

# Mona Merling

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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	<b>University of Pennsylvania</b> , Philadelphia, PA Associate Professor, July 2024 - Assistant Professor, July 2018 - June 2024  <b>Johns Hopkins University</b> , Baltimore, MD J.J. Sylvester Assistant Professor, July 2014 - June 2018 Postdoctoral mentor: Jack Morava	
EDUCATION	<b>University of Chicago</b> , Chicago, IL Ph.D. in Mathematics, June 2014 Advisor: Peter May M.S. in Mathematics, June 2010  <b>Bard College</b> , Annandale, NY B.A. in Mathematics, May 2009	
INVITED ACADEMIC VISITS	<b>Isaac Newton Institute</b> , Cambridge, UK Equivariant Homotopy Theory in Context Program Guest, May-June 2025  <b>Mathematics Sciences Research Institute</b> , Berkeley Floer Homotopy Theory Program, Research Member, September-December 2022  <b>Mathematics Sciences Research Institute</b> , Berkeley Summer Stay, July 2020 (canceled due to COVID)  <b>Isaac Newton Institute</b> , Cambridge, UK K-theory, Algebraic Cycles and Motivic Homotopy Theory Program Guest, (remote June 2022, postponed from 2020 due to COVID)  <b>Max Planck Institute for Mathematics</b> , Bonn, Germany Research Guest, July-November 2018  <b>Isaac Newton Institute</b> , Cambridge, UK Homotopy Harnessing Higher Structures Program Guest, July 2018 (2 weeks)  <b>Hausdorff Institute for Mathematics</b> , Bonn, Germany Junior Trimester Program Guest, September-October 2016	

**University of Copenhagen, Denmark**

Invited Visitor, August 2013 (2 weeks)

RESEARCH GRANTS AND AWARDS	AWM-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 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	2013
VOLUMES EDITED	New directions in homotopy theory, (co-edited with N. Kitchloo, J. Morava, E. Riehl,	

W. S. Wilson), *Contemporary Mathematics*, Volume 707, (2018).

PUBLICATIONS &  
PREPRINTS

Algebraic  $K$ -theory for squares categories (with J. Campbell, J. Kuisper, and I. Zakharevich), submitted, [arXiv:2310.02852](#) (2023), 28 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), 65 pages.

A trace map on higher scissors congruence groups (with A.M. Bohmann, T. Gerhardt, C. Malkiewich, and I. Zakharevich), to appear in *International Mathematics Research Notices*, [arXiv:2303.08172](#) (2023), 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), to appear in *Journal of Geometry and Physics*, [arXiv:2108.08961](#) (2022), 43 pages.

Multiplicative equivariant  $K$ -theory and the Barratt-Priddy-Quillen theorem, (with B. Guillou, J.P. May and A. Osorno), *Advances in Mathematics*, 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      A brief illustrated guide to ‘scissors congruence’ – an ancient geometric idea that’s still fueling cutting-edge mathematical research (with M. Calle), *The Conversation*, (2023).

   Encouraging Curiosity, Self-Directed Study and Belonging in Penn Students: The Directed Reading Program in Math, *Penn Almanac (Talk about Teaching and Learning)*, Volume 69 Issue 25 (2023).

   Widening the Pipeline (with J. Hartmann), *Notices of the AMS (Early Career section)*, Volume 67, Number 11, (2020).

   The User’s Guide Project: Giving Experiential Context to Research Papers, (with C. Malkiewich, D. White, L. Wolcott, and C. Yarnall), *Journal of Humanistic Mathematics*, Volume 5 Issue 2 (2015), pages 186–188.

PRESS      New Math: The Directed Reading Program pairs undergraduates with graduate student mentors for advanced learning, *OMNIA magazine*      2020

   Math education and engagement in West Philadelphia, *Penn Today*      2021

   Penn Arts & Sciences: Making a Difference in Global Communities and Klein Family Social Justice Grants, *Penn Almanac*      2021

   Changing the Equation for the Incarcerated, *OMNIA magazine*, pages 46-47      2023

PHD STUDENT SUPERVISION      Thomas Brazelton, University of Pennsylvania, PhD 2023 (co-advised with Kirsten Wickelgren at Duke)

   Elijah Gunther, University of Pennsylvania, PhD 2023

   Andres Mejia, University of Pennsylvania, PhD 2024

   Maxine Calle, University of Pennsylvania, expected PhD completion 2025

   Kartik Tandon, University of Pennsylvania, expected PhD completion 2027

   Fangji Liu, University of Pennsylvania, expected PhD completion 2028

Albert (Jinghui) Yang , University of Pennsylvania, expected PhD completion 2028

MASTERS THESIS SUPERVISION	Saad Slaoui, University of Pennsylvania	spring 2019
	Yinfeng Lu, University of Pennsylvania	spring 2023
	Zhong Zhang, University of Pennsylvania	2023-24
	Oualid Merzouga, University of Pennsylvania	spring 2023
	Robin Murugadoss, University of Pennsylvania	2023-24
	Frenly Espino, University of Pennsylvania	2023-24
	Chayansudha Biswas, University of Pennsylvania	2023-24
	Yaojie Hu, University of Pennsylvania	spring 2024

POSTDOC MENTORSHIP	Maximilien Peroux, University of Pennsylvania	2020-23
	Ningchuan Zhang, University of Pennsylvania	2020-23

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, <i>BA level class</i> )
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**

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

Equivariant homotopy theory in context program, Isaac Newton Institute, Cambridge, UK, January 2025 (upcoming)

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

New Horizons for Equivariance in Homotopy Theory, Isaac Newton Institute, Cambridge, UK, May 2025 (upcoming)

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.

$(\infty, n)$ -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**

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**

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

### **SERVICE**

Prison Teaching Initiative, volunteer teacher for accredited college math classes, spring 2021-present

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

Co-organizer (with Angela Gibney, Julia Hartmann, and Yumeng Ou), UP GRADE workshop for underrepresented groups in mathematics, Spring 2024

Team Leader (with Julia Semikina), Collaborative workshop on scissors congruence and algebraic  $K$ -theory, 2023-24

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

Co-organizer (with Julia Hartmann, Angela Gibney, Yumeng Ou), FEW (Fund to Encourage Women) event, April 2023

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

Co-organizer (with Manuel Rivera and Jeremy Miller), Algebraic Structures in Topology Conference, San Juan, Puerto Rico, 2024

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

Co-organizer (with Alexander Kupers, Thomas Goodwillie, Manuel Krannich), Spaces of manifolds: algebraic and geometric approaches, Banff International Research Sta-

tion, 2023

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

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

Co-organizer (with Jonathan Block), Summer Bridge Workshop in Algebraic Topology, University of Pennsylvania, Summer 2021

Co-organizer (with Herman Gluck and Davi Maximo), Geometry-Topology Seminar, University of Pennsylvania, Spring 2019-present

Co-organizer (with Herman Gluck and Davi Maximo), PATCH at Penn, University of Pennsylvania, Spring 2019-present

Co-organizer (with Herman Gluck), Summer Bridge Workshop in Algebraic Topology, University of Pennsylvania, Summer 2020

Co-organizer (with Andrew Blumberg, Anna Marie Bohmann, Akhil Mathew, Emily Riehl, and Dylan Wilson), Midwest Topology Seminar/ May Day 2019, University of Chicago, October 2019

Co-organizer (with Julia Hartmann), Workshop on Math Advice and Networking at the University of Pennsylvania (WOMAN UP), September 2019

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

Co-organizer (with Thomas Brazelton), Directed Reading Program, PILOT University of Pennsylvania chapter, fall 2019

Organizer, Directed Reading Program, PILOT Johns Hopkins chapter, 2017-2018

Future Scholars Program (wrote yearly exam and selected the Baltimore high schoolers for math classes at JHU), Johns Hopkins, 2016&2017

Volunteer, John Rurah Middle School Math Lab, Baltimore, Spring 2017

Co-organizer (with Nitu Kitchloo, Jack Morava, Emily Riehl, and Steve Wilson), Second Mid-Atlantic Topology Conference, Johns Hopkins, March 2016

Organizer, Johns Hopkins Algebraic Topology Seminar, Johns Hopkins, 2015-2018

Co-organizer (with Carl McTague), Johns Hopkins Algebraic Topology Seminar, Johns Hopkins, 2014-2015

Author and co-editor in *The User's Guide Project: Giving Experiential Context to Research Papers*

Committee member and mentor for the Directed Reading Program, University of

Chicago, 2012-2014

Co-organizer (with Evangelia Gazaki, Chris Skalit, and Preston Wake), Algebraic K-theory Student Seminar, University of Chicago, spring 2013

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	2023-24
	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
	Faculty Advisory Committee	
	Graduate Certificate in Community-Engaged STEM	2023-
	Interim Faculty Director, Fisher-Hassenfeld House	2023-
	Faculty House Fellow, Fisher-Hassenfeld House	spring 2023
	SAS Teaching Awards Selection Committee	spring 2024
	Faculty House Fellow, Harrison House	2020-2022
	Faculty Advisory Board	
	Netter Center for Community Partnerships	2022-
	Natural Science and Math Panel (as invited junior colleague)	spring 2023
	Penn Graduate Community-Engaged Research Mentorship Program, Netter Center	
	Senior Faculty Mentor	summer 2022
	Faculty Mentor	summer 2021