

# ALLISON H. MOORE

Department of Mathematics & Applied Mathematics  
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## RESEARCH INTERESTS

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Knot theory, low-dimensional topology and geometry, Heegaard Floer and Khovanov homology. Applications of knot theory to DNA topology and molecular biology.

## EDUCATION

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**Ph.D. in Mathematics** (2013) University of Texas  
Advisor: Cameron McA. Gordon  
Dissertation: *Behavior of Knot Floer Homology Under Conway and Genus Two Mutation*

**B.S. in Mathematics, with High Honors** (2006) University of Texas

**B.A. in Plan II, with High Honors** (2006)

**Undergraduate Study, Math In Moscow** (2004) Independent University of Moscow, Russia

## APPOINTMENTS

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**Assistant Professor of Mathematics**, Virginia Commonwealth University, August 2019 — current

**Krener Assistant Professor of Mathematics**, University of California, Davis July 2016 — June 2019  
and postdoctoral appointment (Dept. of Microbiology and Molecular Genetics) July 2017 — June 2019

**RTG Lovett Instructor of Mathematics**, Rice University Fall 2013 — June 2016

**Instructor of Record**, University of Texas Fall 2012

**Research / Teaching Assistant**, University of Texas Fall 2006 — Spring 2013

**Coordinator of the Saturday Morning Math Group** Spring 2011 – Spring 2012

## GRANTS AND HONORS

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### Grants, post-graduate years:

Jeffress Trust Awards Program in Interdisciplinary Research, \$100,000 (Sole PI) 2021–2022  
*Advancing theory and exploring applications of unknotting to molecular biology*

AIM SQuARE, *Unknotting spatial graphs* Project funded for 2019-2021

NSF DMS–1716987, \$290,000 July 18, 2017 – June 30, 2019  
*The Dynamic Genome: Studying the Interplay between Local Strand-Passage and Reconnection*  
Role: I co-designed the specific aims of the grant and co-wrote the proposal with the PI (Vazquez).  
Support: Provided 50% of my postdoctoral funding for two years, travel and equipment.

### Other honors, awards and funding:

G. Thomas Sallee Mathematics Teaching Award, University of California, Davis 2018

NSF DMS–1148609 (Postdoctoral support only; no role in proposal preparation) Fall 2013–Spring 2016

NSF DMS–1148609 (Graduate student support only; no role in proposal preparation) Fall 2010, Summer 2011

Professional Development Award (Travel Grant), University of Texas Spring 2013

Frank Gerth III Teaching Excellence Award, University of Texas 2009

Math Department Summer Fellowship, University of Texas Summer 2009, Summer 2007

Vigre NSF Research Grant for Undergraduates, University of Texas Spring 2006

Mathematics Honored Graduate (Williams Scholar), University of Texas 2006

Chair's Honored Graduate, University of Texas 2006

AMS/NSF Scholarship Grant, *Math In Moscow* 2004

Plan II Research and Travel Grant, University of Texas 2004

## PUBLICATIONS

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### Refereed publications

1. Tye Lidman, Allison H. Moore and Claudius Zibrowius. L-space knots have no essential Conway spheres. arXiv:2006.03521 [math.GT], To appear in *Geometry & Topology*, 2021. 22 pages.
2. Stanislav Jabuka, Beibei Liu, and Allison H. Moore. Knot graphs and Gromov hyperbolicity. Accepted at *Mathematische Zeitschrift*. arXiv:1912.03766v1 [math.GT], 2020. 27 pages.
3. Christopher Flippen, Allison H. Moore, and Essak Seddiq. Quotients of the Gordian and  $H(2)$ -Gordian Graphs. *Journal of Knot Theory and Its Ramifications*, 30(05):2150037, 2021.
4. Eugene Gorsky, Beibei Liu, and Allison H. Moore. Surgery on links of linking number zero and the Heegaard Floer  $d$ -invariant. *Quantum Topology*, 11(2):323–378, (2020).
5. Allison H. Moore and Mariel Vazquez. A note on band surgery and the signature of a knot. *Bulletin of the London Mathematical Society*, 52(6):1191–1208, (2020).
6. Tye Lidman, Allison H. Moore and Mariel Vazquez. Distance one lens space fillings and band surgeries on the trefoil knot. *Algebraic & Geometric Topology*; 19(5):2439–2484, (2019).
7. Allison H. Moore and Mariel Vazquez. The non-coherent band surgery model for site-specific recombination. In *Topology and geometry of biopolymers*, volume 746 of *Contemporary Mathematics*, pages 101–125. Amer. Math. Soc., Providence, RI, (2020).
8. Kenneth Baker and Allison H. Moore. Montesinos knots, Hopf plumbings, and L-space surgeries. *Journal of the Mathematical Society of Japan*, 70(1):95–110, (2018).
9. Tye Lidman and Allison H. Moore. Cosmetic surgery in L-spaces and nugatory crossings. *Transactions of the American Mathematical Society*, 369(5):3639–3654, (2017).
10. Tye Lidman and Allison H. Moore. Pretzel knots with L-space surgeries. *Michigan Mathematical Journal*, 65(1):105–130, (2016).
11. Allison H. Moore. Symmetric unions without cosmetic crossing changes. In Gail Letzter et al., editors, *Advances in the Mathematical Sciences: Research from the 2015 Association for Women in Mathematics Symposium*, volume 6, pages 103–116. Springer International Publishing, Cham, (2016).
12. Allison H. Moore and Laura Starkston. Genus-two mutant knots with the same dimension in knot Floer and Khovanov homologies. *Algebraic & Geometric Topology*, 15(1):43–63, (2015).

### Preprints

13. Eugene Gorsky, Beibei Liu, Tye Lidman and Allison H. Moore. Heegaard Floer homology and triple linking. arXiv:2006.15484 [math.GT], Submitted to *International Mathematical Research Notices*, 2020. 41 pages.
14. Artem Kotelskiy, Tye Lidman, Allison H. Moore, Liam Watson, and Claudius Zibrowius. Cosmetic operations and Khovanov multicurves. arXiv:2109.14049 [math.GT], Submitted to *Crelle's Journal*, 2021. 20 pages.

### Software / Other

15. M. Nasrollahi, S. Witte and A. H. Moore. *BraidGenerator*: Software to generate random braid representatives of a fixed knot type via Markov chain. Open-source software, 2019. Publicly available on Github and PyPi.org.

### Thesis

16. Allison H. Moore. *Behavior of Knot Floer Homology Under Conway and Genus Two Mutation*. PhD Thesis, Department of Mathematics, University of Texas at Austin, 2013.

## TEACHING EXPERIENCE

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### As the Instructor of Record:

|   |                                   |
|---|-----------------------------------|
| Math 502, Graduate Abstract Algebra, VCU                | Fall 2021                         |
| Math 401, Abstract Algebra, VCU                         | Fall 2020                         |
| Math 310, Linear Algebra, VCU                           | Fall 2019, Fall 2020, Spring 2021 |
| Math 307, Multivariate Calculus, VCU                    | Spring 2021                       |
| Math 200, Calculus, VCU                                 | Spring 2020                       |
| Mat 22A, Linear Algebra, UC Davis                       | Spring 2017, Fall 2017, Fall 2018 |
| Mat 141, Euclidean and Non-Euclidean Geometry, UC Davis | Winter 2017                       |
| Mat 116A, Short Calculus, UC Davis                      | Fall 2016                         |

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| Math 306, Elements of Abstract Algebra, Rice University    | Spring 2016             |
| Math 111, Differential Calculus, Rice University           | Fall 2015               |
| Math 445/540, Graduate Algebraic Topology, Rice University | Spring 2015             |
| Math 499, Undergraduate Research Seminar, Rice University  | Fall 2014 – Spring 2016 |
| Math 112, Integral Calculus, Rice University               | Spring 2014             |
| Math 368, Graph Theory and Combinatorics, Rice University  | Fall 2013, Fall 2014    |
| M408K, Differential Calculus, University of Texas          | Fall 2012               |

**As a Teaching Assistant at the University of Texas:**

*Recitations (6 hours weekly) with office hours (3 hours) and grading*

|   |                          |
|---|--------------------------|
| M408M, Vector Calculus                              | Fall 2008, Spring 2009   |
| M408L, Integral Calculus                            | Spring 2008, Summer 2008 |
| M408K, Differential calculus                        | Fall 2007                |
| M408C, Sequence, Series, and Multivariable Calculus | Fall 2006, Spring 2007   |

*Office hours and grading only*

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| M382C, Graduate Algebraic Topology | Fall 2009 |
| M346, Applied Linear Algebra       | Fall 2009 |

**CONFERENCE, COLLOQUIA AND SEMINAR PRESENTATIONS**

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**Conferences and Workshops:**

|   |           |
|---|-----------|
| Canadian Mathematical Society Winter Meeting (Online)   | Dec. 2021 |
| Knots in Washington 49.5, George Washington University, Washington D.C.                             | Dec. 2021 |
| Boston Graduate Topology Seminar, MIT, Boston MA  | Nov. 2021 |
| Workshop in Geometry Topology (Online), Texas Christian University                                  | Jun. 2021 |
| Lightning Talk (Online), 4D Topology ARC, American Institute of Mathematics                         | Mar. 2021 |
| AMS Special Session on Geometry and Topology in Dimensions 3 and 4, Joint Meetings of the AMS/MAA   | Jan. 2021 |
| AMS Special Session on Applied Knot Theory, Fall Southeastern Sectional Meeting (Online)            | Oct. 2020 |
| Mini Symposium: Knot Theory on Okinawa, Okinawa Institute of Science and Technology, Okinawa, Japan | Feb. 2020 |
| AMS Special Session on Applications and Computations in Knot Theory, Joint Meetings, Denver, CO     | Jan. 2020 |
| AMS Special Section on Floer homology, University of Wisconsin-Madison, Madison, WI                 | Sep. 2019 |
| The Topology of Nucleic Acids, Banff International Research Center, Banff, Canada                   | Mar. 2019 |
| Winter Meeting of the Canadian Mathematical Society, Session on Topology, Vancouver, BC, Canada     | Dec. 2018 |
| AMS Sectional on Mathematical Methods for Biopolymers, SFSU, San Francisco, CA                      | Nov. 2018 |
| Topology in Dimensions 3, 3.5 and 4, University of California, Berkeley, CA                         | May. 2018 |
| Eastern IL Integrated Conference in Geometry, Dynamics, and Topology, Charleston, IL                | Apr. 2018 |
| Summer School on Modern Knot Theory. University of Freiburg, Freiburg, Germany.                     | Jun. 2017 |
| Joint Meetings of the AMS/MAA, Seattle, WA  | Jan. 2016 |
| Tech Topology Conference, Georgia Tech, Atlanta, GA   | Dec. 2015 |
| AMS Special Session on Knots, Links and 3-Manifolds, Rutgers, NJ                                    | Nov. 2015 |
| Workshop in Geometric Topology, TCU, Fort Worth, TX   | Jun. 2015 |
| Moab Topology Conference, Moab, UT  | May 2015  |
| AWM Research Symposium, University of Maryland, Baltimore, MD                                       | Apr. 2015 |
| AMS Sectional on Knot Theory and Floer-Type Invariants, East Lansing, MI                            | Mar. 2015 |
| AMS Special Session on Knot Theory, Joint Meetings of the AMS/MAA, San Antonio, TX                  | Jan. 2015 |
| AMS Sectional on Interactions between Knots and Manifolds, San Francisco, CA                        | Oct. 2014 |
| AMS Sectional on Invariants in Low-Dimensional Topology, Baltimore, MD                              | Mar. 2014 |
| AMS Sectional on Geometric Topology of Knots and 3-Manifolds, Philadelphia, PA                      | Oct. 2013 |
| Rolfsenfest, CIRM, Luminy, France   | Jul. 2013 |
| Joint Meetings of the AMS/MAA, San Diego, CA  | Jan. 2013 |
| Topology Students Workshop, Georgia Tech, Atlanta, GA   | Jun. 2012 |
| Joint Meetings of the AMS/MAA, Boston, MA   | Jan. 2012 |
| Graduate Student Topology and Geometry Conference, Michigan State University                        | Apr. 2011 |

**Colloquia:**

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| Colloquium, Virginia Commonwealth University, Richmond, VA | Dec. 2018 |
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| Colloquium, Western Washington University, Bellingham, WA                                  | Nov. 2018 |
| Colloquium, University of Nevada at Reno, Reno, NV   | Oct. 2018 |
| Colloquium, Texas State University, San Marcos, TX   | Jan. 2018 |
| Colloquium, Towson University, Towson, MD  | Dec. 2017 |
| Colloquium, University of Alabama, Tuscaloosa, AL  | Feb. 2016 |
| Colloquium, Sam Houston State University, Huntsville, TX                                   | Oct. 2014 |
| Colloquium, Rice University, Houston, TX   | Sep. 2013 |
| Colloquium, University of Nevada at Reno, Reno, NV   | May 2013  |
| <b>Seminars:</b>   |           |
| Geometry Seminar, University of Virginia, Charlottesville, VA                              | Nov. 2021 |
| Topology Seminar, Boston College, Boston, MA   | Nov. 2021 |
| Topology Seminar, Oklahoma State University (Online)                                       | Nov. 2021 |
| Topology Seminar, University of Texas (Online)   | Nov. 2020 |
| Topology Seminar, Stanford (Online)  | Sep. 2020 |
| Topology Seminar, Brandeis (Online)  | Sep. 2020 |
| Topology Seminar, Georgia Tech (Online)  | Aug. 2020 |
| The Ohio State University, Seminar on Classical Knots + Virtual Knots (Online)             | Aug. 2020 |
| University of British Columbia/PIMS CRG Seminar (Online)                                   | May 2020  |
| Intro to Khovanov Homology (Parts 1, 2, 3), VCU Topology and Geometry (Online)             | Apr. 2020 |
| Topology Seminar, Boston College, Boston, MA   | Oct. 2019 |
| ALPS Seminar, Virginia Commonwealth University, Richmond, VA                               | Sep. 2019 |
| Topology Seminar, Indiana University, IN   | Jun. 2019 |
| Topology Seminar, University of Oregon, Eugene, OR   | May 2019  |
| Geometry Seminar, University of Virginia, Charlottesville, VA                              | Apr. 2019 |
| LA Joint Topology Seminar, UCLA, Los Angeles, CA   | Apr. 2018 |
| Topology Seminar(s), University of California, Berkeley, CA                                | Apr. 2017 |
| Geometry and Topology Seminar(s), University of California, Davis, CA                      | Sep. 2016 |
| Student Geometry and Topology Seminar, University of California, Davis, CA                 | Sep. 2016 |
| Geometry and Topology Seminar, MSU, East Lansing, MI                                       | Nov. 2015 |
| Topology Seminar, University of Texas, Austin, TX  | Sep. 2015 |
| Topology Seminar, Rice, Houston, TX  | Sep. 2015 |
| Seminar in Symplectic Geometry, Gauge Theory and Categorification, Columbia University, NY | May 2015  |
| Geometry and Topology Seminar, Caltech, Pasadena, CA                                       | Nov. 2013 |
| Geometry and Physics Seminar, University of Miami, Miami, FL                               | Nov. 2013 |
| Topology Seminar, Rice University, Houston, TX   | Sep. 2013 |
| Topology Seminar (Thesis Defense), University of Texas, Austin, TX                         | Apr. 2013 |
| Majors' Seminar, Trinity University, San Antonio   | Mar. 2011 |

## SPONSORSHIP OF UNDERGRADUATE AND GRADUATE RESEARCH

- Invariants of theta-curves.** (Fall 2021) Currently advising one VCU graduate student (R. Ibrahim) and two undergrads (M. Elpers, H. Dorney) in projects on invariants of theta-curves, knot invariants and KnotInfo.
- Quotients of the Gordian graph.** (Summer 2020) Co-authored a research article with undergrads Flippen and Seddiq on the graph isomorphism type and hyperbolicity of quotients of the Gordian graph at VCU.
- Braid representatives and knot polynomials.** (Spring 2019) Advised one undergraduate and one graduate student in development of Markov-chain based software to study braid, resulting in open-source software *BraidGenerator*. Advised another undergraduate on project in knot theory. UC Davis.
- Knot invariants and neural knots.** (Summer 2018) Supervised one undergraduate student in the construction of a feed-forward neural network to predict knot invariants. UC Davis.
- Topological data analysis.** (Fall 2014) Seven students were involved in a project to learn basic techniques in data analysis and newer topological methods like persistent homology. Rice University.
- Combinatorial knot theory.** (Spring 2015, Fall 2015) Oversaw projects that involved the Kauffman state sum formulation of the Alexander polynomial and fibered knots, and projects in knot theory involving Fox colorings and symmetric unions. Rice University.
- Topics in homology.** (Spring 2016) Seven students pursued various projects including persistent homology and the study of symmetric unions via the singular homology of branched double covers. Rice University.

## SERVICE TO THE PROFESSION

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**Referee work**, *Proceedings of the American Mathematical Society*, *American Mathematical Monthly*, *Quantum Topology*, *Proceedings of the London Mathematical Society*, *Algebraic & Geometric Topology*, *Cambridge Philosophical Society*, *Springer Conference Proceedings*, *Proceedings of the Edinburgh Mathematical Society*, *Mathematical Research Letters*, *Geometry & Topology Monographs*, *Involve: A Journal of Mathematics*, *Compositio Mathematica*.

**Conference Co-organizer**,

*AMS Special Session on Knots and Links in Low-Dimensional Topology*. AMS Sectional Meeting, University of Virginia, Charlottesville (to be held March 2021).

*Richmond Geometry Festival*, Virginia Commonwealth University (Online). June 10-11, 2021.

*AMS Special Session on Developments in Spatial Graphs* Joint Meetings of the AMS (Online), January 6, 2021

*Topology in Dimension 3.5: A conference in memory of Tim Cochran*, Rice University, Houston, June 1-4, 2016

*AMS Special Session on Geometric Perspectives in Knot Theory*, AMS Sectional Meeting, Loyola University, Chicago, IL, October 2015.

**KnotInfo**. With C. Livingston, I maintain and develop KnotInfo, an online database of knot invariants at [knotinfo.org](http://knotinfo.org).

**Virtual Low-Dimensional Topology**. Co-organizer of Virtual Low-Dimensional Topology, an online community resource for topologists during Covid-19 at <https://sites.google.com/bc.edu/virtualtopology/home>.

**Seminar Co-organizer**: *Colloquium VCU*, current. *Geometry and Topology Seminar VCU*, 2019-2021. *Topology Seminar* and *Working Topology Seminar* Rice, F2014 – S2016. *Heegaard Floer 'Computational'* Rice, F2014 – S2015. *Teaching Seminar*: teaching strategies for graduate students, Rice, F2014 – S2016. *RTG Writing Seminar*: technical writing skills for graduate students, Rice, F2014. *Junior Topology Seminar*, University of Texas, 2010. *Python Learning Seminar*: code writing seminar for grad students, University of Texas, Summer 2012

**Committee Member**, *Website Committee*, VCU, *Undergraduate Curriculum Committee*, VCU, 2020-2021. *Covid-19 Prep Team*, VCU, 2020. *Rice University Colloquium Committee*, Rice University, Fall 2013 – Spring 2014. *Distinguished Women in Mathematics Committee*, University of Texas, Fall 2010 - Spring 2013

**Group Co-Leader**, (with J. Hom). *Women in Symplectic and Contact Geometry and Topology Workshop*, ICERM, Providence RI. July 2019.

**Conference Tutor**, *Summer School on Modern Knot Theory: Aspects in Algebra, Analysis, Biology, and Physics*. University of Freiburg, Freiburg, Germany, June 2017.

**Co-organizer**, *TA Training Workshop*: focus on student-centered calculus discussions, University of Texas, Summer 2012

## SERVICE TO THE COMMUNITY

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**Faculty sponsor and member**, *Local AWM Chapter*, Rice University, 2013 – 2016

**REU and Math Camp Speaker**, Sam Houston State University, July 2015 – Research talk and activities on knots and knot invariants. Texas State University, July 2018 – Math Camp Colloquium Speaker.

**Panelist & Co-organizer**:

*Sonya Kovalevsky Day*, University of Texas, Spring 2013, Spring 2014.

Panelist at the SCMB Symposium in Math-Bio, 2021.

Panelist at the Nebraska Conference for Undergraduate Women, Jan 2012.

**Outreach volunteer**

*Girls Exploring Math and Science*, Houston Museum of Natural Science, February 2014;

*STEM for Girls Workshop*, UC Davis, April 2017

*Picnic Day*, UC Davis, April 2017

*M-PACT middle school outreach*, April 2018.

**Coordinator & Speaker**, *Saturday Morning Math Group & Sunday Math Circle*, 2010 – 2012

Coordinator and speaker at University of Texas's 'math circle' for middle and high school students. Program info at <https://www.ma.utexas.edu/users/smmg/>.

**Mentoring**

Career mentor of two graduate students, VCU, 2019–current.

Research mentoring: 4 undergraduates, 1 graduate, VCU 2019–current.

Research mentoring: 3 undergraduates and 1 graduate in research projects, UC Davis, 2018-2019.

Mentor of one undergrad in the *RTG Directed Reading Program*, University of Texas, Spring 2013

**Sponsor**, *AMC and AIME Exams*, University of Texas, Fall 2011- Fall 2012

Coordinated and proctored math competitions for Austin area grade school students.

**Public lecturer**, *Austin Science and Engineering Festival*, Austin Convention Center, October 2010

Gave the public lecture "How Do You Group It?" for adults and children.

## CONFERENCES AND WORKSHOPS ATTENDED (2010 – current)

|  |             |
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| <b>Speaker</b> Canadian Mathematical Society Winter Meeting (Online)   | Nov. 2021   |
| <b>Speaker</b> Knots in Washington, GWU, Boston MA   | Nov. 2021   |
| <b>Speaker</b> Boston Graduate Topology Seminar, MIT   | Nov. 2021   |
| <b>Speaker</b> Workshop in Geometry Topology (Online), Texas Christian University  | Jun. 2021   |
| <b>Invited</b> American Institute of Mathematics. ARC in 4-Dimensional Topology  | Spring 2021 |
| <b>Invited</b> Interactions of Gauge Theory with Contact and Symplectic Topology in dimensions 3 and 4 (Online)  | Jun. 2020   |
| <b>Speaker</b> Mini-Symposium: Knot Theory on Okinawa, Okinawa Institute for Science and Technology, Japan   | Feb. 2020   |
| <b>Speaker</b> AMS Special Session on Applications and Computations in Knot Theory, JMM, Denver, CO  | Jan. 2020   |
| <b>Speaker</b> AMS Special Section on Floer homology University of Wisconsin-Madison, Madison, WI  | Sep. 2019   |
| <b>Group Co-Leader</b> , Women in Symplectic and Contact Geometry and Topology Workshop, ICERM   | Jul. 2019   |
| <b>Speaker</b> , The Topology of Nucleic Acids: Research at the Interface of Low-Dimensional Topology, Polymer Physics and Molecular Biology, Banff International Research Center, Banff, Canada | Mar. 2019   |
| <b>Speaker</b> , Winter Meeting of the Canadian Mathematical Society, Session on Topology, Vancouver, Canada   | Dec. 2018   |
| <b>Speaker</b> , AMS Sectional on Mathematical Methods for the Study of the Three Dimensional Structure of Biopolymers, SFSU, San Francisco, CA  | Nov. 2018   |
| <b>Speaker</b> , Topology in Dimensions 3, 3.5 and 4, University of California, Berkeley, CA   | Jun. 2018   |
| Perspectives on bordered Heegaard Floer theory, CIRGET, Montréal, Canada   | May. 2018   |
| <b>Speaker</b> , Eastern Illinois Integrated Conference in Geometry, Dynamics, and Topology, Charleston, IL  | Apr. 2018   |
| <b>Tutor</b> , Summer School on Modern Knot Theory, Freiburg, Germany  | Jun. 2017   |
| <b>Co-organizer</b> , Topology in Dimension 3.5: A conference in memory of Tim Cochran, Houston, TX  | Jun. 2016   |
| Synchronizing Smooth and Topological 4-Manifolds, Banff International Research Station, Canada   | Feb. 2016   |
| <b>Speaker</b> , Joint Meetings of AMS/MAA, Seattle, WA  | Jan. 2016   |
| <b>Speaker</b> , Tech Topology Conference, Georgia Tech, Atlanta, GA   | Dec. 2015   |
| <b>Speaker</b> , AMS Sectional on Knots, Links and 3-Manifolds, Rutgers, NJ  | Nov. 2015   |
| <b>Co-organizer</b> , AMS Special Session on Geometric Perspectives in Knot Theory, Chicago, IL  | Oct. 2015   |
| <b>Speaker</b> , Workshop in Geometric Topology, TCU, Fort Worth, TX   | Jun. 2015   |
| Princeton Low Dimensional Topology Workshop, Princeton, NJ   | Jun. 2015   |
| <b>Speaker</b> , Moab Topology Conference, Moab, UT  | May 2015    |
| <b>Speaker</b> , AWM Research Symposium, University of Maryland, Baltimore, MD   | Apr. 2015   |
| Redbud Topology Conference, OSU, Stillwater, OK  | Apr. 2015   |
| <b>Speaker</b> , AMS Special Session on Knot Theory and Floer-Type Invariants, East Lansing, MI  | Mar. 2015   |
| <b>Speaker</b> , AMS Special Session on Knot Theory, Joint Meetings of AMS/MAA, San Antonio, TX  | Jan. 2015   |
| Texas Geometry and Topology Conference, University of Texas, Austin, TX  | Nov. 2014   |
| <b>Speaker</b> , AMS Special Session on Interactions between Knots and Manifolds, San Francisco, CA  | Oct. 2014   |
| Combinatorial Link Homology Theories, Braids, and Contact Geometry, ICERM, Providence, RI  | Aug. 2014   |
| <b>Speaker</b> , AMS Special Session on Invariants in Low-Dimensional Topology, Baltimore, MD  | Mar. 2014   |
| <b>Speaker</b> , AMS Special Session on Geometric Topology of Knots and 3-Manifolds, Philadelphia, PA  | Oct. 2013   |
| Low Dimensional Topology After Floer, CRM, University of Montreal, Montreal, Canada  | Jul. 2013   |
| <b>Speaker</b> , Rolfsenfest, CIRM, Luminy, Marseille, France  | Jul. 2013   |
| Low Dimensional Topology, The Simons Center for Geometry and Physics, Stonybrook, NY   | May 2013    |
| Redbud Topology Conference, University of Arkansas, Fayetteville, AK   | Mar. 2013   |
| <b>Speaker</b> , Joint Meetings of the AMS/MAA, San Diego, CA  | Jan. 2013   |
| Tech Topology Conference, Georgia Tech, GA   | Dec. 2012   |
| Texas Geometry and Topology Conference, Rice University, TX  | Nov. 2012   |
| Midwest Topology Conference, Michigan State University, MI   | Oct. 2012   |
| Holomorphic Curves and Low Dimensional Topology, Stanford University, CA   | Aug. 2012   |
| <b>Speaker</b> , Topology Students Workshop, Georgia Tech, GA  | Jun. 2012   |
| Topics in Dehn Surgery, University of Texas, TX  | Apr. 2012   |
| CNS New Faculty & Teaching Strategies Workshop, University of Texas, TX  | Mar. 2012   |
| <b>Speaker</b> , Joint Meetings of the AMS/MAA, Boston, MA   | Jan. 2012   |
| Texas Geometry and Topology Conference, University of Texas, TX  | Oct. 2011   |
| AMS MRC in Computational and Applied Topology, Snowbird, UT  | Jun. 2011   |
| <b>Speaker</b> , Graduate Student Topology and Geometry Conference, Michigan State University, MI  | Apr. 2011   |
| Categorification and Low Dimensional Topology, Stony Brook University, NY  | Jun. 2010   |
| Topology and Geometry in Dimension Three, Oklahoma State University, OK  | Jun. 2010   |
| Texas Geometry and Topology Conference, Texas Christian University, TX   | Feb. 2010   |
| Introductory Workshop: Homology Theories of Knots and Links, MSRI, CA  | Jan. 2010   |

## SKILLS

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### Computer skills

Languages – Python, Matlab, Mathematica, R, SnapPy  
Markup –  $\LaTeX$ , HTML/CSS, Word, Excel  
Operating systems – Mac, Linux, Windows

### Miscellaneous skills

“Published” musician

## PROFESSIONAL AFFILIATIONS

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American Mathematical Society

Association for Women in Mathematics