

Dr. Sarah J. Greenwald
Department of Mathematics
Appalachian State University
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EDUCATION

Ph.D., University of Pennsylvania, Department of Mathematics, 1998, Riemannian geometry thesis.

B.S., Union College, Department of Mathematics, 1991, Summa Cum Laude with honors in mathematics.

PROFESSIONAL EXPERIENCE

Professor, Department of Mathematics, Appalachian State University, 2009 - Present.

Women's Studies Core Faculty Member, Appalachian State University, 2002 - Present.

Associate Professor, Department of Mathematics, Appalachian State University, 2004 - 2009.

Research Associate, Department of Mathematics, Dartmouth College, 1999 - 2001.

Assistant Professor, Department of Mathematics, Appalachian State University, 1998 - 2004.

HONORS AND AWARDS

Appalachian State University College of Arts & Sciences Outstanding Teacher of the Year, 2011.

Appalachian State University Wayne D. Duncan Award for Excellence in Teaching in General Education, 2010.

Inducted into Appalachian State University College of Arts & Sciences' Academy of Outstanding Teachers, 2010.

Mathematical Association of America Henry L. Alder Award for Distinguished Teaching, 2005.

National Science Foundation Research Opportunity Award, 1999 - 2001.

Nominated for the Appalachian State University Strickland Award for Outstanding Young Faculty, 2000.

Mathematical Association of America Project NExT (New Experiences in Teaching) Fellow, 1999.

University of Pennsylvania Mathematics Good Teaching Award, 1995 and 1996.

Phi Beta Kappa, April, 1990.

PUBLICATIONS

Associate Editor of the Association for Women in Mathematics Newsletter, 2011 - Present.

TAKING SIDES: Clashing Views in Science, Technology & Society Academic Advisory Board,
2010 - Present.

Co-Editor of Media Column for the Association for Women in Mathematics Newsletter, 2009 - Present.

PRIMUS Editorial Board, 2006 - Present.

- WIMM Watch: Julia Robinson and Hilbert's Tenth Problem on Television*, Association for Women in Mathematics Newsletter, 42(1), January-February, 2012.
- Encyclopedia of Mathematics and Society*, with Jill Thomley, Pasadena, CA: Salem Press, October, 2011.
- WIMM Watch: Desperate Housewives*, Association for Women in Mathematics Newsletter, 41(5), September-October, 2011, p. 21.
- Rites of Love and Math: The Controversy*, Association for Women in Mathematics Newsletter, 41(3), May-June, 2011, p. 9.
- Increasing Enjoyment in FYS: The Research Projects*, General Education Newsletter, Appalachian State University, 2011.
- Inspirational Videos*, Association for Women in Mathematics Newsletter, 40(5), September-October 2010, p. 24.
- WIMM Watch: Math Clubs*, Association for Women in Mathematics Newsletter, 40(4), July-August 2010, p. 15.
- Ada Lovelace: Superwoman*, Association for Women in Mathematics Newsletter, 39(5), September-October 2009, p. 17.
- Diameters of 3-Sphere Quotients*, with Bill Dunbar, Jill McGowan and Catherine Searle, *Differential Geometry and its Applications*, 27(2), March 2009, pp. 307-319.
- Mathematically Talented Women in Film and Television: A Summary of the Last Five Years*, with Jill Thomley, Association for Women in Mathematics Newsletter, 38(1), January-February 2009, pp. 8 - 11.
- Evelyn Boyd Granville: Complex Solutions to Real-Life Problems*, *The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics*, 38(2), Fall 2008.
- Asymptotic Expansion of the Heat Kernel for Orbifolds*, with Emily Dryden, Carolyn Gordon and David Webb, *Michigan Mathematical Journal*, 56(1), July 2008, pp. 205-238.
- Math Horizons* Editorial Board, 2003 - 2008.
- To Boldly Go: Current Work and Future Directions in Mathematics and Popular Culture*, with Chris Goff, *PRIMUS*, XVII(1), March 2007, pp. 1-7.
- Mathematically Talented Women in Hollywood*, with Jill Thomley, *PRIMUS*, XVII(1), March 2007, pp. 103-116.
- 'Futurama' Comedy and Writers in the Classroom*, *PRIMUS*, XVII(1), March 2007, pp. 52-66.
- Increasing the Relevance to and Engagement of Students in a Quantitative Literacy Course*, with Holly Hirst, in "Current Practices in Quantitative Literacy" (ed. Richard Gillman), *MAA Notes*, 70, 2006, pp. 105-110.
- Putting the Model in Mathematician Role Models*, with Jill Thomley, *The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics*, 32(2), Fall 2006, pp. 20-22.
- Complex NUMB3RS*, *Notices of the American Mathematical Society*, 53(7), August 2006, p. 741
- Complex NUMB3RS*, *MAA FOCUS: The Newmagazine of the Mathematical Association of America*, 26(5), May/June 2006, pp. 12-13
- Girls Just Want to Have Sums*, Association for Women in Mathematics Newsletter, 36(2), March-April 2006, p. 22-23.

- Geometry of the Earth and Universe Computer Labs*, ICTCM (International Conference on Technology in Collegiate Mathematics) Proceedings, March 2006, pp. 110-113.
- Incorporating the Mathematical Achievements of Women and Minority Mathematicians into Classrooms*, in "From Calculus to Computers: Using the Last 200 Years of Mathematics History in the Classroom" (eds. Richard Jardine and Amy Shell-Gellasch), MAA Notes, 68, 2005, pp. 183-200.
- Marjorie Lee Browne: North Carolina Educator*, with Vicky Klima and Katie Mawhinney, The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics, 31(2), Fall 2005, pp. 28-32.
- The Shape of the Universe*, Mathematics Awareness Month Theme Essay, April 2005,
Available: <http://www.mathaware.org/essays/shape.of.universe.html>
- Mathematicians of the African Diaspora*, Association for Women in Mathematics Newsletter, 34(6), November-December 2004, pp. 16-17.
- Alumni Profiles: Appalachian State University*, with Holly Hirst, Math Horizons, 12(2), November 2004, pp. 20-21.
- Florence Nightingale, the Passionate Statistician*, with Jill Richie, The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics, 30(2), Fall 2004, pp. 13-21
Reprinted by editor request in the Ontario Mathematics Gazette, 43(3), 2005, pp. 30-35.
- Futurama πk - Mathematics in the Year 3000*, with Tom Georgoulas and Marc Wichterich, Math Horizons, 11(4), April 2004, pp. 12-15.
- Using Popular Culture in the Mathematics and Mathematics Education Classroom*, with Andrew Nestler, PRIMUS, XIV(1), March 2004, pp. 1-4.
- r dr r: Engaging Students with Significant Mathematical Content from 'The Simpsons'*, with Andrew Nestler, PRIMUS, XIV(1), March 2004, pp. 29-39.
- Taking Full Advantage of Sketchpad 4 - Why You Can't Live Without It*, with Brian Felkel, ICTCM (International Conference on Technology in Collegiate Mathematics) Proceedings, November 2003, pp. 85-89.
- Thomas Fuller and his Calculation Ability*, with Amy Ksir and Larry Shirley, The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics, 30(1), Spring 2004, pp. 15-19.
- Simpsons Rule!*, with Andrew Nestler, Math Horizons, 10(4), April 2003, pp. 2 and 16.
- David Blackwell and Game Theory*, with Mark Ginn, The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics, 29(2), Fall 2003, pp. 12-18.
- Hypatia, the First Known Woman Mathematician*, with Edith Prentice Mendez, The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics, 29(1), Spring 2003, pp. 19-24.
- Using WebCT Instruction in Courses You Never Thought You Could*, ICTCM (International Conference on Technology in Collegiate Mathematics) Proceedings, November 2002, pp. 82-86.
- Coffee Cooling on a TI-CBL Unit and in Maple*, with William Bauldry, ICTCM (International Conference on Technology in Collegiate Mathematics) Proceedings, November 2001, pp. 151-154.
- African Mathematician Muhammad and his Magic Squares*, with Deanna Wasman, The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics, 28(2), Summer 2001, pp. 13-18.
- Hearing the Shape of a Drum*, with Andrew Nestler, The Centroid - Official Journal of the North Carolina Council of Teachers of Mathematics, 28(1), Winter 2001, pp. 11-15.

'Women in Math': A Course with Significant Mathematical Content, Association for Women in Mathematics Newsletter, 30(4), July-August 2000, pp. 12-13.

Diameters of Spherical Alexandrov Spaces and Constant Curvature One Orbifolds, Indiana University Mathematics Journal, 49(4), Winter 2000, pp. 1449-1479.

The Use of Writing Projects in Teaching Geometry, PRIMUS, X(1), March 2000, pp. 1-14.

SESSIONS ORGANIZED

Riemannian Geometry, 40 Years and Counting: AWM's Celebration of Women in Mathematics, Brown University, September 17-18, 2011.

Visualization in Mathematics, MAA Special Session, with Walter Whiteley, San Francisco, CA, January 2010.

Mathematics and Hollywood: A Conversation with Mathematical Hollywood Writers and Mathematics Faculty, MAA Panel Discussion, with Chris Goff, Joint Mathematics Meetings, San Diego, CA, January 2008.

Appalachian State University Vertically Integrated Workshop for Women, with Holly Hirst, Vicky Klima, Katie Mawhinney, Trina Palmer, and Jill Thomley, 2005-2007.

Mathematics and Popular Culture, MAA Special Session,
with Christopher Goff, MathFest, Knoxville, TN, August 2006.
with Christopher Goff, Joint Mathematics Meetings, San Antonio, TX, January 2006.
with Andrew Nestler, MathFest, Burlington, VT, August 2, 2002.

Teaching a Course on Women and/or Minorities in Mathematics, Association for Women in Mathematics Panel Discussion, with Terri Bennett, Joint Mathematics Meetings, San Antonio, TX, January 2006.

Geometry and Visualization,
with Cathy Gorini and Mary Platt, Joint Mathematics Meetings, Atlanta, GA, January 2005.
with Cathy Gorini and Mary Platt, Joint Mathematics Meetings, Baltimore, MD, January 2003.

Documenting Excellence in Teaching, Project NExT Panel Discussion, Joint Mathematics Meetings, Washington, D.C., January 2000.

Looking Toward the Future of Women in Science Panel, South Eastern Women's Studies Association Meeting, April 2000.

INVITED COLLOQUIA AND PRESENTATIONS

Reasoning and Proof with 'The Simpsons' and 'Futurama', NCTM Regional Conference and Exposition, November 28, 2012

Mathematical Morsels from 'The Simpsons' and 'Futurama'
Wake Forest University, November 16, 2011.
Museum of Mathematics, Manhattan, NY, October 5, 2011.
Summer Ventures, July 12, 2011.
Governor's School West, July 8, 2011.
Bryn Mawr College, April 11, 2011.
Pacific Math Day Conference, Pacific University, March 8, 2011.
Summer Ventures, July 14, 2010.
Governor's School West, July 12, 2010.
Rose-Hulman Undergraduate Mathematics Conference, March 26-27, 2010.

Alamance Community College, March 24, 2010.
Governor's School West, July 6, 2009.
Summer Ventures, July 2, 2009.
Annual Meeting of the Michigan Section of the MAA, Central Michigan University, May 8, 2009.
Dartmouth College, April 30, 2009.
Annual Meeting of the Ohio Section of the MAA, Bowling Green State University, April 4, 2009.
Wofford College, October 16, 2008.
Summer Ventures, Appalachian State University, July 3, 2008.
Governor's School West, Salem College, June 25, 2008.
Annual Meeting of the Pacific Northwest Section of the MAA, Carroll College, June 19-21, 2008.
Annual Meeting of the Texas Section of the MAA, Tarleton State University, April 3-5, 2008.
Lenoir-Rhyne College, Feb 29, 2008.
University of Wisconsin, La Crosse, October 11, 2007.
Summer Ventures, Appalachian State University, July 11, 2007.
Governor's School West, Salem College, July 2, 2007.
Western Washington University, May 19, 2007.
20th Century Fox Studios, Los Angeles, CA, March 15, 2007.
University of Virginia, Charlottesville, November 12, 2006.
American University, October 27, 2006.
Lewis and Clark College, October 19, 2006.
Davidson College, September 27, 2006.
Horizons School, Atlanta, GA, September 1, 2006.
Spelman College, August 31, 2006.
Governor's School West, Salem College, July 28, 2006.
Summer Ventures, Appalachian State University, July 20, 2006.
MathMovesU, Raytheon, Upper Senate Park, Capitol Hill, Washington, DC, with Sen. Edward Kennedy,
Rep. Joanne Davis, Dr. Jonathan Farley and gold Olympic medalist Apolo Ohno, April 24, 2006.
US Naval Academy, April 18, 2006.
MAA State Dinner, Wake Forest University, April 12, 2006.
Dartmouth College, November 17, 2005.
Macalester College, November 3, 2005.
MSRI (Mathematical Science Research Institute), with Ken Keeler and Jeff Westbrook, October 16, 2005.
26th Annual Krost Symposium on The Creative Journey: Creativity at the Intersection of Art and Science,
Texas Lutheran University, September 29, 2005.
Simon's Rock College, September 22, 2005.
Salem State College, September 19, 2005.
Cal State Northridge, with Andrew Nestler, May 13, 2005.
Western Carolina University, April 13, 2005.
Cal Poly Pomona, with Andrew Nestler, April 7, 2005.
MathClub, Hollywood, CA, with Andrew Nestler, April 6, 2005.
High Point University, January 26, 2005.
University of Pennsylvania, Pi Mu Epsilon, April 21, 2004.
Walter Payton College Prep: An Illinois International High School, Chicago, IL, November 22, 2003.
Metropolitan Mathematics Club of Chicago, with Andrew Nestler, Chicago, IL, November 21, 2003
Union College, October 23, 2003.
Fall Meeting of the Eastern Pennsylvania and Delaware (EPADEL) section of the MAA, with Andrew
Nestler, University of Pennsylvania, November 9, 2002.
Davidson College, October 24, 2002.
University of Minnesota Duluth Spectrum Lecture, October 17, 2002.
Undergraduate Connecticut Valley Colloquium, with Andrew Nestler, Amherst College, September 26, 2002.

Southern California MAA meeting, with Andrew Nestler, Cal Tech, March 16, 2002.
Harvey Mudd College, with Andrew Nestler, March 14, 2002.
UNC Asheville, February 21, 2002.

Geometric Properties of Orbifolds,

MD/DC/VA section of the MAA, Randolph-Macon College, April 16, 2011.
Pacific Math Day Conference, Pacific University, March 7, 2011.
EPaDel/New Jersey MAA section meeting, Philadelphia, PA, November 6, 2010.
Rose-Hulman Undergraduate Mathematics Conference, March 26-27, 2010.
Special Section on the Geometry and Topology of Orbifolds, Sectional Meeting of the AMS, San Francisco State University, April 25-26, 2009.
Guy Jacobsohn Memorial Collegiate Mathematics Colloquium Series, Wofford College, October 16, 2008.
Lenoir-Rhyne College, February 29, 2008.
University of Wisconsin, La Crosse, October 12, 2007.
Spelman College, August 30, 2006.
Dartmouth College Geometry Topology Seminar, November 18, 2005.
Simon's Rock College, September 23, 2005.
AMS Special Session on Inverse Spectral Problems, Joint Mathematics Meetings, Atlanta, GA, January 8, 2005.
US Naval Academy, September 4, 2003.
University of Minnesota, Duluth, October 18, 2002.
Valley Geometry Seminar, University of Massachusetts Amherst, September 27, 2002.
High Point University, February 2000.
Davidson College, March 1999.

Fun and Fame with Mathematics: Spherical Rubiks Cubes to Cartoons, Women in Mathematics Colloquium, Saint Mary's University of Minnesota, March 17, 2011.

The Art of Equations, High Point University, October 27, 2010.

Teaching Undergraduate Geometry - Satisfying Course Goals While Increasing Student (and Teacher) Enjoyment, Project NExT, Pittsburgh, PA, August 3, 2010.

Joining the Mathematical Community, Project NExT, Pittsburgh, PA, August 2, 2010.

Careers in Mathematics, STEM-ICT 3D Summer Academy, Appalachian State University, June 21, 2010.

Teaching a First Year Seminar on STEM Breakthroughs and Controversies, Winston-Salem State University, April 14, 2010 and June 12, 2010.

π -day with 'The Simpsons' and 'Futurama', UNCA, March 14, 2010.

Truth Values: One Girl's Romp Through M.I.T.'s Male Math Maze,
Moderated a panel discussion after the performance at Zeum Theater, sponsored by the Mathematical Science Research Institute with proceeds benefiting the Association for Women in Mathematics, January 15, 2010.

What is a Mathematician? Math is Not Only a Young Man's Game

Distinguished Lecture Series on Women, Sex, and Gender, Appalachian State University, Sep 11, 2008.
Annual Meeting of the Pacific Northwest Section of the MAA [3 hour mini-course], June 19-21, 2008.
Annual Meeting of the Texas Section of the MAA, Tarleton State University, April 3-5, 2008.
Teaching Fellows Seminar, Appalachian State University, February 11, 2008.
Lecture preceded a theatrical performance of *Proof*, Appalachian State University, October 5, 2006.
Spelman College Women's Center, August 31, 2006.

Flatland: The Movie, Mathematics, and Popular Culture, Math for America, NY, December 14, 2007.

A Brief History of Calculus: People and Activities, Western Washington University, May 19, 2007.

Geometry of the Earth and Universe,

Western Washington University, March 3, 2007.

University of Minnesota, Duluth, October 31, 2005.

The Rich History of π , Western Washington University, March 3, 2007.

Connecting Students to Mathematics Using History, Visualization, and Pop Culture, Alder Award Presentation, MathFest, Albuquerque, NM, August 6, 2005.

Thomas Fuller and his Calculation Ability, North American Study Group on Ethnomathematics (NASGEM), Philadelphia, PA, April 22, 2004.

Incorporating Women's Mathematical Achievements into the Classroom, North Carolina A&T Sonia Kovalevsky High School Mathematics Day, November 2000.

OTHER PEER REVIEWED PRESENTATIONS

Using the History of Mathematics Technology to Enrich the Classroom Learning Experience, with Jill Thomley, International Conference on Technology in Collegiate Mathematics, Orlando, FL, March 2012.

Teaching a First Year Seminar on STEM Breakthroughs and Controversies, Session on First Year Seminar/First Year Experience Mathematics Courses, MathFest, Pittsburgh, PA, August 2010.

Activities to Enliven a Course on Euclidean and non-Euclidean Geometries, Session on Geometry Topics That Engage Students, MathFest, Pittsburgh, PA, August 2010.

Teaching a Senior Seminar in Humanistic Mathematics, with Eric Marland, Joint Mathematics Meetings, San Francisco, CA, January 2010.

Historical Resources for Multivariable Calculus and Differential Geometry, with Greg Rhoads, Joint Mathematics Meetings, Washington, DC, January 2009.

Vertically Integrated Workshop for Women in Mathematics, with Katie Mawhinney, Joint Mathematics Meetings, New Orleans, LA, January 2007.

Geometry of the Earth and Universe Computer Labs,

Key Curriculum Press Sketchpad Users Group Meeting, Joint Mathematics Meetings, San Antonio, TX, January 2006.

Key Curriculum Press Sketchpad Users Group Meeting, Joint Mathematics Meetings, Atlanta, GA, January 2005.

ICTCM (International Conference on Technology in Collegiate Mathematics), New Orleans, LA, October 31, 2004.

Joint Mathematics Meetings, Baltimore, MD, January 18, 2003.

Benjamin Franklin's Codicil - Financial Mathematics, MathFest, Albuquerque, NM, August 5, 2005.

A North Carolina Middle Mathematics Project Class in Geometry and Measurement, MathFest, Providence, RI, August 12, 2004.

Futurama πk - Mathematics in the Year 3000, Joint Mathematics Meetings, Phoenix, AZ, January 9, 2004.

A Workshop on Student Writing - A Hands on Approach, MathFest, Boulder, CO, August 2, 2003.

Taking Full Advantage of Sketchpad 4 - Why You Can't Live Without It, with Brian Felkel, ICTCM, Orlando, FL, November 2002.

r dr r: Engaging Students with Significant Mathematical Content from 'The Simpsons',
MathFest, Burlington, VT, August 2, 2002.
MathFest, with Andrew Nestler, Madison, WI, August 3, 2001.

Geometric Properties of Spherical Orbifolds,

Poster session for the Program for Women in Mathematics 10th Anniversary Reunion, May 17, 2003.

Poster session for the Journal of Differential Geometry Conference, Harvard University, May 3, 2002.

Spectral Geometry Conference, Dartmouth College, June 29, 2001.

Quantitative Literacy as an Alternative to College Algebra, with Holly Hirst, Joint Mathematics Meetings, San Diego, CA, January 9, 2002.

Using WebCT Instruction in Courses You Never Thought You Could, ICTCM, Baltimore, MD, November 2001.

Tracing the Historical Progression of Mathematics and the Changing Roles of Women and Minorities with Student Projects, MathFest, Madison, WI, August 2, 2001.

Coffee Cooling on a CBL Unit and in Maple, with Bill Bauldry,

ICTCM, Atlanta, GA, November 2000.

Joint Mathematics Meetings, Washington, D.C., January, 2000.

Women in Math: A Course Combining the Disciplines of Mathematics, Women's Studies and History, MathFest, Los Angeles, CA, August 2000.

Maple and WebCT in Modern Algebra, MathFest, Los Angeles, CA, August 2000.

Diameters of Quotients of Spheres,

Dartmouth College, August 5 and 12, 1999.

Olga Taussky Todd Celebration of Careers for Women in Mathematics, MSRI, July 1999.

Lehigh University Geometry/Topology Conference, June 1998.

Joint Mathematics Meetings, Baltimore, MD, January 1998.

'Proof-Checking' a Collaborative Group's Geometers Sketchpad Proof During a Computer Lab, MathFest, Providence, RI, July, 1999.

The Use of Letter Writing Projects in Teaching Geometry,

MAA Southeastern Section Meeting, Memphis, TN, March 1999.

Joint Mathematics Meetings, San Antonio, TX, January 1999.

SELECT MEDIA COVERAGE, INTERVIEWS, AND PERFORMANCES

DVD Movies, Television and Video Interviews and Performances

WAC Presents: A Guide for Student Writing at ASU, 2010.

MTN 18 Evening news, Boone, NC, June 21, 2010.

Greenwaldian Theorem. *Bender's Big Score*, 20th Century Fox. DVD Release November 27, 2007.

Original Television Airdate on Comedy Central: March 23, 3008.

Interactive *Futurama* Math Lecture Feature. *Bender's Big Score*. 20th Century Fox,

DVD Release November 27, 2007.

Television Documentary Series. *FANatical*. Original Airdate on TVtropolis: January 30, 2007.

The Simpsons Season 7 DVD Audio Commentary, *Treehouse of Horror VI* [3F04] Homer³,

DVD Release December 13, 2005.

ABC (WDIO) and NBC (KBJR) 10 o'clock news, Duluth, Minnesota, October 17, 2002.

Select Newspaper and Magazine Articles

- Matemáticas en el año 3000: Una profesora estadounidense desvela los guiños científicos de la serie de culto 'Futurama'*, by Patricia Fernández de Lis, Público Edición Nacional, Number 212, Domingo 27 de Abril de 2008, pp. 36.
- The Problem With 'NUMB3RS'*, by Xiao-bo Yuan, The Chronicle of Higher Education, 52(47), July 28, 2006, p. A4.
- MathTrek: Simpsons Numbers*, by Ivars Peterson, Science News, June 9, 2006.
- Women in Mathematics: WHS Students Participate in ASU Workshop*, by Mike Shands, The Mountain Times, April 13, 2006.
- The Simpson Scholars: ASU's Satellite Q&A Forum*, by Leigh Ann Henion, The Mountain Times, February 20, 2003, p. 13.
- 'Simpsons' fans unite for 300th episode*, by Carrie Baker, Appalachian Online, 77(35), February 18, 2003.
- The real first family: How did The Simpsons get to be such a cultural touchstone?*, by Bob Baker, Los Angeles Times, February 16, 2003, p. E1.
- Math on The Simpsons*, by Carli Entin, Scholastic Math, 23(9), February 14, 2003, cover story and pp. 4-5.
- The Simpsons by the Numbers*, by Brian C. Fenton, Sound & Vision Magazine, June 2002, p. 20.
- 'Simpsons' Analysts Show How Math Figures into Episodes: Professors Use Popular Cartoon to Demonstrate that Subject Doesn't Have to Be Intimidating*, by Matthew Chin, LA Times Inland Valley Edition, March 19, 2002, p. 2.
- Deconstructing The Simpsons*, by Jayson Blair, New York Times Upfront, November 12, 2001, 134(5), pp. 26-27.

Select Radio Interviews

- More or Less*, British Broadcasting Company, Radio 4, May 5, 2008.
- Freestyle*, Canadian Broadcasting Company, February 8, 2007.
- Popular Math*, National Public Radio's *Science Friday*, April 29, 2005, 3-4 pm,
Available: http://www.sciencefriday.com/pages/2005/Apr/hour2_042905.html
- Using The Simpsons and Other Innovative Approaches to Teach Mathematics*, Math Medley, WARL 1320 AM, October 11, 2003, 12-1 pm.
Minnesota News Network, October 17, 2002.

INTERNAL GRANTS

Appalachian State University

- Foundation Fellows Grant - Website for Mathematics History in Multivariable Calculus and Differential Geometry Courses*, with Greg Rhoads, 2007-2008 [\$4700.00 awarded].
- External Scholars Grant - Jeff Weeks and the Shape of Space*, Hubbard Center, 2006 [\$700.00 awarded].
- Grant to Support the Scholarship of Teaching*, Hubbard Center, Various Conferences and Minicourses.
- Research in Geometry*, URC, 1999-2000 [\$500.00 awarded].
- Women in Mathematics Course*, Women's Studies, 1999 [course buyout awarded].

EXTERNAL GRANTS

External Travel Grants for Conferences and Workshops

- NCTM Regional Conference and Exposition, November 2012.
- 40 Years and Counting: AWM's Celebration of Women in Mathematics, Brown University, September 17-18, 2011
- MD/DC/VA section of the MAA, Randolph-Macon College, April 2011.
- Pacific Math Day Conference, Pacific University, March 8, 2011.
- EPaDel/New Jersey MAA section meeting, Philadelphia, PA, November 2010.

International Conference on Spectral Geometry, July 16-23, 2010.
 Rose-Hulman Undergraduate Mathematics Conference, March 26-27, 2010.
 Annual Meeting of the Michigan Section of the MAA, Central Michigan University, May 2009.
 Annual Meeting of the Ohio Section of the MAA, Bowling Green State University, April 2009.
 Annual Meeting of the Pacific Northwest Section of the MAA, Carroll College, June 19-21, 2008.
 Annual Meeting of the Texas Section of the MAA, Tarleton State University, April 3-5, 2008.
 Lilly South Conference on Teaching and Learning, Greensboro NC, February 8-10, 2008.
 Geometry Festival, University of Maryland, College Park, April 2007.
 26th Annual Krost Symposium on The Creative Journey: Creativity at the Intersection of Art and Science,
 Texas Lutheran University, September 2005.
 DIMACS Reconnect Folding and Unfolding in Computational Geometry Travel Grant, July 11-17, 2004,
 St. Mary's College.
 Association for Women in Mathematics Leadership Workshop Travel Grant, March 12-14, 2004,
 University of Maryland, College Park.
 Fall Meeting of the Eastern Pennsylvania and Delaware (EPADEL) section of the MAA,
 University of Pennsylvania, November 9, 2002.
 Inverse Spectral Geometry Workshop Travel Grant, June 20-22, 2002, University of Kentucky.
 Journal of Differential Geometry Conference Travel Grant, May 3-5, 2002, Harvard University.
 Spectral Geometry Conference Travel Grant, June 23-30, 2001, Dartmouth College.
 MAA Professional Enhancement Programs (PREP), Teaching Undergraduate Geometry.
 Olga Taussky Todd Celebration Travel Grant, July, 1999.

National Science Foundation

Principal Investigator for DMS 1034766 *PRISM: Appalachian Ambassadors for Research in Mathematics and Science*, with Carol Babyak, Chuanhui Gu, Vicky Klima and Steve Williams, 2010, [Not funded, but reviews included 3 good ratings].
 Principal Investigator for HRD 0936606 *GSE/RES A Global Investigation of Pipeline Issues in STEM*, with Carol Pollard, David Hunsinger, Dolores Parks, and Phillip Russell, 2009, [Not funded].
 Principal Investigator for DRL 0731557 *Historical Modules for the Teaching and Learning of Mathematics: An Evaluative Study Using Multiple Populations*, with Kathy Clark & Victor Katz, 2007, [Not funded].
 Senior Personnel Member for *Appalachian Undergraduate Academy of Science*, Rahman Tashakkori, 2006, [Not funded].
 Principal Investigator for DUE 0536280 *Website for Math History Across the Curriculum*, with Greg Rhoads, 2005, [Not funded, but reviews included 1 good, 4 very good, and 2 excellent ratings].
 Faculty Participant for *Integrating Writing and Mathematics Instruction to Optimize Student Learning*, Joe Kirtland and Pau-San Haruta, 2003, [Not funded].
 Principal Investigator for 0072533 *Research Opportunity Award: Inverse spectral problems in Riemannian geometry*, with Carolyn Gordon, 2000-2001 [\$8762.00 awarded].
 Principal Investigator for 9972304 *Research Opportunity Award: Problems in global Riemannian geometry*, with Carolyn Gordon, 1999-2000 [\$14,542.14 awarded].

Mathematical Association of America Tensor Foundation

Principal Investigator for *Appalachian State University Vertically Integrated Workshop for Women*, with Vicky Klima, Katie Mawhinney, Trina Palmer, and Jill Thomley, 2006-2007 [\$3100.00 awarded].
 Principal Investigator for *Appalachian State University Vertically Integrated Workshop for Women*, with Holly Hirst and Jill Thomley, 2005-2006 [\$3000.00 awarded].

Department of Education

Faculty Mentor, *McNair Scholars Program*, [Not funded].

American Mathematical Society

Principal Investigator for *Early Career Profiles*, 2005-2006 [\$1200.00 awarded].

CONFERENCES, WORKSHOPS AND LEARNING COMMUNITIES ATTENDED

ICTCM, November 2000 - 2002, 2004, 2012.
Joint Mathematics Meetings, January 1999 - 2000, 2002 - 2010, 2012.
40 Years and Counting: AWM's Celebration of Women in Mathematics, Brown University, September 17-18, 2011
MD/DC/VA section of the MAA, Randolph-Macon College, April 15-16, 2011.
Pacific Math Day Conference, Pacific University, March 8, 2011.
EPaDel/New Jersey MAA section meeting, Philadelphia, PA, November 6, 2010.
MathFest, August 1999 - 2006, 2010.
International Conference on Spectral Geometry, July 16-23, 2010.
General Education Faculty Learning Community, organized by Joe Gonzalez, 2009-2010.
Rose-Hulman Undergraduate Mathematics Conference, March 26-27, 2010.
Annual Meeting of the Michigan Section of the MAA, Central Michigan University, May 8, 2009.
Sectional Meeting of the AMS, San Francisco State University, April 25-26, 2009.
Annual Meeting of the Ohio Section of the MAA, Bowling Green State University, April 4, 2009.
Annual Meeting of the Pacific Northwest Section of the MAA, Carroll College, June 19-21, 2008.
Annual Meeting of the Texas Section of the MAA, Tarleton State University, April 3-5, 2008.
Lilly South Conference on Teaching and Learning, Greensboro NC, February 8-10, 2008.
Appalachian State University Vertically Integrated Workshop for Women, 2005 - 2007.
Geometry Festival, April, 1999 - 2001 and 2007.
History of Mathematics Workshop, Western Washington University, March 3, 2007.
26th Annual Krost Symposium on The Creative Journey: Creativity at the Intersection of Art and Science, Texas Lutheran University, September 29, 2005.
NCTM, April 2004 - 2005.
DIMACS Reconnect Satellite Conference on Folding and Unfolding in Computational Geometry, St. Mary's College, July 11-17, 2004.
Association for Women in Mathematics Leadership Workshop, University of Maryland, College Park, March 12-14, 2004.
Fall Meeting of the Eastern Pennsylvania and Delaware (EPADEL) section of the MAA, November 9, 2002.
Inverse Spectral Geometry Workshop, University of Kentucky, June 20-22, 2002.
Annual Meeting of the Southern California Section of the MAA, March 16, 2002.
Spectral Geometry Conference, Dartmouth College, June 23-30, 2001.
Lehigh Geometry/Topology Festival, June 2001.
National Science Foundation UFE (Undergraduate Faculty Enhancement) Teaching Undergraduate Geometry Workshop, Cornell University, June 2000 and June 2001 (mentor).
North Carolina A&T Sonia Kovalevsky High School Mathematics Day, November 2000.
Barrett Lectures in Geometry, University of Tennessee at Knoxville, May 11-13, 2000.
IFTT Laptop Initiative WebCT Workshop, Appalachian State University, March 13-15, 2000.

COMMITTEE WORK

Select Service to the Department, Department of Mathematics, Appalachian State University

Undergraduate Mathematics Assessment Committee, 2010-Present.
Chair Advisory Committee, 2008 - Present.
Co-Advisor of Pi Mu Epsilon, 2003 - Present.
Undergraduate Math Advisor, 2001 - Present.
Web Committee, 1998 - Present.
Department Retreat Planning Committee, 2008.
Departmental QL Statement Committee, 2008.
Mathematics 1010 Committee, 2004 - 2006, and 2007 - 2008.

Scholarship Committee, 2004 and 2007.
Department Personnel Committee, 2003 - 2005.
Mathematical Sciences Curriculum Revision Steering Committee, 2003 - 2005.
Tea Committee, 1998 - 2004.
Co-Advisor of the Mathematics Club, 1998 - 2003.
MA Math Committee, 1998 - 2000.
Activities Committee, 1998 - 2000.
Colloquium Committee, 1998 - 2000.
Textbook Adoption Committees for MAT 4710, MAT 4140, MAT 3610, MAT 3110, and MAT 3130.
Organized weekly tea for students and faculty, September 1998.

Service to the College and University, Appalachian State University

Faculty Advisory Board for the Center for Judaic, Holocaust, and Peace Studies, 2005 - Present.
Web Page Coordinator for the Center for Judaic, Holocaust, and Peace Studies, 2004 - Present.
Women's Studies Core Faculty Member, 2002 - Present.
Web Page Coordinator for the Jewish Students Hillel Association, 1998 - Present.
Student Faculty Exchange, 2008, 2009, 2011.
First Year Seminar Faculty Coordinator Search Committee, 2011.
General Education Faculty Coordinating Committee for First Year Seminar, 2008 - 2011.
Writing in the Discipline Consultant for Writing Across the Curriculum, 2009 - 2010.
Women's Studies Curriculum Committee, 2010.
Hubbard Center Faculty and Academic Development Advisory Council Committee, 2003 - 2010.
Chair of the Committee for Tenured Mid-Career Foundation Fellows Grants, 2007 - 2008, 2010.
Provost's Task Force on Watauga College, 2007 - 2008.
Women's Studies Grant and Fundraising Committee, 2006 - 2008.
Instructor of Freshman Seminar, 2007.
Discussion Group Leader for the Summer Reading Program, 2000 and 2007.
Leader of Summer Ventures Research Group, 2007.
Advisor of the Jewish Students Association, 2002 - 2004.
Diversity Committee for College of Arts and Sciences, 2001 - 2002.
Watauga College Curriculum Committee, 2000 - 2001.
Search Committee for Director of Women's Studies, 2000.
The Scoop for New Faculty Panel Discussion, 1999 and 2000.
Organizer of Women in Higher Education Teleconference Satellite Site, 2000.

External Service to the Mathematics Profession

Associate Editor of the Association for Women in Mathematics Newsletter, 2011 - Present.
Mathematical Association of America Trevor Evans Award Committee, 2011 - Present.
Chair of the Policy and Advocacy Committee for the Association for Women in Mathematics, 2010 - Present.
TAKING SIDES: Clashing Views in Science, Technology & Society Academic Advisory Board, 2010 - Present.
Co-Editor of Media Column for the Association for Women in Mathematics Newsletter, 2009 - Present.
Association for Women in Mathematics Newsletter Editorial Team, 2009 - 2011.
Executive Committee for the Association for Women in Mathematics, 2008 - Present.
PRIMUS Editorial Board, 2006 - Present.
Book Editor Consultant for the Association for Women in Mathematics, 2003 - Present.
Project NExT Consultant, 2006 - 2008, 2010-2011.
Chair of the Mathematical Association of America Committee on the Henry L. Alder Awards, 2008 - 2011.
Math Horizons Editorial Board, 2003 - 2008.
Mathematical Association of America Committee on Policies on Science, 2001 - 2007.

Joint Policy Board for Mathematics Advisory Panel for Mathematics Awareness Month on the *Mathematics of the Cosmos*, 2004 - 2005.
Search Committee for the Editor of JOMA (Journal of Online Mathematics and its Applications), 2004 - 2005.
Judge for Math Fair, NCCTM, 2003 - 2004.
Mathematical Association of America Program Committee for the 2004 Joint Mathematics Meetings, 2002 - 2003.
Organizing Committee for Park City/IAS Math Institute Women's Program, 1995 - 1998.

REFeree WORK, REVIEWS, FIELD TESTING, AND CONSULTING

Promotion

Emily Proctor, Middlebury Tenure Review, 2012
Colm Mulcahy, Spelman College Full Professor Review, 2011

The Centroid, *Gender Research*, 2011

John Wiley & Sons

College Geometry, 2010
Quantitative Reasoning, 2010
Geometry and Symmetry, 2009
Heart of Mathematics, 3rd Edition, 2009
Visual Linear Algebra, 2004

Key College

Sketchpad 5, 2008 - 2009, 2010
College Geometry, 2003 - 2005
Geometry and Symmetry, 2006-2007
Heart of Mathematics, 3rd Edition, 2007 - 2008
Geometry Website, 2006
Transforming Mathematics with The Geometer's Sketchpad, 2005
Understanding Shape, 2004
Workshop Geometry: Mathematics for Teaching Elementary School, 2004
Heart of Mathematics, 2nd Edition, 2002 - 2003

Princeton University Press

Mathematics Goes to the Movies, 2010
Great Zeus!: Solving the Twelve Labors of Hercules, 2007

National Science Foundation

Course, Curriculum, and Laboratory Improvement (CCLI) program panel review meeting, March 17-19, 2010
Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP) program panel review meeting, November 17-18, 2008
Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP) program panel review meeting, November 5-6, 2007
Course, Curriculum, and Laboratory Improvement (CCLI) program panel review meeting, July 28-31, 2004

Mathematical Reviews

Huber's Theorem for Hyperbolic Orbisurfaces, Emily Dryden et al., *Canad. Math. Bull.* 52(1), 2009, pp. 66-71. Reviewed in 2009
Hearing the Weights of Weighted Projective Planes, Miguel Abreu, Emily Dryden, Pedro Freitas, Leonor Godinho, *Ann. Global Anal. Geom.* 33(4), 2008, pp. 373-395. Reviewed in 2008

One Cannot Hear Orbifold Isotropy Type, Naveed Shams, Elizabeth Stanhope and David L. Webb, Archiv der Mathematik, 87(4), October, 2006, pp. 375-385. Reviewed in 2007
How Tightly Can You Fold a Sphere?, Jill McGowan and Catherine Searle, Differential Geometry and its Applications, 22(1), January 2005, pp. 81-104. Reviewed in 2005

PRIMUS

Referee, 16 Articles from 2002 - 2009
Guest Editor of Special Edition on Popular Culture and Mathematics, 2006 - 2007
Guest Editor of Special Edition on Popular Culture in the Mathematics Classroom, 2002 - 2003

20th Century Fox

Futurama: Bender's Big Score, 2006-2007

Flat World Productions, LLC

Flatland: The Movie, 2006-2007

Raytheon

MathMovesU, 2006

Prentice Hall

Mathematics for Elementary Teaching, 2006
Teachers Mathematics, 2006
Geometric Structures, 2005
Women in Mathematics, 2001

JOMA (Journal of Mathematics and its Applications)

Volumes 1 and 2, 2001 - 2002

STUDENT RESEARCH

Dynamic Geometry Learning with Callie Edwards, 2010-2011
Women in Mathematics with Kayla Corkery, 2010-2011
Humanistic Mathematics in the Classroom with Misty Silver, 2009-2010
Visualization with Kristen Eure, 2009-2010
The Importance of Spherical Geometry and Trigonometry with Griffin Dodd, 2009
Second Reader on *Group Discussions* with Jennifer Wilkinson, 2009
Solutions to Laplace's Equation for Ion Dynamical Studies with Bailee Christopher, 2007
Mathematics Research with Summer Ventures, 2007
Mathematics as a Universal Language with Jenn Schroeder, 2007
Visualizing Differential Geometry with Nathan Crowder, 2006
Classification of Geometries with John Foley, 2004
Active Learning in Geometry with Gina Banks, 2004
Geometry of Metrics on the Plane and Sphere, and Higher Dimensional Geometry with Virginia Culyer, 2000

COURSES TAUGHT

MAT 1010 Introduction to Mathematics
US 1150 Freshman Seminar
UCO 1200 First Year Seminar on Breakthroughs and Controversies in Science and Mathematics
MAT 130 Calculus
MAT 151 Calculus for Social Sciences
MAT 2130 Calculus and Analytic Geometry III
MAT 2240 Introduction to Linear Algebra

MAT 2500 Geometry for Teachers of Grades 6-8
MAT 3010/5125 History of Mathematics
MAT 3110 Introduction to Modern Algebra
MAT 3130 Introduction to Differential Equations
MAT 3500 Mathematics as a Universal Language
MAT 3510 Applications of Geometry
MAT 3520 Instructional Assistant
MAT 3531 Teaching High School Geometry
MAT 3610 Introduction to Geometry
MAT 4010/IDS 3530 Women and Minorities in Mathematics
MAT 4010/IDS 3530 Women in Mathematics
MAT 4010 Seminar in Humanistic Mathematics
MAT 4040 Mathematics Capstone
MAT 4140/5530 Differential Geometry
MAT 4510 Senior Honors Thesis
MAT 4710/5710 Introduction to Topology
MAT 5420 Teaching Apprenticeship
MAT 5525 Product of Learning
MAT 5530 Geometry of Surfaces and Higher Dimensions
MAT 5530 Topics in Non-Euclidean Geometry
MAT 5600 Directed Research
MAT 5920 Linear Algebra for Teachers
MAT 5980 Geometry for Teachers of Grades 6-8
MAT 5980 History of Mathematics for Teachers of Grades 9-12

See <http://www.mathsci.appstate.edu/~sjg/teaching.html> for detailed course web pages and daily activities

PROFESSIONAL SOCIETIES

Association for Women in Mathematics

Mathematical Association of America

National Council of Teachers of Mathematics