

VITA

Fred Worth

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Education

BS in Mathematics - Evangel College, Springfield, Missouri - December 1982.
MS in Applied Mathematics - University of Missouri-Rolla, Rolla, Missouri - August 1987.
Ph.D. in Mathematics - University of Missouri-Rolla, Rolla, Missouri - August 1991.

Teaching Experience

1984 - 1985 - Mathematics teacher - St. Anthony High School, Jersey City, New Jersey.
1985 - 1991 - Graduate teaching assistant - University of Missouri-Rolla, Rolla, Missouri.
1991 - 1994 - Assistant professor of mathematics - member of graduate faculty - Henderson State University, Arkadelphia, Arkansas.
1994 - 1999 - Associate professor of mathematics - member of graduate faculty - Henderson State University, Arkadelphia, Arkansas. Awarded tenure, 1997.
1999 - present - Professor of mathematics - member of graduate faculty - Henderson State University, Arkadelphia, Arkansas.

Professional Organizations

Arkansas Chapter (Brooks Robinson/George Kell Chapter) of Society for American Baseball Research
Association of Christians in the Mathematical Sciences
Mathematical Association of America
Society for American Baseball Research
Southwest Arkansas Council of Teachers of Mathematics

Academic/Professional and Related Journal Subscriptions

<i>Baseball Digest</i>	<i>Mathematics Magazine</i>
<i>Baseball Research Journal</i>	<i>Missouri Journal of Mathematical Sciences</i>
<i>By The Numbers</i>	<i>The National Pastime</i>
<i>Focus</i>	<i>Baseball By The Numbers</i>

Dissertation

"Concerning the expansive property and shift homeomorphisms of inverse limits," University of Missouri-Rolla, 1991, under the direction of Dr. W. T. Ingram.

Courses Regularly Taught

Calculus 1, Calculus 2, Calculus 3, College Algebra, Introduction to Mathematical Computing, Linear Algebra, Mathematics for the Liberal Arts, Mathematics through Sports, Precalculus, Topology

Other Courses Taught

Advanced Calculus, Algebraic Structures, Combinatorics, Differential Equations, Discrete Mathematics 1, Discrete Mathematics 2, Dynamics of Interval Maps, Elementary Algebra, Graph Theory, Intermediate Algebra, Modern Algebra, Plane Trigonometry, Probability and Statistics, Real Line Topology, Vector Analysis

Awards and Recognitions

Departmental Scholarship, Evangel College, 1982.
Awarded the Ellis College of Arts and Sciences Excellence in Service Award, 2002.
Recognized in *Who's Who in America*, 2004 - 2008.
Recognized in *Who's Who Among America's Teachers*, 2004 - 2006.
Awarded the Ellis College of Arts and Sciences Excellence in Scholarly Activity Award, 2005.

Recognized in Who's Who In American Education, 2006 - 2008.
Recognized in Who's Who In Science and Engineering, 2006 - 2009.

Invited Addresses

"Inverse limits," Evangel College, October 1989, Springfield MO.
"When errors give right answers," Evangel University, September 2001, Springfield MO.
"The world wide web in the classroom," Mathematical Association of America Oklahoma-Arkansas section faculty workshop, April 2002, Arkadelphia AR.
"Preparing for graduate school," Evangel University, October 2003, Springfield MO.
"Mathematics, graduate school and life," Evangel University, October 2004, Springfield MO.
"Mathematics and homeschooling," HSLDA International Homeschool Leadership Conference, September 2008, Buffalo NY.
"The dad's role in homeschooling," Clark County Christian Homeschool Organization, October 2008, Caddo Valley AR.

Mathematical Research Talks

"Expansiveness and shift homeomorphisms," American Mathematical Society, March 1992, Springfield MO.
"The expansive property and sequences of mappings," Mathematical Association of America, April 1992, Arkadelphia AR.
"Generalized shift homeomorphisms," Mathematical Association of America, March 1993, Tulsa OK.
"The existence of periodic points on maps of trees," Mathematical Association of America, March 1994, Searcy AR.
"Point-wise expansive homeomorphisms," Mathematical Association of America, April 1996, Ft. Smith AR.
"On periodic points of maps of trees and the expansive property," Association of Christians in the Mathematical Sciences, May 2001, Grand Rapids MI.
"Elementary fixed point theory," Henderson State University Mathematics Club, November 2002, Arkadelphia AR.
"Some results on maps of trees," Mathematical Association of America, March 2004, Conway AR.
"Great (but lesser known) theorems," MathFest, August 2005, Albuquerque NM.
"Three great (but lesser known) theorems," Mathematical Association of America, April 2006, Fayetteville AR.
"Strong Law of Small Numbers," Mathematical Association of America, March 2009, Weatherford OK.

Mathematics Education Talks

"Basic skills tests in calculus," Mathematical Association of America, April 1995, Weatherford OK.
"Helping students find their purpose," The Role and Responsibilities of the Christian Professor in the Academy, April 1997, Memphis TN.
"Mathematics as a liberal art," Mathematical Association of America, April 1998, Little Rock AR.
"Mathematics as a liberal art - one year later," Mathematical Association of America, March 1999, Bethany OK.
"Mathematics as a liberal art," Focus on Learning conference at University of Arkansas Community College, March 1999, Hope AR.
"Requiring graphing calculators in college algebra - pitfalls and how to avoid them," Mathematical Association of America, March 2000, Russellville AR.
"Mathematics in the homeschool," Malvern Homeschool Support Group, January 2001, Malvern AR.
"But I got the right answer," Mathematical Association of America, April 2002, Arkadelphia AR.
"High school linear algebra and the TI-83," Southwest Arkansas Council of Teachers of Mathematics, October 2002, Arkadelphia AR.
Selected to give talk "Mathematics in the newspaper: seeking quantitative literacy," Arkansas Conference on Teaching, November 2002, Little Rock AR.
"The mathematics your elementary school student needs to know," Clark County Christian Homeschool Organization, November 2002, Arkadelphia AR.
"Is the 'right' answer right?" Mathematical Association of America, March 2004, Hammond LA.

Selected to give talk "Mathematics in the newspaper," National Council of Teachers of Mathematics regional conference, November 2004, New Orleans LA.

"Baseball as the focus for a general education mathematics course," Mathematical Association of America, April 2005, Ada OK.

"But I got the right answer," Mathematical Association of America, January 2006, San Antonio TX.

"Newspaper project in a liberal arts mathematics course," Mathematical Association of America, April 2006, Fayetteville AR.

"Why do we need to know this?," MathFest, August 2006, Knoxville TN.

"Some of my favorite calculus problems," Mathematical Association of America, January 2007, New Orleans LA.

"Some of my favorite calculus problems," Mathematical Association of America, March 2007, Tahlequah OK.

"Baseball as the focus for a general education mathematics course - how it is working," Mathematical Association of America, March 2009, Weatherford OK.

Workshops Presented

"How to use MicroGrade," three workshops for Office of Computer and Communication Services, Henderson State University.

"Teaching mathematics in elementary through middle school," Arkansas State Homeschool Convention, May 2000, Searcy AR.

"Teaching upper level mathematics," Arkansas State Homeschool Convention, May 2000, Searcy AR.

"How to do word problems," Arkansas State Homeschool Convention, May 2001, Searcy AR.

"Teaching upper level mathematics," Arkansas State Homeschool Convention, May 2001, Searcy AR.

"How to do word problems," Northwest Arkansas Christian Home Educator's Association curriculum fair, April 2002, Springdale AR.

"Important issues in mathematics education," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, April 2002, Springdale AR.

"Solving word problems," Southwest Home Education Ministries Convention, April 2002, Springfield MO.

"Teaching high school mathematics," Southwest Home Education Ministries Convention, April 2002, Springfield MO.

"Developing creative and critical thinking," Arkansas State Homeschool Convention, May 2002, Searcy AR.

"Helpful hints for teaching mathematics," Arkansas State Homeschool Convention, May 2002, Searcy AR.

"How to teach algebra," Arkansas State Homeschool Convention, May 2003, Searcy AR.

"Developing creative and critical thinking," Arkansas State Homeschool Convention, May 2003, Searcy AR.

"Developing creative and critical thinking," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, April 2004, Fayetteville AR.

"Answering objections to homeschooling," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, April 2004, Fayetteville AR.

"Teaching high school mathematics," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, April 2004, Fayetteville AR.

"Answering objections to homeschooling," Arkansas State Homeschool Convention, May 2004, Searcy AR.

"Developing creative and critical thinking," Arkansas State Homeschool Convention, May 2004, Searcy AR.

"How to teach algebra," Arkansas State Homeschool Convention, May 2004, Searcy AR.

"Homeschooling: a calling," Arkansas State Homeschool Convention, May 2005, Searcy AR.

"Creative and critical thinking," Arkansas State Homeschool Convention, May 2005, Searcy AR.

"How to teach mathematics successfully," Arkansas State Homeschool Convention, May 2005, Searcy AR.

"How to teach algebra," Arkansas State Homeschool Convention, May 2005, Searcy AR.

"Helpful hints for teaching mathematics," Texas Homeschool Coalition, August 2005, Houston TX.

"Developing creative and critical thinking," Texas Homeschool Coalition, August 2005, Houston TX.

"How to do word problems," Texas Homeschool Coalition, August 2005, Houston TX.

"How to teach algebra," Texas Homeschool Coalition, August 2005, Houston TX.

"Helpful hints for teaching mathematics," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, March 2006, Siloam Springs AR.

"Homeschooling: a calling," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, March 2006, Siloam Springs AR.

"Answering objections to homeschooling," Arkansas State Homeschool Convention, May 2006, Searcy AR.

"Teaching upper level mathematics," Arkansas State Homeschool Convention, May 2006, Searcy AR.

"How to do word problems," Arkansas State Homeschool Convention, May 2006, Searcy AR.

"Teaching creative and critical thinking," Arkansas State Homeschool Convention, May 2006, Searcy AR.

"The father's role in homeschooling," Arkansas State Homeschool Convention, May 2006, Searcy AR.

"The father's role in homeschooling," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, March 2007, Siloam Springs AR.

"How to teach algebra and other helpful hints on high school mathematics," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, March 2007, Siloam Springs AR.

"Helpful hints for teaching mathematics," Southwest Home Education Ministries Convention, April 2007, Springfield MO.

"How to teach algebra and other helpful hints on high school mathematics," Southwest Home Education Ministries Convention, April 2007, Springfield MO.

"The father's role in homeschooling," Arkansas State Homeschool Convention, May 2007, Searcy AR.

"Helpful hints for teaching mathematics successfully," Arkansas State Homeschool Convention, May 2007, Searcy AR.

"Homeschooling: a calling," Arkansas State Homeschool Convention, May 2007, Searcy AR.

"How to teach algebra," Arkansas State Homeschool Convention, May 2007, Searcy AR.

"Homeschooling: a calling," Northwest Arkansas Homeschool Convention, June 2007, Springdale AR.

"Algebra, Calculus and Other Issues in Mathematics Education," Christian Home Education Fellowship, April 2008, Tulsa OK.

"Developing Creative and Critical Thinking," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, April 2008, Springdale AR.

"How to Teach Algebra," Northwest Arkansas Christian Home Educator's Association Curriculum Fair, April 2008, Springdale AR.

"Setting up guideposts for your children," Northwest Arkansas Homeschool Convention, May 2008, Springdale AR.

"Answering objections to homeschooling," Northwest Arkansas Homeschool Convention, May 2008, Springdale AR.

"How to do word problems," Northwest Arkansas Homeschool Convention, May 2008, Springdale AR.

"Helpful hints for teaching mathematics," Northwest Arkansas Homeschool Convention, May 2008, Springdale AR.

"The Father's Role in Home Schooling," Arkansas State Homeschool Convention, May 2009, Searcy AR.

"Home Schooling as a Calling," Arkansas State Homeschool Convention, May 2009, Searcy AR.

"Setting Up Guideposts for Your Children," Arkansas State Homeschool Convention, May 2009, Searcy AR.

"Teaching Upper Level Mathematics," Arkansas State Homeschool Convention, May 2009, Searcy AR.

"Homeschooling: A Calling," Northwest Arkansas Homeschool Convention, May 2009, Springdale AR.

- "How To Do Word Problems," Northwest Arkansas Homeschool Convention, May 2009, Springdale AR.
- "The Father's Role in Homeschooling," Northwest Arkansas Homeschool Convention, May 2009, Springdale AR.
- "Teaching Upper Level Mathematics," Northwest Arkansas Homeschool Convention, May 2009, Springdale AR.
- "Helpful hints for teaching mathematics successfully," live web presentation for Home School Legal Defense Association, October 2009.
- "Setting up guideposts for your children," live web presentation for Home School Legal Defense Association, October 2009.
- "The father's role in homeschooling," live web presentation for Home School Legal Defense Association, October 2009.

Baseball Research Talks

- "Baseball's 300 game winners - who was the best?" Mathematical Association of America, March 2003, Tulsa OK.
- "Baseball, ballparks and burials," Brooks Robinson/George Kell chapter of Society for American Baseball Research, May 2005, Little Rock AR.
- "Baseball: statistics, biography and necrology," Ellis College Research Colloquium, Henderson State University, November 2005, Arkadelphia AR.
- "A necrological travelog," Boiling Out 2006, joint meeting of Brooks Robinson/George Kell chapter of Society for American Baseball Research and Society for American Baseball Research's Dead Ball Era committee, March 2006, Hot Springs AR.
- "Corrections, discoveries, peculiarities and personalities," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2006, Memphis TN.
- "An introduction to research resources," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2006, Memphis TN.
- "Fort Smith area baseball necrology," Brooks Robinson/George Kell chapter of Society for American Baseball Research, March 2007, Fort Smith AR.
- "'No wonder he didn't pitch much' - ERAs as a function of innings," Mathematical Association of America, March 2007, Tahlequah OK.
- "A necrological update," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2007, Memphis TN.
- "Statistical oddities and curiosities," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2007, Memphis TN.
- "Some random observations about .300 hitters in baseball," Mathematical Association of America, March 2008, Fort Smith AR.
- "ERAs as a function of innings - A second look," Mathematical Association of America, March 2008, Fort Smith AR.
- "Cleon Jones, one of the most important Mets," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2008, North Little Rock AR.
- "A necrological tour of Mississippi," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2008, North Little Rock AR.
- "A pictorial scavenger hunt," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2009, North Little Rock AR.
- "Grave Hunting Update - 1000 and still 'digging'," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2009, North Little Rock AR.
- "Tom Seaver - ERA by innings," Brooks Robinson/George Kell chapter of Society for American Baseball Research, August 2009, North Little Rock AR.

General Audience Talks

- "Dishonest or Deceptive Uses of Statistics," Henderson State University's Ellis College of Arts and Sciences Community Lecture Program, March 2005, Arkadelphia AR.

Publications - Mathematical Research

- "The expansive property," Academic Forum, Henderson State University, 1993.

- "Generalized shift homeomorphism," Academic Forum, Henderson State University, 1994.
- "On periodic points of maps of trees and the expansive property," Houston Journal of Mathematics, Vol. 22 No. 3, 1996, 621-628.
- "The expansive property and sequences of mappings," Missouri Journal of Mathematical Sciences, Vol. 8 No. 2, 1996, 73-81.
- with Mikhail Bouniaev, Bill Calhoun, David Hill, Leigh Ann Myers, "Least squares and projections," Academic Forum, Henderson State University, 1997.
- "Generalized shift homeomorphisms," Far East Journal of Dynamical Systems, Vol. 1 No. 1, 1999, 57-65.
- "On periodic points of trees and the expansive property," Proceedings of the Association of Christians in the Mathematical Sciences, 2001, 109-114 and Academic Forum, Henderson State University, 2002, 139-144.
- "Some Results on Maps of Trees," Academic Forum, Henderson State University, 2004-2005.
- "Great (But Lesser Known) Theorems," Academic Forum, Henderson State University, 2005-2006, 4-12, and Proceedings of the Oklahoma-Arkansas Section of the Mathematical Association of America, 2006.

Publications - Mathematics Education

- "Report on a study of success in college algebra," Academic Forum, Henderson State University, 1995.
- "Skills tests as a measure of basic competency in calculus 1," Academic Forum, Henderson State University, 1995-1996.
- with Holly Hill, "The new math of the 1960s," Academic Forum, Henderson State University, 1997.
- "Mathematics - one of the liberal arts," Academic Forum, Henderson State University, 1999.
- "Story problems," The Teaching Home, January/February 1999.
- "Mathematics in the newspaper: seeking quantitative literacy," Academic Forum, Henderson State University, 2002-2003.
- "But I Got The Right Answer," Academic Forum, Henderson State University, 2004-2005.
- "I Hate Math, Why Do I Need to Learn It?," Texas Homeschool Coalition Review, May 2005.
- "Baseball as the focus for a general education mathematics course," Proceedings of the Oklahoma-Arkansas Section of the Mathematical Association of America, 2005.
- "Geometry: Areas and Perimeters," Homeschooling Today, September/October 2006.

Publications - Baseball Statistical/Biographical/Necrological Research

- "Major league leaders who weren't - 1961's unbalanced schedule," Research Library of the Society for American Baseball Research, December 2001 and the Online Baseball Library, September 2001 (http://www.baseballlibrary.com/baseballlibrary/submit/Worth_Fred1.stm)
- "The most impressive single-season home run records," Research Library of the Society for American Baseball Research, March 2002 and the Online Baseball Library, February 2002 (http://www.baseballlibrary.com/baseballlibrary/submit/Worth_Fred2.stm)
- "Batting average equal to at bats," Research Library of the Society for American Baseball Research, May 2002 and the Online Baseball Library, February 2002 (http://www.baseballlibrary.com/baseballlibrary/submit/Worth_Fred3.stm).
- "Which 300 game winner was 'the best'," Academic Forum, 2002-2003.
- "Baseball's worst team," Academic Forum, 2003-2004.
- "Interesting statistical combinations," Baseball Research Journal, Vol. 33, 2004, 113-116.
- "1000 Extra Base Hits: A Mark of Greatness?" Baseball Research Journal, Vol. 34, 2005, 96-100.
- "Progressive team home run leaders of the New York Mets and Chicago White Sox," Academic Forum, Henderson State University, 2005-2006, 67-72.
- "A Geographical Look at Home Runs," Academic Forum, Henderson State University, 2006-2007.
- "ERA by IP - 'No wonder he didn't pitch much,'" By the Numbers, May 2007.
- "You do what?" Academic Forum, 2007-2008.

Publications - Books or Chapters in Books

- Chapter on "Bad Use Of Statistics And Polling" in a reader for elementary education majors, by Ian Lowe, Deakin University, Melbourne, Australia, March 2002.

Chapter on Cleon Jones in The Miracle Has Landed: The Amazin' Story of How the 1969 Mets Shocked the World, published October 2009 by the Society for American Baseball Research and Maple Street Press.

Untitled book on baseball necrology, currently under consideration by the University of Mississippi Press.

"College Mathematics through Baseball," currently under consideration by BFW Publishing.

Publications - Textbook Supplements

On-line Excel supplements for Mathematics: A Practical Odyssey (5e), by Johnson and Mowry, Brooks-Cole Publishing Company, 2003 (http://www.brookscole.com/math_d/templates/student_resources/0534400590_johnson/jm_excel_tutorial/excel_index.htm).

On-line Texas Instruments graphing calculator supplements for Fundamentals of College Algebra by Swokowski/Cole, Brooks-Cole Publishing Company, 2004

(http://www.brookscole.com/math_d/templates/student_resources/swokowski_graphing_calculator/fca.html).

On-line Texas Instruments graphing calculator supplements for Precalculus: Functions and Graphs by Swokowski/Cole, Brooks-Cole Publishing Company, 2004

(http://www.brookscole.com/math_d/templates/student_resources/swokowski_graphing_calculator/pfg.html).

On-line Texas Instruments graphing calculator supplements for Algebra and Trigonometry with Analytic Geometry, by Swokowski/Cole, Brooks-Cole Publishing Company, 2004,

(http://www.brookscole.com/math_d/templates/student_resources/swokowski_graphing_calculator/atag.html).

Review tests and answer keys for grade 4 activity book for ShillerMath, Inc., 2004.

Review tests and answer keys for grade 5 activity book for ShillerMath, Inc., 2004.

Review tests and answer keys for grade 6 activity book for ShillerMath, Inc., 2005.

Review tests and answer keys for fractions activity book for ShillerMath, Inc., 2005.

On-line Excel supplements for A Mathematical View of Our World, by Musser, et al, Brooks-Cole

Publishing Company, 2005, (http://www.wadsworth.com/cgi-wadsworth/course_products_wp.pl?fid=M63&product_isbn_issn=0495010618&chapter_number=1&resource_id=21&altname=Excel%20Activities).

Created exercise supplements for grade 1 activity book for ShillerMath, Inc., 2007.

Publications - Book Reviews

Earth-wise by Calvin DeWitt, for Perspectives on Science and Christian Faith, Vol. 47 No. 4 (1995) page 276.

Christian Science in the age of Mary Baker Eddy by Stuart E. Knee, for Perspectives on Science and Christian Faith, Vol. 48 No. 1 (1996) page 62.

Publications - Homeschool related

"Help with Math Word Problems!!!" R.E.A.C.H. Homeschool Newsletter, 2000.

"Homeschooling and socialization," Good Report, March/April 2003, pp. 2-3, 6.

"The goal of homeschooling," C3HSO newsletter, March 2006, West Florida Home Education Support League newsletter, March 2006, TEACH Home Educators of Brant newsletter, Brantford, Ontario, Canada, March/April 2006, CHEN News, Maryland, April 2006, The Times at Home, Winnipeg, Manitoba, Canada, Fall 2006 and Ontario Christian Home Educators' Connection, Spring 2007. Also published in Portuguese (translated by Julio Severo) as "A Meta da Educação Escolar em Casa" at <http://juliosevero.blogspot.com/2006/03/meta-da-educao-escolar-em-casa.html>.

"How to get started homeschooling," Virginia state support group "Leader Letter," TEACH Home Educators of Brant newsletter, Brantford, Ontario, Canada and North Dakota Homeschool Association Newsletter, 2007.

"What is a homeschooled student?" CHEF of Oklahoma Newsletter, 2008.

"The heart and focus of homeschooling," Georgia Home Education Association Newsletter, 2008.

"Assessing learning in mathematics," North Dakota Homeschool Association Newsletter, to appear.

Publications - General Audience Articles or Other Writings

"Suggestions for prospective hirees," Young Mathematicians' Network Newsletter, Vol. 2 No. 10, March 16, 1994.

Guest column, "When *Does* Next Century Begin?," Arkansas Democrat-Gazette, March 1, 1999.

Essay on world views for in-class use at the Focus on the Family Institute, 2002.
Letter to the editor on "Partial Credit," Focus, Vol. 22 No. 5, May/June 2002, page 22.
"The mathematics genealogy project," Focus, November 2006, page 40.

Current Research Interests

Baseball statistics, necrology, biography, photography and history
Expansive mappings and sequences of expansive mappings
Generalized shift homeomorphisms
Properties of maps on trees
Home education and mathematics instruction
Quantitative literacy for liberal arts majors
Student preparedness for and success in college algebra

Professional Activity - Papers Refereed

For "Real Analysis Exchange," Fall 1992,
For "Real Analysis Exchange," Spring 1994.
Regularly serve as second reader for papers to be considered for the Academic Forum.

Professional Activity - Textbooks and Other Educational Materials Reviewed

Calculus for Students of Engineering, Science and Mathematics, Harper-Collins, 1993.
Algebra for College Students, McGraw-Hill, 1999.
A Graphical Approach to College Algebra, Addison-Wesley, 2000.
College Algebra - A Graphing Approach, Houghton-Mifflin, 2000.
College Algebra - A Graphing Approach, McGraw-Hill, 2000.
Video dealing with developmental mathematics software for McGraw-Hill, 2000.
Using and Understanding Mathematics: A Quantitative Reasoning Approach, Addison-Wesley, 2000.
Using and Understanding Mathematics: A Quantitative Reasoning Approach, Addison-Wesley, 2001.
Elementary Algebra with Geometry, McGraw-Hill, 2001.
College Algebra, McGraw-Hill, 2002.
Precalculus, Brooks-Cole, 2002.
Full text review of Precalculus, Brooks-Cole, 2002.
Mathematics of Interest, Brooks-Cole, 2002.
College Algebra - A Graphing Approach, Houghton-Mifflin, 2002.
Using and Understanding Mathematics: A Quantitative Reasoning Approach (2e), Addison-Wesley, 2003.
Precalculus, Functions and Graphs (9e), Brooks-Cole, 2003.
College Algebra: A Dream of Fields, Brooks-Cole, 2003.
Intermediate Algebra, Addison Wesley, 2003.
Supplemental algebra materials, Addison-Wesley, 2003.
Intermediate Algebra, table of contents review, Addison Wesley, 2003.
The Heart of Mathematics: An Invitation to Effective Thinking, (2e), Key College Publishing, 2003.
Intermediate Algebra, Addison Wesley, 2004.
Telephone interview regarding content of courses and various textbooks in mathematics for the liberal arts, John Wiley & Sons Inc., 2004.
College Algebra, Houghton-Mifflin, 2004.
Quantitative Analysis/Quantitative Literacy Email Review, Houghton-Mifflin, 2005.
Intermediate Algebra: The Language and Symbolism of Mathematics, McGraw-Hill, 2005.
Precalculus, Brooks-Cole, 2005.
Intermediate Algebra, Addison-Wesley, 2006.
Intermediate Algebra, additional set of chapters, Addison-Wesley, 2006.
Intermediate Algebra, McGraw-Hill, 2006.
Intermediate Algebra, a third set of chapters, Addison-Wesley, 2006.
Intermediate Algebra, Addison-Wesley, 2007.
Linear Algebra, W.H. Freeman, 2007.
Intermediate Algebra, Addison-Wesley, 2007.
Elementary Algebra, Brooks-Cole, 2008.

Professional Activity - Other Books Reviewed

Served as reader and fact checker for Fifty Greatest Red Sox Games, 2005.

Served as reader and fact checker for Hardball Trivia, 2005.

Professional Activity - Textbooks and Other Educational Materials Edited

Edited grade 4 activity book for ShillerMath, Inc., 2004.

Edited grade 5 activity book for ShillerMath, Inc., 2004.

Edited grade 6 activity book for ShillerMath, Inc., 2005.

Edited fractions activity book for ShillerMath, Inc., 2005.

Professional Activity - Textbook Revisions

Revised and rewrote grade 1 curriculum for ShillerMath, Inc., 2005.

Revised and edited grade 2 book for ShillerMath, Inc., 2005.

Revised and edited grade 3 book for ShillerMath, Inc., 2005.

Professional Activity - Conferences Attended

Missouri Section of the Mathematical Association of America, Rolla MO, 1990.

Spring Topology Conference, San Marcos TX, 1990.

Oklahoma-Arkansas Section Meeting of the Mathematical Association of America, various locations, 1992-1998, 2000, 2002-2008.

American Mathematical Society, Springfield MO, March 1992.

Conference on The Role and Responsibilities of the Christian Professor in the Academy, Memphis TN, 1997-1998.

Arkansas state home education conference, various locations, 1998-2008.

National Meeting of American Mathematical Society and Mathematical Association of America, San Antonio TX, January 1999.

Focus on Learning conference at University of Arkansas Community College, Hope AR, March 1999.

Biennial conference of the Association of Christians in the Mathematical Sciences, Grand Rapids MI, May 2001.

Southwest Arkansas Council of Teachers of Mathematics, Arkadelphia AR, January 2002, October 2002.

Southwest Home Education Ministries Convention, Springfield MO, 2002, 2007.

"Closing the Gap," regional mathematics conference, Arkadelphia AR, May 2003.

Northwest Arkansas Christian Home Educators Association Convention, various locations, 2002, 2004, 2006-2008.

Louisiana-Mississippi Section Meeting of the Mathematical Association of America, Hammond LA, 2004.

"Closing the Gap II," regional mathematics conference, Arkadelphia AR, May 2004.

National meeting of the Society for American Baseball Research, Cincinnati OH, July 2004.

Regional meeting of the National Council of Teachers of Mathematics, New Orleans LA, November 2004.

University of Missouri-Rolla's Tom Ingram Lecture Series, Rolla MO, April 2005.

MathFest, national meeting of Mathematical Association of America, Albuquerque NM, August 2005.

Texas Homeschool Coalition, Houston TX, August 2005.

Regional meeting of the Society for American Baseball Research, Memphis TN, September 2005.

Joint national meetings of Mathematical Association of America and American Mathematical Society, San Antonio TX, January 2006.

Leadership Summit 2006 - National Summit for Homeschool Leaders, Oklahoma City OK, February 2006.

Regional meeting of the Society for American Baseball Research and the Deadball Committee, Hot Springs AR, March 2006.

MathFest, national meeting of Mathematical Association of America, Knoxville TN, August 2006.

Regional meeting of the Society for American Baseball Research, Memphis AR, August 2006.

Joint national meetings of Mathematical Association of America and American Mathematical Society, New Orleans LA, January 2007.

Regional meeting of the Society for American Baseball Research, Fort Smith AR, March 2007.
MathFest, national meeting of Mathematical Association of America, San Jose CA, August 2007.
Northwest Arkansas Homeschool Convention, Springdale, 2007-2008.
Homeschool Legal Defense Association's International Leadership Conference, Buffalo NY, September 2008.

Professional Activity - Workshops/Short Courses Attended

Computer Mini-course on "Teaching Statistics using MAPLE," at International Conference on Technology in Collegiate Mathematics, Parsippany NJ, November 1993.
NSF sponsored ATLAST workshop on technology in teaching of Linear Algebra, College of William & Mary, Williamsburg VA, July 1995.
NSF sponsored workshop on Calculus Reform at Oklahoma State University, Stillwater OK, April 1995.
NSF sponsored workshop on Technology in Undergraduate Mathematics at Oklahoma State University, Stillwater OK, April 1995.
ATLAST Developers Workshop, an NSF funded program for the improving of Linear Algebra instruction through the use of computer technology, at the University of Washington, Seattle WA, August 1996.
Henderson State University workshops for learning to use PowerPoint, multi-media and distance learning technology in instruction.
Henderson State University in workshops to learn HTML.
Short course on Teaching Mathematics History at National Meeting of American Mathematical Society and Mathematical Association of America, San Antonio TX, January 1999.
Short course on Teaching Liberal Arts Mathematics at National Meeting of American Mathematical Society and Mathematical Association of America, San Antonio TX, January 1999.
Workshop on ALEKS, a developmental mathematics software package, Little Rock AR, February 2000.
On-line short course in the use of WebCT for creating on-line courses, Summer 2001.
Workshop on TI-Interactive at meeting of Southwest Arkansas Council of Teachers of Mathematics, Arkadelphia AR, January 2002.
Workshop on Ektron, web production software, 2004.
Workshop on using Angel for online instruction, 2008.

Professional Activity - Grants

Faculty development grant from Henderson State University for the study of ways to implement computer technology in the classroom, February 1993.
Faculty development grant from Henderson State University to attend NSF sponsored ATLAST workshop on technology in teaching of Linear Algebra, College of William & Mary, Williamsburg VA, July 1995.
Faculty development grant from Henderson State University to attend ATLAST Developers Workshop, NSF funded program for Linear Algebra instruction through the use of computer technology, at the University of Washington, Seattle WA, August 1996.
Henderson State University multi-media grant for development of multi-media materials for general education course, 1999.
Faculty development grant from Henderson State University for presenting talks at the regional meeting of the Mathematical Association of America relating to computers and other technology in the classroom, February 2000.
With Dr. Carolyn Eoff (principal investigator) and Dr. Michael Lloyd, received \$24,800 NSF grant to equip computer based classroom, 2000.
Faculty research grant from Henderson State University for a study of homeschool mathematics education, Fall 2001.
Faculty development grant from Henderson State University to present a paper at the biennial conference of the Association of Christians in the Mathematical Sciences, Calvin College, Grand Rapids MI, May 2001.
Henderson State University multi-media grant for development of multi-media and on-line materials for general education course, 2001.

Henderson State University Margin of Excellence grant to bring Bill Briggs, University of Colorado-Denver, as guest speaker, March 2002.

Faculty development grant from Henderson State University to present a paper at the Arkansas Conference on Teaching, Little Rock AR, November 2002.

Faculty development grant from Henderson State University to present papers at sectional Mathematical Association of America conferences in Hammond LA and Conway AR, March 2004.

Faculty development grant from Henderson State University to attend the national meeting of the Society for American Baseball Research in Cincinnati OH, July 2004.

Henderson State University Margin of Excellence grant to bring Thomas Banchoff, Brown University, as guest speaker, September 2005.

Faculty development grant from Henderson State University to present paper at joint meeting of Mathematical Association of America and American Mathematical Society in San Antonio TX, January 2006.

Faculty research grant from Henderson State University for project dealing with baseball biography and necrology, Spring 2006.

Faculty development grant from Henderson State University's Ellis College of Arts and Sciences to present paper at joint meeting of Mathematical Association of America and American Mathematical Society in New Orleans LA, January 2007.

Professional Activity - Graduate Courses Taken Since Degree

"Theory of Numbers," Henderson State University, Spring 1993.

Professional Activity - Baseball Research Related

Member of the Society for American Baseball Research's Baseball Records Committee, Science and Baseball Committee, Statistical Research, Biographical Committee and Dead Ball Era Committee

Founding member of the Arkansas Chapter (Brooks Robinson/George Kell Chapter) of the Society for American Baseball Research, 2004.

Assisted in judging for the *USA Today Sports Weekly Awards* at national meeting of the Society for American Baseball Research, Cincinnati OH, July 2004.

Contributed numerous photographs to the baseball grave photograph listings at www.thedeadballera.com and baseball-almanac.com.

Contributed numerous entries to the baseball grave GPS database at www.retrosheet.org.

Contributed a number of corrections and additions of baseball grave data to www.retrosheet.org, www.thedeadballera.com, baseball-almanac.com and baseball necrology authors Bill Lee and Bob Bailey.

Founder and editor of the newsletter for the Arkansas Chapter (Brooks Robinson/George Kell Chapter) of the Society for American Baseball Research, 2005 - present.

Abstract reviewer for the national meeting of the Society for American Baseball Research, 2006-2009.

Contributed baseball grave photographs to the National Baseball Hall of Fame and Museum, Cooperstown NY, 2006.

Professional Activity - Mathematical Association of America

Served as presider at meetings of the Oklahoma-Arkansas section of the Mathematical Association of America, many times, 1992-present.

Participating in the MAA Lectureship Program, 1994-present.

Program chairman for Oklahoma-Arkansas section meeting of the Mathematical Association of America, 2002-2005.

Served as Mathematical Association of America's Arkansas state department liaison coordinator, 2002-2005.

Serving as Henderson State University's Mathematical Association of America departmental liaison, 2002-present.

Elected governor of the Mathematical Association of America's Oklahoma-Arkansas section, 2005-2008.

Served as presider at MathFest, Knoxville TN, 2006.

Worked with Katherine Pinzon and Scott McClendon to organize and develop student individual and team mathematics competitions at Oklahoma-Arkansas section meetings, 2009.

Professional Activity - Henderson State University

Conducting study of student success rates in College Algebra as it relates to Intermediate Algebra and ACT scores, 1993-present.

Designed department Web pages and personal pages to support instruction, 1997.

Awarded a sabbatical by Henderson State University, Fall 2001.

Professional Activity - Homeschool Related

Interviewed regarding homeschool issues on the radio show "Parenting 2020," on radio station WHPC, Garden City NY, January 2003.

Presented testimony to the Arkansas House of Representatives Education Committee regarding homeschool legislation, March 2003.

Organized and serving as sponsor of the Arkansas chapter of the Eta Sigma Alpha Homeschool Honor Society, 2003-2006.

Facilitated a discussion group on "homeschooling an only child" at Texas Homeschool Coalition convention, 2005.

Interviewed regarding homeschool issues on the radio show "The Homeschooler Next Door," Houston TX, December 2005.

Serving as Arkansas state representative for "Homeschooling Family to Family," a national program for mentoring new homeschoolers, 2005-2008.

Interviewed for a week long series regarding mathematics in homeschooling on the radio program "Homeschool heartbeat," 2008.

Professional Activity - Arkansas Council of Teachers of Mathematics

Participated in proctoring, grading and award determinations for regional ACTM state mathematics contest, 1992-present.

Wrote regional and state trigonometry examinations for ACTM state mathematics contest, Spring 1996.

Professional Activity - Other

Judge of mathematics portion of science fair at Arkansas School for Mathematics and Science, 1998, 1999, 2002.

Participant in the "Dr. Math" web based mathematics help line, 2000.

Participated in teleconference for TeleSession Market Research regarding college algebra and precalculus textbooks, May 2003.

Assisted author of books on World War II era naval ships with various mathematical issues relating to ship armoring and vulnerability.

Reader for Advanced Placement (AP) Calculus, 2008.

Service to the University - Committee Work University

Elected to Faculty Senate for 1992-1994.

Member, Faculty Senate Operations Committee, 1992-1993.

Chairman, Faculty Senate Operations Committee, 1993-1994.

Committee to draft mission statement for Center of Excellence, 1992.

Human Relations Committee, 1992-1995.

Honors Program Committee, 1993-1995, 2001-2004, 2007-2010.

Athletics Committee, 1994-1995.

Student Concerns Committee, 1996-2001.

Chairman, Student Concerns Committee, 1999-2001.

Elected to Faculty Senate, 1999-2000.

Chairman, Faculty Senate Academics Committee, 1999.

Chairman, Faculty Senate Procedures Committee, 1999-2000.

Elected Secretary, Faculty Senate, 1999-2000.

Member, Faculty Senate Executive Committee, 1999-2000.
Chairman, *ad hoc* Faculty Senate committee on faculty evaluations, 2000.
Founders Day 2000 committee, 1999.
Communications Committee, for NCA report, 2000.
General Education Committee, 2001-2003, 2005-2010.
Elected to Faculty Senate, 2003-2004.
Elected President-elect, Faculty Senate, 2003.
Faculty Senate Finance Committee, 2003-2004.
Member, Faculty Senate Executive Committee, 2003-2004.
Elected President, Faculty Senate, 2004.
Member, *ex officio*, Faculty Senate Academics Committee, 2004.
University Budget Committee, 2003-2004.
Assisted Enrollment Management subcommittee in obtaining and analyzing scholarship and retention data, 2003-2004.
Faculty Finance Committee, 2003-2004.
Fringe Benefits Committee, 2004-2006.
Health Insurance *ad hoc* Committee, 2004-2005.
Chair of selection committee for Excellence Award for Henderson State University's Outstanding New Faculty Member, 2005.
Strategic planning program's Academic Programs taskforce, 2005.
Served on financial issues subcommittee, 2005.
Elected to Faculty Senate for 2006-2007.
Member, academics committee, 2006.
Member, *ad hoc* committee on promotion possibilities for long-time instructors, 2006.
Elected parliamentarian, 2007.
Member, procedures committee, 2007.
Member, executive committee, 2007.
Chairman, academics committee, 2007.
Faculty Hearing Committee, 2006.
University Academic Council, 2007.
Ad hoc committee for review of the faculty hearing committee and process, 2007.
Chair of university committee on retention, 2007-2008.
Member, university committee on retention, academic issues subcommittee, 2007-2008.
Member, selection committee for Excellence Award for Henderson State University's Outstanding New Faculty Member, 2008.
Member, "Acquisition, Discovery, and Application of Knowledge" subcommittee of the Higher Learning Commission Steering Committee, 2009-present.
Elected to Faculty Senate, 2010-2011.

Ellis College

Elected to Ellis College Curriculum Committee, 1999-2001.
Ellis College of Arts and Science dean search committee, 2000-2002.
Search committee for Director of Master of Liberal Arts program, 2002.
Elected to Ellis College Curriculum Committee, 2003-2005.
Started and coordinate the "Ellis College Research Colloquium," 2005.
Elected to the Faculty Excellence Award Committee for mathematics and the sciences, 2005-2006.
Elected as alternate to the Ellis College Awards Committee, 2006.

Department of Mathematics and Computer Science

Various departmental curriculum and textbook committees, 1991-present.
Chaired committee for development of, and wrote proposal for, new mathematics general education course, "Mathematics for the liberal arts," 1997-1998.
Developed graphing calculator workshops for college algebra students, 1999.

Developed graphing calculator/computer algebra system course to prepare pre-calculus students for use of such technology, 1999.
Worked with Dr. Michael Lloyd and Dr. Carolyn Eoff to develop new Applied Mathematics track within the B.S. degree program, 2000.
Put together successful proposals for increasing the number of hours required for degree programs in mathematics and mathematics-certification, 2003.
Developed successful proposal for new general education mathematics course, "Mathematics through practical applications," 2007.
Developed new course, "Introduction to mathematical computing," to replace the graphing calculator/computer algebra course, 2007.
Chaired search committee for mathematics faculty position, 2007-2008.

Service to the University - Work with Students

Directed independent study course on "real line topology" for three students, Fall 1992.
Directed student in independent study resulting in the talk entitled "Dynamics of interval maps and expansiveness" given at sectional meeting of the Mathematical Association of America in March 1993.
General Education advisor to undecided students 1993-present.
Mentor, student presenting paper at Henderson Undergraduate Research Conference, 1993 and 1996.
Mentor, student papers in the Honors seminar, 1994 and 1995.
Mentor, student presenting paper at Arkansas Undergraduate Research Conference, 1996.
Mentor, student presenting paper at sectional meeting of Mathematical Association of America in March 1996.
Participating in program for giving talks on various topics in residence halls.
Directed student in independent study resulting in a talk entitled "A New Graphing Technique - Dynamic Function Visualization" given at the Arkansas Undergraduate Research Conference and Space Grant Symposium, Arkadelphia AR April 1999.
Participated in the freshmen mentoring program, 1999.
Participated in Diamond Reddies softball team's "Successful Speaker Program," 2001.
Mentor, student paper in the Honors seminar, 2003.
Committee member for T. J. Hendricks' Master of Liberal Arts thesis, 2004-2005.
Mentor, two students presenting a paper at sectional meeting of Mathematical Association of America in April 2005.
Directed independent study course on "real line topology," Fall 2005.
Mentor, two student papers in the Honors seminar, 2006.

Service to the University - Other

Appointed to the Honors Faculty, 1993-1996.
Participated in six of the seven planning initiative forums and served on the resulting task force on Communications, 1999.
Appointed to the Honors Faculty, 2001-2005.
Developed a mathematics placement test for the Department of Nursing, 2001.
Participant in Henderson State University's "Speakers Bureau," 2001-present.
Participated in faculty choir for Martin Luther King Day program, 2001.
Awarded the Ellis College of Arts and Sciences Excellence in Service Award, 2002.
Special speaker on advising and general education for session of Henderson Seminar, October 2002.
Wrote calculator program to assist women's volleyball team in training evaluation, 2003.
Participated in strategic planning retreat, November 2004.
Appointed to the Honors Faculty, 2006-2009.

Service to the Community - Boy Scouts

Taught merit badge classes in American Business, American Heritage, American Labor, Astronomy, Athletics, Atomic Energy, Citizenship In The Nation, Coin Collecting, Collections, Communications, Computers, Crime Prevention, Engineering, Entrepreneurship, Family Life, Farm Mechanics, Fingerprinting, Genealogy, Geology, Landscape Architecture, Law, Music,

Oceanography, Personal Management, Pets, Public Speaking, Pulp and Paper, Reading, Safety, Salesmanship, Scholarship, Sports, Stamp Collecting, Textile, Traffic Safety, and Truck Transportation for Boy Scout Troop 24, Arkadelphia, 1998-present.
Merit badge program coordinator, Boy Scout Troop 24, 2000-2005.
Assistant scoutmaster, Troop 24, Boy Scouts of America, December 2000-2005.
Troop committee member, Troop 24, Boy Scouts of America, December 2000-2005.
Taught American Heritage merit badge at Nischa Sipo District Camporee, Old Washington AR, October 2001.
Began program for interaction between Boy Scouts and Henderson State University's international students, 2003.
Completed Boy Scouts' Youth Protection training program for issues dealing with child abuse, 2003.

Service to the Community - Home Education Related

Developed web resources for homeschooling including articles and resource links.
Leader of Clark County Christian Homeschool Organization, 1998-2000.
Board of Directors of Arkansas Christian Home Education Association, 1996-1998.
Steering committee, Education Alliance, statewide education advocacy group, 1998-present.
List owner and moderator for HSTUAC (Homeschool Train Up A Child), a homeschool e-mail discussion list, 1999-present.
Preliminary speaker for high school graduation at Arkansas State Homeschool Convention, May 2001, Searcy AR.
Participated in series of discussions with public school superintendents, homeschool leaders, and governor's staff on issues related to the state homeschool law, October 2001-December 2002, Little Rock AR.
Member of scholarship and community service award selection committees for state homeschool organization, 2004-2005.
Member of community service award selection committee for state homeschool organization, 2008, 2009.

Service to the Community - Other Community Organizations

Coached teams in Arkadelphia Little League.
Formed Clark County Chapter of Arkansas Right to Life.
Served as member of Board of Advisors of Arkansas Collegians for Life.
Member and president of Board of Directors of Boys and Girls Club of Clark County.
Served as volunteer at Red Cross shelters during ice storms, December 2000.
Certified as Community Emergency Response Team member, 2005.

Service to the Community - Other

Gave several talks at local churches as representative of HSU student organizations.
Volunteered for the Distance Education Guest Lecturer program coordinated by the HSU Office of Continuing Education.
Taught general education course for ministerial studies students for the Arkansas District of the Church of the Nazarene, January 2003, Benton AR.
District Minister, South Arkansas District of the Church of the Nazarene, 2003-2008.
Ordained elder, Church of the Nazarene, 2008-present.
Associate pastor, First Church of the Nazarene, Arkadelphia AR, 2003-present.
Member, Parents' Association of the University of Missouri-Rolla, 2005-present.
Board member, Parents' Association of the University of Missouri-Rolla, 2005-present.
Member, institutional liaison committee of the Parents' Association of the University of Missouri-Rolla, 2006-present.
Member, legislative committee of the Parents' Association of the University of Missouri-Rolla, 2006-present.
Member, nominating committee of the Parents' Association of the University of Missouri-Rolla, 2006-present.
President, Parents' Association of the University of Missouri-Rolla, 2007-2009.