

ELLEN E. EISCHEN

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<http://www.elleneischen.com>

ABOUT MY WORK

I am a mathematician with broad interests. My research lies primarily in number theory. My research contributions especially concern algebraic and p -adic aspects of *automorphic forms* and *L-functions*, objects that encode properties of certain families of data. I contribute significant efforts toward broadening participation in math and engaging with broader communities.

EMPLOYMENT IN MATHEMATICS DEPARTMENTS

- **University of Oregon**, 2015–present
 - Associate Professor (tenured), 2017–present
 - Assistant Professor, 2015–2017
 - **The University of North Carolina at Chapel Hill**, Assistant Professor, 2012–2015
 - **Northwestern University**, Ralph Boas Assistant Professor, 2009–2012
Postdoctoral mentor: Matthew Emerton (now at the University of Chicago)
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EDUCATION

- **University of Michigan, Ann Arbor**, PhD in Mathematics, 2009
Dissertation advisor: Christopher Skinner (now at Princeton University)
 - **Princeton University**, A.B. *summa cum laude* in Mathematics, 2003
Senior thesis advisor: Andrew Wiles (now at the University of Oxford)
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FUNDING AWARDED

Unless otherwise indicated, I am the sole PI on each grant listed below.

- **National Science Foundation grants awarded**
 - NSF Grant DMS-2302011, \$250,000, number theory research grant, 2023–2026
 - NSF Grant DMS-1751281, \$400,000, CAREER grant, 2018–2023
 - NSF Grant DMS-1559609, \$135,000, number theory research grant, 2015–2019
 - NSF Grant DMS-1249384, \$98,035, number theory research grant, 2012–2015
 - NSF Grant DMS-1557642, \$100,000 (\$19,500 to E. Eischen, with rest divided among other PIs: B. Chapman, D. Gotz, R. Hageman Blair, M. Jacob), QuBBB (Quantitative Approaches to Biomedical Big Data) grant through NIH BD2K (Big Data to Knowledge) initiative in partnership with NSF DMS, 2015–2017
 - NSF Grant DMS-1601959, \$22,840, number theory conference grant, 2016–2017

- **Additional funding awarded**

- CAS Program Grant, \$5,000, University of Oregon, 2022
- NSA Mathematical Sciences Program conference grant, \$25,000, 2021–2023
- Williams Fund, \$7,530, University of Oregon, 2019–2022
- NSA-AMS Young Investigators Award (declined, to accept NSF grant), 2015
- Simons Collaboration Grant (declined, to accept NSF grant), 2015
- Served as faculty advisor on Kenan-Biddle Grant, \$5,460, led by student organizers H. Diaz, C. Hsu, and D. Muckerman, UNC and Duke University, 2015
- US Junior Oberwolfach Fellow, 450 euros, July 2014
- Junior Faculty Development Award, \$7,500, UNC, 2013
- AWM-NSF Travel Grant, \$1,087, Association for Women in Mathematics, June 2012
- Bell Labs Graduate Research Fellowship, \$152,416.21, 2003–2008

HONORS AND AWARDS

- Excellence in Remote Teaching Award, University of Oregon, 2020
- Excellence in Teaching Award, Northwestern University Mathematics Department, 2011
- *Phi Beta Kappa*, Princeton University, 2003
- The Peter A. Greenberg '77 Prize (awarded to a senior “for outstanding accomplishments in mathematics”), Princeton University, 2003
- *Sigma Xi* (research honor society), Princeton University, 2003

BIBLIOGRAPHY

- **Scholarly papers**

Peer-reviewed or to be peer-reviewed by anonymous referees.

- *Automorphic forms on unitary groups*. E. Eischen. 57 pages. Submitted. Most recent version: <https://www.dropbox.com/s/0f43x6qa6y8ixqg/ArizonaWinterSchoolEischenEditJanuary2023.pdf>. Older version on the arXiv.
- *Archimedean zeta integrals for unitary groups*. E. Eischen and Z. Liu. 29 pages. Submitted. Most recent version: <https://www.dropbox.com/s/daa1x4jjfbq6tm1/UnitaryArchimedeanSeptember2021.pdf>. Older version on the arXiv.
- *Entire theta operators at unramified primes*. E. Eischen and E. Mantovan. International Mathematics Research Notices (2022), No. 21, 16405–16463. <https://doi.org/10.1093/imrn/rnab190>
- *p-adic families of automorphic forms in the μ -ordinary setting*. E. Eischen and E. Mantovan. American Journal of Mathematics. Vol. 143 (2021), No. 1, 1–52. <https://doi.org/10.1353/ajm.2021.0006>

Scholarly papers, continued

- *An Introduction to Eisenstein Measures*. E. Eischen. *Journal de Théorie des Nombres de Bordeaux*. Vol. 33 (2021), No. 3.1, 779–808.
<http://doi.org/10.5802/jtnb.1178>
- *Differential operators mod p : analytic continuation and consequences*. E. Eischen, M. Flander, A. Ghitza, E. Mantovan, and A. McAndrew. *Algebra & Number Theory*. Vol. 15 (2021), No. 6, 1469–1504. <http://doi.org/10.2140/ant.2021.15.1469>
- *p -adic L -functions for unitary groups*. E. Eischen, M. Harris, J.-S. Li, and C. Skinner. *Forum of Mathematics, Pi*. Vol. 8 (2020), E9, 160 pages.
<http://doi.org/10.1017/fmp.2020.4>
- *Applications of nonarchimedean developments to archimedean nonvanishing results for twisted L -functions*. E. Eischen. *Math. Res. Lett.* 27 (2020), no. 4, 973–1002.
<https://dx.doi.org/10.4310/MRL.2020.v27.n4.a2>
- *A gallery of Gaussian periods*. E. Eischen and S. Garcia. *Proceedings of Bridges 2020: Mathematics, Art, Music, Architecture, Education, Culture*. Carolyn Yackel, Robert Bosch, Eve Torrence, and Kristóf Fenyvesi, eds., Tessellations Publishing (2020), 243–248. <http://archive.bridgesmathart.org/2020/bridges2020-243.html>
Associated computer app: <http://www.elleneischen.com/gaussianperiods.html>
- *Bootstrapping estimates of stability for clusters, observations, and model selection*. H. Yu, B. Chapman, A. Di Florio, E. Eischen, D. Gotz, M. Jacob, and R. Hageman Blair. *Computational Statistics*. Vol. 34 (2019), Issue 1, 349–372.
<http://doi.org/10.1007/s00180-018-0830-y>
Associated R package: <https://cran.r-project.org/web/packages/bootcluster/bootcluster.pdf>
- *Differential operators and families of automorphic forms on unitary groups of arbitrary signature*. E. Eischen, J. Fintzen, E. Mantovan, and I. Varma. *Doc. Math.* 23 (2018), 445–495. <http://doi.org/10.25537/dm.2018v23.445-495>
- *p -adic Eisenstein series and L -functions of certain cusp forms on definite unitary groups*. E. Eischen and X. Wan. *J. Inst. Math. Jussieu*. 15 (2016), no. 3, 471–510.
<http://dx.doi.org/10.1017/S1474748014000395>
- *Differential operators, pullbacks, and families of automorphic forms*. E. Eischen. *Ann. Math. Qué.* 40 (2016), no. 1, 55–82.
<http://dx.doi.org/10.1007/s40316-015-0049-z>
- *p -adic q -expansion principles on unitary Shimura varieties*. A. Caraiani, E. Eischen, J. Fintzen, E. Mantovan, and I. Varma. *Directions in Number Theory: Proceedings of the 2014 WIN3 Workshop*. Springer International Publishing (2016), 197–243.
http://dx.doi.org/10.1007/978-3-319-30976-7_7
- *A p -adic Eisenstein measure for unitary groups*. E. Eischen. *J. Reine Angew. Math.* 699 (2015), 111–142. <http://dx.doi.org/10.1515/crelle-2013-0008>
- *A p -adic Eisenstein measure for vector-weight automorphic forms*. E. Eischen. *Algebra Number Theory*. 8 (2014), No. 10, 2433–2469.
<http://dx.doi.org/10.2140/ant.2014.8.2433>

Scholarly papers, continued

- *p-adic differential operators on automorphic forms for unitary groups*. E. Eischen. Ann. Inst. Fourier (Grenoble). 62, No. 1 (2012), 177–243.
<http://dx.doi.org/10.5802/aif.2704>
- *Decomposition of almost complete tripartite graphs into two isomorphic factors of fixed diameter*. E. Eischen. Discrete Math. 306 (2006), 745–761.
<http://dx.doi.org/10.1016/j.disc.2006.02.009>
- *Patterns, linesums, and symmetry*. E. Eischen, C. Johnson, K. Lange, and D. Stanford. Linear Algebra Appl. 357 (2002), 273–289.
[http://dx.doi.org/10.1016/S0024-3795\(02\)00417-2](http://dx.doi.org/10.1016/S0024-3795(02)00417-2)

- **PhD dissertation**

- *p-adic differential operators on automorphic forms for unitary groups*. E. Eischen. PhD dissertation. University of Michigan, 2009. 130 pages. http://deepblue.lib.umich.edu/bitstream/2027.42/63860/1/eeischen_1.pdf.

- **Non-technical articles I was invited to write for the broader community**

- *Planting Seeds for Community*. E. Eischen and C. Hsu. Notices of the American Mathematical Society. Vol. 69 (2022), no. 10, 775–777.
<https://www.ams.org/journals/notices/202210/rnoti-p1738.pdf?adat=November%202022&trk=2563&cat=career&galt=career>.
- *The Seattle Universal Math Museum: Transforming Perceptions of Math*. E. Eischen. MAA FOCUS. Oct/Nov 2022. Vol. 42, No. 5, 6–7.
https://digitaleditions.walsworth.com/publication/?i=762972&article_id=4354785&view=articleBrowser
- *Illustrating Mathematics*. E. Eischen. Review of *Illustrating Mathematics*, by D. Davis. Math Horizons. Vol. 29 (2022), no.1, 29–29.
<http://doi.org/10.1080/10724117.2021.1940509>
- *Creativity Counts*. E. Eischen. Math Buffet column in the *Girls' Angle Bulletin*. Vol. 15 (2021), no. 1, 12–16 and cover image.
<http://www.girlsangle.org/page/bulletin-archive/GABv15n01E.pdf>
- *Moving Ahead in Your Research*. E. Eischen. Notices of the American Mathematical Society. Vol. 66 (2019), no. 2, 194–195. <http://dx.doi.org/10.1090/noti1791>
- *Improv-ing a Mathematician's Professional Skills*. E. Eischen. MAA FOCUS. Dec 2016/Jan 2017. Vol. 36, No. 6, 22–24. <http://bit.ly/2ikwVg9>
- *5 Key Takeaways from the Innovations Lab*. E. Eischen. August 2015. Report on the first NIH/NSF Innovations Lab. <http://bit.ly/2igAjwK>

OTHER PROJECT: APP FOR APPLE COMPUTERS

The **Gaussian Periods** app is available on the Mac App Store, as of June 2022. Undergraduate Nat Milnes collaborated with me on this as part of his summer 2021 research project.
<https://apps.apple.com/us/app/%20gaussianperiods/id1622050577>

UPCOMING AND RECENT PRESENTATIONS

- **Invited lecture series**

- Arizona Winter School, March 2022 (4 lectures on automorphic forms beyond GL_2)
- Iwasawa 2019, Bordeaux, France, June 2019 (4 lectures on p -adic L -functions)
- Introductory Workshop on Euler Systems and Special Values of L -functions, EPFL, Switzerland, August 2017 (3 lectures on p -adic L -functions)

- **Invited research talks during past 6 years**

Talks from March 2020 through May 2022 were remote, due to the pandemic.

- Plenary Lecture, TORA, Oklahoma, October 2023
- “Number Theory and Combinatorics in Duluth” conference in honor of Joe Gallian’s 80th birthday, Duluth, MN, August 2023
- Colloquium, University of Utah, April 2023
- Number Theory Seminar, University of Utah, April 2023
- Shimura Varieties and L -functions workshop, MSRI/SLMath, March 2023
- Number Theory Seminar, Caltech, February 2023
- Colloquium, University of California, Berkeley, November 2022
- Colloquium, Temple University, September 2022
- Philadelphia Area Number Theory Seminar, September 2022
- “Community-building in the Langlands program” research conference, University of Bonn, Germany, August 2022
- Algebra and Number Theory Seminar, Yale University, May 2022
- Algebra and Number Theory Seminar, University College Dublin, Ireland, April 2022
- Number Theory Seminar, University of British Columbia, December 2021
- Algebra and Number Theory seminar, Penn State, April 2021
- Algebra and Discrete Mathematics seminar, University of California, Davis, April 2021
- Colloquium, Penn State, February 2021
- Conference on automorphic forms, automorphic representations, Galois representations, and related topics, RIMS, Kyoto, Japan, January 2021
- Colloquium, University of Arizona, October 2020
- Conference on Serre Weights Conjectures and Geometry of Shimura Varieties, Centre de Recherches Mathématiques, Montréal, Canada, September 2020
- Pacific Rim Conference in Mathematics, UC Berkeley, August 2020
- Colloquium, Rice University, February 2020
- Joint Colloquium, Harvard University, November 2019
- Algebra and Number Theory Seminar, Brown University, November 2019
- Automorphic p -adic L -functions and Regulators conference, Lille, France, October 2019

Invited research talks during past 6 years, continued

- Heilbronn Number Theory Seminar, University of Bristol, England, October 2019
- AMS special session on Recent Developments in Automorphic Forms (45-minute talk), Spring Central and Western Joint Sectional Meeting, University of Hawaii, March 2019
- AMS special session on Advances in Iwasawa Theory, Spring Central and Western Joint Sectional Meeting, University of Hawaii, March 2019
- Number Theory Seminar, Caltech, November 2018
- Workshop on Special Values of Automorphic L -functions and Associated p -adic L -Functions, BIRS-CMO, Oaxaca, Mexico, October 2018
- Number Theory Seminar, Stanford University, May 2018
- BC-MIT Number Theory Seminar, MIT, May 2018
- Bellairs workshop on Unitary Shimura Varieties & Modular Forms, Barbados, May 2018
- Number Theory Seminar, University of Chicago, March 2018
- Paul J. Sally Midwest Representation Theory Conference in honor of Freydoon Shahidi's 70th birthday, Purdue University, October 2017
- Colloquium, University of Southern California, September 2017
- Special Cycles on Shimura Varieties and Iwasawa Theory conference, EPFL, Switzerland, August 2017
- Mathematical Congress of the Americas, special session on Galois Representations and Automorphic Forms, Montreal, Canada, July 2017
- The Quebec-Vermont Number Theory Seminar, McGill University, May 2017
- Special session on Automorphic Forms and Arithmetic, AMS sectional meeting, New York, NY, May 2017

- **Public Lecture**

- Creativity Counts: Math+Art, Jordan Schnitzer Museum of Art, May 2021
<https://www.youtube.com/watch?v=nrzNQdfHd1E&t=609s>

- **Invited expository talks (for students, etc) during past 6 years**

- Plenary Lecture, Berkeley RTG Undergraduate Conference, April 2023
- AWM-RTG Lecture Series, University of Utah, April 2023
- Colloquium, Swarthmore College, October 2022
- TATERS seminar, Boise State University, April 2022
- Maseeh Colloquium, Portland State University, May 2021
- Open Neighborhood Seminar, Harvard University, November 2019
- Applied Science Program, The Pennington School, NJ, September 2019
- REU, Oregon State University, July 2019
- Faculty Perspectives, IntroDUCKtion, U. Oregon, June 2018 and July 2019
- The North Star Lectures, University of Oregon, May 2019
- Undergraduate Math Club, Occidental College, Los Angeles, November 2018
- Colloquium, Reed College, October 2018

PARTICIPATION IN COLLABORATIVE RESEARCH WORKSHOPS DURING PAST 6 YEARS

- Organizer of Research Innovations and Diverse Collaborations, U. Oregon, August 2022
<https://sites.google.com/view/automorphic2021/collaborative-research-workshop>
- Leader of a project associated with my lectures at the Arizona Winter School, March 2022
- SQuaRE collaborative research meeting on an algebraic number theory project, American Institute of Mathematics, San Jose, CA, January 2018

TEACHING RECORD DURING PAST 6 YEARS

- **Course development**

- Designed Math and the Creative Process: A Participatory Exploration of Number Theory, undergraduate course Math 199, first offered remotely in Spring 2020 and in-person in Spring 2022
<https://pages.uoregon.edu/eeischen/CreativityCounts/course/>

- **Courses taught during past 6 years through future**

- Math and the Creative Process: A participatory exploration of number theory (Math 199), U. Oregon, spring 2020 and 2022 (new course I developed and designed from scratch: <https://pages.uoregon.edu/eeischen/CreativityCounts/course/>)
- Introduction to Modular Forms (Math 684), U. Oregon, fall 2021
- Graduate Algebraic Number Theory (Math 607), U. Oregon, 2-quarter sequence, fall 2020 and winter 2021
- Introduction to Abstract Algebra II (Math 445/545), U. Oregon, winter 2020
- Graduate Algebraic Number Theory (Math 607), U. Oregon, 2-quarter sequence, winter and spring 2019
- Introduction to Abstract Algebra (Math 444/544, 445/545, 446/546), U. Oregon, 3-quarter sequence 2017–2018
- Introduction to Abstract Algebra III (Math 446/546), U. Oregon, spring quarter 2017
- Linear Algebra (Math 441/541), U. Oregon, spring quarter 2017
- Mathematical Methods of Statistics I (Math 461/561), U. Oregon, fall quarter 2016

- **Reading courses**

I supervise graduate reading courses nearly every term, including a 7-participant reading course in Winter '22 to help students prepare for the 2022 Arizona Winter School, as well as supervising Vitulli Scholar Allegra Martino in Fall '21.

SUPERVISING RECORD

• Postdoctoral scholars supervised

- Maria Fox, NSF Postdoctoral Research Fellow (2021–2022) and Paul Olum Postdoctoral Scholar (2019–2021), U. Oregon, 2019–2022
Next position: Tenure-Track Assistant Professor, Oklahoma State University
- Vivek Pal, Postdoctoral Scholar in Number Theory, U. Oregon, 2016–2017
Next position: Visiting Assistant Professor, Columbia University

• PhD dissertations supervised

- Catherine Hsu, University of Oregon, PhD 2018
Present position: Tenure-Track Assistant Professor, Swarthmore College
First position: Heilbronn Research Fellow, University of Bristol, 2018–2020
- Jon Aycock, University of Oregon, PhD 2022
First position: Stefan E. Warschawski Visiting Assistant Professor, UCSD, 2022–2025
- Sean Haight, University of Oregon, current PhD student
*Awarded Anderson Research Award (summer research appointment), 2021
- Samantha Platt, University of Oregon, current PhD student
*Awarded Paul and Harriet Civin Memorial Graduate Student Award and E. M. Johnson Memorial Scholarship (summer research appointment), 2022
- Francis Dunn, University of Oregon, current PhD student

• Masters project supervised

- Catherine Hsu, The University of North Carolina at Chapel Hill, 2015

• Undergraduate students supervised

- Nat Milnes, algebraic number theory project, University of Oregon, summer 2021
- Robert Macy, data science project, University of Oregon, spring 2016
Graduate school: University of Michigan’s computer science program
- Max Dickinson, data science project, University of Oregon, spring 2016
- Heidi van Batenburg-Stafford, senior honors thesis, Northwestern University, 2012

EDITORIAL WORK

- Member of Editorial Board for the journal *Essential Number Theory*, 2021–present
- Member of Editorial Board for the journal *Research in Number Theory*, 2020–present
- Co-editor of *Directions in Number Theory: Proceedings of the 2014 WIN3 Workshop*. Springer International Publishing (2016).

REVIEWING AND SERVING ON PANELS

- Panelist and reviewer for funding agencies
 - Refereeing and quick opinions for research journals
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CONFERENCE AND WORKSHOP ORGANIZATION

- Co-organizing (with H. Darmon, B. Howard, D. Loeffler, C. Skinner, S. Zerbes, W. Zhang) semester program on Euler Systems and Special Values of L -functions, MSRI, Spring 2023
- Co-organizing (with H. Darmon, B. Howard, E. Mantovan) Introductory Workshop on Euler Systems and Special Values of L -functions, MSRI, January 2023
- Co-organizing (with H. Darmon, B. Howard, E. Mantovan) Connections Workshop on Euler Systems and Special Values of L -functions, MSRI, January 2023
- Co-organizing (with S.W. Shin, L. Xiao) Number Theory and Arithmetic Geometry session, Pacific Rim Mathematical Association Congress, Vancouver, Canada, December 2022
- Organizing 2 weeklong workshops: collaborative research workshop to promote diverse collaborations and instructional workshop on recent developments, U. Oregon, July and August 2022 <https://sites.google.com/view/automorphic2021>
- Co-organizing (with M. Dimitrov, A. Jorza) weeklong instructional workshop and weeklong conference on p -adic L -functions and eigenvarieties, Notre Dame, July 2022
- Co-organized (with D. Barrera Salazar, L. Alberto Lomelí, A. Pacetti, C. Sorensen) session on Galois representations and automorphic forms, Mathematical Congress of the Americas, Buenos Aires, Argentina, July 2021
- Co-organized (with J. Kamnitzer, A. Kontorovich, K. Stange) Illustrating Algebra and Number Theory workshop, week-long workshop as part of the semester-long ICERM program Illustrating Mathematics, Brown University, Providence, RI, October 2019
- Co-organized (with Y. Liu, L. Xiao, W. Zhang) AMS Special Session on Special Values of L -functions and Arithmetic Invariants in Families, Spring Eastern Sectional Meeting, University of Connecticut, Hartford, CT, April 2019
- Co-organized (with A. Bucur) the AMS/MAA Joint Mathematics Meetings AWM Workshop (special session on number theory), Atlanta, GA, January 2017
- Co-organized (with J. Rouse, K. Thompson) the 30th Automorphic Forms Workshop, Wake Forest University, Winston-Salem, NC, March 2016

SELECT SERVICE DURING PAST 6 YEARS

For editorial work, reviewing, and conference/workshop organization, see above.

• National committees

- MAA Committee on the Earle Raymond Hedrick Lectures, 2022–2025
- Advisory Board and Exhibits Committee, Seattle Universal Math Museum, 2021–present
- AMS Liaison Committee with the American Association for the Advancement of Science (AAAS), 2020–2022
- AMS Committee on the Profession, 2020–2023
 - Subcommittee to analyze the report from Committee on Professional Ethics (COPE)
 - Subcommittee to organize panel on COVID and the Profession for JMM 2022
 - Subcommittee to organize panel on Careers Outside Academia for JMM 2023
 - Subcommittee on mitigating the effects of COVID-19

• University committees

- Undergraduate Research Opportunity Program (UROP) Faculty Advisory Committee, UO, 2021–2022
- Search Committee for Director of McNair Scholars Program, UO Division of Undergraduate Studies, Fall 2018

• Department committees

- Faculty supervisor, Oregon Undergraduate Mathematics Club, 2018–present
- Teaching Effectiveness Committee, UO Math Department, 2021–2022
- At-Large Graduate Affairs Committee, UO Math Department, 2018–2019, 2021–2022
- Graduate Advising Committee, UO Math Department, 2019–2021
- PhD Committee, UO Math Department, 2019–2020
- Open Tenure-Track Search Committee, UO Math Department, 2018–2019
- Executive Committee, UO Math Department, 2018–2019

• Thesis and dissertation committees

- Math graduate students' PhD committees (for PhD students Jon Aycock, Corey Brooke, Christophe Dethier, Francis Dunn, Sean Haight, Catherine Hsu, Sarah Frei, Greg Knapp, Samantha Platt, Leila Vaden), Oregon, 2015–present
- Outside committee member for 1 UO Chemistry Department PhD candidates (Jenna Mancuso), 2018–present
- Outside committee member for 2 UO Computer Science Department PhD candidates (Nicole Marsaglia, Abhishek Yenpure), 2020–present
- Committee member for senior theses (Sasha Shmakov, UO Math Department; Sam Calvert, UO Honors College), 2018

- **Seminar Organization at the University of Oregon**

- Founded and chaired the Oregon Distinguished Mathematics Lectures for Students, U. Oregon, 2015–2022 (website: <http://blogs.uoregon.edu/mathisawesome/>)
- Committee chair, Niven and Moursund Distinguished Lectures, U. Oregon, 2017–2018
- Co-organized the University of Oregon Number Theory Seminar, 2016–2021

ADDITIONAL SIGNIFICANT OUTREACH AND EDUCATIONAL ACTIVITIES

Additional activities in which I have taken a leadership role or contributed substantial time

- **Museums**

- Organized exhibit *Creativity Counts: Possibilities Shaped by Constraints of Arithmetic* to share the beauty of mathematics with the public, opened Spring 2021 at the Jordan Schnitzer Museum of Art (<https://jsma.uoregon.edu/CreativityCounts>)
 - * Virtual tour: <https://mpembed.com/show/?m=FGvT8EzPQpy&mpu=885>
- Member of the Advisory Board and the Exhibits Committee, Seattle Universal Math Museum, 2021–present

- **Reading room**

- Spearheaded efforts to create reading room for women in math and facilitate reading room discussions about gender and math, U. Oregon, 2017–present

- **Integrating principles of improv to build community in undergraduate classes**

- Collaborating with Heather Barnes (from Improv@Work, Second City, Museum of Science and Industry, and Shedd Aquarium), consultant on my NSF CAREER grant, on adapting tools from improv for STEM pedagogy and communication, 2018–present
- Panelist on webinar Building a Community of Learners (in remote math classes), TPSE/ AMATYC, August 2020 https://www.youtube.com/watch?v=P_EhnoK8_Ms
- Design and lead remote and in-person workshops and presentations on improv exercises for building community and engagement in undergraduate classes, e.g. *Whose Math Is It Anyway? Improv in an Undergraduate Mathematics Class*, 2019–present
Remote presentations for National Institute on Scientific Teaching, St. Mary's College of California, Bowling Green State University, Idaho State University; in-person presentations at UO for EDST 624: Methods: Scientific Problem Solving in School of Education, the English Department's Scientific and Technical Writing course, and (joint with Heather Barnes) the Teaching Engagement Program

- **STEM communication**

- Interview subject for the winning submission to the AWM/Math for America high school essay contest, 2021
<https://awm-math.org/awards/student-essay-contest/2021-student-essay-contest-results/2021-student-essay-contest-high-school-winner/>
- STEM pen pal, Letters to a Prescientist, 2019–2020
- Participant, UO Science Literacy Program communication workshops, spring 2017

SELECT MEDIA INTERVIEWS

- *Oregon professors focus on equity, accessibility in STEM*, Brittany Falkers, KGW (NBC affiliate in Portland), February 11, 2022.
<https://www.kgw.com/article/features/oregon-professors-focus-equity-accessibility-in-stem/283-a5adab25-d9f6-47bd-a906-24e68dd6ccb1>
- *Creativity Counts: An exhibit inspired by mathematical processes*, Ester Barkai, Eugene Weekly, June 24, 2021. <https://eugeneweekly.com/2021/06/24/creativity-counts/>
- *Mathematicians Find Long-Sought Building Blocks for Special Polynomials*, Kelsey Houston-Edwards, Quanta Magazine, May 25, 2021.
<https://www.quantamagazine.org/mathematicians-find-polynomial-building-blocks-hilbert-sought-20210525/>

OTHER APPOINTMENTS AND AFFILIATIONS

- **Long-term visits (at least two weeks)**
 - Research Professor, MSRI/SLMath, Berkeley, CA, spring 2023
 - Research Member, MSRI/SLMath, Berkeley, CA, fall 2022
 - Invited Research Fellow, Illustrating Mathematics, ICERM, Brown University, fall 2019
 - Invited guest, Caltech, November–December 2018
 - Invited academic guest, special program on “Euler systems and special values of L -functions,” EPFL, Switzerland, August and December 2017
 - Visiting Scholar, Columbia University, spring 2014 and 2006–2008 (except fall 2007)
 - Visiting Student Research Collaborator, Princeton University, 2008–2009
- **Additional affiliations**
 - Faculty Associate, Center for Science Communication Research, U. Oregon, 2021–present
 - Member, Women’s Innovation Network, U. Oregon, 2021–present
 - Faculty Affiliate, Phil and Penny Knight Campus for Accelerating Scientific Impact, U. Oregon, 2019–present
 - Faculty Affiliate, Center for the Study of Women and Society, U. Oregon, 2019–present

PROFESSIONAL MEMBERSHIPS

AMS, AWM