

ERIC L. MCDOWELL

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Berry College
Mount. Berry, GA 30149-5014
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EDUCATION

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| 1992- 1995 | West Virginia University Morgantown, WV Ph.D., December 1995 Major: Mathematics (Continuum Theory) Director of Dissertation: Dr. Sam B. Nadler, Jr. |
| 1989- 1991 | Miami University Oxford, Ohio M.A., May 1991 Major: Mathematics |
| 1983- 1987 | Bethany College Bethany, WV B.S., May 1987 Majors: Mathematics/Computer Science |

PRESENT POSITION

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| 2011- present | Professor of Mathematics Berry College Mount Berry, GA 30165 |
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Responsibilities include a regular annual teaching/research load of 24 semester hours of upper and lower division mathematics courses, advising of mathematics majors, committee membership relevant to the position, professional development through mathematics research and conference presentations, and service to the local college and civic communities.

PROFESSIONAL EXPERIENCE

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| 2004- 2011 | Associate Professor of Mathematics Berry College Mount Berry, GA 30149 |
| 1998- 2004 | Assistant Professor of Mathematics Berry College Mount Berry, GA 30149 |
| 1995- 1998 | Assistant Professor of Mathematics Bethany College Bethany, WV |

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| 1992- 1995 | Instructor and Graduate Teaching Assistant West Virginia University Morgantown, WV |
| 1991- 1992 | Instructor of Mathematics Miami University Oxford, OH |
| 1989- 1991 | Graduate Teaching Assistant Miami University Oxford, OH |
| 1987- 1989 | Programmer/Analyst General Electric Aircraft Engines Cincinnati, OH |

PUBLICATIONS

Eric L. McDowell, *Left-to-Right Algorithms for Addition and Subtraction*, Far East Journal of Mathematical Education, Vol. 17, No. 1 (2017), pp. 43-50.

Eric L. McDowell, *Mediants Make (Number) Sense of Fraction Foibles*, Mathematics Teacher, **110** (2016), Volume 1, pp. 18-24.

Blayne Carroll and Eric L. McDowell, *Continued Fractions and Square Root Approximations*, Far East Journal of Mathematical Education, **4** (2010), pp. 151-156.

Eric L. McDowell, *A Correction To: The Connectivity Structure of the Hyperspaces $C(X)$* , Topology Proceedings, **34** (2009), pp. 47-51.

Eric L. McDowell, *Coincidence Values of Commuting Functions*, Topology Proceedings, **34** (2009), pp. 365-384.

Eric L. McDowell and B.E. Wilder, *Small-point hyperspaces of the arc, circle and simple triod*, Aportaciones Matemáticas de la Sociedad Matemática Mexicana (2008).

Eric L. McDowell, *A Development of Simpson's Rule for the Classroom*, The International Journal of Computational and Numerical Analysis and Applications, **3** (2003), pp. 9-15.

Eric L. McDowell and B.E. Wilder, *The Connectivity Structure of the Hyperspaces $C(X)$* , Topology Proceedings, **27** (2003), pp. 223-232.

Eric L. McDowell, *A Numerical Introduction to Partial Fractions*, The College Mathematics Journal, **33** (2002), pp. 400-403.

Eric L. McDowell, *Fixed Point Set Characterizations of Peano Continua and Absolute Retracts*, Topology and Its Applications, **128** (2003), pp. 123-134.

B.E. Wilder and Eric L. McDowell, *Components and Quasicomponents of Subsets of Continua*, JP Journal of Geometry and Topology, **1** (2001), pp. 163-171.

Eric L. McDowell and B.E. Wilder, *Bumping Boundaries in Connected Topological Spaces*, Continuum Theory: In Honor of the 60th Birthday of Sam Nadler, Lecture Notes in Pure and Applied Mathematics, Marcel Dekker, Inc., New York (2002), pp. 237-244.

Eric L. McDowell, *Absolute Fixed Point Sets for Multi-Valued Maps*, Proc. Amer. Math. Soc. **126** (1998), pp. 3733-3741.

Joe Kennedy and Eric McDowell, *Geoboard Quadrilaterals*, Mathematics Teacher, **91** (1998), pp. 288-290.

Joe Kennedy and Eric McDowell, *Geoboard Quadrilaterals*, Ohio Journal of School Mathematics **32** (1996), pp. 3-6.

E.L. McDowell and Sam B. Nadler, Jr., *Absolute Fixed Point Sets for Continuum-Valued Maps*, Proc. Amer. Math. Soc. **124** (1996), pp. 1271-1276.

Eric L. McDowell (under the direction of Sam B. Nadler, Jr.), *Absolute Fixed Point Sets for Multi-Valued Maps*, Dissertation, UMI Co., (1996).

PROFESSIONAL PRESENTATIONS

A Left-to-Right Subtraction Algorithm and its Pedagogical Advantages, 12th Annual Hawai'i International Conference on Education, Honolulu, Hawai'i (January 5-8, 2014).

The Derivative Rag, 11th Annual Hawai'i International Conference on Education, Honolulu, Hawai'i (January 6-9, 2013).

The Eight Pedagogical Errors of Mathematics Education (with suggestions for improvement), 10th Annual Hawai'i International Conference on Education, Honolulu, Hawai'i (January 6-9, 2012).

Commuting Self-Maps of the Unit Interval, 2009 Fall Central Section Meeting of the American Mathematical Society, Baylor University, Waco, Texas (October 16-18, 2009).

Commuting Self-Maps of the Simple Triod, 2008 Spring Topology and Dynamical Systems Conference, University of Wisconsin, Milwaukee, WI (March 13-15, 2008).

A Report on the Small-Point Hyperspaces of the Simple n -od, Third International Meeting on Continuum Theory, Museo Univeritario Casa de los Muñecos, Puebla City, Puebla, Mexico (June 7-9, 2007).

Investigations of the Turning Sequences of Elsa Continua, 2007 Spring Topology and Dynamical Systems Conference, University of Missouri, Rolla MO (March 30, 2007).

Continua X with a small-point hyperspace homeomorphic to $X \times [0,1]$, 40th Annual Spring Topology and Dynamical Systems Conference, University of North Carolina Greensboro, Greensboro NC (March 23-25, 2006).

There and Back Again: An Introduction to the Study of Hyperspaces, Invited lecture for the Colloquium Series at Georgia Southern University, Statesboro GA (February 17, 2006).

Counting, Invited lecture for the Public Lecture Series at Georgia Southern University, Statesboro GA (February 16, 2006).

A Discussion of the Small-point Hyperspaces of Simple n -ods, 1006th Meeting of the American Mathematical Society, Texas Tech University, Lubbock, TX (April 8-10, 2005).

A Motivational Discussion of Small-point Hyperspaces, 9th Chico Topology Conference, California State University, Chico, CA (May 27-29, 2004).

Small-point hyperspaces of the arc, circle and simple triod, 2004 Spring Topology and Dynamics Conference, University of Alabama at Birmingham, Birmingham, Alabama (March 25-27 2004).

A Development of Simpson's Rule for the Classroom, 11th International Colloquium on Numerical Analysis and Computer Science with Applications, Technical University of Plovdiv, Plovdiv Bulgaria (August 2002).

An Introduction to a New Class of Hyperspaces, 8th Chico Topology Conference, California State University, Chico CA (May 2002).

An Introduction to a New Class of Hyperspaces, Invited Address at the University of Missouri, Rolla MI (May 2002).

An Apology for Topology, Invited colloquium lecture at the University of Missouri, Rolla MI (April 2002).

Chaos Theory: A Bridge Between Determinism and Free Will, Invited lecture, Berry College (April 2002).

The Connectivity Structure of the Hyperspaces $C_n(X)$, 2002 Spring Topology and Dynamics Conference, University of Texas, Austin TX (March 2002).

Components and Quasicomponents of Subsets of Continua. 954th Meeting of the American Mathematical Society, University of Louisiana at LaFayette, Lafayette, Louisiana (April 2000). (*This talk was sponsored through a travel grant from Berry College.*)

Bumping Boundaries Outside Continua. Fourth Joint International Meeting of the American Mathematical Society and the Sociedad Matematica Mexicana, University of North Texas, Denton, Texas (May 1999).

Fixed Point Set Characterizations of Peano Continua and Absolute Retracts. Thirteenth Summer Conference on General Topology and its Applications, Universidad Nacional Autonoma de Mexico, Mexico City (June 1998).

Absolute Fixed Point Sets For Continuum-Valued Maps. Conference on Topology and Dynamical Systems, University of Delaware (March 1995).

SERVICE

Institutional

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| 2016-2017 | Member of the School Promotion and Tenure Committee Member of the School P&T FAQ Committee Incoming Faculty Athletics Representative Volunteer for several Admission's events Volunteer for the Berry mathematics competitions |
| 2015-2016 | Chair of the Department of Mathematics and Computer Science Member of Academic Council Volunteer for several Admission's events Volunteer for the Berry mathematics competitions |
| 2014-2015 | Chair of the Department of Mathematics and Computer Science Member of the college-wide Promotion and Tenure Committee Member of Academic Council Volunteer for several Admission's events Volunteer for the Berry mathematics competitions |
| 2013-2014 | Chair of the Department of Mathematics and Computer Science Executive Secretary of the college-wide Promotion and Tenure Committee Berry's Representative to the Goldwater Scholarship Program Member of Academic Council Volunteer for several Admission's events Volunteer for the Berry mathematics competitions |
| 2012-2013 | Chair of the Department of Mathematics and Computer Science Member of the college-wide Promotion and Tenure Committee Berry's Representative to the Goldwater Scholarship Program Member of Academic Council Volunteer for several Admission's events Volunteer for the Berry mathematics competitions (faculty coordinator during Fall semester) Member of the (ad hoc) committee on Hiring Practices Member of the Teacher Education Unit |

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| 2011- 2012 | <p>Chair of the Department of Mathematics and Computer Science</p> <p>Berry's Representative to the Goldwater Scholarship Program</p> <p>Volunteer for several Admission's events</p> <p>Volunteer for the Berry mathematics competitions</p> <p>Workshop leader for the Summer Mathematics Content Workshop for Floyd County Elementary School Teachers</p> |
| 2010- 2011 | <p>Chair of the Department of Mathematics and Computer Science</p> <p>Member of Academic Council</p> <p>Berry's Representative to the Goldwater Scholarship Program</p> <p>Workshop leader for the Summer Mathematics Content Workshop for Floyd County Middle and High School Mathematics Teachers</p> <p>Co-host of the annual New Faculty Pot Luck</p> <p>Volunteer for the Berry mathematics competitions</p> <p>Volunteer for several Admissions events (Discover Berry, Firsthand Friday, Majors Fair)</p> <p>Participant in Berry's Alumni Work Week</p> <p>Judge for the Berry College Elementary and Middle School Science Fair</p> <p>Volunteer for the Berry Half Marathon</p> <p>Member of the Dining Advisory Committee</p> |
| 2009- 2010 | <p>Member of Academic Council</p> <p>Member of Planning Council</p> <p>Member of the "6-3" Subcommittee of Planning Council to review proposals for new and enhanced programs</p> <p>Member of the MNS Promotion and Tenure Committee</p> <p>Member of the Academic Appeals Committee</p> <p>Member of Dr. Alice Harper's Third Year Review Committee</p> <p>Berry's Representative to the Goldwater Scholarship Program</p> <p>Member of the Center for Teaching Excellence Committee</p> <p>Co-host of the Annual New Faculty Pot Luck</p> <p>Member of the Dining Advisory Committee</p> |
| 2008- 2009 | <p>School representative for Academic Council</p> <p>School representative for Planning Council</p> |

Member of the Center for Teaching Excellence Committee

Berry's representative for the Barry M. Goldwater Scholarship and Excellence in Education Program

Member of the Dr. Cathy Borer's Third Year Review Committee

Member of the Dining Committee

Tutored students in Costa Rica during the week of spring break so that they might better be able to pass the GRE; two of these students matriculated at Berry in Fall 2009

Served as a representative and lecturer during Discover Berry

2007-
2008

School representative for Academic Council

Member of the Faculty Hearing Committee

Faculty representative for the Barry M. Goldwater Scholarship and Excellence in Education Program

Member of the Dining Committee

2005-
2006

Chair of the Ongoing Faculty Development Committee

Chair of the MNS Undergraduate Research Committee

Faculty representative for the Barry M. Goldwater Scholarship and Excellence in Education Program

Faculty Assembly representative to Berry's Planning Council

Served as a Teaching Fellow at Berry College

Steering Committee Member of the Spring Topology and Dynamical Systems Conference

Member of the Mathematics Association of America

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| 2004-2005 | <p>Lead organizer of the 2005 Spring Topology and Dynamical Systems Conference held at Berry College March 17-19, 2005</p> <p>Chair of the Ongoing Faculty Development Committee</p> <p>Chair of the MNS Undergraduate Research Committee</p> <p>Faculty representative for the Barry M. Goldwater Scholarship and Excellence in Education Program</p> <p>Faculty Assembly representative to Berry's Planning Council</p> |
| 2003-2004 | <p>Served as a Teaching Fellow at Berry College</p> <p>Chair of the MNS Undergraduate Research Committee.</p> <p>Faculty representative for the Barry M. Goldwater Scholarship and Excellence in Education Program.</p> <p>Faculty Assembly representative to Berry's Planning Council.</p> <p>Serve as a Teaching Fellow at Berry College.</p> |
| 2002-2003 | <p>Chair of the MNS Undergraduate Research Committee.</p> <p>Faculty representative for the Barry M. Goldwater Scholarship and Excellence in Education Program.</p> <p>Faculty Assembly representative to Berry's Planning Council.</p> <p>Member of the Vice President of Finance search committee.</p> <p>Chair of the MANS Undergraduate Research Committee.</p> |
| 2001-2002 | <p>Faculty representative for the Barry M. Goldwater Scholarship and Excellence in Education Program.</p> <p>Member of the Faculty and Staff Benefits Committee.</p> <p>Member of the Lectures and Symposium Series Subcommittee of the Centennial Committee.</p> <p>Participated as a lecturer in Berry's SUCCESS program.</p> |
| 2000-2001 | <p>Member of the MANS Undergraduate Research Committee.</p> <p>Member of the Lectures and Symposium Series Subcommittee of the Centennial Committee.</p> <p>Attended the Pew-sponsored conference on Problem Based Learning at Samford University in Birmingham, AL. Participated in a workshop on PBL for Berry faculty.</p> |
| 1999-2000 | <p>Member of The BerryTones, the acapella male quartet of Berry College.</p> <p>Member of the Writing Across the Curriculum (WAC) committee.</p> <p>Member of the Faculty Assembly's Student Life Committee.</p> |

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| | Member of the Lectures and Symposium Series Subcommittee of the Centennial Committee. |
| 1998-2003 | Organized the first, second, third, fourth, fifth and sixth annual potluck dinners for new Berry College faculty. These dinners were held at the House o' Dreams on Berry's mountain campus. |
| 1999-2000 | Traveled with Admissions Office personnel to participate in Berry College open houses. |
| 1999 | "Graduated" from Berry College's first Writing Across the Curriculum (WAC) workshop, and communicated some of the ideas from that workshop to interested departmental colleagues. |
| 1998-1999 | Attended <i>The Wake Forest Story</i> conference at Wake Forest University to examine Wake Forest's move toward a ubiquitous computing environment. |
| 1997-1998 | Member of the <i>Amazing Greys</i> , a barbershop/gospel male quartet made up of Bethany College faculty. The <i>Greys</i> performed at a variety of college events as well as for many church services and civic functions. |
| 1995-1998 | Committee membership on the Gans Fund Committee at Bethany College |
| 1997-1998 | Committee membership on the Scholarship Committee at Bethany College |

Professional

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| 2016-2017 | Member of the Editorial Board for the Far East Journal of Mathematical Education Invited performance of my song <i>Roll Call</i> at the MathFest Conference in Columbus, OH |
| 2015-2016 | Partnered with Floyd County Schools for the continuing education of Floyd County School teachers in STEM disciplines |
| 2013-2014 | Wrote the song "The Calculus Priority Dispute" and worked with Viking Fusion to produce a music video that introduces students to the continental academic battle regarding the invention of the Calculus |
| 2011-2012 | Partnered with Floyd County Schools on a \$598,000 grant (Dr. April Childers, PI) for the continuing education of Floyd County School teachers in STEM disciplines |
| 2010-2011 | Partnered with Floyd County Schools on a \$598,000 grant (Dr. April Childers, PI) for the continuing education of Floyd County School teachers in STEM disciplines Wrote the song "Derivative Rag" and produced a music video that introduces students to the fundamental rules of differentiation |
| 2009-2011 | Member of the Mathematical Association of America |
| 2008-2009 | Wrote the song "Mr. Mathman" and produced a music video as an introduction to topics traditionally covered during the first two weeks of Calculus |

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| | Member of the Mathematical Association of America |
| 2007-2008 | Steering Committee Member of the Spring Topology and Dynamical Systems Conference |
| | Member of the Mathematical Association of America |
| 2006-2007 | Steering Committee Member of the Spring Topology and Dynamical Systems Conference |
| | Member of the Mathematical Association of America |
| 2005-2006 | Steering Committee Member of the Spring Topology and Dynamical Systems Conference |
| | Member of the Mathematical Association of America |
| 2004-2005 | Conference Chair for the 2005 Spring Topology and Dynamical Systems Conference at Berry College. Approximately 130 participants from 7 countries. Approximately 90 speakers (18 invited). Conference supported by a \$40,000 grant from NSF. |
| | Event coordinator and examiner, Georgia Science Olympiad Regional Tournament at Berry College, March 2005. |
| 2003-2004 | Invited Participant, Georgia Professional Standards Commission Content Review Panel, charged with developing professional certification standards for public school educators in the state. |
| | Event coordinator and examiner, Georgia Science Olympiad Regional Tournament at Berry College, March 2004. |
| | Conference Chair for 2005 Spring Topology and Dynamical Systems Conference at Berry College. |
| 2003 | Served on a committee to review the mathematics programs at several Georgia colleges for the purpose of determining their adherence to accreditation (NCATE) standards. |
| 2002 | Completed the early planning stages of organizing the 2005 Spring Topology and Dynamical Systems Conference to be held at Berry in March of 2005. |
| 2000-2001 | Invited speaker for a ceremony honoring the mathematical achievements of students at the Berry College Middle School. |
| 1999-2000 | Member of the American Mathematical Society. |
| 1998-1999 | Member of the Mathematical Association of America. |

- 1999 Served on a panel which helped to make awards for the Higher Education portion of the Eisenhower Act for the Improvement of Mathematics and Science Education. This panel met at the University of Georgia, Athens, Georgia, on January 21, 1999.
- 1998 Organizer of the 1st Annual Eastern College Consortium Mathematics Competition. Member of a team of three mathematicians who conceived, organized and executed an undergraduate mathematics competition involving students from eight colleges in Ohio and West Virginia.

Community

- 2016-2017 President of the Summerville Park Neighborhood Association
Board Member of the Three Rivers Singers
Chair of the Rome Georgia Unified Land Development Code (ULDC) Board of Adjustments
- 2015-2016 President of the Summerville Park Neighborhood Association
Member and Board Member of the Three Rivers Singers
Member of the Rome, Georgia Unified Land Development Code (ULDC) Board of Adjustment (the body through which appeals to the Land Development Code are heard)
- 2013-2014 President of the Summerville Park Neighborhood Association
Board Member of the Three Rivers Singers (community volunteer choral group)
Member of the Rome, Georgia Unified Land Development Code (ULDC) Board of Adjustment (the body through which appeals to the Land Development Code are heard)
- 2013-2014 President of the Summerville Park Neighborhood Association
Board Member of the Three Rivers Singers (community volunteer choral group)
Member of the Rome, Georgia Unified Land Development Code (ULDC) Board of Adjustment (the body through which appeals to the Land Development Code are heard)
- 2012-2013 President of the Summerville Park Neighborhood Association
Board Member of the Three Rivers Singers (community volunteer choral group)
Member of the Rome, Georgia Unified Land Development Code (ULDC) Board of Adjustment (the body through which appeals to the Land Development Code are heard)
- 2011-2012 President of the Summerville Park Neighborhood Association
Board Member of the Three Rivers Singers (community volunteer choral group)
Member of the Rome, Georgia Unified Land Development Code (ULDC) Board of Adjustors (the body through which appeals to the Land Development Code are heard)
- 2010-2011 Board Member (Past President) of the Summerville Park Neighborhood Association

Board Member of the Three Rivers Singers (community volunteer choral group)

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| | President of the Summerville Park Neighborhood Association |
| 2009-2010 | Board Member of the Three Rivers Singers (community volunteer choral group) Member of the Rome Neighborhood Alliance (promotes and defends neighborhood interests in the Rome community) Presented two invited guest lectures to Mrs. Mary Holcomb's AP Calculus class at Rome High School |
| 2008-2009 | President of the Summerville Park Neighborhood Association Board Member of the Three Rivers Singers (community volunteer choral group) Member of the Rome Neighborhood Alliance (promotes and defends neighborhood interests in the Rome community) |
| 2007-2008 | President of the Summerville Park Neighborhood Association Board Member of the Three Rivers Singers (community volunteer choral group) Member of the Rome Neighborhood Alliance (promotes and defends neighborhood interests in the Rome community) Served as a Governor's Honors Program interviewer at Rome High School |
| 2006-2007 | First elected President of the Summerville Park Neighborhood Association Member of the Three Rivers Singers |
| 2005-2006 | Member of the Three Rivers Singers |
| 2002 | Facilitator of the leadership team for the PTO of Berry College Elementary/Middle School. Volunteer entertainer (pianist) at Wisdom House, an assisted living community. |
| 2001 | Served as a Governor's Honors Program interviewer at Rome High School. Helped to prepare for the Berry College Elementary School's community auction. Volunteer entertainer (pianist) at Wisdom House, an assisted living community. |
| 2000 | Guest worship service pianist at the Berry College Chapel. Volunteer entertainer (pianist) at the Merrill Garden retirement community. |
| 1999 | Served as an interviewer for the Governor's Honors Program at Rome High School. |
| 1998 | Traveled with a group of Berry College students to participate in the AIDS Walk in Atlanta, GA. |
| 1997-1998 | Town Councilman for the Town of Bethany, West Virginia. |
| 1996-1997 | Occasional pianist for services at the Bethany Memorial Church. |
| 1997 | Workshop Instructor, Bethany Primary School, Bethany, West Virginia. Presented a mathematics workshop on Moebius strips to the K, 1 st , 2 nd , 3 rd and 4 th grade |

classes.

- 1996-1997 Occasional pianist for services at the Bethany Memorial Church.
- 1997 Workshop Instructor, Bethany Primary School, Bethany, West Virginia. Presented a mathematics workshop on Moebius strips to the K, 1st, 2nd, 3rd and 4th grade classes.
- 1996-1998 Member of the Bethandians, an organization of Bethany townsfolk whose purpose is to assist other Bethany townsfolk who are moving into or out of the community, who are making structural improvements to their homes, etc.

AWARDS

- 2003 Presented with the Dave and Lu Garrett Award for Meritorious Teaching at Berry College's commencement ceremony on May 3, 2003. The Garrett award is presented annually to the faculty member who has been judged as the most effective teacher during the academic year. Research and service are also necessary qualifications for this prize.
- Awarded the title of *Teaching Fellow* at Berry College. Teaching fellows serve as a resource to new faculty who seek assistance with their new roles.
- 2002 Selected as a finalist for the annual Writing Across the Curriculum award.