Zach Teitler

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Degrees

Ph.D. (Mathematics), University of Michigan, 2005
Dissertation: Multiplier ideals of line arrangements
Advisor: Robert Lazarsfeld

B.S. (Creative Studies–Mathematics), University of California–Santa Barbara, 2000

Employment History

Associate Professor of Mathematics, Boise State University, 2014–Present

Assistant Professor of Mathematics, Boise State University, 2010–2014

Visiting Assistant Professor of Mathematics, Texas A&M University, 2007–2010

Assistant Professor of Mathematics, Southeastern Louisiana University, 2005–2008

Publications

1. Brian Harbourne, Juan Migliore, Uwe Nagel, Zach Teitler, *Unexpected hypersurfaces and where to find them*, submitted

2. Jarosław Buczyński, Kangjin Han, Massimiliano Mella, Zach Teitler, *On the locus of points of high rank*, European Journal of Mathematics, 2018

3. Theodosios Douvropoulos, Joachim Jelisiejew, Bernt Ivar Utstøl Nødland, Zach Teitler, *The Hilbert scheme of* 11 *points in* $\mathbb{A}^3$ *is irreducible*, in *Combinatorial Algebraic Geometry*, Gregory G. Smith, Bernd Sturmfels, eds., 2017, Springer

4. Zach Teitler, *Sufficient conditions for Strassen's additivity conjecture*, Illinois J. Math., 2015 (published in 2016)

5. Jarosław Buczyński and Zach Teitler, *Some examples of forms of high rank*, Collect. Math., 2016

6. Nathan Ilten and Zach Teitler, *Product ranks of the* 3×3 *permanent and determinant*, Canad. Math. Bull., 2016

7. Harm Derksen and Zach Teitler, *Lower bound for ranks of invariant forms*, JPAA, 2015

8. Kent M. Neuerburg and Zach Teitler, *Decompositions of ideals of minors meeting a submatrix*, Comm. Alg., 2016

9. Zach Teitler, *Geometric lower bounds for generalized ranks* (arXiv:1406.5145 [math.AG])

10. Nickolas Hein, Christopher J. Hillar, Abraham Martín del Campo, Frank Sottile, Zach Teitler, *The monotone secant conjecture in the real Schubert calculus* Exp. Math., 2015. (Extended version of abstract presented at MEGA 2011.)

11. Grigoriy Blekherman, Zach Teitler, *On Maximum, Typical, and Generic Ranks*, Math. Ann., 2015

12. Erik Holmes*, Paul Plummer*, Jeremy Siegert*, Zach Teitler, *Maximum Waring ranks of monomials and sums of coprime monomials*, Comm. Alg., 2016
    * undergraduate co-author

13. Weronika Buczyńska, Jarosław Buczyński, Johannes Kleppe, and Zach Teitler, *Apolarity and direct sum decomposability of polynomials*, Michigan Math. J., 2015

14. Zach Teitler, *Software for multiplier ideals*, JSAG, 2015

15. Zach Teitler and Alex Woo, *Power sum decompositions of defining equations of reflection arrangements*, J. Alg. Comb., 2015

16. Zach Teitler and Douglas A. Torrance, *Castelnuovo–Mumford regularity and arithmetic Cohen–Macaulayness of complete bipartite subspace arrangements*, JPAA, 2015

17. Weronika Buczyńska, Jarosław Buczyński, and Zach Teitler, *Waring decompositions of monomials*, J. Algebra, 2013

18. Zach Teitler, *Topological criteria for schlichtness*, Proc. Edinb. Math. Soc. (2), 2013

19. Javier Elizondo, Paulo Lima-Filho, Frank Sottile, and Zach Teitler, *Arithmetic toric varieties*, Math. Nach., 2014

20. Luis García-Puente, Nickolas Hein, Christopher J. Hillar, Abraham Martín del Campo, James Ruffo, Frank Sottile, and Zach Teitler, *The Secant Conjecture in the real Schubert calculus*, Experimental Math., 2012

21. Thomas Bauer, Cristiano Bocci, Susan Cooper, Sandra Di Rocco, Marcin Dumnicki, Brian Harbourne, Kelly Jabbusch, Andreas Leopold Knutsen, Alex Küronya, Rick Miranda, Joaquim Roé, Hal Schenck, Tomasz Szemberg, Zach Teitler, *Recent developments and open problems in linear series*, in *Contributions to Algebraic Geometry*, IMPANGA Lecture Notes, August 2012

22. Susan Cooper, Brian Harbourne, and Zach Teitler, *Combinatorial bounds on Hilbert functions of fat points in projective space*, J. Pure Appl. Algebra, 2011

23. Nero Budur, Mircea Mustaţă, and Zach Teitler, *The Monodromy Conjecture for hyperplane arrangements*, Geom. Dedicata, 2011

24. Christopher Hillar, Luis García-Puente, Abraham Martín del Campo, James Ruffo, Zach Teitler, Stephen L. Johnson, and Frank Sottile, *Experimentation at the Frontiers of Reality in Schubert Calculus*, Contemp. Math., 2010

25. J.M. Landsberg and Zach Teitler, *On the ranks of tensors and symmetric tensors*, Found. Comput. Math., 2010

26. Zach Teitler, *Bounding symbolic powers via asymptotic multiplier ideals*, Ann. Univ. Pedagog. Crac. Stud. Math., 2009

27. Ulrich Derenthal, Michael Joyce, and Zach Teitler, *A nef cone volume for generalized Del Pezzo surfaces*, Algebra & Number Theory, 2008

28. Zach Teitler, *A note on Mustaţă's computation of multiplier ideals of hyperplane arrangements*, Proc. Amer. Math. Soc., 2008

29. Zachariah C. Teitler, *On the intersection of the curves through a set of points in* $\mathbb{P}^2$, J. Pure Appl. Algebra, 2007

30. Zachariah C. Teitler, *Multiplier ideals of general line arrangements in* $\mathbb{C}^3$, Comm. Alg., 2007

Grants and Awards

1. Simons Foundation Collaboration Grants for Mathematicians (award #354574, 2015–2020, $35,000)

2. COAS Travel Grant, for travel to CMS Winter Meeting, Hamilton, Ontario, December 2014

3. COAS Travel Grant, for travel to Institute of Mathematics of the Polish Academy of Sciences, Warsaw, January 2013

4. COAS Travel Grant, for travel to AMS Sectional Meeting at University of Iowa, March 2011

5. (with W. Bangerth, R. Carroll, and F. Sottile) NSF SCREMS Grant "Cluster Computing for the Mathematical Sciences at Texas A&M University" (DMS-0922866, 2009–2010, $59,480)

6. (with Kent Neuerburg) Louisiana University Board of Regents Research Competitiveness Subprogram (RCS) grant, "Geometry and Algebra of Ideals Generated by Determinants", awarded (LEQSF(2007-10)-RD-A-28, 2007–2010, Louisiana Board of Regents, Research Competitiveness Subprogram, $59,892)

7. Southeastern Louisiana University Center for Faculty Excellence, Travel Grant for travel to University of Nebraska–Lincoln, October, 2006

8. Southeastern Louisiana University Center for Faculty Excellence, Center's Innovative Teaching Initiative (CITI) grant for travel to Project NExT, 2006–7

9. Travel Grant for Emerging Faculty, Louisiana Board of Regents/NSF, March–April 2005

10. Regents-VIGRE Graduate Fellow, University of Michigan, September 2000–April 2005

11. Raymond L. Wilder Award, University of California–Santa Barbara, Department of Mathematics, June 2000

Invited Conference Presentations

1. *A bound for the Waring rank of the determinant via syzygies*, AMS 2018 Fall Central Sectional Meeting, Ann Arbor, MI (Special Session on Commutative Algebra and Complexity), October 20–21, 2018

2. *Waring ranks*, three plenary lectures and problem session, for the *Varieties and Group Actions* workshop of the *Varieties: Arithmetic and Transformations* semester of the IMPAN (Institute of Mathematics of the Polish National Academy of Sciences), Warsaw, Poland, September 23–29, 2018

3. *Geometry of high rank loci*, Spring 2017 AMS Western Sectional, Pullman, WA (Special Session on Combinatorial and Computational Commutative Algebra and Algebraic Geometry), April 22–23, 2017

4. *Direct sum decomposability of forms*, Spring 2017 AMS Western Sectional, Pullman, WA (Special Session on Commutative Algebra), April 22–23, 2017

5. *Lower bound for ranks of invariant forms*, CMS Winter Meeting, Hamilton, Ontario, December 5–8, 2014

6. *On maximum, typical, and generic ranks*, Spring 2014 AMS Central Sectional, Lubbock, TX, April 11–13, 2014

7. *Direct sum decomposability of polynomials*, Interactions between Commutative Algebra and Algebraic Geometry II, Tulane, September 28–29, 2013

8. *Software for computing multiplier ideals*, SIAM Conference on Applied Algebraic Geometry, Colorado State University, August 1–4, 2013

9. *Direct sum decomposability of polynomials*, SIAM Conference on Applied Algebraic Geometry, Colorado State University, August 1–4, 2013

10. *Experimentation at the Frontiers of Reality in Schubert Calculus*, AAAS Pacific Division 2012 Meeting, Boise, ID, June 27, 2012

11. *Software for computing multiplier ideals*, Michigan Computational Algebraic Geometry 2012, Oakland University, May 13, 2012

12. *Ranks and Generalized Ranks*, 2011 SIAM Conference on Applied Algebraic Geometry, NCSU, October 7, 2011

13. *Software for the computation of multiplier ideals*, MEGA (Effective Methods in Algebraic Geometry), Stockholm, Sweden, June 1, 2011

14. *Ranks and generalized ranks*, Toric geometry and applications, Leuven, Belgium, June 6, 2011

15. *Ranks of polynomials*, AMS Sectional, Iowa City, March 19, 2011

16. *Combinatorial bounds for Hilbert functions and graded Betti numbers of fat point schemes*, Oberwolfach workshop on Linear Series on Algebraic Varieties, October 5, 2010

17. *Experimentation at the Frontiers of Reality in Schubert Calculus*, Joint Mathematics Meetings, January 16, 2010

18. *Experimentation at the Frontiers of Reality in Schubert Calculus*, AMS Central Section Meeting, October 18, 2009

19. (Poster) *Hilbert functions of fat point schemes*, Pan-American Advanced Study Institute (PASI) in Commutative Algebra and its Connections to Geometry, Olinda, Brazil, August 2009

20. *Experimentation at the Frontiers of Reality in Schubert Calculus*, AMS Southeastern Section Meeting, April 5, 2009

21. *Bounding Hilbert functions of fat point schemes*, AMS Fall Western Section Meeting, October 4, 2008

22. *Multiplier ideals of hyperplane arrangements*, AMS Southeastern Sectional Meeting, March 28, 2008

23. *Multiplier ideals of hyperplane arrangements*, AMS Southeastern Sectional Meeting, March 3, 2007

24. *On the intersection of the curves through a set of points in* $\mathbb{P}^2$, Joint Mathematics Meetings, January 8, 2007

Invited Seminar and Colloquium Presentations

1. *Waring ranks of homogeneous forms*, University of Washington, Algebra and Algebraic Geometry Seminar, November 21, 2017

2. *Waring ranks of homogeneous forms*, York University, November 7, 2016

3. *Waring ranks of homogeneous forms*, Fields Institute, University of Toronto, October 18, 2016

4. *Bounds for Waring rank*, McMaster University, September 19, 2016

5. *Bounds for Waring rank*, University of Minnesota, Commutative Algebra Seminar, February 18, 2016

6. *Bounds for Waring rank*, Central Michigan University, November 16, 2015

7. *Bounds for Waring rank*, University of Utah, October 6, 2015

8. *Geometric lower and upper bounds for Waring rank*, University of Arkansas, January 6, 2015

9. *Ranks of polynomials*, University of Idaho, March 27, 2014

10. *Apolarity, Waring ranks, and direct sum decomposability of polynomials*, Queen's University, January 13, 2014

11. *A geometric lower bound for rank*, IMPANGA, Warsaw, Poland, January 11, 2013

12. *Direct sum decomposability and apolarity*, MIMUW Algebraic Geometry Seminar, Warsaw, Poland, January 10, 2013

13. *Ranks of polynomials*, Cleveland State and Kent State, April 20–23, 2011

14. *Ranks of polynomials* and *Experimentation at the Frontiers of Reality in Schubert Calculus*, Idaho State University, March 31–April 1, 2011

15. *Ranks of polynomials*, University of Utah, May 30, 2011

16. *Experimentation at the Frontiers of Reality in Schubert Calculus*, University of Idaho, Feb. 3, 2011

17. *Ranks of polynomials*, University of Kentucky, February 8, 2010

18. *Ranks of polynomials*, Rice, February 2, 2010

19. *Counting curves through points with multiplicities*, Texas State University San Marcos, December 4, 2009

20. *Ranks of polynomials*, Pomona College, November 24, 2009

21. *Ranks of polynomials*, UC Santa Barbara, November 23, 2009

22. *Ranks of polynomials*, Sam Houston State University, November 18, 2009

23. *Introduction to multiplier ideals and an application to commutative algebra*, Notre Dame, November 13, 2009

24. *Ranks of polynomials*, UT Austin, October 13, 2009

25. *Arithmetic toric varieties*, UT Austin, October 13, 2009

26. *Introduction to multiplier ideals and an application to commutative algebra*, UT Arlington, October 9, 2009

27. *Ranks of polynomials*, Kansas U., September 22, 2009

28. *Ranks of polynomials*, UIUC, September 4, 2009

29. *Ranks of polynomials*, TCU, April 22, 2009

30. *Ranks of polynomials*, Texas Tech, April 17, 2009

31. *Ranks of polynomials*, Baylor, March 4, 2009

32. *Ranks of polynomials*, Purdue, February 25, 2009

33. *Experimentation at the Frontiers of Reality in Schubert Calculus*, Purdue, February 25, 2009

34. *Ranks of polynomials*, UT Arlington, February 13, 2009

35. *Bounding Hilbert functions of fat point schemes*, UIUC, October 14, 2008

36. *Multiplier ideals of hyperplane arrangements*, UT Austin, April 15, 2008

37. *Multiplier ideals of hyperplane arrangements*, Tulane, March 26, 2008

38. *On the intersection of the curves through a set of points in* $\mathbb{P}^2$, University of Nebraska, October 27, 2006

39. *On the intersection of the curves through a set of points in* $\mathbb{P}^2$, Tulane, September 25, 2006

40. *Multiplier ideals of line arrangements*, University of Utah, September 12, 2006

41. *Singularities in Algebraic Geometry*, Tulane, April 26, 2006

Selected Local Seminar Presentations

1. *High-rank and maximum-rank geometry*, AGC Seminar, Boise State University, October 6, 2017
2. *Recent* advances in Waring rank and apolarity*, AGC Seminar, Boise State University, September 22, 2017
3. *The Gessel-Viennot theorem*, AGC Seminar, Boise State University, April 7, 2017
4. *Lefschetz properties, hyperplane arrangements, inclusion matrices*, AGC Seminar, Boise State University, March 3, 2017
5. *Geometry of high rank loci*, AGC Seminar, Boise State University, January 20, 2017
6. *Arrangement apolarity*, AGC Seminar, Boise State University, February 3, 2017
7. *Random graphs*, AGC Seminar, Boise State University, January 29, 2016
8. *Strassen's additivity conjecture and bounds for Waring rank*, AGC Seminar, Boise State University, January 15, 2016
9. *Waring rank bounds*, AGC Seminar, Boise State University, September 25, 2015
10. *The slope problem*, AGC Seminar, Boise State University, April 17, 2015
11. *Using cotangent to find the sum of* $1/n^{2k}$, AGC Seminar, Boise State University, February 27, 2015

Conference, Session, and Seminar Organization See `https://sites.google.com/site/zteitler/home/events/`.

1. *Special Session on Combinatorial and Computational Commutative Algebra and Algebraic Geometry* at the Spring 2015 Western Sectional AMS Meeting, April 9-10, 2016, Salt Lake City (co-organizer)
2. *AMS Special Session on Tensor Decompositions and Secant Varieties* at the Joint Mathematics Meetings, Seattle, January, 2016 (organizer)
   6 speakers
3. Macaulay2 Workshop, Boise State University, May 27-30, 2015 (local co-organizer)
   37 participants. Supported by NSF DMS 10-02171 / NSF DMS 10-02210.
4. Western Algebraic Geometry Symposium, University of Idaho, October 11–12, 2014 (local co-organizer)
   6 speakers, 58 registered participants. Partially supported by NSF.
5. *Special Session on Combinatorial and Computational Commutative Algebra and Algebraic Geometry* at the Spring 2013 Western Sectional AMS Meeting, April 13-14, 2013, Boulder, Colorado (co-organizer)
   19 speakers

6. *Special Session on Computational and Algorithmic Algebraic Geometry* at the AMS 2011 Fall Western Section Meeting, Salt Lake City, October 22-23, 2011 (co-organizer)
   20 speakers

7. Algebra, Geometry, Cryptology (AGC) Seminar at Boise State, 2010–Present (co-organizer)
   `http://math.boisestate.edu/seminars/agc/`

8. Algebraic Geometry Seminar at Texas A&M, 2007–2010 (co-organizer)

9. *AMS Special Session on Computational Algebra and Convexity* at the Joint Mathematics Meetings, Washington, DC, January, 2009 (co-organizer)
   16 speakers

10. *Special Session on Algebraic Geometry of Matrices and Determinants* at the AMS 2008 Spring Southeastern Meeting, Baton Rouge, March 28-30, 2008 (co-organizer)
    14 speakers

11. Regional conference AGIL: Algebraic Geometry In Louisiana, 2006, 2007 (co-organizer)
    3 speakers at each event

Selected Conferences and Workshops Attended

1. Tensors in Computer Science and Geometry, Simons Institute for the Theory of Computing, Berkeley, CA, November 10–14, 2014

2. Recent Advances in Algebraic Geometry: a conference in honor of Robert Lazarsfeld's 60th birthday, University of Michigan, May 16–19, 2013

3. Western Algebraic Geometry Symposium, University of Utah, October 20–21, 2012

4. Macaulay2 workshop, Wake Forest, NC, Aug. 4–10, 2012

5. Western Algebraic Geometry Symposium, University of Washington, Seattle, April 14–15, 2012

6. IMA (Institute for Mathematics and its Applications) Special Workshop on Macaulay2, Minneapolis, July 2011

7. NCSI/EPSCoR Introduction to Parallel Programming and Cluster Computing, June 2011

8. ARCC (American Institute of Mathematics Research Conference Center) workshop on "Algebraic systems with only real solutions", October, 2010

9. MSRI workshop on *Combinatorial, Enumerative and Toric Geometry*, March, 2009

10. Park City Math Institute summer research program on "Analytic and Algebraic Geometry", July 2008

11. AMS Math Research Communities program on "Computational Algebra & Convexity", June 2008

Academic Advising — Graduate Advising

1. Stuart Nygard
   M.S. Mathematics, Boise State University, 2016.
   Thesis: *The density topology on the reals and other spaces*
   http://scholarworks.boisestate.edu/td/1143/

2. Monica Josue Agana (Co-advisor: Andrés Eduardo Caicedo)
   M.S. Mathematics, Boise State University, 2015.
   Thesis: *Classical theory of rearrangements*
   http://scholarworks.boisestate.edu/td/1039/

3. Anna Marie Megale
   M.S. Mathematics, Boise State University, 2015.
   Thesis: *The Frobenius problem*
   http://scholarworks.boisestate.edu/td/1048/

Academic Advising — Graduate Committee Member

1. Mitchell Scofield
   M.S. Mathematics, Boise State University, 2019 (expected)
   Advisor: Jens Harlander

2. Khoi Le
   M.S. Mathematics, Boise State University, 2018
   Advisor: Liljana Babinkostova

3. Phillip W. Hart
   M.S. Mathematics, Boise State University, 2015
   Advisor: Uwe Kaiser
   Thesis: *Monodromy representation of the braid group*
   http://scholarworks.boisestate.edu/td/989/

4. Tyler Allyn
   M.S. Mathematics, Boise State University, 2014
   Advisor: Jens Harlander
   Thesis: *Diagrammatically reducible 2-complexes*
   http://scholarworks.boisestate.edu/td/815/

5. Uri Rogers
   Ph.D. Electrical and Computer Engineering, Boise State University, 2014
   Advisor: Hao Chen
   Dissertation: *On uniformly most powerful decentralized detection*
   http://scholarworks.boisestate.edu/td/805/

6. Summer Lynne Kisner
   M.S. Mathematics, Boise State University, 2013
   Advisor: Andrés Eduardo Caicedo
   Thesis: *Schur's theorem and related topics in Ramsey theory*
   http://scholarworks.boisestate.edu/td/376/

7. Katherine Kylee Zebedeo
   M.S. Mathematics, Boise State University, 2012
   Advisor: Uwe Kaiser
   Thesis: *Regular homotopy of closed curves on surfaces*
   `http://scholarworks.boisestate.edu/td/326/`

Academic Advising — Undergraduate Senior Theses

1. Kayla Neal
   B.S. Mathematics, Boise State University, 2018
   Senior thesis: *The Cayley-Bacharach theorem*

2. Amanda Aydelotte
   B.S. Mathematics, Boise State University, 2017
   Senior thesis: *An Exploration of the Chromatic Polynomial*
   `http://scholarworks.boisestate.edu/math_undergraduate_theses/7/`

3. Karly Reid
   B.S. Mathematics, Boise State University, 2017
   Senior thesis: *Hyperbolic Geometry: History, Models, and Art*

4. Kyle Auble
   B.S. Mathematics, Boise State University, 2018

5. Brandon Sams
   B.S. Mathematics, Boise State University, 2017
   Senior thesis: *Complementary Coffee Cups*
   `http://scholarworks.boisestate.edu/math_undergraduate_theses/6/`

6. Stacia Orr
   B.S. Mathematics, Boise State University, 2016
   Senior thesis: *Cubik Mathemagic*

7. Brent El-Bakri
   B.S. Mathematics, Boise State University, 2014
   Senior thesis: *A brief encounter with linear codes*
   `http://scholarworks.boisestate.edu/math_undergraduate_theses/3/`

Academic Advising — Other

1. Mentor for STEP Undergraduate researcher Nick Walker, 2012–2013

2. Appointed to Graduate Faculty, 2011

Service — Professional

1. Reviewer for granting agencies:

   (a) NSERC, 2016

   (b) NSA, 2016

2. Referee for journal articles:

Year	# Journals	# Papers
2006	1	1
2009	1	1
2010	3	4
2011	3	3
2012	3	4
2013	3	3
2014	3	3
2015	4	4
2016	7	7
2017	5	6
To date	21[1]	36

3. MathSciNet reviewer, 2007–Present.
   To date: 34 articles reviewed

4. University of Nebraska MCTP-IMMERSE summer program, June-July 2007

Service — Department

1. Graduate Committee, 2017–Present

2. Personnel & Budget Committee (PBC), 2017–Present

3. Undergraduate Committee, Mathematics, 2017–Present

4. Computational and Applied Math/Stat Tenure Track Hiring Committee, 2017–2018

5. Salary committee, 2015, 2016

6. Developed ScholarWorks web collection of undergraduate senior theses in mathematics (`http://scholarworks.boisestate.edu/math_undergraduate_theses/`)

7. Scholarship Committee, 2013–2014, Chair, 2014–Present

8. Hosted colloquium visitors:

   (a) Brian Harbourne (University of Nebraska), March 2018
   (b) Aaron Bertram (University of Utah), October 2017
   (c) Bruce Reznick (UIUC), April 2016
   (d) Ellen Veomett (St. Mary's College of California), April 2016
   (e) Hirotachi Abo (U. Idaho), February 2016
   (f) Jarosław Buczyński (IMPAN), November 2014
   (g) Gregory G. Smith (Queen's University), October 2014
   (h) Jennifer Kacmarcik (University of Montana), September 2014, October 2014

[1] Counting journals without repetition

(i) Alexander Woo (University of Idaho), November 2012

(j) Colleen Robles (Texas A&M University), October 2012

(k) Hirotachi Abo (University of Idaho), March 2012

(l) Jim Wolper (Idaho State University), January 2011

9. Faculty advisor for Math Club, 2012–2016, 2017–2018

10. Organized Algebra, Geometry, & Cryptology Seminar 2010–Present

11. Organized travel for Boise State graduate students to attend AMS 2011 Fall Western Section Meeting in Salt Lake City

Service — College

1. Bronco Day, Apr. 11, 2015

2. Major Madness, Mar. 3, 2015

3. Orientation advising, Summer 2014, Summer 2015

4. Advising Matters Day, Oct. 1, 2014

Service — University

1. Senate Faculty University Curriculum Committee, September 2014–2016

2. Senate Faculty Diversity Committee, March 2013–2015, Chair, 2015–2016

3. Co-chair, Foundation Scholar Awards Committee, Research/Creativity Sub-Committee, November 2011–April 2012

4. CID-Mathematics Committee, April–October 2011

Community Outreach

1. Developed and co-led Boise Math Teachers' Circle, 2015–present
`http://boisemathcircles.org/teachers/`
Supported 2015–2017 by American Institute of Mathematics and Boise State University Concurrent Enrollment

2. Judged student oral and poster presentations at the AAAS (American Association for the Advancement of Science) regional meeting, mathematics symposium, June 25–26, 2012.

3. Correspondence with prison inmate studying from Aschbacher's *Finite Group Theory*, answering questions and providing feedback on proofs and problem solutions (exchanged 9 letters through prison staff intermediary during June–November 2011; following inmate release on parole in December 2011, direct correspondence continued through email for about a year)

Professional Development

1. Gender and Sex-Based Misconduct Prevention & Response Online Training Class, December, 2018

2. Clery Act Online Training Class, April, 2018
3. Campus Security Authority Re-Certification Course, April, 2018
4. Preventing Sexual Misconduct (Title IX) training, April, 2018
5. State of Idaho Security Training, February, 2018
6. Clery Act Online Training Class—Campus Security Authority Re-Certification Course, April, 2016
7. Gender and Sex-Based Misconduct Prevention & Response Online Training Class, September, 2015
8. Clery Act Online Training Class, April, 2015
9. Clery Act Online Training Class and Title IX Online Training Class, April, 2014
10. Clery Act Online Training Class and Title IX Online Training Class, April, 2013
11. Faculty Advising Institute, April, 2012
12. Great Ideas for Teaching and Learning Symposium, January, 2012
13. Boise State Best Practices in STEM Teaching Symposium, January, 2011
14. Boise State/NSF STEM Teaching Scholars: Teaching for STEM Student Success, 2010–2011
15. Project NExT, 2006–7 (sepia dot)

Professional Associations

1. Association for Women in Mathematics, 2016–Present
2. Society for Industrial and Applied Mathematics, 2010–Present
   SIAM Activity Group in Algebraic Geometry
3. American Mathematical Society, 2004–Present
4. Mathematical Association of America, 2004–Present

Courses Taught
Key: LD=undergraduate lower division, UD=undergraduate upper division, G=graduate

Term	Course	Credit hours	Students
	University of Michigan		
Fall 2001	Precalculus	4	27
Fall 2002	Calculus I	4	26
Fall 2003	Calculus I	4	25
Fall 2004	Calculus II	4	27

	Southeastern Louisiana University		
Fall 2005	Calculus I	5	10
	College Algebra	3	23
	College Algebra	3	22
Spring 2006	Calculus I	5	13
	College Algebra	3	14
	2005–06 totals:	**19**	**82**
Fall 2006	Calculus II	5	17
	Trigonometry	3	22
Spring 2007	Calculus I	5	15
	Complex Variables (UD)	3	5
	2006–07 totals:	**16**	**59**
	Texas A&M University		
Fall 2007	Business Mathematics I (Finite Math)	3	82
	Business Mathematics I (Finite Math)	3	88
Spring 2008	Calculus II	4	90
	2007–08 totals:	**10**	**260**
Fall 2008	Topics in Applied Mathematics I (Linear Algebra) (UD)	3	19
	Topics in Applied Mathematics I (Linear Algebra)	3	35
Spring 2009	Calculus II	4	88
	2008–09 totals:	**10**	**142**
Fall 2009	Calculus II	4	43
	Calculus II	4	48
Spring 2010	Calculus II	4	36
	2009–10 totals:	**12**	**127**
	Boise State University		
Fall 2010	Discrete and Foundational Mathematics I (LD)	4	25
Spring 2011	Calculus I	4	36
	Foundations of Geometry (UD)	3	27
	2010–11 totals:	**11**	**88**
Fall 2011	Discrete and Foundational Mathematics I	4	25
	Abstract Algebra (UD/G)	3	10
Spring 2012	Discrete and Foundational Mathematics I	4	25
	Advanced Algebra (G)	3	9
Summer 2012	Multivariable and Vector Calculus	4	23

	2011–12 totals:	**18**	**92**
Fall 2012	Discrete and Foundational Mathematics I	4	25
	Multivariable and Vector Calculus	4	46
	Advanced Calculus (UD/G)	4	12
Spring 2013	Advanced Analysis (G)	3	5
	Independent study: complex analysis	3	1
	Independent study: graph theory	3	1
	2012–13 totals:	**21**	**85**
Fall 2013	Multivariable and Vector Calculus	4	120
	Independent study: chip firing	3	1
Spring 2014	Topics in Graph Theory (UD)	3	7
	Foundations of Geometry	3	20
Summer 2014	Multivariable and Vector Calculus	4	30
	2013–14 totals:	**17**	**178**
Fall 2014	Discrete and Foundational Mathematics I	3	27
	Advanced Number Theory (G)	3	3
	Independent study: algebraic geometry	3	1
	Senior thesis: *A brief encounter with linear codes*	1	1
Spring 2015	Introduction to Linear Algebra (UD)	3	26
	Advanced Topology (G)	3	5
	2014–15 totals:	**16**	**63**
Fall 2015	Foundations of Analysis (UD)	3	22
	Advanced Calculus (UD/G)	4	6
	Independent study: Elliptic curves	1	1
Spring 2016	Discrete and Foundational Mathematics I	3	14
	Foundations of Geometry	3	10
	Senior thesis: *Cubik Mathemagic: Group theory of Rubik's cubes*	1	1
	Seminar in Mathematics	1	1
	2015–16 totals:	**16**	**26**
Fall 2016	Sabbatical		
Spring 2017	Discrete and Foundational Mathematics II (UD)	4	5
	Intro. to Abstract Algebra and Number Theory (UD)	3	17
	Senior thesis: *Complementary coffee cups*	1	1
	Senior thesis: *From Rings to Graphs: A Different Look at Structure*	1	1
Summer 2017	Multivariable and Vector Calculus	4	21
	Multivariable and Vector Calculus	4	15
	2016–17 totals:	**17**	**60**

Fall 2017	Discrete and Foundational Mathematics I	3	13
	Abstract Algebra (UD/G)	3	19
	Senior thesis: *An Exploration of the Chromatic Polynomial*	1	1
	Senior thesis: *Hyperbolic Geometry: History, Models, and Art*	1	1
Spring 2018	Discrete and Foundational Mathematics I	3	15
	Advanced Algebra (G)	3	8
Summer 2018	Multivariable and Vector Calculus	4	14
	2017–18 totals:	**18**	**71**
Fall 2018	Calculus I: Theory and Applications	4	8
	Intro. to Abstract Algebra and Number Theory (UD)	3	4
	Senior thesis: *The Cayley-Bacharach Theorem*	1	1
	Seminar in Mathematics	1	1
Spring 2019	Discrete and Foundational Mathematics I	3	17
	Discrete and Foundational Mathematics II (UD)	4	4
	Number Theory (UD)	3	5

Citizenship United States

Languages English (native), Spanish (elementary), French (elementary), German (elementary).