

Mona Merling

BASIC INFORMATION	University of Pennsylvania Department of Mathematics 209 South 33rd Street Philadelphia, PA 19104-6395	<i>Email:</i> mmerling@upenn.edu <i>Webpage:</i> math.upenn.edu/~mmerling <i>Citizenship:</i> Romania & USA
RESEARCH INTERESTS	Algebraic topology. In particular, algebraic K-theory, equivariant stable homotopy theory, and their applications to manifolds.	
ACADEMIC APPOINTMENTS	University of Pennsylvania , Philadelphia, PA Associate Professor, July 2024 - Assistant Professor, July 2018 - June 2024 Johns Hopkins University , Baltimore, MD J.J. Sylvester Assistant Professor, July 2014 - June 2018 Postdoctoral mentor: Jack Morava	
EDUCATION	University of Chicago , Chicago, IL Ph.D. in Mathematics, June 2014 Advisor: Peter May M.S. in Mathematics, June 2010 Bard College , Annandale, NY B.A. in Mathematics, May 2009	
ACADEMIC VISITS	Stanford University , Palo Alto Visiting Associate Professor, 2025-26 Isaac Newton Institute , Cambridge, UK Equivariant Homotopy Theory in Context Program Guest, spring 2025 (2 weeks) Mathematics Sciences Research Institute , Berkeley Floer Homotopy Theory Program, Research Member, September-December 2022 Mathematics Sciences Research Institute , Berkeley Summer Stay, July 2020 (canceled due to COVID) Isaac Newton Institute , Cambridge, UK K-theory, Algebraic Cycles and Motivic Homotopy Theory Program Guest, (remote June 2022, postponed from 2020 due to COVID) Max Planck Institute for Mathematics , Bonn, Germany Research Guest, July-November 2018 Isaac Newton Institute , Cambridge, UK Homotopy Harnessing Higher Structures Program Guest, July 2018 (2 weeks)	

Hausdorff Institute for Mathematics, Bonn, Germany

Junior Trimester Program Guest, September-October 2016

University of Copenhagen, Denmark

Invited Visitor, August 2013 (2 weeks)

RESEARCH GRANTS AND AWARDS	PI, NSF grant DMS-2506429 “Collaborative Research: K -theory, manifolds, and polyhedra” (collaborative grant with Malkiewich)	2025-27
	Simons Fellowship	2025-26
	AWM Joan & Joseph Birman Research Prize in Topology and Geometry	2025
	PI, NSF FRG grant DMS-2052988 “Collaborative Research: Trace Methods and Applications for Cut-and-Paste K -Theory” (collaborative grant with Blumberg, Bohmann, Gerhardt, Hill, Mandell, Malkiewich, Ponto, Zakharevich)	2021-24
	PI, NSF CAREER grant DMS-1943925 “Applications of equivariant homotopy theory to manifolds”	2020-25
	PI, NSF grant DMS-1709461/1850644 “Groups, manifolds, and stable homotopy theory”	2017-20
	AMS-Simons Travel Grant	2015-17
CONFERENCE GRANTS	co-PI, NSF grant DMS-2348092 “Algebraic structures in topology 2024,” San Juan, Puerto Rico, (with PI Rivera and co-PIs Kaufmann and Miller)	2023-24
	PI, NSF grant DMS-2017119 “Mid-Atlantic Topology Conference,” University of Pennsylvania, (with co-PIs Block and Knudsen)	2020-21
	School of Arts and Sciences Conference Grant, University of Pennsylvania	2020
	University Research Fund Conference Grant, University of Pennsylvania	2020
	co-PI, NSF grant DMS-1619569 “Mid-Atlantic Topology Symposium: New Directions,” Johns Hopkins University, (with PI Morava and co-PI Riehl)	2016
EDUCATION GRANTS	Klein Family Social Justice Grant, University of Pennsylvania <i>Grant for supporting a mathematics prison teaching program in collaboration with the Prison Teaching Initiative at Princeton</i>	2021
	NV Grant, Center for Educational Resources, Johns Hopkins University <i>Grant for designing and implementing a narrative visual component for two mathematics classes in the form of video final presentations</i>	2016

TEACHING AWARDS	Departmental Good Teaching Award, University of Pennsylvania, math 2030	2025
	Departmental Good Teaching Award, University of Pennsylvania, math 6100	2025
	Departmental Good Teaching Award, University of Pennsylvania, math 1700	2024
	Departmental Good Teaching Award, University of Pennsylvania, math 4100	2024
	Departmental Good Teaching Award, University of Pennsylvania, math 6010	2024
	Departmental Good Teaching Award, University of Pennsylvania, math 1234	2023
	Departmental Good Teaching Award, University of Pennsylvania, math 1300	2023
	Departmental Good Teaching Award, University of Pennsylvania, math 520	2022
	Departmental Good Teaching Award, University of Pennsylvania, math 500	2021
	Departmental Good Teaching Award, University of Pennsylvania, math 123	2021
	Departmental Good Teaching Award, University of Pennsylvania, math 619	2021
	Departmental Good Teaching Award, University of Pennsylvania, math 123	2020
	Departmental Good Teaching Award, University of Pennsylvania, math 730	2020
	Departmental Good Teaching Award, University of Pennsylvania, math 410	2019
	Departmental Good Teaching Award, University of Pennsylvania, math 619	2019
		Lawrence and Josephine Graves Prize for Excellence in Undergraduate Teaching, University of Chicago
VOLUMES EDITED	New directions in homotopy theory, (co-edited with N. Kitchloo, J. Morava, E. Riehl, W. S. Wilson), <i>Contemporary Mathematics</i> , Volume 707, (2018).	
PUBLICATIONS & PREPRINTS	Homotopy Type of the Space of Fibrations of the Three-sphere by Simple Closed Curves (with D. DeTurck, H. Gluck, Z. Fang, L. Lichtenfelz, J. Yang and Y. Wang), arXiv:2508.01185 (2025), 35 pages.	
	Parametrized scissors congruence K -theory of manifolds and cobordism categories (with G. Raptis and J. Semikina), arXiv:2504.01810 (2025), 30 pages.	
	On the functoriality of the space of equivariant smooth h -cobordisms (with T. Goodwillie, K. Igusa and C. Malkiewich), submitted, arXiv:2303.14892 (2023), 91 pages.	
	Topological ΔG -homology for rings with twisted G -action (with G. Angelini-Knoll and M. Péroux), to appear in <i>Advances in Mathematics</i> (2026), arXiv:2409.18187 , 72 pages.	
	Algebraic K -theory for squares categories (with J. Campbell, J. Kuyper, and I. Zakharevich), <i>Annals of K-theory</i> , Vol. 11, No. 1 (2026), pages 1-36, arXiv:2310.02852 .	
	Scissors congruence K -theory for equivariant manifolds (with M. Ng, J. Semikina, A. Sendón Blanco, and L. Williams), <i>Bulletin of the London Mathematical Society</i> , Volume 58, Issue 1 (2025), arXiv:2501.06928 , (2025), 20 pages.	
	A trace map on higher scissors congruence groups (with A.M. Bohmann, T. Gerhardt, C. Malkiewich, and I. Zakharevich), <i>International Mathematics Research Notices</i> , Volume 153 (2024), arXiv:2303.08172 , 30 pages.	
	Deformation retraction of the group of strict contactomorphisms of the three-sphere to the unitary group (with D. DeTurck, H. Gluck, L. Lichtenfelz, J. Yang and Y. Wang), <i>Journal of Geometry and Physics</i> , Volume 206 (2024), arXiv:2108.08961 , 43 pages.	
	Multiplicative equivariant K -theory and the Barratt-Priddy-Quillen theorem, (with B. Guillou, J.P. May and A. Osorno), <i>Advances in Mathematics</i> , Volume 414 (2023), arXiv:2001.05563 , 91 pages.	

Equivariant infinite loop space theory. The space level story, (with J.P. May and A. Osorno), [arXiv:1704.03413](#), to appear in *Memoirs of the AMS*, 121 pages.

The equivariant parametrized h -cobordism theorem, the non-manifold part, (with C. Malkiewich), *Advances in Mathematics*, Volume 399 (2022), [arXiv:2001.05563](#), 41 pages.

Cut and paste invariants of manifolds via algebraic K-theory, (with R. Hoekzema, L. Murray, C. Rovi, J. Semikina), *Topology and its Applications*, Volume 316 (2022), [arXiv:2001.00176](#), 22 pages.

Coassembly is a homotopy limit map, (with C. Malkiewich), *Annals of K-Theory* Volume 5 Issue 3 (2020), pages 373–394, [arXiv:1904.05858](#).

Symmetric monoidal G -categories and their strictification, (with B. Guillou, J.P. May and A. Osorno), *Quarterly Journal of Mathematics*, Volume 71, Issue 1 (2020), pages 207–246, [arXiv:1809.03017](#).

Equivariant A -theory, (with C. Malkiewich), *Documenta Mathematica*, 24 (2019), pages 815–55, [arXiv:1609.03429](#).

A symmetric monoidal and equivariant Segal machine, (with B. Guillou, J.P. May and A. Osorno), *Journal of Pure and Applied Algebra*, Volume 226 (6) (2019), pages 2425–2454, [arXiv:1711.09183](#).

Motivic homotopical Galois extensions, (with A. Beaudry, K. Hess, M. Kedziorek, and V. Stojanoska), *Topology and its Applications*, Volume 235 (2018), pages 290–338, [arXiv:1611.00382](#).

Equivariant algebraic K -theory of G -rings, *Mathematische Zeitschrift*, 285(3), (2017), pages 1205–1248, [arXiv:1505.07562](#).

Categorical models for equivariant classifying spaces, (with B. Guillou and J.P. May), *Algebraic and Geometric Topology*, 17-5 (2017), pages 2565–2602, [arXiv:1201.5178](#).

Unbased calculus for functors to chain complexes, (with M. Basterra, K. Bauer, A. Beaudry, R. Eldred, B. Johnson and S. Yeakel), *Contemporary Mathematics*, Vol. 641 (2015), pages 29–48, [arXiv:1409.1553v2](#).

Function fields with class number indivisible by a prime l , (with M. Daub, J. Lang, A. Pacelli, N. Pitiwan, M. Rosen), *Acta Arithmetica*, 150 (2011), pages 339–359, [arXiv:0906.3728](#).

Gassmann equivalent dessins, (with R. Perlis), *Communications in Algebra*, Vol. 38, Issue 6 (2010), pages 2129–2137.

CONFERENCE
PROCEEDINGS

Moduli spaces of equivariant h -cobordisms, *Oberwolfach reports*, Report No. 34, (2023), pages 11–14.

G -manifolds and algebraic K -theory, *Oberwolfach reports*, Report No. 31, (2018), pages 37–40.

OTHER PUBLICATIONS	<p>A brief illustrated guide to ‘scissors congruence’ – an ancient geometric idea that’s still fueling cutting-edge mathematical research (with M. Calle), <i>The Conversation</i>, (2023).</p> <p>Encouraging Curiosity, Self-Directed Study and Belonging in Penn Students: The Directed Reading Program in Math, <i>Penn Almanac (Talk about Teaching and Learning)</i>, Volume 69 Issue 25 (2023).</p> <p>Widening the Pipeline (with J. Hartmann), <i>Notices of the AMS (Early Career section)</i>, Volume 67, Number 11, (2020).</p> <p>The User’s Guide Project: Giving Experiential Context to Research Papers, (with C. Malkiewich, D. White, L. Wolcott, and C. Yarnall), <i>Journal of Humanistic Mathematics</i>, Volume 5 Issue 2 (2015), pages 186–188.</p>	
PRESS	<p>New Math: The Directed Reading Program pairs undergraduates with graduate student mentors for advanced learning, <i>OMNIA magazine</i></p> <p>Math education and engagement in West Philadelphia, <i>Penn Today</i></p> <p>Penn Arts & Sciences: Making a Difference in Global Communities and Klein Family Social Justice Grants, <i>Penn Almanac</i></p> <p>Changing the Equation for the Incarcerated, <i>OMNIA magazine</i>, pages 46-47</p>	<p>2020</p> <p></p> <p>2021</p> <p>2021</p> <p>2023</p>
PHD STUDENT SUPERVISION	<p>Thomas Brazelton, University of Pennsylvania, PhD 2023 (<i>co-advised with Kirsten Wickelgren at Duke</i>)</p> <p>Elijah Gunther, University of Pennsylvania, PhD 2023</p> <p>Andres Mejia, University of Pennsylvania, PhD 2024</p> <p>Maxine Calle, University of Pennsylvania, expected PhD completion 2026</p> <p>Kartik Tandon, University of Pennsylvania, expected PhD completion 2027</p> <p>Fangji Liu, University of Pennsylvania, expected PhD completion 2028</p> <p>Albert (Jinghui) Yang, University of Pennsylvania, expected PhD completion 2028 (<i>co-advised with Danny Shi at UWashington</i>)</p> <p>Mattie Ji, University of Pennsylvania, expected PhD completion 2029 (<i>co-advised with Mark Behrens at Notre Dame</i>)</p> <p>Riley Shahaar, University of Pennsylvania, expected PhD completion 2029</p> <p>David Zhu, University of Pennsylvania, expected PhD completion 2030</p>	
MASTERS THESIS SUPERVISION	<p>Saad Slaoui, University of Pennsylvania</p> <p>Yinfeng Lu, University of Pennsylvania</p> <p>Zhong Zhang, University of Pennsylvania</p> <p>Oualid Merzouga, University of Pennsylvania</p> <p>Robin Murugadoss, University of Pennsylvania</p> <p>Frenly Espino, University of Pennsylvania</p> <p>Chayansudha Biswas, University of Pennsylvania</p> <p>Yaojie Hu, University of Pennsylvania</p> <p>David Zhu, University of Pennsylvania</p> <p>Colton Griffin, University of Pennsylvania</p> <p>Josh Tabb, University of Pennsylvania</p>	<p>spring 2019</p> <p>spring 2023</p> <p>2023-24</p> <p>spring 2023</p> <p>2023-24</p> <p>2023-24</p> <p>2023-24</p> <p>spring 2024</p> <p>2024-25</p> <p>spring 2025</p> <p>spring 2025</p>
POSTDOC MENTORSHIP	<p>Maximilien Peroux, University of Pennsylvania</p> <p>Ningchuan Zhang, University of Pennsylvania</p>	<p>2020-23</p> <p>2020-23</p>

TEACHING
EXPERIENCE

Princeton Prison Teaching Initiative, Co-Instructor

Fall 2024 math 015 Basic College Mathematics (South Woods State Prison)
Spring 2023 Math in the Courtroom (South Woods State Prison, *BA level class*)
Spring 2022 math 015 Basic College Mathematics (South Woods State Prison)
Fall 2021 math 020 College Algebra (Garden State Correctional Facility)

University of Pennsylvania, Instructor

Spring 2025 math 2030 Proving Things, Algebra
Spring 2025 math 6190 Algebraic Topology III (Kan seminar in K -theory)
Fall 2024 math 1700 Ideas in Math
Spring 2024 math 6010 Algebraic Topology I (graduate)
Spring 2024 math 4100 Complex Analysis
Fall 2023 math 1234 Community Math Teaching Project (ABCS class)
Spring 2023 math 6190 Algebraic Topology III (graduate)
Spring 2023 math 1300 Introduction to Calculus
Spring 2022 math 520 Representation Theory of Finite Groups
Fall 2021 math 500 Topology

Fall 2021 math 123 Community Math Teaching Project (ABCS class)
Spring 2021 math 619 Algebraic Topology III (graduate)
Fall 2020 math 123 Community Math Teaching Project (ABCS class)
Spring 2020 math 730 Algebraic K -theory (graduate, Kan seminar style)
Fall 2019 math 410 Complex Analysis
Spring 2019 math 619 Algebraic Topology III (graduate)
Spring 2019 math 370 Abstract Algebra

Johns Hopkins University, Instructor

Spring 2018 math 106 Calculus I for biology
Fall 2017 math 727 Topics in Algebraic Topology (graduate)
Fall 2017 math 615 Algebraic Topology I (graduate)
Spring 2017 math 422 Representation Theory
Spring 2017 math 616 Algebraic Topology II (graduate)
Spring 2016 math 422 Representation Theory
Spring 2016 math 401 Advanced Algebra
Fall 2015 math 401 Advanced Algebra
Fall 2015 math 328 Non-Euclidean geometry (inquiry based learning style)
Spring 2015 math 107 Calculus II for biology
Fall 2014 math 328 Non-Euclidean geometry (inquiry based learning style)

University of Chicago, Instructor

Winter 2014 math 176 Geometry IBL (co-taught with John Boller)
Spring 2013 math 112 Studies in mathematics
Winter 2013 math 153 Calculus III
Fall 2012 math 152 Calculus II
Spring 2012 math 112 Studies in mathematics
Winter 2012 math 106 Precalculus II
Fall 2011 math 105 Precalculus I

University of Chicago, College Fellow

Spring 2011 math 256 Basic Algebra III (mentor: Liang Xiao)
 Winter 2011 math 255 Basic Algebra II (mentor: Rina Anno)
 Fall 2010 math 254 Basic Algebra I (mentor: David Constantine)

TALKS

Mini courses and lecture series

- European Autumn School in Topology, Utrecht, Netherlands, September 2026 (upcoming)
- Equivariant homotopy theory in context program, Isaac Newton Institute, Cambridge, UK, January 2025
- Algebraic K-theory of spaces, Regensburg, Germany, July 2023
- Scissors Congruence, Algebraic K-Theory, and Trace Methods, June 2023
- Algebraic structures in topology, San Juan, Puerto Rico, May 2022

Conference and Colloquium Talks

- Conference on Algebra, K-theory and Applications, Honoring the Works of Hyman Bass and Charles Weibel, Rutgers University, May 2026 (upcoming)
- Colloquium, Indiana University, March 2026 (upcoming)
- Colloquium, Lehigh University, October 2025
- Workshop on Homotopy Theory, Field Institute, Toronto, July 2025
- Abel Symposium, Trondheim, Norway, July 2025
- New Horizons for Equivariance in Homotopy Theory, Isaac Newton Institute, Cambridge, UK, May 2025
- International Workshop on Algebraic Topology (Peter May's 85th Birthday Conference), SUSTech, Shenzhen, China, March 2025
- The interplay of geometric group theory and K -theory, Southampton, UK, June 2024
- Real algebraic K-theory and trace methods, Université Paris 13, May 2024
- Case Western University Colloquium, Cleveland, February 2024
- AMS special session on Homotopy Theory, Joint Math Meetings, San Francisco, January 2024
- Homotopy Theory, Oberwolfach, Germany, August 2023
- Homotopy: fruit of the fertile furrow, Isaac Newton Institute, Cambridge, UK, June 2023
- Higher Invariants in Equivariant and Geometric Topology, IMSA, Miami, May 2023
- Midwest Topology Conference, Purdue, Lafayette, April 2023
- Spring Topology and Dynamics Conference, semi plenary talk, March 2023 (online)
- Floer homotopical methods in low dimensional and symplectic topology, MSRI, Berkeley, November 2022
- Equivariant Techniques in Stable Homotopy Theory, AIM, San Jose, October 2022
- AMS Sectional Meeting, Special session on algebraic K-theory, Utah, October 2022
- Connections Workshop: Floer Homotopy Theory, MSRI, Berkeley, September 2022
- Follow-up Workshop to Junior Trimester Program "Topology," Hausdorff Institute for Mathematics, Bonn, Germany, September 2022
- Algebraic Topology and Topological Data Analysis: A Conference in Honor of Gunnar Carlsson, IMA, Minneapolis, August 2022
- Algebra and Number Theory Day, Johns Hopkins, September 2021
- (∞, n) -categories, factorization homology, and algebraic K-theory, MSRI, Berkeley, March 2020 (moved online)
- Equivariant stable homotopy theory and p -adic Hodge theory, Banff International Research Station, Canada, March 2020
- Colloquium, Bryn Mawr, November, 2019
- Mid-Atlantic Topology Conference, University of Virginia, Charlottesville, October 2019

- International Workshop on Algebraic Topology, Shanghai Center for Mathematical Sciences, Fudan University, China, August 2019
- Four manifolds: Confluence of high and low dimensions, Fields Institute, Toronto, Canada, July 2019
- Graduate Student Conference in Algebra, Geometry, and Topology (Keynote speaker), Temple University, June 2019
- Cornell Topology Festival, Ithaca, May 2019
- AMS Sectional Meeting, Special Session on Equivariant Homotopy and Trace Methods, University of Hawaii, March 2019
- Equivariant and Motivic Homotopy Conference (Homotopy Harnessing Higher Structures Program), Isaac Newton Institute, Cambridge, UK, August 2018
- Topologie, Oberwolfach, Germany, July 2018
- Equivariant Homotopy Theory and K-theory, FU Berlin, Germany, June 2018
- AMS Sectional Meeting, Special Session on Homotopy Theory, Vanderbilt University, Nashville, April 2018
- Tetrahedral Geometry and Topology Seminar, Lancaster, April 2018
- AMS Sectional Meeting, Special Session on Homotopy Theory, Ohio State University, Columbus, March 2108
- Midwest Topology Seminar, Northwestern, Evanston, March 2018
- Colloquium, Florida State University, December 2017
- Colloquium, University of Pennsylvania, December 2017
- Colloquium, Notre Dame University, December 2017
- Colloquium, University of Melbourne, November 2017
- Lloyd Roeling Conference, University of Louisiana, Lafayette, November 2017
- AMS Sectional Meeting, Algebraic Topology Special Session, Buffalo, September 2017
- Cascade Topology Conference, University of British Columbia, Vancouver, Canada, May 2017
- Colloquium, Reed, Portland, November 2016
- Operations in Highly Structured Homology Theories, Banff, Canada, May 2016
- Equivariant Derived Algebraic Geometry, Banff, Canada, February 2016
- Trace Methods Summer School, Regensburg, Germany, August 2015
- Equivariant and Motivic Homotopy Theory, Reed, Portland, May 2015
- AMW Workshop at AMS Joint Meetings, San Antonio, January 2015
- Young Topologists Meeting, Copenhagen, Denmark, June 2014 (contributed talk)
- MSRI Connections for Women Workshop, MSRI, Berkeley, January 2014
- AMS Joint Meetings, Special Session on Homotopy Theory, Baltimore, January 2014
- AMS Special Session Homotopy Theory and Algebraic K-theory, Riverside, November 2013
- Graduate Student Topology Conference, Notre Dame, April 2013 (contributed talk)
- AMS Joint meetings, Washington DC, January 2009 (contributed talk)
- AMS Joint meetings, San Diego, January 2008 (contributed talk)
- AMS Joint meetings, New Orleans, January 2007 (contributed talk)

Seminar Talks

- Indiana University topology seminar, March 2026 (upcoming)
- MSU topology seminar, February 2026
- Columbia topology seminar, November 2025
- Brandeis topology seminar, September 2025
- Stanford topology seminar, September 2025
- Princeton topology seminar, December 2024
- Brown topology seminar, April 2024
- George Mason University topology seminar, November 2023

- UC Santa Cruz algebra and number theory seminar, May 2023
- University of Chicago topology seminar, May 2023
- Northeastern topology seminar, January 2023
- UCLA topology seminar, December 2022
- University of Washington topology seminar, November 2022
- UC Berkeley topology seminar, October 2022
- UCSD topology seminar, October 2022
- Lehmann College topology seminar, September 2022
- FRG Scissors congruence K-theory seminar, September 2022
- electronic Computational Homotopy Theory seminar, September 2022
- Columbia topology seminar, May 2022
- Bard College Seminar, online, April 2021
- University of Aberdeen Topology Seminar, online, March 2021
- University of Kentucky Topology seminar, online, March 2021
- CORONA Geometry Seminar, online, October 2020
- UCLA Topology Seminar, online, May 2020
- Temple Topology Seminar, September 2019
- Michigan State University Topology Seminar, April 2019
- Princeton Topology Seminar, March 2019
- MIT Topology Seminar, March 2019
- University of Pennsylvania Topology Seminar, February 2019
- Johns Hopkins Topology Seminar, February 2019
- University of Münster Topology Seminar, November 2018
- University of Wuppertal Topology Seminar, November 2018
- École Polytechnique Federale de Lausanne Topology Seminar, October 2018
- University of Bochum Topology Seminar, October 2018
- University of Copenhagen Topology Seminar, September 2018
- University of Regensburg Topology Seminar, July 2018
- Penn State Altoona Topology Seminar, October 2017
- Notre Dame Topology Seminar, March 2017
- Maryland University Topology Seminar, January 2017
- Wayne State Topology Seminar, November 2016
- Rochester Topology Seminar, October 2016
- Hausdorff Institute for Mathematics Seminar, Bonn, September 2016
- University of Virginia Topology Seminar, October 2015
- UIUC Topology Seminar, May 2015
- UCSD Number Theory/Topology Seminar, March 2015
- Johns Hopkins Topology Seminar, March 2015
- MIT Topology Seminar, December 2014
- Penn State Altoona Topology Seminar, May 2014
- Northwestern Topology Seminar, December 2013
- UIUC Topology Seminar, February 2013

Talks for undergraduates

- Kitao lecture, Swarthmore, October 2023
- University of Chicago summer REU, July 2022 (online)
- University of Chicago summer REU, July 2021 (online)
- Penn Undergraduate Mathematics Society, September 2020 (online)
- University of Chicago summer REU, June 2020 (online)
- University of Chicago summer REU, July 2016
- Undergraduate Conference on Geometry and Topology (faculty talk), University of Texas, Austin, February 2016

General audience talks

◦ Social choice and topology, Prison Teaching Initiative Faculty Lecture Series, Ft. Dix Prison, April 2025

◦ Taking STEM to the incarcerated, Community-Engaged STEM seminar, University of Pennsylvania, March 2024

CONFERENCE AND WORKSHOP ORGANIZATION

Algebraic Structures in Topology Conference, San Juan, Puerto Rico, ICM Satellite Conference, July 2026 (co-organized with Manuel Rivera, Jeremy Miller, Ralph Kaufmann)

Scissors congruence K -theory and manifolds, Banff International Research Station, 2027 (co-organized with Julia Semikina, Cary Malkiewich, George Raptis)

Scissors congruence and algebraic K -theory conference, University of Pennsylvania, July 2025 (co-organized with Andrew Blumberg, Mike Hill, Michael Mandell, Kate Ponto)

UP GRADe workshop for underrepresented groups in mathematics, Spring 2024 (co-organized with Angela Gibney, Julia Hartmann, Yumeng Ou)

Collaborative workshop on scissors congruence and algebraic K -theory, Vanderbilt University, July 2024 (scientific committee with Andrew Blumberg, Anna Marie Bohmann, Teena Gerhardt, Mike Hill, Cary Malkiewich, Michael Mandell, Kate Ponto, Inna Zakharevich)

FEW event with Kathryn Hess and Malabika Pramanik, April 2023 (co-organized with Julia Hartmann, Angela Gibney, Yumeng Ou)

Scissors congruence, algebraic K -theory and Steinberg modules, American Institute for Mathematics, June 2024 (co-organized with Cary Malkiewich, Jeremy Miller, Jenny Wilson)

Algebraic Structures in Topology Conference, San Juan, Puerto Rico, June 2024 (co-organized with Manuel Rivera, Jeremy Miller, Ralph Kaufmann)

Scissors Congruence, Algebraic K -Theory, and Trace Methods, Indiana University, June 2023 (scientific committee with Andrew Blumberg, Anna Marie Bohmann, Teena Gerhardt, Mike Hill, Cary Malkiewich, Michael Mandell, Kate Ponto, Inna Zakharevich)

Spaces of manifolds: algebraic and geometric approaches, Banff International Research Station, 2023 (co-organized with Alexander Kupers, Thomas Goodwillie, Manuel Kranich)

Mid-Atlantic Topology Conference, April 2023 (postponed from 2020 due to COVID) (co-organized with Jonathan Block, Rob Ghrist, Ben Knudsen, Tony Pantev, Maximilien Peroux, Ningchuan Zhang)

UP GRADe workshop for underrepresented groups in mathematics, Fall 2021 (co-organized with Maxine Calle, Angela Gibney, Julia Hartmann, Marielle Ong, Ellen Urheim)

Summer Bridge Workshop in Algebraic Topology, University of Pennsylvania, Summer

	2021 (co-organized with Jonathan Block)	
	Midwest Topology Seminar / May Day 2019, University of Chicago, October 2019 (co-organized with Andrew Blumberg, Anna Marie Bohmann, Akhil Mathew, Emily Riehl, Dylan Wilson)	
	Workshop on Math Advice and Networking at the University of Pennsylvania (WOMAN UP), September 2019 (co-organized with Julia Hartmann)	
	Second Mid-Atlantic Topology Conference, Johns Hopkins, March 2016 (co-organized with Nitu Kitchloo, Jack Morava, Emily Riehl, Steve Wilson)	
SEMINAR ORGANIZATION	Co-organizer (with Herman Gluck and Davi Maximo), PATCH at Penn, University of Pennsylvania, 2019-	
	Co-organizer (with Herman Gluck and Davi Maximo), Geometry-Topology Seminar, University of Pennsylvania, 2019-	
	Organizer, Johns Hopkins Algebraic Topology Seminar, Johns Hopkins, 2015-18	
	Co-organizer (with Carl McTague), Johns Hopkins Algebraic Topology Seminar, Johns Hopkins, 2014-15	
OTHER SERVICE TO THE PROFESSION	Member of the AMS Eastern Section Program Committee, 2025-27	
	Member of the ICM Outreach Committee, 2024-26	
	Associate Editor on the Bulletin of the AMS Editorial Board for Book Reviews, 2024-2028	
	Grant reviewer: NSF Topology Panel (3 times), NSF CAREER panel, and NWO Dutch Research Council	
	Team Leader (with Julia Semikina), Collaborative workshop on scissors congruence and algebraic K -theory, 2023-24	
	Team Leader (with Carmen Rovi) for the Women in Topology III Workshop (proposed a research project and collaborated on a resulting publication with our group), 2019-20	
	Author and co-editor in <i>The User's Guide Project: Giving Experiential Context to Research Papers</i>	
PROFESSIONAL DEVELOPMENT	Whistling Vivaldi Discussion on Inclusion and Belonging <i>Undergraduate Council Discussion, breakout room facilitator</i>	fall 2022
	Getting Students into the Philadelphia Community <i>CTL Faculty Conversation</i>	spring 2022
	Inclusive Teaching Seminar <i>CTL yearlong monthly seminar</i>	2019-20
DEPARTMENT SERVICE	Major advisor	2023-

	Directed Reading Program Faculty Mentor	2019-
	Graduate Admissions Committee	2018-19, 2019-20, 2020-21, 2021-22, 2022-23
	Prize Committee	2018-19, 2023
	Prize Committee, Chair	2019-20, 2020-21, 2021-22, 2023-24
SERVICE TO THE UNIVERSITY	Penn Chapter of the Prison Teaching Initiative Collaboration	2021-
	Committee on Undergraduate Education	2024-25
	FAIT Project Leadership Team	2024-
	Faculty Advisory Committee	
	Graduate Certificate in Community-Engaged STEM	2023-
	Faculty Director, Fisher-Hassenfeld House	2025 -
	Interim Faculty Director, Fisher-Hassenfeld House	2023-25
	Faculty House Fellow, Fisher-Hassenfeld House	spring 2023
	SAS Teaching Awards Selection Committee	2024-25
	Faculty House Fellow, Harrison House	2020-22
	Faculty Advisory Board	
	Netter Center for Community Partnerships	2022-
	Natural Science and Math Panel (as invited junior colleague)	2023-25
	Penn Graduate Community-Engaged Research Mentorship Program, Netter Center	
	Senior Faculty Mentor	summer 2022
Faculty Mentor	summer 2021	