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Curriculum Vitae

Education and Employment

Education

December 2006 • Ph.D. in Mathematics, The Ohio State University
August 2003 • M.S. in Mathematics, The Ohio State University
December 1998 • B.A. in Mathematics, The Ohio State University

Current Position

August 2017 - present • *Associate Professor*, University of Colorado, Colorado Springs

Previous Positions

August 2011 - July 2017 • *Assistant Professor*, University of Colorado, Colorado Springs
September 2007 - March 2008 • *Adjunct Instructor*, Columbus State Community College
January 2007 - July 2008 • *Lecturer*, The Ohio State University

Visiting Positions

September 2009 - June 2011 • *Visiting Assistant Professor*, Ohio University
September 2008 - June 2009 • *Visiting Instructor*, Otterbein College

Honors

- Paper "A short proof of the Bolzano-Weierstrass Theorem" (with undergraduate Katrina Biele) cited in the book *The best writing on mathematics 2018*. Princeton University Press, Princeton, NJ, 2019

Internal Funding

-College of Letters, Arts, and Sciences Student-Faculty Research Award, $3000 (joint with undergraduate Ben Griffith), UCCS, Spring 2016
-College of Letters, Arts, and Sciences Student-Faculty Research Award, $3000 (joint with undergraduate Victoria Slattum), UCCS, Spring 2014

Courses Taught at UCCS

Undergraduate Courses

-Independent Study Hours
-Modern Algebra I
-Linear Algebra I
-Introduction to Linear Algebra
-Theory of Numbers
-Discrete Mathematics
-Calculus II
-Calculus I
-Calculus I with Precalculus Refresher A

Graduate Courses

-Ph.D. Thesis Hours
-Master's Thesis Hours
-Independent Study Hours
-Rings and Modules II
-Rings and Modules I
-Linear Algebra I

Service to the Profession

Editorial Work

-Editor, Problems Books Series (American Mathematical Society), February 2019 - January 2022
-Problems Editor, College Mathematics Journal (Mathematical Association of America), May 2018 - December 2023

Regional Committee

-Section Nominating Committee of the Rocky Mountain Section of the MAA, April 2018 - February 2021 (Chair, September 2019 - September 2020)

Conference Organized

-Spring 2013 Western Section Meeting of the AMS, Special Session "Associative Rings and Their Modules" (co-organized with Zak Mesyan)

Reviewing

-Mathematical Reviews (7 papers)

Refereeing

-Algebra Colloquium (1 paper)
-Algebra Universalis (2 papers)
-American Mathematical Monthly (4 papers)
-American Mathematical Society Contemporary Mathematics Series (1 paper)
-Bollettino dell'Unione Matematica Italiana (1 paper)
-Bulletin of the Iranian Mathematical Society (1 paper)
-Bulletin of the Malaysian Mathematical Sciences Society (1 paper)

Service to the Profession (continued)

-College Mathematics Journal (1 paper)
-College Mathematics Journal Problem Section (6 problems)
-Communications in Algebra (7 papers)
-Hacettepe Journal of Mathematics and Statistics (1 paper)
-Journal of Algebra (2 papers)
-Journal of Algebra and Its Applications (8 papers)
-Mathematics Magazine Problem Section (1 problem)
-Mediterranean Journal of Mathematics (1 paper)
-Missouri Journal of Mathematical Sciences Problem Section (1 problem)
-Quaestiones Mathematicae (2 papers)
-Rocky Mountain Journal of Mathematics (1 paper)
-ScienceAsia (1 paper)
-Turkish Journal of Mathematics (3 papers)

Mathematics Competition Problem Proposals

-American Mathematical Association of Two Year Colleges (AMATYC) 2017 Student Math League Spring Competition (2 problems)

Service to the University

-Interviewed for The UCCS Scribe article, "The Perils of a Math Degree" (published November 12, 2019)
-Spoke at Mountain Lion Experience Days (talked with prospective students interested in the math major at UCCS), November 2019, April 2019, and April 2018
-MathPathways Task Force Representative, UCCS, February 2018
-Faculty Assembly, College of Letters, Arts, and Sciences Representative, UCCS, January 2017 - May 2017

Service to the College

-Member of College of Letters, Arts, and Sciences Curriculum and Requirements Committee, UCCS, September 2015 - present

Service to the Department

-Member of Tenure-Track Search Committee, UCCS, September 2020 - present
-Member of Primary Unit Evaluation Committee, UCCS, Fall 2020, 2019, 2018
-Advised Ph.D. student Veronica Marth on her M.S. project, "A classification of the divisible abelian groups", UCCS, Fall 2019
-Gave a talk to the UCCS Math Club, October 2019
-Member of Tenure-Track Search Committee, UCCS, September 2019 - March 2020
-Advised Rachel Drawbond on her M.Sc. project, "All PIDs are UFDs", UCCS, Spring 2019
-Member of Ad Hoc Committee for Precalculus Reform, UCCS, February 2018 - July 2018
-Chair of Ad Hoc Committee for the Adoption of a New Discrete Mathematics Text, UCCS, February 2018 - April 2018
-Chair of Undergraduate Committee, UCCS, January 2018 - present
-New GTF Mentor, UCCS, Fall 2019, 2018, 2016, 2015, 2014, and 2013

Service to the Department (continued)

-Member of Full-Time Mathematics Instructor Search Committee, UCCS, February 2016 - May 2016
-Speaker at UCCS Mathematics Department Colloquium, November 2015 and September 2012
-Faculty reviewer for Sarah Reuther's M.Sc. paper, "Cauchy's Theorem and Dehn's Theorem on rigidity of complex polytopes in R^3", UCCS, Spring 2015
-Chair of Tenure-Track Mathematics Faculty Search Committee, UCCS, October 2014 - March 2015
-Led a session of the "Math Incline" Undergraduate Seminar, UCCS, February 2012
-Chair of Full-Time Mathematics Instructor Search Committee, UCCS, January 2012 - May 2012
-Member of Graduate Committee, UCCS, September 2011 - May 2014
-Member of Undergraduate Committee, UCCS, August 2011 - present
-Regular speaker at the UCCS Mathematics Department "Rings and Wings" Algebra Seminar, August 2011 - present
-Teaching Workshop Mentor, Ohio University, September 2010
-Member of Math Major Semester Conversion Curriculum Reform Committee, Otterbein College, January 2009 - June 2009
-Algebra Qualifying Exam Workshop Mentor, The Ohio State University (held a workshop to prepare new graduate students for the algebra qualifying exam), Summer 2004

Community Service

Sidekicks Volunteer

Duties: meet one-on-one with advanced high school students to discuss career options with a mathematics focus.
-Dayton Gould, February 2013
-Jacob Carson, January 2012

Miscellaneous Community Service

-Met with student Tony Wang to assist him in learning advanced material not offered at his high school, February 2016

Student Work Directed

Current Research Students

-Veronica Marth (Ph.D. student)
-Van Hovenga (undergraduate)
-Troy Johnson (undergraduate)
-John Stroud (undergraduate)
-Kristen Gearhart (undergraduate)

Ph.D. Dissertations Directed

-Luke Harmon, UCCS, Spring 2020
Dissertation: "Lower finite modules over commutative rings with identity" (published in Journal of Algebra and Its Applications)
Current Position: lecturer at University of California Merced

Student Work Directed (continued)

-Ryan Schwiebert (co-advised with Professor Sergio Lopez-Pérmouth), Ohio University, Spring 2011
Dissertation: "Faithful torsion modules and rings" (resulted in two papers: one published in Communications in Algebra and the other published in Journal of Algebra and Its Applications)
Current Position: software engineer at Seegrid Corporation

Master's Theses Directed

-Jacob Karn, UCCS, Summer 2018 (*Outstanding Graduate Student in Mathematics Awardee*, UCCS Math Department)
M.S. Thesis: "Commutative rings whose prime spectra have certain arithmetical closure properties"
Current Position: instructor (mathematics) at UCCS

-Matt Jones, UCCS, Fall 2016
M.S. Thesis: "A set-theoretic approach to obtaining infinity"
Current Position: instructor at City Rock

-Luke Harmon, UCCS, Summer 2015
M.S. Thesis: "A set-theoretic foundation of mathematical induction"

Undergraduate Research Directed

-John Stroud, UCCS, Fall 2020 (expected) (*Outstanding B.S. in Physics Awardee*, UCCS Physics Department, and *Natural Science Outstanding Graduate Awardee*, UCCS College of Letters, Arts, and Sciences)
Paper: "Rings whose subrings have an identity" (to appear in Involve)
Current Position: M.S. student (physics) at UCCS

-Jacob Lojewski, UCCS, Summer 2019
Paper: "Rings isomorphic to their nontrivial subrings" (published in Involve)
Current Position: undergraduate at UCCS

-Caitlin Randall (*Outstanding B.S. in Mathematics Awardee*, UCCS Math Department) & Logan Robinson, UCCS, Spring 2019
Paper: "Infinite sums in totally ordered abelian groups" (published in Involve)
Current Position - Caitlin: associate analyst at Canidium Company
Current Position - Logan: automation contractor for Hoste

-Katrina Biele, UCCS, Spring 2016 (*Outstanding B.A. in Mathematics Awardee*, UCCS Math Department)
Paper: "A short proof of the Bolzano-Weierstrass Theorem" (published in College Mathematics Journal)
Current Position: M.S. student (mathematics) at University of California, Berkeley

-Benjamin Griffith, UCCS, Spring 2016 (*Lorch Scholarship Recipient*, UCCS Math Department)
Paper: "A radical excursion: from irrational roots to Prüfer domains and back" (published in Pi Mu Epsilon Journal)
Current Position: senior actuarial analyst at Berkshire Hathaway

-Victoria Slattum, UCCS, Spring 2014 (*Outstanding B.S. in Mathematics Awardee*, UCCS Math Department)
Paper: "A characterization of the cyclic groups by subgroup indices" (published in College Mathematics Journal)
Current Position: data scientist at Ball Aerospace (after completing an M.S. in applied mathematics at CU Boulder)

-Veronica Marth, UCCS, Spring 2012 (*Outstanding B.A. in Mathematics Awardee*, UCCS Math Department)
Paper: "Group permutations which preserve subgroups" (published in Pi Mu Epsilon Journal)
Current Position: Ph.D. student (mathematics) at UCCS

Research Interests

Algebra and logic

Research Visits

Roozbeh Hazrat, Western Sydney University, Sydney Australia	November 25 - November 29, 2019
Alan Loper, Ohio State University, Columbus OH	Fall 2017
Manfred Dugas & Daniel Herden, Baylor University, Waco TX	November 17 - November 20, 2016
Adam Salminen, University of Evansville, Evansville IN	June 10 - June 12, 2015
Ryan Berndt, Otterbein University, Westerville OH	May 26 - May 30, 2014

Talks

(talks at home institutions not listed)

Western Sydney University Math Department Colloquium, Sydney Australia	November 2019
Cedarville University Math Department Colloquium, Cedarville OH	September 2019
North Dakota State University Algebra Seminar, Fargo ND	April 2018
Conference on Applications of Model Theory to Operator Algebras, Houston TX	July 2017
Ohio University Math Department Graduate Student Seminar, Athens OH	June 2017
Baylor University Algebra Seminar, Waco TX	November 2016
Mathematical Association of America Mathfest, Columbus OH	August 2016
Ohio State - Denison Mathematics Conference, Columbus OH	May 2016
Seattle University Math Department Colloquium, Seattle WA	February 2016
University of Evansville Math Department Colloquium, Evansville IN	December 2015
University of South Alabama Algebra and Topology Seminar, Mobile AL	April 2015
Ohio State University Commutative Algebra Seminar, Columbus OH	March 2015
Athens Algebra Seminar, Athens OH	October 2014
New Mexico State Algebra Seminar, Las Cruces NM	April 2014
Ohio State University - Ohio University Ring Theory Seminar, Columbus OH	October 2013
University of Colorado Graduate Algebra Seminar, Boulder CO	March 2013
Mini Conference on Commutative Rings, Jupiter FL	March 2013
Sectional Meeting of the AMS, New Orleans LA	October 2012
Southern Regional Algebra Conference, Morrow GA	March 2012
Ohio State University - Ohio University Ring Theory Seminar, Columbus OH	October 2011
Colorado College "Fearless Fridays" Math Department Seminar, Colorado Springs CO	September 2011
University of New England Math Department Colloquium, Biddeford ME	April 2011
University of New England Math Club Talk, Biddeford ME	April 2011
UCCS Math Department Colloquium, Colorado Springs CO	February 2011
Weber State Recruitment Talk (offer received), Ogden UT	February 2011
Southern Regional Algebra Conference, Lafayette LA	October 2010
University of Denver Math Department Graduate Student Seminar, Denver CO	February 2010
Sectional Meeting of the AMS, Boca Raton FL	October 2009
Ohio State University - Ohio University Ring Theory Seminar, Columbus OH	October 2009
Bowling Green State University Algebra Seminar, Bowling Green OH	December 2008
Ohio State University - Ohio University Ring Theory Seminar, Columbus OH	October 2008
Otterbein College Recruitment Talk (offer received), Westerville OH	February 2008

Talks (continued)

Sectional Meeting of the AMS, Davidson NC — March 2007
Bowling Green State University Algebra Seminar, Bowling Green OH — December 2006

List of Publications

* denotes a graduate student coauthor; ** denotes an undergraduate coauthor
(*submitted papers and manuscripts in preparation not listed*)

Refereed Research Papers

[51] *Modules whose submodule lattice is lower finite* (with Luke Harmon*), Journal of Algebra and Its Applications, 16 pages (to appear)
[50] *A characterization of large Dedekind domains*, Archiv der Mathematik **115** (2020), no. 2, 159–168.
[49] *Rings with arithmetical closure properties relative to the prime spectrum and its complement*, Communications in Algebra **48** (2020), no. 5, 2041–2050.
[48] *An infinite cardinal-valued Krull dimension for rings* (with Alan Loper and Zak Mesyan), Journal of Algebra **517** (2019), 223–248.
[47] *Residually small commutative rings* (with Adam Salminen), Journal of Commutative Algebra **10** (2018), no. 2, 187–211.
[46] *Residual smallness in commutative algebra* (with Adam Salminen), Communications in Algebra **46** (2018), no. 5, 2109–2122.
[45] *Elementarily λ-homogeneous binary functions*, Algebra Universalis **78** (2017), no. 2, 147–157.
[44] *Factorization theory of root closed monoids of small rank* (with Jim Coykendall), Communications in Algebra **45** (2017), no. 7, 2795–2808.
[43] *Polynomial and power series rings with finite quotients* (with Adam Salminen), Houston Journal of Mathematics **43** (2017), no. 1, 31–38.
[42] *Turning automatic continuity around: automatic homomorphisms* (with Ryan Berndt), Real Analysis Exchange **41** (2016), no. 2, 271–286.
[41] *Divisible multiplicative groups of fields*, Journal of Algebra **453** (2016), 177–188.
[40] *The axiomatizability of the class of root closed monoids* (with Alan Loper and Nick Werner), Semigroup Forum **91** (2015), no. 3, 737–740.
[39] *The theory of integrally closed domains is not finitely axiomatizable*, Mathematical Logic Quarterly **61** (2015), no. 1-2, 120–122.
[38] *A note on strongly Jónsson binary relational structures*, Algebra Universalis **73** (2015), no. 1, 97–101.
[37] *Strongly Jónsson and strongly HS modules*, Journal of Pure and Applied Algebra **218** (2014), no. 8, 1385–1399.
[36] *Commutative rings with infinitely many maximal subrings* (with Alborz Azarang), Journal of Algebra and Its Applications, **13** (2014), no. 7, 1450037, 29 pp.
[35] *Small and large ideals of an associative ring*, Journal of Algebra and Its Applications **13** (2014), no. 5, 1350151, 20 pp.
[34] *Modules which are isomorphic to their factor modules* (with Adam Salminen), Communications in Algebra **41** (2013), no. 4, 1300–1315.
[33] *Jónsson posets and unary Jónsson algebras* (with Keith Kearnes), Algebra Universalis **69** (2013), no. 3, 101–112.
[32] *Rings whose multiplicative endomorphisms are power functions*, Semigroup Forum **86** (2013), no. 2, 272–278.
[31] *Rings which admit faithful torsion modules* (with Ryan Schwiebert*), Communications in Algebra **40** (2012), no. 6, 2184–2198.
[30] *Rings which admit faithful torsion modules II* (with Ryan Schwiebert*), Journal of Algebra and Its Applications **11** (2012), no. 3, 1250054, 12 pp.

List of Publications (continued)

[29] *On modules whose proper homomorphic images are of smaller cardinality* (with Adam Salminen), Canadian Mathematical Bulletin **55** (2012), no. 2, 378–389.
[28] *On elementarily κ-homogeneous unary structures*, Forum Mathematicum **23** (2011), no. 4, 791–802.
[27] *Cardinalities of residue fields of Noetherian integral domains* (with Keith Kearnes), Communications in Algebra **38** (2010), no. 10, 3580–3588.
[26] *Jónsson modules over Noetherian rings*, Communications in Algebra **38** (2010), no. 9, 3489–3498.
[25] *On the axiom of union*, Archive for Mathematical Logic **49** (2010), no. 3, 283–289.
[24] *More results on congruent modules*, Journal of Pure and Applied Algebra **213** (2009), no. 11, 2147–2155.
[23] *On modules M for which $N \cong M$ for every submodule N of size $|M|$*, Journal of Commutative Algebra **1** (2009), no. 4, 679–699.
[22] *Ring semigroups whose subsemigroups intersect*, Semigroup Forum **79** (2009), no. 2, 413–416.
[21] *Ring semigroups whose subsemigroups form a chain*, Semigroup Forum **78** (2009), no. 2, 374–377.
[20] *Some results on Jónsson modules over a commutative ring*, Houston Journal of Mathematics **35** (2009), no. 1, 1–12.
[19] *On infinite modules M over a Dedekind domain for which $N \cong M$ for every submodule N of cardinality $|M|$*, Rocky Mountain Journal of Mathematics **39** (2009), no. 1, 259–270.
[18] *A note on the n-generator property for commutative monoids*, Semigroup Forum **74** (2007), no. 1, 155–158.

Refereed Survey Papers

[17] *Unifying some notions of infinity in ZC and ZF*, Reports on Mathematical Logic **51** (2016), 43–56.
[16] *Jónsson and HS modules over commutative rings*, International Journal of Mathematics and Mathematical Sciences (2014), 120907, 13 pp.

Miscellaneous Refereed Papers

[15] *Rings whose subrings have an identity* (with John Stroud**), Involve, 6 pages (to appear)
[14] *Problem-posing: a look behind the scenes*, Pi Mu Epsilon Journal **15** (2020), no. 1, 111–118.
[13] *Infinite sums in totally ordered abelian groups* (with Caitlin Randall** and Logan Robinson**), Involve **12** (2019), no. 2, 281–300.
[12] *Rings isomorphic to their nontrivial subrings* (with Jacob Lojewski**), Involve **11** (2018), no. 5, 877–883.
[11] *A short proof of the Bolzano-Weierstrass Theorem* (with Katrina Biele**), College Mathematics Journal **48** (2017), no. 4, 288–289.
[10] *A radical excursion: from irrational roots to Prüfer domains and back* (with Ben Griffith**), Pi Mu Epsilon Journal **14** (2016), no. 5, 327–332.
[9] *Game show shenanigans: Monty Hall meets mathematical logic* (with Greg Morrow and Adam Salminen), Elemente der Mathematik **71** (2016), no. 4, 145–155.
[8] *I'm thinking of a number...* (with Adam Hammett), Missouri Journal of Mathematical Sciences **28** (2016), no. 1, 31–48.
[7] *A characterization of the cyclic groups by subgroup indices* (with Victoria Slattum**), College Mathematics Journal **47** (2016), no. 1, 29–33.
[6] *The converse of The Intermediate Value Theorem: from Conway to Cantor to cosets and beyond*, Missouri Journal of Mathematical Sciences **26** (2014), no. 2, 134–150.
[5] *Groups whose subgroups have distinct cardinalities*, Pi Mu Epsilon Journal, **14** (2014), no. 1, 31-37.
[4] *Group permutations which preserve subgroups* (with Veronica Marth**), Pi Mu Epsilon Journal **13** (2012), no. 7, 407–414.
[3] *The number of homomorphic images of an abelian group*, International Journal of Algebra **5** (2011), no. 3, 107–115.
[2] *An independent axiom system for the real numbers*, College Mathematics Journal **40** (2009), no. 2, 78–86.

List of Publications (continued)

Book Chapter

[1] *Jónsson modules over commutative rings*, Chapter 1 of "Commutative Rings: New Research," Nova Science Publishers, New York (2009), 1–6. (invited chapter)

Problems Posed

[71] *Problem #???*, College Mathematics Journal (to appear)
[70] *Problem #???*, College Mathematics Journal (to appear)
[69] *Problem #???*, College Mathematics Journal (to appear)
[68] *Problem #???*, College Mathematics Journal (to appear)
[67] *Problem #???*, College Mathematics Journal (to appear)
[66] *Problem #???*, College Mathematics Journal (to appear)
[65] *Problem #???*, College Mathematics Journal (to appear)
[64] *Problem #???* (with Alan Loper), College Mathematics Journal (to appear)
[63] *Problem #???*, College Mathematics Journal (to appear)
[62] *Problem #1185*, College Mathematics Journal **51** (2020), no. 4, p. 306.
[61] *Problem #1179*, College Mathematics Journal **51** (2020), no. 3, p. 246.
[60] *Problem #1173*, College Mathematics Journal **51** (2020), no. 2, pp. 146–147.
[59] *Problem #1166*, College Mathematics Journal **51** (2020), no. 1, p. 66.
[58] *Problem #1356* (with Ikko Saito), Pi Mu Epsilon Journal, Spring 2019.
[57] *Problem #1155*, College Mathematics Journal **50** (2019), no. 3, p. 225.
[56] *Problem #1150*, College Mathematics Journal **50** (2019), no. 2, p. 144.
[55] *Problem #1088* (with Luke Harmon*), Mathematics Magazine **92** (2019), no. 1, p. 73.
[54] *Problem #1145*, College Mathematics Journal **50** (2019), no. 1, p. 62.
[53] *Problem #12089* (with Adam Salminen), American Mathematical Monthly **126** (2019), no. 1, p. 83.
[52] *Problem #1140*, College Mathematics Journal **49** (2018), no. 5, p. 372.
[51] *Problem #1134*, College Mathematics Journal **49** (2018), no. 4, p. 296.
[50] *Problem #12036*, American Mathematical Monthly **125** (2018), no. 4, p. 370.
[49] *Problem #2043* (with Adam Salminen), Mathematics Magazine **91** (2018), no. 2, p. 151.
[48] *Problem #1125*, College Mathematics Journal **49** (2018), no. 2, p. 141.
[47] *Problem #1078*, Mathematics Magazine **91** (2018), no. 1, p. 72.
[46] *Problem #1118* (with Logan Robinson**), College Mathematics Journal **49** (2018), no. 1, p. 61.
[45] *Problem #12010* (with Adam Salminen), American Mathematical Monthly **124** (2017), no. 10, p. 971.
[44] *Problem #1111*, College Mathematics Journal **48** (2017), no. 5, p. 370.
[43] *Problem #1106*, College Mathematics Journal **48** (2017), no. 4, p. 292.
[42] *Problem #2019*, Mathematics Magazine **90** (2017), no. 2, p. 145.
[41] *Problem #353* (with Adam Hammett), Math Horizons **23** (2017), no. 3, p. 30.
[40] *Problem #1104*, College Mathematics Journal **48** (2017), no. 3, p. 220.
[39] *Problem #1103*, College Mathematics Journal **48** (2017), no. 3, p. 220.
[38] *Problem #1332*, Pi Mu Epsilon Journal, Spring 2017.
[37] *Problem #1331*, Pi Mu Epsilon Journal, Spring 2017.
[36] *Problem #1096* (with Adam Salminen), College Mathematics Journal **48** (2017), no. 2, p. 138.
[35] *Problem #1095* (with Keith Kearnes), College Mathematics Journal **48** (2017), no. 1, p. 59.
[34] *Problem #1093*, College Mathematics Journal **48** (2017), no. 1, p. 58.
[33] *Problem #2009*, Mathematics Magazine **89** (2016), no. 5, p. 379.
[32] *Problem #11943* (with Keith Kearnes), American Mathematical Monthly **123** (2016), no. 10, p. 1050.
[31] *Problem #1078*, College Mathematics Journal **47** (2016), no. 3, pp. 221–222.

List of Publications (continued)

[30] *Problem #1998*, Mathematics Magazine **89** (2016), no. 3, pp. 223–224.
[29] *Problem #11887* (with Luke Harmon*), American Mathematical Monthly **123** (2016), no. 2, p. 197.
[28] *Problem #1067*, College Mathematics Journal **47** (2016), no. 1, p. 61.
[27] *Problem #1054*, College Mathematics Journal **46** (2015), no. 3, p. 221.
[26] *Problem #326* (with Alan Loper), Math Horizons **23** (2015), no. 1, p. 30.
[25] *Problem #318*, Math Horizons **22** (2015), no. 3, p. 30.
[24] *Problem #11813*, American Mathematical Monthly **122** (2015), no. 1, p. 76.
[23] *Problem #11750*, American Mathematical Monthly **121** (2014), no. 1, p. 83.
[22] *Problem #1934*, Mathematics Magazine **86** (2013), no. 5, p. 382.
[21] *Problem #1011*, College Mathematics Journal **44** (2013), no. 5, p. 437.
[20] *Problem #1006*, College Mathematics Journal **44** (2013), no. 4, p. 325.
[19] *Problem #11702*, American Mathematical Monthly **120** (2013), no. 4, p. 365.
[18] *Problem #11658*, American Mathematical Monthly **119** (2012), no. 7, p. 608.
[17] *Problem #985*, College Mathematics Journal **43** (2012), no. 4, p. 338.
[16] *Problem #1900*, Mathematics Magazine **85** (2012), no. 3, p. 229.
[15] *Problem #977*, College Mathematics Journal **43** (2012), no. 3, p. 257.
[14] *Problem #968*, College Mathematics Journal **43** (2012), no. 1, p. 95.
[13] *Problem #11617*, American Mathematical Monthly **119** (2012), no. 1, p. 68.
[12] *Problem #946*, College Mathematics Journal **42** (2011), no. 2, p. 151.
[11] *Problem #940*, College Mathematics Journal **41** (2010), no. 5, p. 410.
[10] *Problem #1211*, Pi Mu Epsilon Journal, Fall 2009.
[9] *Problem #11451*, American Mathematical Monthly **116** (2009), no. 7, p. 648.
[8] *Problem #1825* (with Kevin Schoenecker), Mathematics Magazine **82** (2009), no. 3, p. 228.
[7] *Problem #892*, College Mathematics Journal **40** (2009), no. 1, p. 55.
[6] *Problem #1810*, Mathematics Magazine **81** (2008), no. 5, p. 376.
[5] *Problem #871*, College Mathematics Journal **39** (2008), no. 2, p. 153.
[4] *Problem #11284*, American Mathematical Monthly **114** (2007), no. 4, p. 358.
[3] *Problem #203*, Math Horizons **14** (2006), no. 1, p. 40.
[2] *Problem #820*, College Mathematics Journal **37** (2006), no. 1, p. 60.
[1] *Problem #11166*, American Mathematical Monthly **112** (2005), no. 7, p. 654.