by the Mathematical Association of America.

LEADERSHIP IN EDUCATION:

Education Advisory Committee (Mathematics Department)
Chair, September 2022 - present.
Committee Member, March 2021 - present.

Mastermath Education Committee (OC)
Committee Memeber, September 2022 - present.

Graduate School of Natural Sciences Education Committee (OC)
Committee Member, September 2021 - present.

Academic Skills Committee
Committee Member, March 2022 - June 2022.

Oberlin HHMI Leadership Team
Co-Program Director, Fall 2018 - Spring 2019.
Member, Spring 2018 - Spring 2020.

POSTDOCS SUPERVISED:

Peter Koymans, Postdoctoral Researcher, Utrecht University (2024 - 2026)

Shuntaro Yamagishi, Postdoctoral Researcher, Utrecht University (2020 - 2022)

PHD STUDENTS SUPERVISED:

Samira le Grand, PhD Student, Utrecht University (current)

Sebastián Carillo Santana, PhD Student, Utrecht University, July 2026.
Thesis title: "Eisenstein series and powerfree integers"

David Hokken, PhD Student (co-supervisor: Gunther Cornelissen), Utrecht University, May 2026.
Thesis title: "Randomness and symmetry of polynomials"

MASTER'S STUDENTS SUPERVISED:

Anniek Reuijl, supervisor, Master's Thesis, Utrecht University '26
Project Title: "Representing integers with sums of proper divisors"

Balazs Nagyvaradi, supervisor, Master's Thesis, Utrecht University '25
Project Title: "Efficiently computing partial sums of arithmetic functions"

Bjorn Kiezebrink, supervisor, Master's Thesis, Utrecht University '25
Project Title: "The sum of reciprocals of divisors of Lucas sequences"

Lammert Westerdijk, co-supervisor (with Till Miltzow and Jan-Hendrik Evertse), Master's Thesis, Utrecht University '24, winner of the 2025 GSNS award for Best Master's Thesis
Project Title: "A framework for studying the complexity of general ε-robust problems"

Joël Ganesh, supervisor, Master's Thesis, Utrecht University '24
Project Title: "Efficient computation of Chebyshev's psi function"

Lucas Hoogendijk, supervisor, Master's Thesis, Utrecht University '23
Project Title: "Connecting arithmetic functions and continuous distribution functions"

Niels van Ee, supervisor, Master's Thesis, Utrecht University '22
Project Title: "Parallels between primes and φ-practical numbers"

Erin van der Kamp, supervisor, Master's Thesis, Utrecht University '21
Project Title: "Eisenstein series newforms: an investigation of the signs of their Fourier coefficients"

Lennert den Besten, supervisor, Master's Thesis, Utrecht University '21
Project Title: "The integer sides of triangles with a prime side opposite a $\pi/3$ angle"

BACHELOR'S STUDENTS SUPERVISED:

Han Datema, Bachelor's Thesis student, Utrecht University '25
Project Title: "Divisors of the middle binomial coefficient"

Ruben Riemens, Bachelor's Thesis student, Utrecht University '24
Project Title: "Euclid, Euler, Erdős: exploring the infinitude of the primes"

Daphne Stouthart, Bachelor's Thesis student, Utrecht University '24
Project Title: "Euclid and the infinite number of missing primes"

Bjorn Kiezebrink, Bachelor's Thesis student, Utrecht University '23
Project Title: "Convergence and divergence of sums of prime reciprocals"

Nina Blockland, Bachelor's Thesis Student, Utrecht University '22
Project Title: "Perfect squares as a result of concatenating consecutive integers"

Joppe Stokvis, Bachelor's Thesis Student, Utrecht University '21
Project Title: "Random matrix theory: From Riemann zeros to quantum chaos"

Victor de Vries, Bachelor's Thesis Student, Utrecht University '21
Project Title: "Flat cyclotomic polynomials"

Ivan Aidun, Honors Bachelor's Thesis Student, Oberlin College '19
Project Title: "A statistical investigation of a divisor-sum function"

Nicholas Schwab, Max Planck Institute Summer Intern, University of Bonn '19
Project Title: "A generalization of the practical numbers"

Leo Gitin, Max Planck Institute Summer Intern, University of Bonn '19
Project Title: "Prime numbers and their 'practical' cousins"

Hannah Pieper, Winter Term Research Student, Oberlin College '18
Project Title: "Nim sums and combinatorial games"

Jad Salem, Winter Term Research Student, Oberlin College '17
Project Title: "Topics in module theory"

Jules Metcalf-Burton, Winter Term Research Student, Oberlin College '15
Project Title: "Problems in analytic number theory"

OTHER THESIS COMMITTEES:

Ricardo Martinho Marques, Second Reader, Master's Thesis, Utrecht University 2026
Project Title: "On the solubility statistics of ternary quadratic forms"

Michiel van den Eshof, Second Reader, Master's Thesis, Utrecht University 2025
Project Title: "The height zeta function method for rational points on projective space"

Michiel Horikx, Second Reader, Master's Thesis, Utrecht University 2024
Project Title: "On h-fulness in number fields"

Komal Agrawal, External Examiner, PhD Thesis, University of Georgia 2022
Project Title: "On some problems concerning integer recurring sequences"

David Hokken, Second Reader, Master's Thesis, Utrecht University 2021
Project Title: "Littlewood polynomials with square discriminant"

Robert Slob, Second Reader, Master's Thesis, Utrecht University 2020
Project Title: "Primitive divisors of elliptic curves over function fields and the Lang-Trotter conjecture over function fields"

Jack Ladd, Second Reader, Honors Bachelor's Thesis, Oberlin College 2019
Project Title: "Classifying primes of the form $x^2 + ny^2$"

TALKS ON MATH PEDAGOGY:

"Flipping your classroom in an upside down world"
June 2022, Algebra Seminar, University of Seville.

"I did it my way": making undergraduate research work for you
January 2020, Joint Mathematics Meetings, AMS-MAA Special Session on Getting Started in Undergraduate Research: Topics, Tools, and Open Problems.

#quadraticreciprocity: from 140-character tweets to polished student-authored textbooks
January 2018, Joint Mathematics Meetings, MAA Session on Innovative Teaching Practices in Number Theory.

IBL number theory (for large values of n)
January 2015, Joint Mathematics Meetings, MAA/NSF Funded Poster Session (poster).
June 2014, Legacy of R. L. Moore Conference.

Using WeBWorK
November 2013, Math Faculty Seminar, Oberlin College.

Flipping the classroom (without turning your life upside down)
October 2013, Ohio Project NExT, MAA Ohio Sectional Meeting.

GENERAL AUDIENCE MATHEMATICS TALKS:

Unraveling the mysteries of the primes: the Fields Medal-winning work of James Maynard
April 15, 2023. Nationale Wiskunde Dagen 2023.

The work of James Maynard
October 11, 2022. Fields Medal Lecture Series, Utrecht University.

TALKS FOR MASTER'S STUDENTS:

(Mind the) gaps between primes
February 17, 2022. Masterclass, Utrecht University.

The ping-pong lemma
November 22, 2019. Reading group on Geometric Group Theory, Max Planck Institute for Mathematics.

What are modular forms?
March 6, 2019. AFW Graduate Student Bootcamp, Duquesne University.

(Mind the) gaps between primes
January 23, 2018. Graduate Student Seminar, University of Georgia.

TALKS FOR UNDERGRADUATE STUDENTS:

An efficient algorithm for summing values of arithmetic functions
November 2022, Eskwadraat Pub Lecture, Utrecht University.

My (somewhat windy) mathematical journey
May 2022, Women in Science Endeavor, Utrecht University.
August 2017, WADE REU, Wake Forest University.

Reflections on the 2018 ICM
October 2018, Oberlin College. Joint with Benjamin Linowitz.

(Mind the) gaps between primes
January 2020, Swarthmore College.
August 2017, WADE REU, Wake Forest University.

Twin primes and their kin
March 2018, Colloquium, Lake Forest College.
March 2018, Colloquium, Elon University.
April 2017, Pi Mu Epsilon Induction Ceremony at Chico State University.
June 2016, Complexity Across Disciplines REU, Boise State University.
February 2016, AWM Lecture, University of Akron.
October 2015, Colloquium, Butler University.
April 2014, Colloquium, Kenyon College.
March 2014, Colloquium, Oberlin College.
March 2014, Undergraduate Colloquium, University of Georgia.

Are there infinitely many pairs of twin primes?
November 2014, Math Club Lecture, Clemson University.

On the divisors of $x^n - 1$
June 2013, Clemson University REU.

Curious patterns in the divisors of $x^n - 1$
January 2012, Colloquium, Oberlin College.
January 2012, Colloquium, Ursinus College.
January 2012, Colloquium, Whittier College.
November 2011, Colloquium, Goucher College.

Coefficients of Cyclotomic Polynomials
November 2009, Dartmouth Math Society.

Heights of Divisors of $x^n - 1$
September 2009, Women In Math In New England.

TALKS FOR HIGH SCHOOL STUDENTS:

Patterns in the primes
October 2022, IMAGINARY Program, Utrecht University.

Mind the gaps between primes
June 2022, Euler Circle.

Degrees of divisors of $x^n - 1$
September 2016, Max Planck Institute for Mathematics Summer Intern Program.

Twin primes and their kin
July 2014, Ross Mathematics Program.

The Mathematics of SET
June 2013, UGA Math Camp.

Number Theory and Security in the Digital Age
July 2010, Ross Mathematics Program.

Bertrand's Postulate
July 2009, Ross Mathematics Program.

PEDAGOGY WORKSHOPS:

AMS webinar on Advocating for Student of Color: There's More You Can Do, Fall 2020.
Participated in a 6-hour webinar aimed at helping faculty identify actionable ways that they can advocate for students of color.

Mastery Grading Online Conference, June 2020
Participated in a two-day workshop on using Mastery Grading in college-level mathematics courses.

Approaches to Student Mentoring, October 2018.
Oberlin College
Participated in a two-hour workshop on best practices for serving as an effective research mentor to undergraduate students.

Career Development in the Academic Department, October 2018.
Oberlin College
Participated in a one-hour workshop on steps that academic departments can take to help their students prepare for life outside of academia.

Music$^+$ Workshop, January 2018.
Oberlin College
Participated in a one day workshop on incorporating music in liberal arts college courses.

"Beautiful Problems": Designing (and Scaffolding) Writing Assignments to Promote Disciplinary Ways of Thinking and Arguing, January 2016.
Oberlin College
Participated in a two day workshop led by John Bean on designing writing assignments to promote disciplinary ways of thinking.

MAA PREP Workshop on Inquiry-Based Learning, June 2014.
Kenyon College
Partially funded by the NSF to attend a week-long workshop in which participants design a course for the 2014-2015 academic year that will incorporate inquiry-based learning methods.

Sharing Responsibility for Classroom Environments and Learning, February 2014.
Oberlin Center for Teaching Innovation and Excellence
Participated in a three-hour workshop led by Allison Cook-Sather on creating faculty-student partnerships to strengthen teaching and learning in higher education.

IBL Workshop, October 2013.
MAA Ohio Section Meeting, Cleveland State University
Participated in a two-hour introductory workshop led by Carol Schumacher on using inquiry-based learning methods.

Project NExT, August 2013 - August 2014
Hartford, CT; Baltimore, MD; Portland, OR
Participated in Project NExT, a professional development for new or recent Ph.D.s in the mathematical sciences. Project NExT addresses all aspects of an academic career: improving the teaching and learning of mathematics, engaging in research and scholarship, and participating in professional activities.

Legacy of R. L. Moore – IBL Conference, June 2013 & June 2014.
University of Texas at Austin
Funded by the Educational Advancement Foundation to attend a three-day workshop on developing and implementing inquiry-based learning techniques.

Active Learning Institute
Dartmouth Center for the Advancement of Learning, August 2011.
Selected from teaching faculty across disciplines at Dartmouth College to participate in an intensive two-day workshop on creating learner-centered educational experiences in the classroom.

Course Development Series
Dartmouth Center for the Advancement of Learning, June 2011.
Took part in a four session workshop designed to support instructors in creating new courses or revising existing courses.

Mentoring Workshop
Dartmouth Center for the Advancement of Learning, January 2010.

Participated in a four session workshop focused on developing the skills necessary to serve as a research mentor to undergraduate and graduate students. Topics included: designing a research program, interacting effectively with students, writing recommendation letters.

Ethics Facilitator Training

Dartmouth Ethics Institute, Winter 2010.

Participated in a training workshop that made me eligible to teach a section of *UNSG 100: Graduate Ethics* at Dartmouth College. The Graduate Ethics course was a case study-based training for PhD students in STEM fields. The course focused on ethical dilemmas that PhD students may encounter in their research and teaching.

Teaching Seminar

Dartmouth College, Summer 2009.

Participated in an intensive summer-long training course taken by Dartmouth's post-qualifying exam graduate students. The course included reading and discussion of material on the philosophy and science of learning and teaching. Participants also designed and executed two week-long mathematics workshops for high school students and guest-lectured for two class periods in a Dartmouth course (in my case, *Math 31: Abstract Algebra*).

OUTREACH ACTIVITIES:

Project Leader

Women in Sage Tunisia, October 2025.

Let a group of female PhD students, postdocs, and junior faculty members from North African universities on a Sage coding project in harmonic analysis. Instructed the students on how to use Sage, and gave 4 lectures introducing them to the relevant tools from harmonic analysis. Supervised the students with preparing a final presentation on their work.

Project Leader

Number Theory in the Americas 2, September 2024.

Co-led (with Plinio Murrillo) a group of Spanish-speaking postdocs and junior faculty members on a research project in the intersection of analytic number theory and spectral geometry.

Project Leader

Women in Sage Uganda, September 2023.

Led a group of female master's students, PhD students, and postdocs from East African universities on a Sage coding project in analytic number theory. Instructed the students in how to use Sage, and gave 4 lectures introducing them to the relevant tools from number theory. Supervised the students with preparing a final presentation on their work.

Project Group Co-Leader

Women In Numbers Europe 4, August 2022.

Co-led (with Cécile Dartyge) a group of female postdocs and graduate students on a research project that we designed at the Women In Numbers 4 workshop. This work resulted in paper [23] on my list of research publications (see p. 1).

Tea Time With A Number Theorist

People Online In Number Theory, July 2020 - October 2020.

Co-organized (with Ana Cariani, Jessica Fintzen, and Bianca Viray) a weekly "tea" aimed at junior mathematicians from around the world. Each weekly tea was hosted by a different senior mathematician, who provided informal career advice and mathematical discussion. This was created in response to the covid-19 pandemic, after hearing from many junior mathematicians that their opportunities for informal mentoring had disappeared.

Mathematical Consultant

Stardrop Circus, Spring 2016 - Winter 2020.

Served as mathematical consultant to the Stardrop Circus, a Cleveland-based aerial acrobatics group. Helped circus performers develop a mathematically-correct aerial acrobatics demonstration on principles from physics aimed at middle school students.

Research Mentor

Max Planck Institute for Mathematics Summer Intern Program, September 2016.

Mentored two high school students on mathematics research projects during a month-long internship program.

Invited Faculty Panelist

Nebraska Conference for Undergraduate Women in Math, January 2015.

Provided mentorship to undergraduates interested in pursuing careers in mathematics. Spoke in a panel on "Random bits of advice" and facilitated breakout sessions on "Research in Mathematics" and "Various Teaching Opportunities."

Invited Faculty Mentor

Southeastern Conference for Undergraduate Women in Math, November 2014.

Provided mentorship to undergraduate women from the Southeastern region of the United States interested in pursuing careers in mathematics. Participated in roundtable discussions and gave a plenary talk on my own research.

Instructor

UGA Math Camp, University of Georgia, June 2013.

Designed a hands-on course in graph theory for local high school students. Gave a plenary talk on the mathematics behind the card game SET.

Panelist

Sonia Kovalevsky Math Day, Dartmouth College, November 2011.

Provided advice to middle school girls on pursuing a career in mathematics.

Calculus Instructor

Summer Institute for the Gifted, Dartmouth College, August 2010.

Designed and taught individualized calculus courses based on the Renzulli learning model.

Lecturer

CTY Odyssey Program In Mathematics, Dartmouth College, May 2010 & May 2011.

Member of the organizing committee (2011). Designed and led exploratory sessions for middle school students on patterns in the prime numbers and cryptography.

Instructor

Exploring Mathematics, Dartmouth College, July 2009

Worked with three other instructors to develop and teach hands-on courses on topics from group theory and combinatorics.

Invited Panelist

Nebraska Conference for Undergraduate Women in Math, January 2009.

Provided mentorship to undergraduate women interested in pursuing graduate studies in mathematics. Chaired a session of undergraduate research talks in number theory.

Teaching Assistant

Cryptography & Security Camp, Dartmouth College, June 2008.

Assisted high school students with cryptography problem sets and programming.

Counselor

Ross Mathematics Program, The Ohio State University, Summer 2007.

Provided individualized instruction in elementary number theory to high school students using the Moore method.

Counselor, *Young Scholars Program*, The University of Chicago, Fall 2004 - Spring 2006.

Worked under the direction of Paul Sally. Used an inquiry-based learning model to guide students through group assignments in graph theory, geometry and economic game theory.

III. Service

SERVICE TO THE PROFESSION:

MAA Focus
Associate editor (2022 - present)

Indagationes Mathematicae
Editor (2026 - present)
Associate editor (2020 - 2026)

Algorithmic Number Theory Symposium
Program Committee – selection committee for papers submitted to the ANTS conference proceedings (2024, 2026)

Heidelberg Laureate Forum
Mathematics Reviewing Board (2020, 2022, 2023, 2024, 2025)

AMS-Simons Travel Grant Committee
Committee member (2021 - 2023)

National Science Foundation
Grant proposal reviewer (2020, 2023)

Journal Referee: Acta Arithmetica, Colloquium Mathematicum, Finite Fields and Applications, Forum of Mathematics: Pi, Indagationes Mathematicae, Mathematics of Computation, Mathematical Proceedings of the Cambridge Philosophical Society, Mathematika, Primus, Proceedings of the American Mathematical Society, Proceedings of the National Academy of Sciences, The American Mathematical Monthly, The International Journal of Number Theory, The Journal of Number Theory.

Mathematical Reviews
Reviews: MR2904139.

MAA Ohio Committee on Section Activities
Committee Member, Fall 2013 - Spring 2016.

Judge for MAA Student Paper Session 4
MAA MathFest (2013).

SERVICE TO DUTCH SCIENTIFIC COMMUNITY:

European Women in Mathematics - NL
President, September 2026 - present.

Dutch Intercity Number Theory Seminar
Coordinator, September 2026 - present.

Discrete, Interactive and Algorithmic Mathematics, Algebra and Number Theory (DIAMANT) Research Cluster
Board Member, October 2025 - present.
Organizer of the Autumn Symposium, November 19-20, 2026.

SERVICE TO UTRECHT UNIVERSITY:

Utrecht Geometry Center
Chair, February 2025 - present.
Board Member, January 2021 - present.

Education Advisory Committee (Mathematics Department)
Chair, September 2022 - present.
Committee Member, March 2021 - present.

Springer Chair Selection Committee
Chair, June 2023 - February 2024.

Mastermath Education Committee (OC)
Committee Memeber, September 2022 - present.

Graduate School of Natural Sciences Education Committee (OC)
Committee Member, September 2021 - present.

Academic Skills Committee
Committee Member, March 2022 - June 2022.

Utrecht Mathematical Colloquium Committee
Committee Member, October 2020 - present.

Hiring Committees
Committee Member, search for UHD Open Position, Spring 2023.

SERVICE TO OBERLIN COLLEGE:

Oberlin HHMI Leadership Team
Co-Program Director, Fall 2018 - Spring 2019.
Member, Spring 2018 - Spring 2020.

Sigma Xi, Oberlin Chapter
Vice President, Fall 2015 - Spring 2016.

Mead-Swing Lectureship Committee
Member, Fall 2014 - Spring 2016, Fall 2017 - Spring 2018.

Cognitive Science Committee
Member, Fall 2014 - Spring 2015, Fall 2017 - Spring 2018.

Goldwater Scholarship Nominating Committee
Fall 2014, Fall 2015.

PROFESSIONAL AFFILIATIONS:

American Mathematical Society, 2007 - Present.

Association for Women In Mathematics, 2006 - 2019.

European Women in Mathematics, 2020 - Present.

Mathematical Association of America, 2012 - 2014, 2022 - Present.

Dutch Royal Mathematical Society, 2022 - Present.

REFERENCES: Available upon request.