

Curriculum Vita for Scott Baldrige

Loretta Cox Stuckey and Dr. James G. Traynham Distinguished Professor
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Social Media: Website: www.scottbaldrige.net
Twitter: @scottbaldrige (34,700 current followers)
@scistate (19,800 current followers)
Facebook Page: scottjbaldrige (7,200 current followers)
LinkedIn: Scott Baldrige (22,200 current followers)
Youtube: ScottBaldrige (156,000 views with 1500 subscribers)

Academic Degrees

Ph.D. 2001 Michigan State University, thesis advisor: Ronald Fintushel
M.S. 1996 Michigan State University, Mathematics
B.S. 1993 Kettering University, Information Systems, Magna Cum Laude

Interests

Mathematics: Geometric Topology and Differential Geometry

Education: Knowledge Engineering, Curriculum Design, and Mathematical Knowledge for Teachers

Professional Experience

2015– Loretta Cox Stuckey and Dr. James G. Traynham Distinguished Professor,
Louisiana State University, Department of Mathematics
2015– Co-Director, The Gordon A. Cain Center for Scientific, Technological, Engineering and
Mathematical Literacy, Louisiana State University
2012– Lead Curriculum Writer and Lead Mathematician, Eureka Math/EngageNY Curriculum
2012–15 Common Core Fellow in Mathematics, Great Minds
2010 Research Member, Mathematical Sciences Research Institute, Spring Program
2009–15 Associate Professor, Louisiana State University, Department of Mathematics
2004–09 Assistant Professor, Louisiana State University, Department of Mathematics
2003 Research Fellow, Institute for Pure and Applied Mathematics.
2001–04 VIGRE Postdoctoral Fellow, Indiana University at Bloomington, Mathematics Department
1995–01 Teaching Assistant, Michigan State University, Mathematics Department
1994–95 Problem editor and illustrator, Connected Mathematics Project

Publications and Books

Published/Accepted or in Revision

1. S. Baldrige, B. McCarty, and D. Shea Vela-Vick, *Lifting Lagrangian immersions in $\mathbb{C}\mathbb{P}^{n-1}$ to Lagrangian cones in \mathbb{C}^n* , pages 1-28, <https://arxiv.org/abs/1708.09048>.
2. S. Baldrige and J. Madden, *Notes on quantity and measurement*, to be submitted soon, pages 1-11.
3. S. Baldrige and B. McCarty, *On the rotation class of knotted Legendrian tori in \mathbb{R}^5* , *Topology and its Applications*, **209** (2016), 91-114.
4. S. Baldrige and P. Kirk, *Coisotropic Luttinger surgery and some new symplectic 6-manifolds with vanishing canonical class*, *Indiana Univ. Math. J.* **62** (2013), 1457-1471.
5. S. Baldrige and A. Lowrance, *Cube diagrams and 3-dimensional Reidemeister-like moves for knots*, *Journal of Knot Theory and Its Ramifications*, **21** (2012) no. 5.
6. A. Akhmedov, S. Baldrige, I. Baykur, P. Kirk, and B. D. Park, *Simply connected minimal symplectic 4-manifolds with signature less than -1* , *Journal of the European Mathematical Society*, **12** (2010), no. 1, 133-161.
7. S. Baldrige and B. McCarty, *Small examples of cube diagrams of knots*, *Topology Proceedings*, **36** (2010), 213-228.
8. S. Baldrige and P. Kirk, *Constructions of small symplectic 4-manifolds using Luttinger surgery*, *Journal of Differential Geometry*, **82** (2009) no. 2, 317-361.
9. S. Baldrige and P. Kirk, *A symplectic manifold homeomorphic but not diffeomorphic to $\mathbb{C}\mathbb{P}^2 \# 3\overline{\mathbb{C}\mathbb{P}^2}$* , *Geometry & Topology* **12** (2008), 919-940.
10. S. Baldrige and P. Kirk, *Symplectic 4-manifolds with arbitrary fundamental group near the Bogomolov-Miyaoka-Yau Line*, *Journal of Symplectic Geometry*, **4** (2006), no. 1, 63-70. 53D35 (14Jxx 57R17).
11. S. Baldrige and P. Kirk, *On symplectic 4-manifolds with prescribed fundamental group*, *Commentarii Mathematici Helvetici*, **82** (2007) no. 4, 845-843.
12. S. Baldrige and T. Parker, *Elementary Geometry for Teachers*, Okemos, MI: Sefton-Ash Publishing, (2008) xii+258 pages.
13. S. Baldrige and T.J. Li, *Geography of symplectic 4-manifolds with Kodaira dimension one*, *Algebraic and Geometric Topology*, **5** (2005), 355-368.
14. S. Baldrige, *New symplectic 4-manifolds with $b_+ = 1$* , *Mathematische Annalen* **333** (2005) 633-643.
15. S. Baldrige, *Seiberg-Witten vanishing theorem for S^1 -manifolds with fixed points*, *Pacific Journal of Mathematics*, **217** (2004), no. 1, 1-10.
16. T. Parker and S. Baldrige, *Elementary Mathematics for Teachers*, Okemos, MI: Sefton-Ash Publishing, (2004) x+237 pages.

17. S. Baldrige, *Seiberg–Witten invariants, orbifolds, and circle actions*, Transactions of the American Mathematical Society **355** (2002), no. 4, 1669 – 1697.
18. S. Baldrige, *Seiberg–Witten invariants of 4-manifolds with free circle actions*, Commun. Contemp. Math, **3** (2001), 341 – 353.
19. S. Baldrige, Thesis. Michigan State University, May 2001.

EngageNY/Eureka Math PK-12 Curriculum

I am the Lead Curriculum Writer and Lead Mathematician for a national PK-12 mathematics curriculum based upon the Common Core State Standards. It is the first complete curriculum designed to meet the Common Core State Standards in all grades and includes teacher lesson plans, student textbooks, homework sets, and student assessments. The curriculum is produced through Great Minds, Inc., a nonprofit organization where I am also a research fellow. All 45,000 pages of the curriculum were initially created for New York and are freely available to download at engageNY.org/mathematics; the national version of the curriculum is called Eureka Math, and is available at GreatMinds.org. The curriculum has been downloaded over **20 million times** from these websites. In April 2016, a RAND Corporation study found that **57% of elementary teachers** in the United States and **47% of secondary teachers** use Eureka Math/EngageNY in their classrooms. The curriculum splits into three works: *A Story of Units* in grades PK-5, *A Story of Ratios* in grades 6-8, and *A Story of Functions* in grades 9-12.

Overview Documents

20. Scott Baldrige, Jill Diniz, *A Story of Functions: Curriculum Map and Overview 9-12 Mathematics*, Albany, NY: Engage New York, (2012) 53 pages. Available at:
www.engageny.org/sites/default/files/resource/attachments/a_story_of_functions_curriculum_map_and_overview_9-12.pdf
21. Scott Baldrige, Jill Diniz, *A Story of Ratios: A Curriculum Overview for Grades 6-8*, Albany, NY: Engage New York, (2012) 31 pages. Available at:
www.engageny.org/sites/default/files/resource/attachments/a-story-of-ratios-a-curriculum-overview-for-grades-6-8.pdf
22. Scott Baldrige, Robin Ramos, *How to Implement “A Story of Units,”* Albany, NY: Engage New York, (2012) 45 pages. Available at:
www.engageny.org/sites/default/files/resource/attachments/how_to_implement_a_story_of_units.pdf
23. Scott Baldrige, Robin Ramos, *A Story of Units: A Curriculum Overview for Grades P-5*, Albany, NY: Engage New York, (2012) 63 pages. Available at:
<https://www.engageny.org/file/8776/download/a-story-of-units-a-curriculum-overview-and-map-for-grades-p-5.pdf>

Kindergarten

24. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade K, Module 1: Numbers to 10*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 368 pages. ISBN:978-1-118-81131-3
25. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade K, Module 2: Two-Dimensional and Three-Dimensional Shapes*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 96 pages. ISBN: 978-1-118-79358-9

26. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade K, Module 3: Comparison of Length, Weight, Capacity, and Numbers to 10*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 312 pages. ISBN: 978-1-118-79350-3
27. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade K, Module 4: Number Pairs, Addition and Subtraction to 10*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 432 pages. ISBN: 978-1-118-81120-7
28. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade K, Module 5: Numbers 10-20 and Counting to 100*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 256 pages. ISBN: 978-1-118-79338-1
29. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade K, Module 6: Analyzing, Comparing, and Composing Shapes*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 120 pages. ISBN: 978-1-118-81121-4

First Grade

30. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 1, Module 1: Sums and Differences to 10*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 496 pages. ISBN: 978-1-118-79285-8
31. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 1, Module 2: Introduction to Place Value Through Addition and Subtraction Within 20*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 384 pages. ISBN: 978-1-118-79336-7
32. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 1, Module 3: Ordering and Comparing Length Measurements as Numbers*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 192 pages. ISBN: 978-1-118-81138-2
33. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 1, Module 4: Place Value, Comparison, Addition and Subtraction to 40*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 400 pages. ISBN: 978-1-118-81124-5
34. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 1, Module 5: Identifying, Composing, and Partitioning Shapes*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 208 pages. ISBN: 978-1-118-81133-7
35. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 1, Module 6: Place Value, Comparison, Addition and Subtraction to 100*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 376 pages. ISBN: 978-1-118-81132-0

Second Grade

36. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 2, Module 1: Sums and Differences to 20*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 136 pages. ISBN: 978-1-118-79293-3

37. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 2, Module 2: Addition and Subtraction of Length Units*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 144 pages. ISBN: 978-1-118-79363-3
38. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 2, Module 3: Place Value, Counting, and Comparison of Numbers to 1,000*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 296 pages. ISBN: 978-1-118-79349-7
39. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 2, Module 4: Addition and Subtraction Within 200 with Word Problems to 100*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 416 pages. ISBN: 978-1-118-79345-9
40. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 2, Module 5: Addition and Subtraction Within 1,000 with Word Problems to 100*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 288 pages. ISBN: 978-1-118-81122-1
41. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 2, Module 6: Foundations of Multiplication and Division*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 288 pages. ISBN: 978-1-118-81141-2
42. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 2, Module 7: Problem Solving with Length, Money, and Data*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 384 pages. ISBN: 978-1-118-81158-0
43. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 2, Module 8: Time, Shapes, and Fractions as Equal Parts of Shapes*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 256 pages. ISBN: 978-1-118-86256-8

Third Grade

44. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 3, Module 1: Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 288 pages. ISBN: 978-1-118-79295-7
45. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 3, Module 2: Place Value and Problem Solving with Units of Measure*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 296 pages. ISBN: 978-1-118-79360-2
46. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 3, Module 3: Multiplication and Division with Units of 0, 1, 6-9, and Multiples of 10*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 288 pages. ISBN: 978-1-118-79342-8
47. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 3, Module 4: Multiplication and Area*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 224 pages. ISBN: 978-1-118-81149-8

48. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 3, Module 5: Fractions as Numbers on the Number Line*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 384 pages. ISBN: 978-1-118-79411-1
49. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 3, Module 6: Collecting and Displaying Data*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 152 pages. ISBN: 978-1-118-81161-0
50. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 3, Module 7: Geometry and Measurement Word Problems*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 472 pages. ISBN: 978-1-118-81147-4

Fourth Grade

51. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 4, Module 1: Place Value, Rounding, and Algorithms for Addition and Subtraction*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 264 pages. ISBN: 978-1-978-1-118-79296-4
52. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 4, Module 2: Unit Conversions and Problem Solving with Metric Measurement*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 96 pages. ISBN: 978-1-118-79351-0
53. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 4, Module 3: Multi-Digit Multiplication and Division*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 504 pages. ISBN: 978-1-118-79367-1
54. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 4, Module 4: Angle Measure and Plane Figures*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 288 pages. ISBN: 978-1-118-81160-3
55. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 4, Module 5: Fraction Equivalence, Ordering and Operations*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 552 pages. ISBN: 978-1-118-81126-9
56. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 4, Module 6: Decimal Fractions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 272 pages. ISBN: 978-1-118-81142-9
57. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 4, Module 7: Exploring Multiplication*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 256 pages. ISBN: 978-1-118-81137-5

Fifth Grade

58. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics: A Story of Units, Grade 5, Module 1: Place Value and Decimal Fractions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 256 pages. ISBN: 978-1-118-79297-1

59. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 5, Module 2: Multi-Digit Whole Number and Decimal Fraction Operations*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 392 pages. ISBN: 978-1-118-79369-5
60. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 5, Module 3: Addition and Subtraction of Fraction*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 256 pages. ISBN: 978-1-118-79371-8
61. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 5, Module 4: Multiplication and Division of Fractions and Decimal Fractions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 512 pages. ISBN: 978-1-118-79354-1
62. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 5, Module 5: Addition and Multiplication with Volume and Area*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 320 pages. ISBN: 978-1-118-81139-9
63. Scott Baldrige, Ben McCarty, Robin Ramos, *Common Core Mathematics, A Story of Units: Grade 5, Module 6: Problem Solving with the Coordinate Plane*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 440 pages. ISBN: 978-1-118-81129-0

Sixth Grade

64. Scott Baldrige, Erika Silva, *Common Core Mathematics, A Story of Ratios: Grade 6, Module 1: Ratios and Unit Rates*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 424 pages. ISBN: 978-1-118-79347-3
65. Scott Baldrige, Erika Silva, *Common Core Mathematics, A Story of Ratios: Grade 6, Module 2: Arithmetic Operations Including Division of Fractions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 336 pages. ISBN: 978-1-118-81127-6
66. Scott Baldrige, Erika Silva, *Common Core Mathematics, A Story of Ratios: Grade 6, Module 3: Rational Numbers*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 320 pages. ISBN: 978-1-118-81131-3
67. Scott Baldrige, Erika Silva, *Common Core Mathematics, A Story of Ratios: Grade 6, Module 4: Expressions and Equations*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 608 pages. ISBN: 978-1-118-81117-7
68. Scott Baldrige, Erika Silva, *Common Core Mathematics, A Story of Ratios: Grade 6, Module 5: Area, Surface Area, and Volume Problems*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 528 pages. ISBN: 978-1-118-81123-8
69. Scott Baldrige, Henry Kranendonk, Roxy Peck, *Common Core Mathematics, A Story of Ratios: Grade 6, Module 6: Statistics*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 448 pages. ISBN: 978-1-118-79343-5

Seventh Grade

70. Scott Baldrige, Anne Netter, Julie Wortmann, *Common Core Mathematics, A Story of Ratios: Grade 7, Module 1: Ratios and Proportional Relationships*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 376 pages. ISBN: 978-1-118-79356-5
71. Scott Baldrige, Anne Netter, Julie Wortmann, *Common Core Mathematics, A Story of Ratios: Grade 7, Module 2: Rational Numbers*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 448 pages. ISBN: 978-1-118-81115-3
72. Scott Baldrige, Anne Netter, Julie Wortmann, *Common Core Mathematics, A Story of Ratios: Grade 7, Module 3: Expressions and Equations*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 592 pages. ISBN: 978-1-118-81111-5
73. Scott Baldrige, Anne Netter, Julie Wortmann, *Common Core Mathematics, A Story of Ratios: Grade 7, Module 4: Percent and Proportional Relationships*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 448 pages. ISBN: 978-1-118-81113-9
74. Scott Baldrige, Henry Kranendonk, Roxy Peck, *Common Core Mathematics, A Story of Ratios: Grade 7, Module 5: Statistics and Probability*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 520 pages. ISBN: 978-1-118-81112-2
75. Scott Baldrige, Pia Mohsen, David Wright, *Common Core Mathematics, A Story of Ratios: Grade 7, Module 6: Geometry*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 512 pages. ISBN: 978-1-118-81109-2

Eighth Grade

76. Scott Baldrige, Stefanie Hassan, *Common Core Mathematics, A Story of Ratios: Grade 8, Module 1: Integer Exponents and Scientific Notation*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 240 pages. ISBN: 978-1-118-79370-1
77. Scott Baldrige, Stefanie Hassan, *Common Core Mathematics, A Story of Ratios: Grade 8, Module 2: The Concept of Congruence*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 336 pages. ISBN: 978-1-118-81102-3
78. Scott Baldrige, Stefanie Hassan, *Common Core Mathematics, A Story of Ratios: Grade 8, Module 3: Similarity*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 304 pages. ISBN: 978-1-118-81107-8
79. Scott Baldrige, Stefanie Hassan, *Common Core Mathematics, A Story of Ratios: Grade 8, Module 4: Linear Equations*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 736 pages. ISBN: 978-1-118-81104-7
80. Scott Baldrige, Stefanie Hassan, *Common Core Mathematics, A Story of Ratios: Grade 8, Module 5: Examples of Functions from Geometry*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 272 pages. ISBN: 978-1-118-81082-8

81. Scott Baldrige, Henry Kranendonk, Roxy Peck, *Common Core Mathematics, A Story of Ratios: Grade 8, Module 6: Linear Functions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 360 pages. ISBN: 978-1-118-81097-2
82. Scott Baldrige, Stefanie Hassan, *Common Core Mathematics, A Story of Ratios: Grade 8, Module 7: Introduction to Irrational Numbers Using Geometry*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 520 pages. ISBN: 978-1-118-81100-9

Algebra I

83. Scott Baldrige, Jill Diniz, *Common Core Mathematics, A Story of Functions: Algebra I, Module 1: Relationships Between Quantities and Reasoning with Equations and Their Graphs*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 560 pages. ISBN: 978-1-118-79376-3
84. Scott Baldrige, Henry Kranendonk, Roxy Peck, *Common Core Mathematics, A Story of Functions: Algebra I, Module 2: Descriptive Statistics*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 432 pages. ISBN: 978-1-118-79364-0
85. Scott Baldrige, Jill Diniz, *Common Core Mathematics, A Story of Functions: Algebra I, Module 3: Linear and Exponential Functions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2014, 544 pages. ISBN: 978-1-118-81114-6

Geometry

86. Scott Baldrige, Pia Mohsen, *Common Core Mathematics, A Story of Functions: Geometry, Module 1: Congruence, Proof, and Constructions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2013, 528 pages. ISBN: 978-1-118-79368-8
87. Scott Baldrige, Stefanie Hassan, Pia Mohsen, *Eureka Math, A Story of Functions: Geometry, Module 2: Similarity, Proof, and Trigonometry*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2015, 800 pages. ISBN: 978-1-118-81144-3
88. Scott Baldrige, Pia Mohsen, *Eureka Math, A Story of Functions: Geometry, Module 3: Extending to Three Dimensions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2015, 352 pages. ISBN: 978-1-118-81140-5
89. Scott Baldrige, Pam Goodner, *Eureka Math, A Story of Functions: Geometry, Module 4: Connecting Algebra and Geometry through Coordinates*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2015, 350 pages. ISBN: 978-1-118-81164-1
90. Scott Baldrige, Pam Goodner, *Eureka Math, A Story of Functions: Geometry, Module 5: Circles with and Without Coordinates*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2015, 496 pages. ISBN: 978-1-118-81146-7

Algebra II

91. Scott Baldrige, Chris Black, *Eureka Math, A Story of Functions: Algebra II, Module 1: Polynomial, Rational, and Radical Relationships*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2015, 511 pages. ISBN: 978-1-118-81136-8
92. Scott Baldrige, Chris Black, *Eureka Math, A Story of Functions: Algebra II, Module 2: Trigonometric Functions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2015, 327 pages. ISBN: 978-1-118-81163-4
93. Scott Baldrige, Chris Black, *Eureka Math, A Story of Functions: Algebra II, Module 3: Exponential and Logarithmic Functions*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2015, 597 pages. ISBN: 978-1-118-81157-3
94. Scott Baldrige, Henry Kranendonk, Roxy Peck, *Eureka Math, A Story of Functions: Algebra II, Module 4: Inferences and Conclusions from Data*. Washington D.C: Common Core, Inc. [producer]. Indianapolis, IN: Jossey-Bass, 2015, 672 pages. ISBN: 978-1-118-81151-1

Preprints

95. S. Baldrige, *Embedded and Lagrangian Knotted Tori in \mathbb{R}^4 and Hypercube Homology*, arXiv:1010.3742v1 [math.GT].
96. S. Baldrige and P. Kirk, *Luttinger Surgery and interesting symplectic 4-manifolds with small Euler characteristic*, arXiv:math/0701400v2 [math.GT].
97. S. Baldrige, *Eureka Math/EngageNY Definitions Progressions*, preprint (126 pages).
98. S. Baldrige, *Representations of Curriculum Knowledge using Description Logic*, in preparation.
99. S. Baldrige, *A new genre of mathematics curricula in the US: the epic curriculum*, preprint (8 pages).

Social Media and Multimedia

100. Scott Baldrige, *Blog and website*. The ScottBaldrige.net website has the following active channels: *Engineering School Mathematics*, *Growing up with Eureka*, *Geometry and Topology Today*, *Baldrige Theorems*, and *News to Me*. **There are 75+ articles that have been posted on the website since inception, and those articles have been view over 50,000 times in the past two years.** Articles include news events, papers, and videos about the Eureka Math/EngageNY curriculum, my research in mathematics, my research in knowledge engineering (education), and science outreach.
101. Scott Baldrige, Autumn Baldrige, *Growing up with Eureka Video Series*. In this video series, I explore PK-16 mathematics with my 7-year old daughter, Autumn. The goal of the videos is to show teachers and parents positive ways of interacting with their children around the mathematics in the Eureka Math/EngageNY curriculum. Autumn and I write, film, and produce the videos together. **The 21+ youtube videos have been viewed over 142,000 times.** This series can be viewed at:

<http://scottbaldrige.net/growing-up-with-eureka/>

102. Scott Baldrige, David Shea Vela-Vick, *⟨Sci|State⟩ Video Series*. This video series includes *Geometry and Topology Today* videos, *⟨Sci|State⟩ Science* videos, *⟨Sci|State⟩ Engineering* videos, *⟨Sci|State⟩ Knowledge Engineering* videos, etc. This video series was created by Shea Vela-Vick and me to showcase research scientists and their research at three levels: general audience (high school), undergraduate/graduate, and post-graduate. **The 15+ youtube videos have been viewed over 20,000+ times.** Some of the videos can be viewed at:

<http://scottbaldrige.net/geometry-and-topology-today/>, or
<http://www.scistate.com/>

Computer Programs and Non-mathematical Publications

103. S. Baldrige, A. Lowrance. *Cube Knot Calculator*, (Mathematica software), [Computer Program] (2010), <http://cubeknots.googlecode.com>.
104. S. Baldrige, T. Parker, *Instructor Resources: Elementary Mathematics for Teachers*, [Computer Program and website] (2009), www.elementarymathforteachers.com.
105. S. Baldrige, *Multivariable Alexander Polynomial Calculator for Mathematica*, (Mathematica software), [Computer Program], (1999).
106. S. Baldrige, *Experiments in measuring uncertainty*, Steelcase Inc., (1996), 1–17.
107. S. Baldrige, *Employee Development System*, (ObjectPal, C++), [Computer Program], Whirlpool Corporation, (1993). Includes a 156 page user guide.
108. S. Baldrige, *WIK System*, (EIS Commander, Pascal), [Computer Program], Whirlpool Corporation, (1991).
109. S. Baldrige, *NetQuest System*, (Nomad2), [Computer Program], Whirlpool Corporation, (1989).
110. S. Baldrige, *Teacher Gradebook Module*, (TurboBasic), [Computer Program], Surfside Software, Inc., Massachusetts, (1987). Includes a 46 page user guide. (I started writing this program when I was 15; it sold nationally and paid for part of my college education.)

Students

1. Adam Lowrance, Ph.D. (2009). Adam was a VIGRE postdoc at University of Iowa and is now an Assistant Professor of Mathematics (tenure track) at Vassar College.
2. Ben McCarty, Ph.D. (2012). Ben is an Assistant Professor of Mathematics (tenure track) in the Department of Mathematics at the University of Memphis.
3. Peter Lambert-Cole, Ph.D. (2014). Peter is currently a Postdoc at Georgia Tech and was a Zorn Postdoc at Indiana University. In Fall 2013, Peter was awarded the Pasquale Porcelli Award for Graduate Research Excellence, an award that recognizes students who show the greatest promise of making significant contributions to mathematical research.
4. Ryan Leigon, Ph.D. expected in 2019. Ryan's work is in establishing connections between contact geometry and bordered Floer homology.
5. Sudipta Ghosh (currently a student).

University or Distinguished Lectures

- Apr. 2018 Invited Lead Speaker (accepted), National Council of Mathematics Teachers Annual Meeting, Washington, DC.
- Feb. 2018 Keynote Speaker, The 45th Annual Conference of Research Council on Mathematics Learning, Baton Rouge, LA.
- Nov. 2016 Invited Speaker, WSU Mathematics and Statistics Department Distinguished Lecture Series, Winona State University
- Aug. 2015 Invited Speaker, Hugo Rossi Lecture Series, University of Utah
- Sept. 2011 Keynote Speaker, LaGear UP Conference, Baton Rouge, LA
- Apr. 2010 University Lecture, Arizona State University.

Recent Invited Lectures and Colloquiums (140+ Lectures)

- Apr. 2018 Panelist Speaker with April Strom and Kyle Pearce (accepted), National Council of Mathematics Teachers Annual Meeting, Washington, DC.
- Jan. 2018 Invited Speaker, SciArt at LSU Science Cafe: Science in Tom Stoppard's "Arcadia," Baton Rouge, LA
- Jan. 2018 Invited Speaker, AMS Special Session on Differential Geometry, San Diego, CA
- Jan. 2018 MAA Panel, Mathematicians' Work in Creating Open Education Resources for K-12, San Diego, CA
- Oct. 2017 Colloquium Speaker, University of Memphis, Memphis, TN
- Oct. 2017 Invited Speaker, Teacher Group, University of Memphis, TN
- Apr. 2017 Invited Speaker, Proportionality and Proportional Relationships Symposium, Scottsdale Community College, Scottsdale, AZ
- Apr. 2017 Invited Speaker, Mathematics Matters in Education, Texas State University, College Station, TX
- Jan. 2017 AMS Special Session on Public School Districts and Higher Education Mathematics Partnerships, Atlanta, GA
- Nov. 2016 Colloquium Speaker, Michigan State University, Lansing, MI
- Nov. 2016 Invited Speaker, Topology Seminar, Michigan State University, Lansing, MI
- Nov. 2016 Colloquium Speaker, Winona State University, Winona, MN
- Nov. 2016 Invited Speaker, Student Seminar, Winona State University, Winona, MN
- Oct. 2016 Principal Speaker, Teacher Group, University of Oregon, Eugene, OR
- Oct. 2016 Colloquium Speaker, University of Oregon, Eugene, OR
- Oct. 2016 Invited Speaker, Topology Seminar, University of Oregon, Eugene, OR
- April 2016 Invited Speaker, National Council of Teachers of Mathematics, San Francisco, CA
- Nov. 2015 Invited Speaker (with Autumn Baldrige), LATM 2015 Conference, Baton Rouge, LA
- Nov. 2015 Invited Speaker, Workshop on Geometry, LATM 2015 Conference, Baton Rouge, LA
- Oct. 2015 Invited Speaker, AMS Special Session on Strategies of Training Pre-Service Teachers, Fullerton, CA
- Aug. 2015 Invited Speaker, Department of Mathematics, Brigham Young University, UT
- Aug. 2015 Invited Speaker, Department of Mathematics Education, Brigham Young University, UT
- June 2015 Invited Speaker, Louisiana Teacher Leader Conference, New Orleans, LA
- June 2015 Invited Speaker, Louisiana Teacher Leader Conference, New Orleans, LA
- Apr. 2015 Invited Speaker, National Council of Teachers of Mathematics, Boston, MA
- Apr. 2015 Invited Speaker (with Beau Bailey), National Council of Teachers of Mathematics, Boston, MA
- Mar. 2015 Invited Speaker, Mathematics Matters in Education, Texas A&M University, College Station, TX

- Jan. 2015 AMS Special Session on Creating Coherence in K–12 Mathematics, San Antonio, TX
- Jan. 2015 Invited Speaker, Lafayette Parish School System, Lafayette, LA
- Dec. 2014 Invited Speaker, Avoyelles Parish School System, Marksville, LA
- Oct. 2014 Invited Speaker, National Council of Teachers of Mathematics, LATM, Shreveport, LA
- July 2014 Invited Speaker, Network Team Institute, Albany, NY
- Apr. 2014 Invited Speaker, National Council of Teachers of Mathematics, Eureka Math, New Orleans, LA
- Mar. 2014 Invited Speaker, Mathematicians in Mathematics Education Workshop, Texas A&M, TX
- Mar. 2014 Invited Speaker, Critical Issues in Mathematics Education 2014: The role of the mathematics department in the mathematical preparation of teachers, MSRI, Berkeley, CA
- Jan. 2014 Invited Speaker, Mathematicians and School Mathematics Education: A Pan-American Workshop, BIRS, Banff
- Nov. 2013 Invited Speaker, Network Team Institute, Albany, NY
- July 2013 Invited Speaker, Network Team Institute, Albany, NY
- May 2013 Invited Speaker, Writer’s Workshop, New York City, NY
- May 2013 Invited Speaker, Network Team Institute, Albany, NY
- Aug. 2012 Invited Speaker, Network Team Institute, Albany, NY
- Apr. 2012 Invited Speaker, Geometric Structures on Manifolds (12w5121), BIRS, Banff
- Nov 2011 Invited Speaker, LATM 2011 Conference, Monroe, LA
- Nov 2011 Invited Speaker, Career Award Regional Forum, LSU
- Sep. 2011 Invited Panelist, Making Science Cool: Solving the Shortage of Math and Science Students, U.S. News and World Report, National Press Club, Washington DC
- Sep. 2011 Invited Speaker, Common Core, Inc., Washington DC
- Aug. 2011 Invited Speaker, Aarhus Gauge Theory Workshop, Aarhus, Denmark
- June 2011 Invited Speaker, LSU Math Circle, LSU
- July 2011 Principal Speaker, 2 day mini-course, Los Angeles
- April 2011 Invited Speaker, Burroughs Wellcome Fund, Research Triangle Park, North Carolina
- April 2011 AMS Special Session on Knots, Surfaces and 3-manifolds, University of Nevada, NV
- Jan. 2011 Principal Speaker, 1 day mini-course, Episcopal Lower School, Baton Rouge, LA
- Sept. 2010 Invited Speaker, Rockford High School, Rockford, MI
- Sept. 2010 Invited Speaker, Internat. Seminar on Math., Physics and Chem. Textbook, Santiago, Chile
- Aug. 2010 Invited Speaker, Tiger Prep, LSU
- July 2010 Principal Speaker, 10 day mini-course, City of Baker, LA
- June 2010 Invited Speaker, LSU Math Circle, LSU
- June 2010 Principal Speaker, 4 day mini-course, Episcopal Lower School, Baton Rouge, LA
- May 2010 AMS Special Session on Homology Theories for Knots and Skein Modules, Newark, NJ
- May 2010 AMS Special Session on Invariants of Knots, Links, and 3-Manifolds, Newark, NJ
- Feb. 2010 Invited Speaker, Texas Geometry and Topology Conference, Fort Worth, TX, hosted by Texas Christian University and University of Texas at Arlington
- Feb. 2010 Invited Speaker, Spring Program, Mathematical Sciences Research Institute, CA
- Feb. 2010 Invited Speaker, Teacher Circle, Laney College, CA
- Jan. 2010 Invited Speaker, Association of Mathematics Teacher Educators, Irvine, CA
- Jan. 2010 AMS Committee on Education Panel Discussion on the Common Core Standards, San Francisco, CA
- Aug. 2009 Invited Speaker, Tiger Prep
- June 2009 Principal Speaker, 10 day mini-course, City of Baker, Louisiana
- June 2009 Invited Speaker, LSU Math Circle

- Apr. 2009 Seminar Speaker, Georgia Tech, Atlanta, GA
- Mar. 2009 Invited Speaker, Spring Topology and Dynamics Conference, Gainesville, FL
- Mar. 2009 Colloquium, Purdue University (in Mathematics)
- Mar. 2009 Seminar Speaker, Purdue University (in Education)
- Feb. 2009 LSU/Iowa Virtual Seminar, LSU
- Jan. 2009 AMS Committee on Education Panel Discussion on National Mathematics Panel, Washington, D.C.
- Jan. 2009 AMS Special Session on Mathematics Education on Baker Grant, Washington, D.C.
- Jan. 2009 AMS Special Session on Mathematics Education on NSF CCLI grant, Washington, DC.
- Jan. 2009 MAA Poster Session on Projects Supported by the NSF Division of Undergraduate Education.
- Nov. 2008 Invited Speaker, University of Michigan (in Mathematics)
- Nov. 2008 Invited Speaker, University of Michigan (in Education)
- June 2008 Principal Speaker, 10 day mini-course, City of Baker, Louisiana
- May 2008 Invited Speaker, Stepping up to the Challenge, 40th Annual Conference, WMC, Green Lake, WI
- May 2008 Speaker (w/ T. Parker), Stepping up to the Challenge, 40th Annual Conference, WMC, WI
- May 2008 Invited Speaker, AMS Special Session, Claremont University, CA
- Apr. 2008 Invited Speaker, Isidore Newman School, New Orleans, LA
- Mar. 2008 Invited Speaker, AMS Special Session, Baton Rouge, LA
- Feb. 2008 Colloquium, University of Memphis (in Education)
- Feb. 2008 Colloquium, University of Memphis (in Mathematics)
- Feb. 2008 Seminar Speaker, Indiana University
- June 2007 Principal Speaker, 5 day mini-course, Delaware Foundation for Sci. and Math. Ed., Wilmington, DE.
- May 2007 Invited Speaker, Georgia Topology Conference, Univ. of Georgia.
- May 2007 Seminar Speaker, University of Massachusetts.
- Mar. 2007 Invited Speaker, Interactions of geo. and topology in low dimensions conference, BIRS, Banff.
- Mar. 2007 Invited Speaker, Tulane University.
- Feb. 2007 Invited Speaker, Second Louisiana-Texas-Topology-Retreat Conference
- Jan. 2007 AMS-MAA-MER Special Session on Mathematics and Education Reform, New Orleans
- Nov. 2006 Invited Speaker, University of Louisiana, Lafayette.
- Nov. 2006 Invited Speaker, Symplectic Geometry and Topology and their Applications Conference, Poland.
- Aug. 2006 Principal Speaker, 5 day mini-course, Wyoming, Michigan.
- Apr. 2006 AMS Special Session on Invariants of Low Dimensional Manifolds, Miami, Florida
- Mar. 2006 Colloquium, Texas State University
- Feb. 2006 Principal Speaker, 2 day mini-course, Beaumont Texas
- Feb. 2006 Colloquium, Rice University
- Jan. 2006 AMS Special Session on New Developments in Symplectic Topology, San Antonio
- Dec. 2005 Principal Speaker, 2 day mini-course, Beaumont Texas
- Aug. 2005 Principal Speaker, 5 day mini-course, Singapore Mathematics Institute, Madison, Wisconsin
- May 2005 Invited Speaker, Conference, Mathematical Sciences Research Institute (MSRI)
- May 2005 Invited Speaker, Symplectic Geometry Program Reunion Conference (IPAM), Lake Arrowhead
- Apr. 2005 Colloquium, Southeastern Louisiana University
- Apr. 2005 Colloquium, California State University, Fullerton
- Apr. 2005 Colloquium, Chapman University, California
- Apr. 2005 Colloquium, California State University, Northridge
- Mar. 2005 Invited Speaker, Geometry and Topology Seminar, Tulane University
- Feb. 2005 Invited Speaker, BRACTM conference, Baton Rouge

- Jan. 2005 AMS Special Session on Mathematicians' work on Mathematics Education, Atlanta Georgia
- Oct. 2004 Lecture to introduce graduate students to topology, Louisiana State University
- Sept. 2004 Colloquium, Southeastern Louisiana University
- Aug. 2004 Principal Speaker, 3 day mini-course, Singapore Mathematics Institute, Madison, Wisconsin
- May 2004 Invited Speaker, Conference on Geometry and Topology of Manifolds, McMaster University
- Feb. 2004 Colloquium, The Ohio State University
- Feb. 2004 Colloquium, Loyola University of Chicago
- Jan. 2004 Colloquium, Louisiana State University (in Mathematics)
- Jan. 2004 Colloquium, Louisiana State University (in Education)
- Jan. 2004 AMS Special Session on Geometric Structures on Manifolds
- Jan. 2004 AMS Special Session on Low-Dimensional Topology
- Jan. 2004 AMS-MAA-MER Special Session on Mathematics and Education Reform, Phoenix
- Nov. 2003 Invited Speaker, Special Workshop on Mathematics Education, The Ohio State University
- Aug. 2003 Invited Speaker, Differential Geometry Seminar, University of Minnesota
- Aug. 2003 Principal Speaker, 5 day mini-course, Singapore Mathematics Institute, Madison, Wisconsin
- May 2003 Invited Speaker, Tenth Gökova Geometry/Topology Conference, Gökova, Turkey
- May 2003 Colloquium, California State University at Los Angeles
- April 2003 Colloquium, University of Memphis
- April 2003 Invited Speaker, Symplectic Geometry Seminar, IPAM, UCLA
- April 2003 AMS Special Session on Topology, Indiana University
- Jan. 2003 Invited Speaker, Differential Geometry Seminar, Georgia Tech
- Nov. 2002 Invited Speaker, AMS Committee on Education, Washington, D.C., November, 2002
- Nov. 2002 Invited Speaker, Differential Geometry Seminar, University of Illinois
- April 2002 Invited Speaker, Gauge Theory Seminar, Michigan State University
- Feb. 2002 Topology and Geometry seminar, Indiana University
- Jan. 2002 Low Dimensional Topology Seminar, AMS/MAA Joint Mathematics Meeting
- Nov. 2001 Invited Speaker, Differential Geometry Seminar, Massachusetts Institute of Technology

Awards, Honors, Grants, Recognitions: \$6.3 Million+.

Mathematics Research:	\$4,308,423.
Mathematics Education and Research:	\$1,495,236.
Mathematics Graduate/Undergraduate Outreach:	\$510,282.

- 2017 US Dept of Education (DOED), CodingMinds for Computational Thinking in STEM (submitted), \$1,394,956.
- 2012-4 **Common Core, Development of Common Core PK-12 Curriculum in Mathematics**, \$359,156.
- 2011 **Tiger Athletic Foundation President's Award.** Awarded to 1-4 professors per year university-wide: "recognizes a faculty member for extraordinary classroom teaching as demonstrated by an impact on and involvement with students."
- 2011 Louisiana Systemic Initiatives Program (LaSIP), Building a High Performing Mathematics Program in the City of Baker School System, \$137,775.
- 2011 The Brookhill Foundation, Building a High-Performing Mathematics Program in the City of Baker School System, Private Donation, \$63,000.

- 2010 Rockford Hall of Fame, Rockford, MI. I am one of 10 inductees to my alma mater's hall of fame.
- 2010 Louisiana Systemic Initiatives Program (LaSIP), Building a High Performing Mathematics Program in the City of Baker School System, \$211,994.
- 2010 The Brookhill Foundation, Building a High-Performing Mathematics Program in the City of Baker School System, Private Donation, \$70,000.
- 2008 NSF, Louisiana State University University VIGRE Proposal EMSW21-VIGRE, \$3,745,347.
- 2008 Rainmaker Award, LSU's "Top 100 Faculty Scholars"
- 2008 Invited to run for Member at Large to the Council of the AMS
- 2008 LEQSF(2008-10)-ENH-TR-04, Board of Regents, Human Resource Development in Mathematical Science, \$140,000.
- 2008 LEQSF, Board of Regents, Professional Master's Degree Programs for K-12 STEM Teachers, \$140,336.
- 2008 **NSF CAREER Award DMS-0748636, CAREER: The topology of smooth and symplectic 4-manifolds**, \$452,869.
- 2008 Louisiana Systemic Initiatives Program (LaSIP), Building a High-Performing Mathematics Program in the City of Baker School System, \$352,140.
- 2008 The Brookhill Foundation, Building a High-Performing Mathematics Program in the City of Baker School System, Private Donation, \$136,650.
- 2008 Gabriella and Paul Rosenbaum Foundation, Building a High-Performing Mathematics Program in the City of Baker School System, Private Donation, \$15,000.
- 2007 NSF-DUE, Collaborative Research: Elementary Mathematics for Teachers, \$149,521.
- 2006 Research fellowship, Park City Mathematics Institute, IAS.
- 2005 Nominated by LSU for the Rising Star of Academia award, given by the Chronicles of Higher Education.
- 2005 LEQSF-ENH grant, Overcoming Louisiana's Mathematics Gap: From Algebra to Calculus, \$229,946
- 2005 NSF Grant DMS-0506737, Conference in Honor of Ronald Fintushel, \$15,000
- 2004 NSF Grant DMS-0507857, Transfer of Grant DMS-0406021 to LSU, \$67,163, (\$57,163 from NSF and \$10,000 from LSU)
- 2004 **NSF Grant DMS-0406021, The Topology of Smooth 4-manifolds, with Applications to the Topology of Symplectic 4-Manifolds**, \$75,207
- 2003 Research fellowship, Institute for Pure and Applied Mathematics (Spring Program)
- 2001 Research consultant, Michigan State University, \$5000
- 2001 Research fellowship, Park City Mathematics Institute, IAS
- 2001 Dissertation completion fellowship, College of Natural Sciences, Michigan State University
- 1998 Graduate student teaching award, Michigan State University
- 1996 Steelcase Research Grant, Steelcase Corporation, \$10,000
- 1993 Special distinction for outstanding thesis, Kettering University
- 1992 Sigma Alpha Chi Honorary Management Society

Conferences Organized

- 2010 Critical Issues in Mathematics Education: Reasoning and Sense-Making in the Math Curriculum, Mathematical Sciences Research Institute, CA from June 07, 2010 to June 09, 2010.

- 2008 AMS Special Session on Gauge Theory in Smooth and Symplectic Topology, Spring Southeastern Meeting in Baton Rouge, LA on March 28-30.
- 2007 AMS Special Session on Recent Developments in Floer Homology, AMS/MAA Joint Mathematics Meetings New Orleans, LA, January 5-8, 2007.
- 2006 Topology Conference Honoring Ronald Fintushel. Held at Tulane University, November 10–12, 2006. Co-organizers: Terry Lawson and Thomas Mark.

Service and Professional Activities

- 2016- National Assessment of Education Progress (NAEP) Mathematics Standing Committee
- 2015- Undergraduate Advisors Committee, Department of Mathematics
- 2010-2012 Hiring Committee, Department of Mathematics
- 2008-2013 VIGRE Steering Committee, Department of Mathematics
- 2009-2012 LSU Curriculum Committee, Department of Mathematics
- 2006-2012 Undergraduate Advisors Committee, Department of Mathematics
- 2008-2012 VIGRE Steering Committee, Department of Mathematics
- 2008-2009 Team Leader, American Mathematical Society, National Math Panel Forum.
- 2008 Participant, Science and Mathematics Teacher Imperative-NASULGC, Austin, TX, February.
- 2006-2007 Internal Review Committee, Department of Mathematics, LSU
- 2006 Masters of Natural Science Development Committee, Department of Mathematics, LSU
- 2005 Organizer, Teaching in East Baton Rouge Parish Schools after Katrina presentation, LSU.
- 2005 Volunteer, Pete Maravich Assembly Center, LSU's Hurricane Katrina acute care field hospital
- 2005 Review team member, Chancellor's Distinguished Lectureship Series, LSU
- 2004–2008 Student Advisor Committee, Department of Mathematics, Louisiana State University
- 2004–2008 Secondary Education Committee, College of Arts and Science, Louisiana State University
- 2004 Participant, Step thru Stem Retreat, May
- 2004 Participant, Standards Setting Meeting, American Board for Certification of Teacher Excellence
- 2003 REU Project Advisor, Student: Russell Halper
- 2002–2004 Principal organizer, VIGRE Seminar, Indiana University
- 2002 Participant, Standards for Success Project
- 2002 Course Adoption Committee, 21st Century Teacher Project
- 1997–1998 Principal organizer, Knot theory student seminar, Michigan State University
- 1998–1999 Dean's Student Advisory Council, College of Natural Science, Michigan State University
- 1997–1998 Graduate Student Committee, Department of Mathematics, Michigan State University
- 1997–1998 Directed a knot theory student seminar, Michigan State University
- 1998 Member of the Mathematical Association of America
- 1996– Member of the American Mathematical Society

Courses Taught

The courses are listed by level from graduate school (listed in bold) to remedial college level.

- **4-Manifolds and Seiberg-Witten Theory.** Topics course for graduate students. (LSU, Spring, 2017)
- **Chern-Simons Theory.** Topic course for graduate students on Maxwell's equations, Yang-Mill's equations, and Chern-Simons Theory. (LSU, Math 7590, Fall 2015).
- **Differential Geometry.** Course on differentiable manifolds, transversality, differential forms, de Rham cohomology, and Lie groups . (LSU, Math 7550, Spring 2015, Spring 2018)
- **4-manifold Theory.** Topics course for graduate students. (LSU, Fall 2010)
- **Seiberg-Witten-Floer Theory.** Topics course for graduate students. (LSU, Spring 2010)
- **Pseudoholomorphic maps and Gromov-Witten invariants.** Topics course for graduate students. (LSU, Math 7590, Fall 2007)
- **Seiberg-Witten Theory.** Topics course for graduate students. (IU, Math 624, Spring 2004)
- **Riemannian and Symplectic Geometry.** Introduction to Riemannian geometry: manifolds, metrics, Levi-Civita connections, and symplectic geometry. (LSU, Math 7590-2, Fall 2006)
- **Topology I.** Text: Munkres (graduate course). Basic notions of general topology, with emphasis on Euclidean and metric spaces, continuous and differentiable functions, inverse function theorem and its consequences. (LSU, Math 7510, Fall 2005, Fall 2009)
- **Complex Variables.** Text: Brown and Churchill, *Complex Variables and Applications*. (LSU, Math 4036, Fall 2010)
- **Geometry.** Text: S. Baldrige and T. Parker, *Elementary Geometry for Teachers*; Supervised two GAANN fellows. (LSU, Math 4005)
- **Step II Course for Teachers.** (LSU, Math 3002).
- **Step I Course for Teachers.** (LSU, Math 3001).
- **Ordinary Differential Equations.** Text: Adkins and Davidson, *Ordinary Differential Equations*. (LSU, Math 2065, Fall 2011, Fall 2015, Spring 2017)
- **Calculus III.** Text: Thomas and Finney, *Calculus, part II, 9th ed.* Supervised one teaching assistant. (MSU, Math 234)
- **Calculus I.** Text: Stewart, *Early Transcendentals*. Supervised teaching assistants. (IU, Math 211)
- **Elementary Measurement and Geometry.** Text: Euclid, *Book I*; E. E. Moise and F. L. Downs, *Geometry; Singapore*, Grades 3-7. (MSU, Math 202)
- **Elementary Arithmetic and Algebra.** Text: T. H. Parker and S. J. Baldrige, *Elementary Mathematics for Teachers; Singapore*, Grades 3-6. Supervised teaching assistants. (LSU, Math 1201, Fall 2017, MSU and IU, Math 201 and Math T101)

- Survey of Calculus with Applications. Text: Gleason, Hughes-Hallet, et. al., *Applied Calculus for Business, Social Science, and Life Sciences*. (MSU, Math 124)
- College Algebra. Text: Larson, Hostetler, and Edwards, *College Algebra*. Worked in a special program for disadvantaged and under-prepared students (Enrichment Program). Supervised teaching assistants. (MSU, Math 103)
- Intermediate Algebra. Text: Phillips, Butts, and Shaughnessy, *Intermediate Algebra, 2nd Edition*. Enrichment Program. Supervised teaching assistants. (MSU, Math 1825)

A Sample of Media Coverage, News Releases, Government Reports

I was quoted, my mathematical research was highlighted, or my work in education was discussed in the following newspapers, magazines, or government reports:

1. Chris Brownell, *Curricula narratives thought of as stories*, Zone of Potential Construction Podcast, recorded December 21, 2017. This recording will be published as two or three episodes in March and April of 2018.
2. Chris Rogers, *WSU brings math education expert to lecture*, Winona Post, October 31, 2016.
3. Saffron VanGalder, *This Math Curriculum Created by Teachers Is Raising Standards for Students Across the Country*, High Standards, Education Post, April 21, 2016.
4. Amber M. Northern, *Implementation of K12 State Standards for Mathematics and English Language Arts and Literacy*, The Thomas B. Fordham Institute, April 20, 2016.
5. Liana Heitin, *The Search for Common-Core Curricula: Where Are Teachers Finding Materials?*, Education Week, April 19, 2016.
6. Opfer, V. Darleen, Julia H. Kaufman and Lindsey E. Thompson, *Implementation of K12 State Standards for Mathematics and English Language Arts and Literacy: Findings from the American Teacher Panel*. Santa Monica, CA: RAND Corporation, 2016.
http://www.rand.org/pubs/research_reports/RR1529.html.
7. Jay Mathews, *Many parents hated Common Core math at first, before figuring it out*, The Washington Post, January 31, 2016.
8. Allison McCollister, *Eureka! Connecting Math to the Real World*, The Pursuit, pages 32-33, 2015.
9. Leigh Guidry, *How did Eureka Math Start? 2 Writers Answer*, The Town Talk, July 31, 2015.
10. Robert Pondiscio, *Common Core's First Breakout Hit: EngageNY's curriculum is getting attention well beyond the Empire State*, U.S. News & World Report, May 29, 2015.
11. Jessica Hughes, *'Eureka Math' Embeds Real-World Problems in Pre-K12 Mathematics Lessons*, Center for Digital Education, April 2, 2015.
12. Rachel Monahan, *How Common Core is Killing the Textbook*, The Hechinger Report, March 31, 2015.

13. Jessica Williams, *Common Core, Eureka Math shake up Louisiana classrooms*, The Times-Picayune, March 13, 2015.
14. Liana Heitin, *Most Math Curricula Found to Be Out of Sync with Common Core*, Education Week, March 4, 2015. (Guess which curriculum was the only one found to be in sync!)
15. Ginger Moored, *An inside look at some of the top teacher prep programs*, National Quality on Teacher Quality, June, 17, 2013.
16. Anne Pfaelzer de Ortiz, *Common Core Mathematics Comes to Delaware*, i-Newswire, August 2, 2012.
17. Hillary Marder, *Common Core to Create New York State's Recommended PK-12 Mathematics Curriculum*, Common Core, July 18, 2012.
18. Jason Koebler, *Experts: STEM Education is all about jobs*, U.S. News and World Report, September 27, 2011.
19. The National Press Club, *'Cool' experts to discuss how to get students excited about STEM education*, September 27, 2011.
20. Rena Pederson, *Tom Luce to be featured speaker at U.S. News and World Report summit*, National Math+Science Initiative, September 2, 2011.
21. Danielle Arndt, *Hall of Fame inductees 'represent what's possible'*, Rockford Independent, October 10, 2010.
22. Ron Cammel, *Busy weekend planned for first inductees of Rockford Public Schools' Hall of Fame*, Grand Rapids Press, September 28, 2010.
23. NBC's Education Week: a nationally televised conference on education, September 22-23, 2010. Panel discussions and speeches televised on NBC, CNBC, MSNBC, and NBC's websites.
24. Faiza Elmasry, *Singapore Math Adds Up for US Teachers*, Voice of America, August 10, 2010. <http://www.voanews.com/english/news/usa/Singapore-Math-Adds-Up-for-US-Teachers-100338189.html>
25. Danielle Arndt, *Hall of Fame inductees announced*, Rockford Independent, August 10, 2010.
26. Satellite Media Tour: I did several local, national, and international television and radio interviews about elementary mathematics curricula in the U.S. Sample of locations: Miami (2 interviews), Phoenix, Los Angeles, Seattle, Atlanta, Waco and networks: Fox Business Network, etc., June 23, 2010.
27. John Fensterwald, *Common-core standards under fire*, The Educated Guess, January 17th, 2010.
28. Patricia Clark Kenschaft, *Is Elementary Education a Concern of MAA Members?*, MAA Focus, p. 23-24, August/September 2009.
29. Ashley Berthelot, *NSF grants LSU \$5 million to develop Louisiana math and science teacher institute*, Louisiana State University, September 4, 2009.

30. Chante' Warren, *Math Retreat*, The Baton Rouge Advocate, June 27, 2009, page 4B.
31. Beth Courtney and Craig Freeman, *Louisiana Public Square: Legislative Review 2009*, Louisiana Public Broadcasting, Aired June 24, 2009 (7:00p.m.). I was part of a panel discussion on television to discuss the 2009 Louisiana State Budget. My goal was to point out that LSU's budget was already lean and cutting it further would hurt the core missions of Louisiana's flagship university.
32. Andy Magid (editor), et. al., *Mathematics People*, Notices of the American Mathematical Society, Vol. 56, No. 2, p. 268-271, 2009.
33. Andy Magid (editor), et. al., *Biographies of Candidates 2008*, Notices of the American Mathematical Society, Vol. 55, No. 8, p. 1002–1013, September 2008.
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Other Interests

Physics: I am interested in supersymmetry and how it relates to Seiberg-Witten theory. I audited the following courses at Michigan State University: PHY 820 Classical Mechanics, PHY 851-2 Quantum Mechanics I & II, AST 860B Gravitational Astrophysics, PHY 853 Advanced Quantum Mechanics, PHY 854 Quantum Electrodynamics.

Programming Languages: Java (limited), Mathematica, Maple, C, C++, Pascal, BASIC (all forms), COBOL, FORTRAN, ObjectPAL and PAL, Nomad2.

Hobbies: Running (PR's: 16:23 minutes in 5 km, 1:59 minutes in $\frac{1}{2}$ mile), playing guitar, backpacking, restoring antique sports cars.

References

Ronald Fintushel, Michigan State University
Roger Howe, Yale University, (on education)
Paul Kirk, Indiana University
Clifford Taubes, Harvard University
Patrick Thompson, Arizona State University (on education)