Madeline Locus Dawsey
Curriculum Vitae

Department of Mathematics
University of Texas at Tyler
3900 University Boulevard
Tyler, TX 75799

Office: Ratliff Building North 4048
Department phone: (903) 565-5839
E-mail: mdawsey@uttyler.edu
Webpage, Personal Webpage

EDUCATION

Ph.D. in Mathematics, Emory University 2019

Advisor: Dr. Ken Ono
Dissertation: *New Results on Partitions, Prime Numbers, and Moonshine*

B.S. in Mathematics, University of Georgia 2014

A.B. in Italian, University of Georgia 2014

RESEARCH INTERESTS

Analytic and combinatorial number theory including integer partitions, modular forms, arithmetic and analytic densities, and digital representations

POSITIONS HELD

Associate Professor, University of Texas at Tyler 2024 – present

Assistant Professor, University of Texas at Tyler 2019 – 2024

Research Assistant, Emory University 2019

Teaching Assistant, Emory University 2015 – 2018

PUBLICATIONS

*indicates an undergraduate student author, **indicates a graduate student author

RESEARCH PUBLICATIONS

1. C. Frechette* and M. Locus*. Combinatorial Properties of Rogers-Ramanujan-Type Identities Arising from Hall-Littlewood Polynomials. *Annals of Combinatorics*, **20**: 2 (2016), 345-360.
2. M. Locus** and I. Wagner**. Congruences for Powers of the Partition Function. *Annals of Combinatorics*, **21**: 1 (2017), 83-93.
3. E. Alwaise*, R. Dicks*, J. Friedman*, L. Gu*, Z. Harner*, H. Larson*, M. Locus**, I. Wagner*, and J. Weinstock*. Shifted distinct-part partition identities in arithmetic progressions. *Annals of Combinatorics*, **21**: 4 (2017), 479-494.

4. M. Locus**. Conjugacy growth series for finitary wreath products. *Research in Number Theory*, **3**: 7 (2017).

   M. Locus**. Erratum to: Conjugacy growth series for finitary wreath products. *Research in Number Theory*, **3**: 15 (2017).

5. M. L. Dawsey**. A new formula for Chebotarev densities. *Research in Number Theory*, **3**: 27 (2017).

6. M. L. Dawsey** and R. Masri. Effective bounds for the Andrews spt-function. *Forum Mathematicum*, Vol. 31, Issue 3 (2019), 743-767.

7. M. L. Dawsey**, K. Ono, and I. Wagner**. Multiquadratic fields generated by characters of A_n. *Journal of Algebra*, Volume 533 (2019), 339-343.

8. M. L. Dawsey** and K. Ono. Higher width moonshine. *Advances in Mathematics*, Volume 360 (2020), doi.org/10.1016/j.aim.2019.106896.

9. M. L. Dawsey, K. Ono, and I. Wagner. Fields generated by characters of finite linear groups. *Archiv der Mathematik* **116** (2021), 487-500.

10. M. L. Dawsey and D. McCarthy. Generalized Paley graphs and their complete subgraphs of orders three and four. *Research in the Mathematical Sciences* **8**: 18 (2021).

11. M. L. Dawsey and B. Sharp*. Self-conjugate t-core partitions and applications. *Australasian Journal of Combinatorics* **82(2)** (2022), 212–227.

12. M. L. Dawsey, T. Russell*, and D. Urban**. Derivatives and Integrals of Polynomials Associated with Integer Partitions. *Journal of Integer Sequences* **25** (2022), Article 22.5.1.

13. M. L. Dawsey, M. Just**, and R. Schneider. A "supernormal" partition statistic. *Journal of Number Theory* **241** (2022), 120–141.

14. E. Cochran*, M. L. Dawsey, E. Harrell*, and S. Saunders*. Bijections, generalizations, and other properties of sequentially congruent partitions. *Ramanujan Journal* (2023). https://doi.org/10.1007/s11139-023-00728-y.

15. K. Anders, M. L. Dawsey, R. Gupta, and J. Vandehey. Non-standard binary representations and the Stern sequence. *Electronic Journal of Combinatorics* Volume 31, Issue 4, Article Number P4.39 (2024).

16. K. Anders, M. L. Dawsey, B. Reznick, and S. Sisneros-Thiry. Representations of integers as quotients of sums of distinct powers of three. Submitted. Preprint: https://arxiv.org/abs/2308.07252.

17. W. Craig, M. L. Dawsey, and G.-N. Han. Inequalities and asymptotics for hook numbers in restricted partitions. Submitted. Preprint: https://arxiv.org/abs/2311.15013.

18. A. Botkin**, M. L. Dawsey, D. J. Hemmer, M. R. Just, and R. Schneider. Partition-theoretic model of prime distribution. Submitted. Preprint: https://arxiv.org/abs/2501.00580.

19. K. Anders, M. L. Dawsey, R. Gupta, N. Lebowitz-Lockard, and J. Vandehey. Non-standard quaternary representations and the Fibonacci sequence. Submitted.

20. M. L. Dawsey and R. Gupta. On summation formulas associated with a general class of arithmetical functions. Submitted.

21. M. L. Dawsey, M. Jeske*, A. Martinez*, A. Russo*, and M. Taylor*. Combinatorial properties of standard Young tableaux and their connections to permutations. Submitted.

RESEARCH IN PREPARATION

1. K. Anders, M. L. Dawsey, and J. Vandehey. Balancing numbers for the Stern sequence. In preparation.
2. K. Anders, M. L. Dawsey, B. Reznick, and S. Sisneros-Thiry. Digraphs for representations of integers as quotients of sums of distinct powers of three. In preparation.

CONFERENCE PROCEEDINGS

1. M. L. Dawsey** and K. Ono. CM Evaluations of the Goswami-Sun Series. *Proceedings of Elliptic Integrals, Elliptic Functions and Modular Forms in Quantum Field Theory.* Zeuthen, Germany (Ed. J. Blumlein, et. al.), Springer (2019), 183-193.
2. M. L. Dawsey and D. McCarthy. Hypergeometric Functions over Finite Fields and Modular Forms: A Survey and New Conjectures. Conference Proceedings: Baylor Analysis Fest - From Operator Theory to Orthogonal Polynomials, Combinatorics, and Number Theory. *Operator Theory: Advances and Applications*, Birkhauser (2021) 41–56.

OTHER PUBLICATIONS

1. Popular magazine article: M. L. Dawsey** and K. Ono. Speed Seeking. *Splash Magazine* (Summer 2019), 38-39.
2. Book chapters
   (i) Review of "Your hit parade: the top ten most fascinating formulas in Ramanujan's lost notebook," by B. C. Berndt and G. E. Andrews. *Srinivasa Ramanujan: His Life, Legacy, and Mathematical Influence*. Springer (2024). Accepted for publication.
   (ii) Ramanujan and the Nekrasov–Okounkov Formula. *Srinivasa Ramanujan: His Life, Legacy, and Mathematical Influence*. Springer (2024). Accepted for publication.

GRANTS

NSF-AWM Travel Grant 2025

Awarded $2,300 for travel to the Joint SIAM/CAIMS Annual Meetings, Montréal 2025

NSF Research Experience for Undergraduates (REU), PI (pending) 2026 – 2029

NSF Research Experience for Undergraduates (REU), PI (pending) 2025 – 2028

NSF Research Experience for Undergraduates (REU), Senior Personnel 2022 – 2025

AMS-Simons Travel Grant 2020 – 2022

Awarded $5,000 to support travel for research in number theory.

UT Tyler New Faculty Research Grant 2020 – 2021

Awarded $7,149 for travel, supplies, and research assistants for research in number theory.

NSF-AWM Travel Grant 2020

Awarded $1,722.18 for travel to the 34th Automorphic Forms Workshop, Utah.

HONORS AND AWARDS

UT Tyler nominee for the UT System Regents' Outstanding Teaching Award	2024 – 2025
President's Excellence in Service Award ($2500), University of Texas at Tyler	2024 – 2025
UT Tyler nominee for the UT System Regents' Outstanding Teaching Award	2023 – 2024
Innovation in Teaching Award ($2000), University of Texas at Tyler	2023 – 2024
Jack and Dorothy Faye White Fellowship for Teaching Excellence ($2500), University of Texas at Tyler	2022 – 2023
UT Tyler Department of Mathematics Faculty Teaching Award	2022 – 2023
Marshall Hall, Jr. Teaching Award, Emory University	2018 – 2019
George W. Woodruff Fellowship, Emory University	2015 – 2019
SEC Boyd McWhorter Scholar-Athlete of the Year, Southeastern Conference	2015
NCAA Postgraduate Scholarship, National Collegiate Athletic Association	2015
AT&T Student Leadership Award, University of Georgia	2014
Joel Eaves Scholar-Athlete Award, University of Georgia Athletic Department	2013
Hollingsworth Award, University of Georgia Math Department	2013

PRESENTATIONS

CONFERENCE PRESENTATIONS

*indicates a plenary talk

- *Even-base integer representations and special sequence relations* 2025
  AMS Sectional Meeting, New Orleans, LA
  Special Session: Experimental Mathematics
- *An application of hypergeometric functions to graph theory* 2025
  Third Joint SIAM/CAIMS Annual Meetings, Montréal, Québec, Canada
  Minisymposium: Hypergeometric Series and Their Applications
- *Partition-theoretic model of prime distribution** 2025
  Southeastern Regional Meetings on Numbers (SERMON), Savannah, GA
- *Partition-theoretic model of prime distribution* 2025
  AMS Sectional Meeting, Hartford, CT
  Special Session: Partitions and q-Series
- *Digital representations and special sequences* 2024
  Bayou Arithmetic Research Days (BARD) 4, Tulane University
- *Properties of sequentially congruent partitions* 2024
  Joint Mathematics Meetings, San Francisco, CA
  Special Session: Partition Theory and q-Series
- *Binary representations and the Stern sequence* (virtual talk) 2023

AMS Sectional Meeting, South Alabama
Special Session: Experimental Mathematics in Number Theory and Combinatorics

- *A new partition statistic* 2022

  Baylor Analysis Fest (virtual)

- *Student Workshop on Ranks and Cranks** 2022

  NSF-CBMS Regional Research Conference Series, University of Texas Rio Grande Valley

- *Interdisciplinary Mathematics Research* 2022

  East Texas Research Conference (virtual)

- *A new partition statistic* 2022

  Joint Mathematics Meetings (virtual)
  Special Session: Early career number theory research with combinatorics, modular forms, and basic hypergeometric series

- *A new partition statistic** 2022

  Southern Regional Number Theory Conference, Louisiana State University

- *Modular forms, hypergeometric functions, and Ramsey numbers* 2020

  AMS Sectional Meeting, Pennsylvania State University
  Special Session: q-Series and Related Areas in Combinatorics and Number Theory

- *Congruences for powers of* $p(n)$ 2019

  AMS Sectional Meeting, University of Florida
  Special Session: Partition Theory and Related Topics

- *Partitions and a conjecture of John Thompson* 2019

  Analytic and Combinatorial Number Theory: The Legacy of Ramanujan, University of Illinois at Urbana-Champaign

- *Moonshine for finite groups* 2019

  Southern Regional Number Theory Conference: Modular Curves, Modular Forms, and Hypergeometric Functions, Louisiana State University

- *Moonshine for finite groups* 2019

  AMS Sectional Meeting, University of Hawaii at Manoa
  Special Session: Recent Advances and Applications of Modular Forms

- *Inequalities satisfied by the Andrews* spt*-function* 2019

  AMS Sectional Meeting, Auburn University, AL
  Special Session: Experimental Mathematics in Number Theory, Analysis & Combinatorics

- *Moonshine for finite groups* 2019

  Low dimensional topology and number theory XI, Osaka University, Japan

- *CM Evaluations of the Goswami–Sun Series* 2019

  Joint Mathematics Meetings, Baltimore, MD
  Special Session: Partition Theory and Related Topics

- *The Andrews Smallest Parts Partition Function* 2019

  Joint Mathematics Meetings, Baltimore, MD
  Invited Paper Session: Modular Forms: Aesthetics and Applications

- *Higher Width Moonshine* 2018
  New developments in the theory of modular forms over function fields, Centro di Ricerca Matematica, Italy
- *A New Formula for Chebotarev Densities* 2018
  Canadian Number Theory Association XV, Université Laval, Canada
- *Effective Bounds for Andrews' Smallest Parts Function* 2018
  Combinatory Analysis, Pennsylvania State University
- *Effective Bounds for Andrews' Smallest Parts Function* 2018
  Automorphic Forms Workshop, Tufts University, MA
- *A New Formula for Chebotarev Densities* 2017
  International Conference on Number Theory, SASTRA University, India
- *A New Formula for Chebotarev Densities* 2017
  Palmetto Number Theory Series, University of Tennessee
- *Rogers–Ramanujan Series Arising from Hall–Littlewood Polynomials* 2015
  Joint Mathematics Meetings Poster Session, San Antonio, TX

COLLOQUIUM AND SEMINAR PRESENTATIONS

- *Properties of sequentially congruent partitions* 2024
  Online Partitions and q-Series Seminar (virtual)
- *Binary representations and the Stern sequence* 2023
  Mathematics Department Seminar, University of Texas at Tyler
- *Adding and Counting: How Hard Can It Be?* 2023
  NSF Research Experience for Undergraduates talk, Texas A&M University Commerce
- *A new partition statistic* 2022
  Number Theory Seminar, Texas A&M University
- *A new partition statistic and applications* 2022
  Texas Number Theory and Combinatorics Seminar (virtual)
- *Adding & counting in many different ways* 2021
  Math Club, University of Texas at Tyler
- *Maps between partitions and the natural numbers* 2020
  Mathematics Department Seminar, University of Texas at Tyler
- *Adding and Counting: How Hard Can It Be?* 2020
  Women in Math and Science Research Seminar, University of Texas at Tyler
- *Modular forms and Ramsey theory* 2020
  Number Theory Seminar, Vanderbilt University
- *Moonshine and its variants* 2020
  Algebra Seminar, University of North Texas
- *Modular forms and Ramsey theory* 2020

Mathematics Department Seminar, University of Texas at Tyler

- *Molecular Mathematics* 2020
  Math Club, University of Texas at Tyler
- *Two new results in representation theory* 2019
  Algebraic Geometry and Number Theory Seminar, Rice University
- *Densities of subsets of prime numbers* 2019
  Mathematics Colloquium, TCU
- *Partitions and representation theory* 2019
  Mathematics Department Seminar, University of Texas at Tyler
- *A new formula for Chebotarev densities* 2019
  Algebra and Number Theory Seminar, Texas Tech University
- *Adding and Counting: How Hard Can It Be?* 2019
  Math Club, University of Texas at Tyler
- *Moonshine for finite groups* 2019
  Mathematics Department Seminar, University of Texas at Tyler
- *Adding and Counting: How Hard Can It Be?* 2019
  Mathematics Colloquium, St. Edward's University
- *Densities of subsets of prime numbers* 2018
  Number Theory Seminar, Texas A&M University
- *Densities of subsets of prime numbers* 2018
  Mathematics Department Seminar, University of Texas at Tyler
- *Moonshine for finite groups* 2018
  Mathematics Colloquium, Baylor University
- *Moonshine for finite groups* 2018
  Algebra Seminar, University of Tennessee
- *Moonshine for finite groups* 2018
  Algebra Seminar, Emory University
- *Densities of subsets of prime numbers* 2018
  Mathematics Colloquium, Baylor University
- *Conjugacy Growth Series for Wreath Products of Finitary Permutation Groups* 2017
  Combinatorics, Algebra, and Geometry Seminar, University of Pennsylvania
- *Conjugacy Growth Series for Wreath Products of Finitary Permutation Groups* 2017
  Number Theory Seminar, Texas A&M University
- *Combinatorial Properties of Generalized Rogers–Ramanujan Identities* 2015
  Number Theory Seminar, University of Georgia

ADVISING

UNIVERSITY OF TEXAS AT TYLER

Postdoctoral Fellows

–Rajat Gupta 2023 – 2024

Graduate Student Research Assistants

–Dannie Urban, *A study of partitions* 2020 – 2021

Undergraduate Student Research Assistants

–Tyler Russell, *A study of partitions* 2020 – 2021

· Pi Mu Epsilon MathFest presentation: *Polynomials Associated to Integer Partitions*
· MathFest Outstanding Presentation Award

–Benjamin Sharp, *A study of partitions* 2020 – 2021

Research Experiences for Undergraduates (REU)

–*Permutations of Partition Young Tableaux* 2024

· Alessandra Martinez (University of Texas Rio Grande Valley)
· Alessandro Russo (Charleston Southern University)
· Mat Taylor (University of Texas at Tyler)

–*Sequentially Congruent Partitions* 2022

· Ezekiel Cochran (LeTourneau University)
· Emma Harrell (Mount Holyoke College)
· Samuel Saunders (University of Texas at Tyler)

Louis Stokes Alliances for Minority Participation (LSAMP)

–Millie Jeske, *Permutations of Partition Young Tableaux* 2024

Senior Capstone Projects

–Kenneth Chandler, *Palindrome Partitions* Fall 2025
–Melissa Rodriguez-Sanchez, *Permutation Puzzles* Fall 2024
–Alejandro De Mingo, *The Mathematics of Origami* Spring 2024
–Tyler Russell, *The Circle Method* Spring 2022
–Rebecca Odom, *Identifying Self-Conjugate Partitions* Spring 2021

· Pi Mu Epsilon MathFest presentation: *Identifying Self-Conjugate Partitions*
· MathFest Outstanding Presentation Award
· Paper submitted to *Rose-Hulman Undergraduate Mathematics Journal*

–Landri Edwards, *Mathematical Analysis of Soccer* Fall 2020
–Chloe West, *Mathematical Analysis of Swimming* Spring 2020

Honors Projects

–*Networks*, by Hunter Brown Spring 2025
Honors Contract Project

–*Permutation Groups and Number Puzzles*, by Melissa Rodriguez-Sanchez Fall 2024
Honors Senior Project

–*Permutations and Partition Young Tableaux*, by Millie Jeske Fall 2024
Honors Senior Project

–*Modeling Malaria Control with Differential Equations*, by Matthew Castillo Spring 2023

Honors Contract Project

EMORY UNIVERSITY

Undergraduate Directed Research Projects (joint with Ken Ono)

–Sven Mesihovic, *Analytic Study of High Performance Swimming* Spring 2019

Research Experiences for Undergraduates (graduate student mentor)

–*Analytic Study of High Performance Swimming* 2018, 2019

UNIVERSITY OF VIRGINIA

Undergraduate Directed Research Projects (joint with Ken Ono)

–Jerry Lu, *Analytic Study of High Performance Swimming* 2020 – 2021

PROFESSIONAL DEVELOPMENT

Student Research Professional Learning Community

–Undergraduate and Graduate Research Funding Opportunities 2022

–Tips for Recruiting Student Researchers 2021

Tenure & Promotion: Assistant to Associate Professor 2021

Course Hero Virtual Education Summit 2020

–The Future of Higher Education in the Age of Coronavirus

–Engaging Underprepared Students: Before, During, And After the COVID Era

–Teaching Effective Thinking Through Mathematics

–TailorEd: Student Learning Outcomes

–Synchronous vs. Asynchronous: Lessons From An Educator Teaching Online Since 1994

–Unleashing Faculty Innovation

UT Tyler Faculty Panel on Course Evaluations: Learning from our Students 2020

Student Success Seminar Series, UT Tyler

–From ABC to XYZ: Educating the Instant Generation 2020

UT System Academy of Distinguished Teachers Winter Conference

–Defining and Teaching for Student Success 2020

–Active Learning Using Educational Technologies 2020

–Meeting these Challenges 2020

UT Tyler Center for Excellence in Teaching and Learning

–Six Science-Supported Strategies for Effective Teaching and Learning 2025

–AI: The Teaching Assistant You Never Knew You Needed 2024

–Collaborative Project-Based Learning 2024

–Teaching and Learning in the Age of AI: How Do We Adapt? 2023

–Advanced Active Learning Strategies for In-Person, Online, and Blended Learning Environments 2023

–Understanding our Undergraduate Students: They're Here 2022
–Post-Pandemic Teaching and Learning 2022
–Active Learning Strategies in STEM Courses 2021
–How Do I Help My Students? 2021
–Panel Discussion: OER and Affordable Textbook Alternatives 2020
–Digital Tools to Empower 21st Century Learners 2020
–Using Storytelling in the Classroom 2020
–Increasing Accessibility for All 2019
–Culture Shock and College Success 2019
–Building Student Resilience 2019
–Designing Service-Learning Courses 2019

MAA Project NExT Workshops 2020
–Math for Non-Math Majors
–Inspired by Real, Fun Math: Practical Outreach for Sharing the Power and Beauty of Mathematics with our Communities
–Fostering an Equitable Classroom

UT Tyler Internal Grants: Facilitating Faculty and Staff Research and Collaboration 2019

Work-Life Balance Faculty Learning Community Workshop/Meeting 2019

UT Tyler Tenure & Promotion Workshop 2019, 2020, 2021, 2022

PROFESSIONAL SERVICE

Co-organizer, Third Joint SIAM/CAIMS Annual Meetings, Montréal, Québec, Canada 2025
Minisymposium on "Hypergeometric Series and Their Applications"

External reviewer, NSF Research Experience for Undergraduates, Texas A&M Commerce 2023

Co-organizer, JMM Special Session on "Modular Forms and Combinatorics" 2022

Reviewer, AMS Mathematical Reviews 2021 – present

Co-organizer, JMM Special Session on "Partition Theory and q-Series" 2020

Judge, MAA Undergraduate Student Poster Session at the JMM 2020

Session Chair, Analytic and Combinatorial Number Theory: The Legacy of Ramanujan 2019

Referee Work: 2016 – present
–*Transactions of the American Mathematical Society*
–*Proceedings of the American Mathematical Society*
–*Research in the Mathematical Sciences*
–*Acta Mathematica Scientia*
–*Ramanujan Journal*
–*Journal of Number Theory*
–*Research in Number Theory*

–*Hardy-Ramanujan Journal*
–*Discrete Mathematics*
–*Discussiones Mathematicae Graph Theory*
–*International Journal of Number Theory*
–*Communications in Algebra*
–*Annals of Combinatorics*
–*Electronic Journal of Combinatorics*
–*Graphs and Combinatorics*
–*Integers*
–*Australasian Journal of Combinatorics*
–*Involve*
–*Journal of Mathematical Research with Applications*
–*Bulletin of the Brazilian Mathematical Society, New Series*
–*Ball State Undergraduate Mathematics Exchange*
–A paper contributed to a Festschrift for *Operator Theory: Advances and Applications*
–A paper contributed to *FPSAC (Formal Power Series and Algebraic Combinatorics)*

UNIVERSITY SERVICE

University of Texas at Tyler

Institutional Committees and Service

College of Arts and Sciences Curriculum Committee	
Chair	2024 – 2025
Member	2023 – 2027
Research Council member (a university-level advisory committee)	2023 – 2026
Conducted a Center for Excellence in Teaching and Learning workshop	
"Problem-Based Learning in Precalculus"	2023
Honors Program Coordinator Search Committee member	2021
Judge for Lyceum Student Research Showcase	2021, 2023
Leader of eleven freshman book discussion mock classes at orientation	2020, 2021
Pi Mu Epsilon Texas Phi Chapter Faculty Advisor	2021 – present
Guest speaker at Honors Forum	2021
Panelist for "What I Wish I'd Known" at new faculty orientation	2020
Founder/faculty advisor, Women in Math and Science at UT Tyler	2019 – present
Founder/faculty advisor, Patriots for the Deaf and Hard of Hearing	2019 – 2021
Service-Learning Faculty Learning Community Member	2019 – 2020
Global Quiz Night Volunteer	2019

Departmental Committees and Service

Mathematics Department Search/Hiring Committee

Chair 2024 – 2025
Member 2023 – 2025

Mathematics Department Chair Hiring Committee member 2024
Mathematics Department Postdoctoral Committee member 2023 – 2024
Mathematics Department Awards Committee
Chair 2024 – 2025
Member 2023 – 2026
Mathematics Department Webmaster (Website Committee chair) 2023 – present
Mathematics Department Curriculum Committee Even Fall – Odd Spring
Mathematics Department Graduate Committee Odd Fall – Even Spring
Redesigned the B.S. Mathematics degree to include career tracks 2022 – 2024
Helped design a $4 + 1$ B.S./Master's degree in Mathematics 2022 – 2024
Mathematics Department Strategic Plan Committee member 2022
Mathematics Department Standardizing Math-CS Double Major Committee member 2021
Mathematics Department Open House Co-organizer 2021
Mathematics Department Ph.D. Committee member 2020 – 2023
Mathematics Department Education Committee member 2019 – 2021
Founded the UT Tyler Number Theory and Combinatorics Seminar 2020
Seminar Organizer 2020 – 2021, 2023 – present

Emory University

Moderator of a teaching panel at the teaching assistant preparatory workshop 2018
Micro-teaching facilitator at the teaching assistant preparatory workshop 2018
Lecturer for the STEM Pathways program 2018
Head coach for the Emory Collegiate Club Swim Team 2016 – 2018

COMMUNITY SERVICE

Contest Director for UIL Regional Number Sense Competition 2025
Organizer/speaker for Keller Collegiate Academy's visit to UT Tyler Math Department 2024
Co-organizer for UT Tyler STEM Summer Camp 2020, 2021
Guest speaker for STEM Like a Girl, Discovery Science Place 2020, 2021
Guest speaker for No Excuses University Initiative, Van Intermediate School 2019
Volunteer at the American Heart Association Heart Walk in Tyler, TX 2019
Participant at Swim Across America, Atlanta 2016 – 2018
Volunteer for HomeStretch with UGA alumni 2018
Guest speaker at an Atlanta Girls' School swim practice 2016
Assistant instructor at two Emory Math Circle meetings 2016
Guest speaker for Fellowship of Christian Athletes at The Lovett School 2016

COURSES TAUGHT

University of Texas at Tyler

MATH 5321: Topics in Combinatorics
MATH 4336: Abstract Algebra II
MATH 4321: Combinatorics/Graph Theory
MATH 4160/4161: Senior Seminar I/II
MATH 3425: Foundations of Mathematics
MATH 3336: Abstract Algebra I
MATH 3305: Ordinary Differential Equations
MATH 3203: Matrix Methods in Science and Engineering
MATH 2415: Multivariate Calculus
HNRS 2414: Honors Calculus II
MATH 2414: Calculus II
HNRS 2413: Honors Calculus I
MATH 2413: Calculus I
MATH 2312: Precalculus
MATH 1342.H: Honors Statistics I
MATH 1342: Statistics I

Emory University

MATH 211: Multivariable Calculus
MATH 116 (teaching assistant): Calculus II for Life Sciences
MATH 112: Calculus II
MATH 111: Calculus I