

Heather C. Smith

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Department of Mathematics
& Computer Science
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With a wide range of interests, two themes of my research in discrete mathematics are:
(1) *Discrete mathematical biology, including computational complexity of genome rearrangement models and interdisciplinary research on bacterial typing;*
(2) *Combinatorics of partially ordered sets, including dimension and saturation.*

Education

- Aug. 2010– **Ph.D. in Mathematics**
Aug. 2015 *University of South Carolina, Columbia, SC*
Dissertation: Trees, Partitions, and Other Combinatorial Structures
Advisor: László Székely
- Aug. 2008– **M.S. in Mathematics**
May 2010 *Virginia Commonwealth University, Richmond, VA*
Thesis: Zero Divisors among Digraphs
Advisor: Richard Hammack
- Aug. 2005– **B.A. in Mathematics and B.A. in Adolescence Education**
May 2008 *Houghton College, Houghton, NY*
Summa Cum Laude

Academic Positions

- Fall 2018 - **Assistant Professor**
present Department of Mathematics and Computer Science, Davidson College, Davidson, NC
- Fall 2015- **IMPACT Postdoctoral Fellow**
Spring 2018 School of Mathematics, Georgia Institute of Technology, Atlanta, GA
- Fall 2014- **Dean's Doctoral Dissertation Fellow**
Spring 2015 *1 of 10 awarded by the College of Arts and Sciences, University of South Carolina, Columbia, SC*
- Fall 2010 - **Graduate Teaching Assistant**
Spring 2014 Department of Mathematics, University of South Carolina, Columbia, SC
- Summer 2010 **Adjunct Instructor**
Department of Mathematics, Virginia Commonwealth University, Richmond, VA
- Fall 2008- **Graduate Teaching Assistant**
Spring 2010 Department of Mathematics, Virginia Commonwealth University, Richmond, VA

Publications

In print

13. M. Ferrara, D. Johnston, S. Loeb, F. Pfender, A. Schulte, H. C. Smith, E. Sullivan, M. Tait, C. Tompkins. "On edge-colored saturation problems," *To appear*. Preprint at arXiv:1712.00163 [math.CO].
12. F. Barrera-Cruz, T. Prag, H. C. Smith, L. Taylor, W. T. Trotter. "Comparing Dusknik-Miller dimension, Boolean dimension, and local dimension," *Accepted for publication*. Preprint at arXiv:1710.09467 [math.CO].
11. F. Barrera-Cruz, R. Garcia, P. Harris, B. Kubik, H. C. Smith, S. Talbott, L. Taylor, and W. T. Trotter. "The graph of critical pairs of a crown," *Order*. (2019) *In press*. <https://doi.org/10.1007/s11083-019-09485-4>

10. F. Barrera-Cruz, S. Felsner, T. Mészáros, P. Micek, H. C. Smith, L. Taylor, and W. T. Trotter. "Separating tree-chromatic number from path-chromatic number," *Journal of Combinatorial Theory, Series B*. 138 (2019): 206-218.
9. B. Bjorkman, G. Cochran, W. Gao, L. Keough, R. Kirsch, M. Phillipson, D. Rorabaugh, H. C. Smith, and J. Wise. " k -foldability of words," *Discrete Applied Mathematics*. 259 (2019): 19-30.
8. I. Miklós and H. C. Smith. "The computational complexity of calculating partition functions of optimal medians with Hamming distance," *Advances in Applied Mathematics*. 102 (2019): 18-82.
7. R. Anderson, S. Bai, F. Barrera-Cruz, É. Czabarka, G. Da Lozzo, N. L. F. Hobson, J. C.-H. Lin, A. Mohr, H. C. Smith, L. Székely, and H. Whitlatch. "Analogies between the crossing number and the tangle crossing number," *Electronic Journal of Combinatorics*. 25.4 (2018).
6. H. C. Smith, L. A. Székely, H. Wang, and S. Yuan. "On different 'middle parts' of a tree," *Electronic Journal of Combinatorics*. 25.3 (2018).
5. M. Ferrara, B. Kay, L. Kramer, R. R. Martin, B. Reiniger, H. C. Smith, and E. Sullivan. "The saturation number of induced subposets of the Boolean lattice," *Discrete Mathematics* 340.10 (2017): 2479-2487.
4. I. Miklós and H. C. Smith. "Sampling and counting genome rearrangement scenarios," *BMC Bioinformatics* 16(Suppl 14):S6 (2015). (DOI:10.1186/1471-2105-16-S14-S6, 2015).
3. H. C. Smith, L. A. Székely, and H. Wang. "Eccentricity Sums in Trees," *Discrete Applied Mathematics* 207, (2016): 120-131.
2. H. C. Smith and L. A. Székely "Some Remarks on Baranyai's Theorem," *Congressus Numerantium* 222, (2014): 43-55.
1. R. Hammack and H. C. Smith. "Zero Divisors among Digraphs," *Graphs and Combinatorics* 30.1, (2014): 171-181. (Published on-line DOI:10.1007/s00373-012-1248-x, 2012)

Submitted

5. R. R. Martin, H. C. Smith and S. Walker. "Improved bounds on induced-diamond-saturated families and induced-antichain-saturated families," *Submitted*.
4. T. Cameron, A. Langville, and H. C. Smith. "On the graph Laplacian and the rankability of data," *Submitted*.
3. C. Biro, B. Bosek, H. C. Smith, W. T. Trotter, R. Wang, and S. J. Young. "Planar posets that are accessible from below have dimension at most 6," *Submitted*.
2. H. C. Smith and W. T. Trotter. "Fractional Local Dimension," *Submitted*. Preprint at arXiv:1906.05839 [math.CO].
1. J. Kim, R. R. Martin, T. Masařík, W. Shull, H. C. Smith, A. Uzzell, and Z. Wang. "Local dimension and size," *Submitted*. Preprint at arXiv:1803.08641 [math.CO].

Book Chapter under Review

E. Drellich and H. Smith. "Combinatorics of RNA Folding," *Submitted for inclusion in a volume containing open research projects for undergraduates*.

Research Visits

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|-------------|---|
| Spring 2017 | 3 day research visit to Iowa State University, Ames, IA to collaborate with Ryan Martin |
| Summer 2016 | 5 day research visit to the University of Colorado, Denver to collaborate with Michael Ferrara, Ryan Martin, William Kay, and Eric Sullivan |
| Fall 2014 | 2 day research visit to University College London and Oxford University, sponsored by the AMS, to collaborate with Valentin Danchev and Beate Franke |
| Fall 2014 | 4 week research visit to the the Alfréd Rényi Institute of Mathematics of the Hungarian Academy of Sciences, sponsored by the College of Arts and Sciences of the University of South Carolina, to collaborate with István Miklós |
| Summer 2013 | 4 week research visit to the Alfréd Rényi Institute of Mathematics of the Hungarian Academy of Sciences, sponsored by the provost of the University of South Carolina, to collaborate with István Miklós and Péter Erdős |

Research Funding

Received

- 2019-2021 AMS-Simons Travel Grant administered by the American Mathematics Society with support from the Simons Foundation. (\$4,000)
- 2015-2018 IMPACT Postdoctoral Fellowship from the School of Mathematics of the Georgia Institute of Technology with partial support from NSF DMS 1344199.
- 2014-2015 Dean's Doctoral Dissertation Fellowship from the College of Arts and Sciences of the University of South Carolina. (\$25,000)
- Summer 2014 Research Assistantship from NSF DMS contract #1300547 (\$4,000)
- 2013 SPARC Graduate Fellowship from the Office of the Vice President for Research at the University of South Carolina (\$5,000)
- Summer 2012 Research Assistantship from NSF DMS contract #1000475 (\$3,200)

Conference and Workshop Travel Awards

- 2019 IMA Workshop for Women in Graph Theory and Applications (\$700 in addition to meals and lodging)
- 2019 Math Teachers' Circle Summer Math Camp (meals and lodging)
- 2018 Schloss Dagstuhl- NSF Support Grant for the Genomics, Pattern Avoidance, and Statistical Mechanics Workshop (\$980 in addition to meals and lodging)
- 2017 Fully funded participant: Rocky Mountain–Great Plains Graduate Research Workshop in Combinatorics (\$500 in addition to meals and lodging)
- 2017 Fully funded participant: Mathematics Research Community on Crossing Numbers (\$560 in addition to meals and lodging)
- 2017 Travel Grant for 3-day research visit to Iowa State University (\$560 in addition to meals and lodging)
- 2016 Travel Grant for the 6th Polish Combinatorial Conference (\$190 in addition to meals and lodging)
- 2016 Travel Grant for the 13th Triangle Lectures in Combinatorics (\$330)
- 2015 Travel Grants for the Connections in Discrete Mathematics conference (\$769 from the Graduate School of the University of South Carolina, \$200 from the conference)
- 2015 Fully funded participant: Rocky Mountain–Great Plains Graduate Research Workshop in Combinatorics (\$400 in addition to meals and lodging)
- 2015 Travel Grant for the 2015 Midwest Combinatorics Conference (\$500 in addition to lodging)
- 2015 Travel Grant for the Association for Women in Mathematics Research Symposium (\$380)
- 2015 Travel Grant for the Joint Mathematics Meetings from the AMS (\$800)
- 2014 Travel Grant for the AMS Sectional Meeting, Greensboro, NC from the AMS (\$230)
- 2014 Travel Award from the AMS for research visit to University College London and Oxford University (\$750)
- 2014 Fully funded participant: Rocky Mountain–Great Plains Graduate Research Workshop in Combinatorics (\$950 and lodging)
- 2014 Fully funded participant: Mathematics Research Communities in Network Science (\$650 in addition to meals and lodging)

Awards

- Jun. 2018 MAA Project NExT fellow (Peach 2018 cohort)
- Apr. 2013 "2012-2013 Outstanding Graduate Teaching Assistant" awarded by the Department of Mathematics, University of South Carolina, Columbia, SC
- Mar. 2011 "2010-2011 Outstanding First Year Graduate Student" awarded by the Department of Mathematics, University of South Carolina, Columbia, SC
- Mar. 2007 "Outstanding Junior Student 2006/2007" awarded by the Department of Mathematics, Houghton College, Houghton, NY

Student Supervision

- Fall 2018-
Spring 2019 **Savannah Williams**, Senior Honors Thesis, Davidson College
Project: Zero Forcing Polynomials: Mapping Spiders to Paths
Williams was awarded high honors by the department.
- Fall 2016-
Spring 2017 **Catherine Chen**, Junior Undergraduate in Computer Science, Georgia Institute of Technology
Project: Perfect folding for RNA strings
- Summer 2016 **Ida De Vierno**, Sophomore Undergraduate in Mathematics, Georgia Institute of Technology
Isabella Nang, Senior Undergraduate in Mathematics, Georgia State University
Project: Irreducibility of a Markov chain on meanders
Nang and de Vierno presented a poster at the 2017 Joint Mathematics Meetings, Atlanta, GA
Nang gave talks in the Georgia Tech Undergraduate Seminar and the Georgia State Undergraduate Seminar

Presentations

Conference and Seminar Organization

- Spring 2019 **Co-organizer for the Math/CS Coffee Talks**
Davidson College, Davidson, NC
- Spring 2017 **Co-organized Combinatorics seminar**
Georgia Institute of Technology, Atlanta, GA
- 17-18 Oct. 2016 **Organized IMPACT Distinguished Lecture Series**
Georgia Institute of Technology, Atlanta, GA (Speaker: Tandy Warnow)
- 14-16 Oct. 2016 **Organized mini-symposium on “Discrete and Algebraic Approaches in Mathematical Biology”**
Ninth Annual International Symposium on Biomathematics and Ecology Education and Research,
College of Charleston, Charleston, SC
- 6-10 Jun. 2016 **Co-organized mini-symposium on “Discrete Mathematical Biology” (with C. Heitsch)**
SIAM Conference on Discrete Mathematics, Georgia State University, Atlanta, GA

Invited Talks

- 15 Oct. 2019 **Separating Tree-Chromatic Number and Path-Chromatic Number (50 min.)**
Discrete Mathematics Seminar, Virginia Commonwealth University, Richmond, VA
- 5 Apr. 2019 **Separating Tree-Chromatic Number and Path-Chromatic Number (50 min.)**
Discrete Seminar, University of South Carolina, Columbia, SC
- 19 Jan. 2019 **Local Dimension of a Poset and Size (20 min.)**
Special Session on Advances by Early Career Women in Discrete Mathematics, Joint Mathematics Meetings, Baltimore Convention Center, Baltimore, MD
- 19 Jan. 2019 **Saturation for Induced Subposets (20 min.)**
Special Session on Enumerative Combinatorics, Joint Mathematics Meetings, Baltimore Convention Center, Baltimore, MD
- 8 Nov. 2018 **Complexity of the SCJ model and Partition Functions (25 min.)**
Genomics, Pattern Avoidance, and Statistical Mechanics Workshop, Schloss Dagstuhl, Wadern, Germany
- 25 Oct. 2018 **Discrete Models for Genome Rearrangement (50 min.)**
Math Department Colloquium, Wake Forest University, Winston-Salem, NC
- 14 Apr. 2018 **Extremal Properties of Vertex Attributes in Trees (25 min.)**
Special Session on Mathematical Chemistry, AMS Spring Southeastern Sectional, Vanderbilt University, Nashville, TN
- 30 Mar. 2018 **Sampling and Counting Genome Rearrangement Scenarios (50 min.)**
Computational Science Seminar, Georgia Southern University, Statesboro, GA
- 23 Mar. 2018 **Local Dimension of a Poset (50 min.)**
Discrete Mathematics Seminar, Virginia Commonwealth University, Richmond, VA
- 12 Jan. 2018 **Local Dimension of a Poset and Size (20 min.)**
Special Session on Research from the Rocky Mountain-Great Plains Graduate Research Workshop in Combinatorics, Joint Mathematics Meetings, San Diego Convention Center, San Diego, CA

- 17 Nov. 2017 **Local Dimension of a Poset (50 min.)**
Discrete Seminar, University of South Carolina, Columbia, SC
- 1 Aug. 2017 **Complexity of Models for Genome Rearrangement (20 min.)**
Special Session on Polyhedral and Combinatorial Geometry
SIAM Conference on Applied Algebraic Geometry, Georgia Institute of Technology, Atlanta, GA
- 30 Mar. 2017 **Sampling and Counting Genome Rearrangement Scenarios (55 min.)**
Department of Mathematics Colloquium, Iowa State University, Ames, IA
- 4 Nov. 2016 **Induced Saturation for Posets (55 min.)**
Discrete Seminar, University of South Carolina, Columbia, SC
- 6 Jun. 2016 **Extremal Properties of Vertex Attributes in Trees (25 min.)**
Special Session on Structures in Trees
SIAM Conference on Discrete Mathematics, Georgia State University, Atlanta, GA
- 16 Apr. 2016 **Extremal Properties of Vertex Attributes in Trees (25 min.)**
Special Session on Extremal Graph Theory
AMS Spring Central Sectional Meeting #1120, North Dakota State University, Fargo, ND
- 5 Mar. 2016 **Counting Single Cut-or-Join Scenarios (25 min.)**
Special Session on Theory and Applications of Graphs,
AMS Spring Southeastern Sectional Meeting #1117, University of Georgia, Athens, GA
- 11 Nov. 2015 **Zero Forcing: The Spread of Infection on a Graph (50 min.)**
Discrete Math Seminar, Kennesaw State University, Marietta, GA
- 20 Oct. 2015 **The Single Cut-or-Join Model for Gene Rearrangement (50 min.)**
Discrete Seminar, Georgia State University, Atlanta, GA
- 11 Oct. 2015 **Counting Single Cut-or-Join Scenarios (25 min.)**
Minisymposium on Algebraic and Discrete Methods in Mathematical Biology,
Eighth Annual International Symposium on Biomathematics and Ecology Education and Research,
Illinois State University, Normal, IL
- 12 Apr. 2015 **Sampling Single Cut-or-Join Scenarios (20 min.)**
Special Session on Discrete Mathematics (and Theoretical Computer Science),
AWM Research Symposium 2015, University of Maryland, College Park, MD
- 11 Jan. 2015 **Sampling Single Cut-or-Join Scenarios (20 min.)**
AMS Special Session on Network Science, 2015 Joint Mathematics Meetings,
Henry B. Gonzalez Convention Center, San Antonio, TX
- 27 Apr. 2013 **Zero Divisors among Digraphs (15 min.)**
Mini-Conference on Graduate Research, Georgia Southern University, Statesboro, GA
- [Local Seminar Talks](#)
- 13 Oct. 2017 **Local dimension of a poset and size (50 min.)**
Combinatorics Seminar, Georgia Institute of Technology, Atlanta, GA
- 20 Nov. 2015 **Counting Single Cut-or-Join Scenarios (55 min.)**
Combinatorics Seminar, Georgia Institute of Technology, Atlanta, GA
- 3 Apr. 2015 **On the Complexity of Genome Rearrangement (60 min.)**
Discrete Seminar, University of South Carolina, Columbia, SC
- 30 Apr. 2014 **Approximating the Number of Double Cut-and-Join Scenarios (60 min.)**
SIAM Student Chapter, University of South Carolina, Columbia, SC
- 22 Mar. 2013 **The Lovász Isotopy Lemma (60 min.)**
Algebra and Logic Seminar, University of South Carolina, Columbia, SC
- 1 Mar. 2013 **Results of Lovász Concerning Direct Products (60 min.)**
Algebra and Logic Seminar, University of South Carolina, Columbia, SC
- 30 Apr. 2010 **Math and Origami (60 min.)**
Graduate Student Seminar, Virginia Commonwealth University, Richmond, VA
- 5 Feb. 2010 **Extensions of the Pythagorean Theorem (60 min.)**
Analysis seminar, Virginia Commonwealth University, Richmond, VA

Outreach Talks

- 29 Sep. 2015 **Zero Forcing: The Spread of Infection on a Graph (25 min.)**
Undergraduate Seminar
 Georgia Institute of Technology, Atlanta, GA
- 24 Oct. 2014 **Zero Forcing: The Spread of Infection on a Graph (20 min.)**
Carolina Math Seminar, Columbia College, Columbia, SC
- 2 Oct. 2014 **Beauty of Mathematics Research (45 min.)**
High school senior class, International Christian School of Budapest, Diósd, Hungary
- Other**
- 16 Oct. 2016 **Exploring the Space of RNA Secondary Structures (25 min.)**
Special Session on Discrete and Algebraic Approaches in Mathematical Biology
Ninth Annual International Symposium on Biomathematics and Ecology Education and Research,
 College of Charleston, Charleston, SC
- 20 Sept. 2016 **Saturation for Induced Subposets (20 min.)**
6th Polish Combinatorial Conference, The Polish Academy of Sciences' Conference Center, Będlewo,
 Poland
- 9 Jun. 2016 **Complexity of the Single Cut-Or-Join Model for Genome Rearrangement (25 min.)**
Special Session on Discrete Mathematical Biology
SIAM Conference on Discrete Mathematics, Georgia State University, Atlanta, GA
- 16 Jun. 2015 **Computational Complexity of Weight Functions on Optimal Medians (20 min.)**
Connections in Discrete Mathematics
 Simon Fraser University, Burnaby, BC, Canada
- 28 Mar. 2015 **On the Combinatorics of Genome Rearrangement (20 min.)**
Graduate Student Combinatorics Conference, University of Kentucky, Lexington, KY
- 9 Nov. 2014 **Eccentricity in Trees (10 min.)**
AMS Fall Southeastern Section Meeting, University of North Carolina, Greensboro, NC
- 11 Apr. 2014 **Markov Chains and the Single Cut-or-Join Model (15 min.)**
17th Annual Graduate Student Day, University of South Carolina, Columbia, SC
- 5 Apr. 2014 **Baranyai Partitions and the Anti-Baranyai Theorem (25 min.)**
10th Graduate Student Combinatorics Conference, Auburn University, Auburn, AL
- 6 Mar. 2014 **Constructing Baranyai Partitions (15 min.)**
The 45th Southeastern International Conference on Combinatorics, Graph Theory, and Computing,
 Florida Atlantic University, Boca Raton, FL
- 19 Apr. 2010 **Zero Divisors among Digraphs (45 min.)**
Public Defense of Master's Thesis, Virginia Commonwealth University, Richmond, VA

Teaching Experience

Davidson College, Davidson, NC

Fall 2018- present Assistant Professor

Department of Mathematics and Computer Science

- MATH 281: Models for Biological Structures (Spring 2019)
- MATH 230: Sets and Proofs (Fall 2018)
- MATH/CSC 220: Discrete Structures (Fall 2019)
- MATH 150: Linear Algebra (Spring 2019)
- MATH 111: Calculus I - no previous exposure (Fall 2018, Fall 2019)

Georgia Institute of Technology, Atlanta, GA

Fall 2015- Spring 2018 Visiting Assistant Professor

School of Mathematics

- MATH 4022: Introduction to Graph Theory (Fall 2017)
- MATH 3012: Applied Combinatorics (Fall 2015, Spring 2016, Spring 2017)
- MATH 2106: Foundations of Mathematical Proof (Spring 2018)
- MATH 1552: Integral Calculus (Fall 2016)

University of South Carolina, Columbia, SC

Spring 2011- **Instructor of Record**

Spring 2014 *Department of Mathematics*

- MATH 111: Basic College Mathematics (Spring 2011)
- MATH 115: Precalculus Mathematics (Spring 2012)
- MATH 122: Business Calculus (Spring 2013)
- MATH 141: Calculus I (Fall 2012, Fall 2013)
- MATH 241: Vector Calculus (Summer 2011, Fall 2011, Summer 2013)
- MATH 374: Discrete Structures (Spring 2014)

Fall 2010, **Graduate Teaching Assistant**

Fall 2013 *Department of Mathematics*

- MATH 142: Calculus II (Led weekly recitations and taught a computer lab with Maple)

Virginia Commonwealth University, Richmond, VA

Summer 2010 **Adjunct Instructor for Calculus I MATH 161**

Department of Mathematics and Applied Mathematics

- MATH 161: Calculus I

Fall 2008- **Instructor of Record**

Spring 2010 *Department of Mathematics and Applied Mathematics*

- MATH 141: Algebra with Applications (Fall 2008, Spring 2009, 2 sections each)
- MATH 151: Precalculus Mathematics (Fall 2009, Spring 2010, 2 sections each)

Professional Service

1 Aug. 2019 **Judge for the MAA Undergraduate Student Paper Session**

MathFest, Cincinnati, OH

7 Mar. 2019 **Assistant for Treasure Hunt**

MAA Southeastern Section Meeting, Lee University, Cleveland, TN

18 Jan. 2019 **Judge for the Association for Women in Mathematics Graduate Student Poster Session**

Joint Mathematics Meetings, Baltimore, MD

17 Jan. 2019 **Invited Participant in AMS Mathematical Research Communities Focus group**

Joint Mathematics Meetings, Baltimore, MD

2018-present **Assistant with the Charlotte Math Teachers Circle**

2015-present **Reviewer for Mathematical Reviews, *American Mathematical Society***

2015-present **Referee for the following journals:**

- *Ars Combinatoria*
- *Discrete Applied Mathematics*
- *Discrete Mathematics*
- *SIAM Journal on Discrete Mathematics*
- *Theory and Applications of Graphs*

10 Mar. 2018 **Proctor and Grader for the 2018 Georgia Tech High School Mathematics Competition**

Georgia Institute of Technology, Atlanta, GA

Fall 2017 **Mentor with the local AWM mentorship program**

Georgia Institute of Technology, Atlanta, GA

30 Aug. 2017 **Teaching panel member for Part-time New Faculty Orientation**

Georgia Institute of Technology, Atlanta, GA

9-22 Jul. 2017 **Postdoc mentor at the Rocky Mountains-Great Plains Graduate Research Workshop in Combinatorics**

Denver University and University of Colorado, Denver, CO

Assist graduate students in developing research problem statements and facilitate research groups

11-17 Jun. 2017 **Assistant to the organizers at the Mathematics Research Community on Crossing Numbers**

Snowbird Ski and Summer Resort, Snowbird, UT

Facilitated the work of small research groups and prepared a summary report of conference activities for the NSF

- Summer 2017 **Mentor for Graduate Student Instructors**
Georgia Institute of Technology, Atlanta, GA
Supervised graduate student who were instructors of record, assisting with syllabi, giving advice on exams, verifying final grades, and being available for questions
- 25 May-
20 Jul. 2016 **Co-leader of IMPACT REU program**
Georgia Institute of Technology, Atlanta, GA
- 12 Mar. 2016 **Grader for the 2016 Georgia Tech High School Mathematics Competition**
Georgia Institute of Technology, Atlanta, GA
- 31 Jan. 2015 **Proctor for the 29th High School Mathematics Competition and Menger Sponge Build**
University of South Carolina, Columbia, SC
- 2013-2015 **Judge for the 11th, 12th, and 13th Annual Integration Bees**
Pi Mu Epsilon Alpha Chapter and Gamecock Math Club
University of South Carolina, Columbia, SC
- 2011, 2014, 2015 **Proctor for the AP Examination**
University of South Carolina, Columbia, SC
- 2013-2014 **Proctor for the 27th and 28th High School Mathematics Competition**
University of South Carolina, Columbia, SC
- 2012-2013 **Co-referee with László Székely for the following journals:**
- *Moscow Journal of Combinatorics and Number Theory*
 - *Electronic Journal of Combinatorics*
 - *Central European Journal of Mathematics*
- 2012 **Mentor with the Women's Mentoring Program**
University of South Carolina, Columbia, SC

Other Service to Davidson College

- 2019-present **Informal Department Mentor for Visiting Assistant Professor**
- 2019-2021 **Center for Interdisciplinary Studies Advisory Board**
- 2019-2020 **Student Conduct Council**
- 2019-present **Faculty mentor for local Association for Women in Mathematics (AWM) chapter**

Summer Schools/Workshops Attended

Fully-funded Participant

- 19-23 Aug. 2019 **Workshop for Women in Graph Theory and Applications**
Institute for Mathematics and its Applications, Minneapolis, MN
- 25-27 Jul. 2019 **Mathematics Teachers' Circle Summer Camp**
North Carolina Center for the Advancement of Teaching, Cullowhee, NC
- 5-9 Nov. 2018 **Genomics, Pattern Avoidance, and Statistical Mechanics**
Schloss Dagstuhl, Wadern, Germany
- 11-17 Jun. 2017 **AMS Mathematics Research Community on Crossing Numbers**
Snowbird Ski and Summer Resort, Snowbird, UT
- 1 Jun. -
12 Jun. 2015 **Rocky Mountain–Great Plains Graduate Research Workshop in Combinatorics**
Iowa State University, Ames, IA
- 27 Jul.-
8 Aug. 2014 **Rocky Mountain–Great Plains Graduate Research Workshop in Combinatorics**
University of Denver and University of Colorado Denver, Denver, CO
- 25-29 Jun. 2014 **AMS Mathematics Research Community on Network Science**
Snowbird Ski and Summer Resort, Snowbird, UT

Other

- 14-17 Sep. 2016 **Order and Geometry Workshop**
Gułtowy Palace, Gułtowy, Poland
- 20-31 May 2013 **Summer School in Network Science**
University of South Carolina, Columbia, SC

Conferences Attended

- 31 Jul. - **MAA MathFest**
3 Aug. 2019 Duke Energy Convention Center, Cincinnati, OH
- 25-27 Jul. 2019 **NC Math Teachers' Circle Summer Camp**
NC Center for the Advancement of Teaching, Cullowhee, NC
- 7-8 Mar. 2019 **MAA Southeastern Section Meeting**
Lee University, Cleveland, TN
- 16-19 Jan. 2019 **2019 Joint Mathematics Meetings**
Baltimore Convention Center, Baltimore, NC
- 28 Sep. 2018 **MAA NC State Dinner**
Campbell University, Buies Creek, NC
- 1-4 Aug. 2018 **MAA MathFest**
Sheraton Denver Downtown Hotel, Denver, CO
- 14-15 Apr. 2018 **AMS Spring Southeastern Sectional Meeting #1138**
Vanderbilt University, Nashville, TN
- 10-13 Jan. 2018 **2018 Joint Mathematics Meetings**
San Diego Convention Center, San Diego, CA
- 30 Sep. - **Atlanta Lecture Series in Combinatorics and Graph Theory XX**
Oct. 1 2017 Georgia Institute of Technology, Atlanta, GA
- 31 Jul. - **SIAM Conference on Applied Algebraic Geometry**
4 Aug. 2017 Georgia Institute of Technology, Atlanta, GA
- 9-11 Jan. 2017 **A Conference Celebrating the 25th Anniversary of the ACO Program**
Georgia Institute of Technology, Atlanta, GA
- 4-7 Jan. 2017 **2017 Joint Mathematics Meetings**
Hyatt Regency Atlanta and Marriott Atlanta Marquis, Atlanta, GA
- 22-23 Oct. 2016 **Atlanta Lecture Series in Combinatorics and Graph Theory XVIII**
Emory University, Atlanta, GA
- 14-16 Oct. 2016 **Ninth Annual International Symposium on Biomathematics and Ecology Education and Research**
College of Charleston, Charleston, SC
- 19-23 Sep. 2016 **6th Polish Combinatorial Conference**
Polish Academy of Sciences' Conference Center, Będlewo, Poland
- 6-10 Jun. 2016 **SIAM Conference on Discrete Mathematics**
Georgia State University, Atlanta, GA
- 16-17 Apr. 2016 **AMS Spring Central Sectional Meeting #1120**
North Dakota State University, Fargo, ND
- 5-6 Mar. 2016 **AMS Spring Southeastern Sectional Meeting #1117**
University of Georgia, Athens, GA
- 27 Feb. 2016 **13th Triangle Lectures in Combinatorics**
University of North Carolina, Greensboro, NC
- 14-15 Nov. 2015 **Atlanta Lecture Series in Combinatorics and Graph Theory XVI**
Georgia Institute of Technology, Atlanta, GA
- 9-11 Oct. 2015 **Eighth Annual International Symposium on Biomathematics and Ecology Education and Research**
Illinois State University, Normal, IL
- 15-19 Jun. 2015 **Connections in Discrete Mathematics**
Simon Fraser University, Burnaby, BC, Canada
- 19-21 May 2015 **2015 Midwest Combinatorics Conference**
University of Minnesota, Minneapolis, MN
- 15-17 May 2015 **28th Cumberland Conference on Combinatorics, Graph Theory, & Computing**
University of South Carolina, Columbia, SC

- 11-12 Apr. 2015 **Association for Women in Mathematics Research Symposium 2015**
University of Maryland, College Park, MD
- 27-29 Mar. 2015 **Graduate Student Combinatorics Conference**
University of Kentucky, Lexington, KY
- 7-8 Mar. 2015 **2nd Lake Michigan Workshop on Combinatorics and Graph Theory**
University of Notre Dame, Notre Dame, IN
- 10-13 Jan. 2015 **2015 Joint Mathematics Meetings**
Henry B. Gonzalez Convention Center, San Antonio, TX
- 8-9 Nov. 2014 **AMS Fall Southeastern Section Meeting #1105**
University of North Carolina, Greensboro, NC
- 24 Oct. 2014 **Carolina Math Seminar**
Columbia College, Columbia, SC
- 26 Apr. 2014 **Atlanta Lecture Series in Combinatorics and Graph Theory XII**
Georgia Institute of Technology, Atlanta, GA
- 4-5 Apr. 2014 **Graduate Student Combinatorics Conference**
Auburn University, Auburn, AL
- 3-7 Mar. 2014 **45th Southeastern Int. Conference on Combinatorics, Graph Theory and Computing**
Florida Atlantic University, Boca Raton, FL
- 22 Feb. 2014 **9th Triangle Lectures in Combinatorics**
University of North Carolina, Chapel Hill, NC
- 20-21 Sep. 2013 **8th Triangle Lectures in Combinatorics**
North Carolina State University, Raleigh, NC
- 1-5 Jul. 2013 **Erdős Centennial Conference**
The Alfréd Rényi Institute of Mathematics, Budapest, Hungary
- 24-28 Jun. 2013 **Random Walks: Crossroads and Perspectives**
The Alfréd Rényi Institute of Mathematics, Budapest, Hungary
- 27 Apr. 2013 **Mini-Conference on Graduate Research**
Georgia Southern University, Statesboro, GA
- 4-8 Mar. 2013 **44th Southeastern Int. Conference on Combinatorics, Graph Theory and Computing**
Florida Atlantic University, Boca Raton, FL
- 27-28 Oct. 2011 **26th Clemson Mini-Conference on Discrete Mathematics and Algorithms**
Clemson University, Clemson, SC
- 24-25 Sep. 2011 **AMS Fall Southeastern Section Meeting #1073**
Wake Forest University, Winston-Salem, NC
- 7-8 Oct. 2010 **25th Clemson Mini-Conference on Discrete Mathematics and Algorithms**
Clemson University, Clemson, SC
- 5-8 Jan. 2009 **2009 Joint Mathematics Meetings**
Marriott Wardman Park and Omni Shoreham, Washington, DC

Pedagogy Workshops Attended

- 18 Nov. 2016 **Measuring Learning**
Faculty Development Workshop, Center for the Enhancement of Teaching and Learning, Georgia Institute of Technology, Atlanta, GA
- 19 Oct. 2016 **Teaching Students Across Multiple Backgrounds and Abilities**
Faculty Development Workshop, Center for the Enhancement of Teaching and Learning, Georgia Institute of Technology, Atlanta, GA
- 18,28 Mar. 2016 **LearnTech Scholars: Technology in the Classroom**
Faculty Learning Community, Center for Teaching and Learning, Georgia Institute of Technology, Atlanta, GA

Memberships

- Mathematical Association of America (MAA)
- Pi Mu Epsilon (IIME)

- Association for Women in Mathematics (AWM)

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