Michael Todd Edwards

School Address
Department of Teacher Education
Miami University
Oxford, OH 45056
(513) 529-6320

Permanent Address
61 Christopher Drive
Oxford, OH 45056
(513) 280-0891

PROFESSIONAL INTERESTS

I am currently an Associate Professor of Mathematics Education in the Department of Teacher Education at Miami University in Oxford, Ohio. My research focuses on the development of technology-oriented curricula, specifically teaching materials that utilize hand-held graphing technology and dynamic geometry software in the teaching of mathematics and statistics at the secondary level (grades 6-12), as well as the impact of these materials on student understanding and the preparation of future teachers.

EDUCATION

Doctor of Philosophy, Mathematics Education
Ohio State University, Columbus, OH — June 2001
Dissertation title: "The electronic other: Computer algebra systems as a pedagogical tool with secondary algebra students" (Advisor: Douglas T. Owens)

Master of Science, Mathematics
Ohio University, Athens, OH — May 1995

Master of Education, Secondary Mathematics Education
Ohio University, Athens, OH — May 1995
Thesis Title: "The Effect of Prison Education Programs on Recidivism Rates" (Advisor: Bonnie Beach)

Bachelor of Science, Mathematics (with minor in Computer Science)
Miami University, Oxford, OH — December 1990

PROFESSIONAL EXPERIENCE

Miami University — August 2011 – Present
Associate Professor, Mathematics Education — Oxford, OH
- Affiliate faculty member, Interactive Media Studies
- Affiliate faculty member, Educational Leadership

Assistant Professor, Mathematics Education — August 2006 – 2010

John Carroll University — September 2001 – May 2006
Assistant Professor, Mathematics Education — University Heights, OH
- Faculty member, Department of Mathematics & Computer Science
- Faculty member, Department of Education & Allied Studies

Linworth Alternative Program — September 2000 – June 2001
Secondary Mathematics Teacher — Worthington, OH

Upper Arlington High School — September 1995 – June 2000
Secondary Mathematics Teacher — Upper Arlington, OH

BOOKS

Brown, S., Breunlin, R.J., Eddins, S., Edwards, M.T., Wiltjer, M. & Usiskin, Z. (2007). *University of Chicago school mathematics project* (UCSMP) *algebra*: (3rd Ed.). New York: McGraw Hill.

BOOK CHAPTERS

Edwards, M. T., Harper, S. R., & Klein, R. M. (2013). And now this . . . problem: Neil Postman, technology, and the secondary school mathematics curriculum in Clough, M., Olson, J. and Niederhauser, D. (Eds.) The Nature of Technology: Implications for Teaching and Learning. Boston, MA: Sense Pubishers.

Edwards, M.T., Phelps, S., & Wanko, J. J. (2013). Mystery Plots: Motivating Algebraic Model Building with Dynamic Sketches. In Z. Karadag, D. Martinovic and D. Novak (Eds.) *Research in Visual Mathematics and Cyberlearning*. New York: Springer.

Edwards, M.T., Harper, S.R., Shay, N., & Edwards, J.F. (2012). Sample course 4: Adolescent mathematics II. In J.W. Nutta, K. Mokhtari, & C. Strebel (Eds.), *Preparing every teacher to reach English learners: A practical guide for teacher educators* (pp. 163-166). Cambridge, MA: Harvard Education Press.

Edwards, M.T. (2003). Calculator-based computer algebra systems: Tools for meaningful algebraic understanding. In J. Fey (Ed.), *CAS in secondary schools* (pp. 117-134). Reston, VA: NCTM.

JOURNAL ARTICLES

† indicates student co-authorship

Strayer, J. &, Edwards, M. T. (In review, submitted January 5, 2014). Smarter cookies: Fostering quantitative literacy with the cookie conundrum. Submitted for publication to *Mathematics Teacher*.

Edwards, M. T., Quinlan, J., Harper, S. R., Cox, D., & Phelps, S. (2014). Fostering deductive thinking with angle chasing. *Mathematics Teacher 107*(6), 426-431.

Özgün-Koca, S. A., Edwards, M. T., & Meagher, M. (2013). Virtual environments for reasoning and sense-making. *Mathematics Teacher 107*(3), 180-187.

Wanko, J., Edwards, M.T., & Phelps, S. (2012). Core conversations with educative dragging. *Mathematics Teacher 106*(2), 108-113.

Cox, D. & Edwards, M. T. (2012). Sizing up the Grinch's heart. *Mathematics Teaching in the Middle School 18*(4), 228-235.

Edwards, M. T., Harper, S. R., & Cox, D. (2012). Authentic tasks in a standards-based world. *Mathematics Teacher 106*(5), 346-353.

Edwards, M. T. & Cox, D. (2011). The frame game. *Journal of Mathematics Education at Teachers College 2*(2). New York: Teachers College Press, 18-27.

Meagher, M., Özgün-Koca, S. A., & Edwards, M. T. (2011). Preservice teachers' experiences with advanced digital technologies: The interplay between technology in a preservice classroom and in field placements. *Contemporary Issues in Technology and Teacher Education, 11*(3).

Meagher, M., Özgün-Koca, S. A., & Edwards, M.T. (2011) The shift from "learner/doer of mathematics" to "teacher of mathematics":A heuristic for pre-service teacher candidates. *Mathematics Teacher Education and Development 13*(1), 88-107.

†Bucher, C. & Edwards, M.T. (2011). Delving deeper: Deepening understanding of transformation through proof. *Mathematics Teacher 104*(9), 716-722.

Harper, S.R. & Edwards, M.T. (2011). A new recipe: No more cookbook lessons. *Mathematics Teacher 105*(3), 180-188.

Harper, S. R., Klein, R., & Edwards, M. T. (2010). On using technology to confront information overload in a mathematics classroom. *Journal of the Research Center for Educational Technology 6*(2), 48-62.

Özgün-Koca, S. A., Meagher, M., & Edwards, M. T. (2010). Pre-service teachers' emerging TPACK in a technology-rich methods class. *The Mathematics Educator 19*(2), 10-20.

Özgün-Koca, S. A., Meagher, M. & Edwards, M. T. (2011), A teacher's journey with a new generation handheld: Decisions, struggles, and accomplishments. *School Science and Mathematics 111*, 209-224.

Phelps, S. & Edwards, M.T. (2010). Delving deeper: New life for an old topic: Completing the square using technology. *Mathematics Teacher 104*(3), 230-236.

Edwards, M. T. & Harper, S. R. (2010). Paint bucket polygons: Explorations of meaningful mathematical definitions. *Teaching Children Mathematics 16*(7), 420-428.

Klein, R. M., Phelps, S. & Edwards, M.T. (2009). Purposeful dragging: Using dynamic tools and the what-if-not approach to investigate functions in geometry class. *On-Math*. Retrieved November 5, 2009, from `http://www.nctm.org/eresources/tocgraphic.asp?journal_id=6`

Edwards, M. T. (2009). Who was William Shakespeare?: Using readability measures to connect language arts and mathematics. *Mathematics Teacher 102*(8), 580-585.

Özgün-Koca, S. A., & Edwards, M. T. (2009). Algebra 2.0: Rethinking content in second year algebra with technology. *Mathematics Teaching 214*. Derby, UK: ATM.

Edwards, M.T. & Phelps, S. (2008). Can you fathom this? Connecting data analysis, algebra, and geometry with probability simulation. *Mathematics Teacher 102*(3), 210-216.

Edwards, M.T., Özgün-Koca, S. A., & Meagher, M. (2008). When is a 'good fit' not a good fit?: Dynamic regression with the TI-Nspire graphing calculator. *Mathematics Teacher 102*(4), 300-5.

Edwards, M. T. & Reinhardt, J. (2008). Are you connected? Fostering exploration with unexpected graphs. *Mathematics Teacher 101*(6), 412-417.

†Edwards, M.T. & Borchik, J. (2007). The 'object participant' paradigm: Towards an appropriate use of graphing calculators in the teaching and learning of school mathematics. *Ohio Journal of School Mathematics 55*, 3-11.

Edwards, M. T. & Reinhardt, J. (2006). Technology tips: Exploring area with Monte Carlo simulations. *Mathematics Teacher 100*(6). Reston, VA: NCTM, 408-411.

Edwards, M. T. (2006). Technology tips: Visualizing DeMorgan's laws using logic simulation software. *Mathematics Teacher 100*(3). Reston, VA: NCTM, 198-201.

Edwards, M. T. (2006). Shutting the box: Fostering collaboration among early grades and secondary preservice teachers through authentic problem solving. *Contemporary issues in Technology and Teacher Education* [Online serial], 6(4).

Quesada, A. & Edwards, M.T. (2005). Framework for technology-rich explorations. *Journal of Online Mathematics and its Applications, 5.* Retrieved January 26, 2009, from `http://mathdl.org/mathDL/4/?pa=content&sa=viewDocument&nodeId=605`.

Edwards, M. T. (2005). Using overhead projectors to explore size change transformations. *Mathematics Teacher 98*(7), 498-507.

Edwards, M. T. (2005). Emptying the bowl: An investigation of probability and mathematics using CAS as a counting and data generation tool. *International Journal for Technology in Mathematics Education 11*(4), 1-11.

Edwards, M. T. (2005). Promoting understanding of linear equations with the median slope algorithm. *Mathematics Teacher 98*(6), 414-425.

Edwards, M. T. & Borrow, C. (2005). I'm in the band: Investigating quadrilaterals with paper cutting and inquiry-based teaching methods. *Ohio Journal of School Mathematics 51*, 64-74.

Edwards, M. T. (2005). Collaborative circles: Casting school geometry in a new light with dynamic geometry software. *Micromath 21*(1), 32-40.

Edwards, M. T. (2004). Novice algebra students may be ready for CAS but are CAS tools ready for novice algebra students? *International Journal of Computer Algebra in Mathematics Education 10*(4), 265-277.

Edwards, M. T. (2004). Fostering mathematical inquiry with explorations of facial symmetry. *Mathematics Teacher 97*(5), 234-241.

†Edwards, M. T. & Reeder, J. (2004). Uncovering unexpected mathematical connections with the folded triangles problem. *Ohio Journal of School Mathematics 49*, 3-17.

Edwards, M. T. (2003). Visualizing transformations: Matrices, handheld graphing calculators, and CAS. *Mathematics Teacher 96*(1), 48-56.

Edwards, M. T. (2002). Symbolic manipulation in a technological age. *Mathematics Teacher 95*(8), 614-620.

Heid, K. M. & Edwards, M. T. (2001). Computer algebra systems: A revolution or a retrofit for todays mathematics classrooms? *Theory into Practice 40*(2), 128-137.

CONFERENCE PROCEEDINGS

Meagher, M., Edwards, M. T., & Özgün-Koca, S. A. (2013). The use of authentic high-school student solutions as a change agent with preservice teachers. In Martinez, M. & Superfine, A. (Eds.). *Proceedings of the 35th annual meeting of the North American chapter of the international group for the psychology of mathematics education.* Chicago, IL: University of Illinois at Chicago. Available on-line at `http://pmena.org/2013/files/PMENA2013_Conference_Proceedings.pdf`

Edwards, M. T. (2012). Task Design and Analysis using the measure-trace-algebratize Approach. In *Proceedings of the Twelfth International Congress on Mathematical Education*, July 8-15, 2012. Seoul, Korea. To be available on-line at `http://www.mathunion.org/icmi/publications/icme-proceedings/`

Meagher, M., Özgün-Koca, S. A., & Edwards, M. T. (2011). Project CRAFTeD: An adapted lesson study partnering preservice mathematics teachers with a master teacher. In Wiest, L. R., & Lamberg, T. (Eds.). *Proceedings of the 33nd annual meeting of the North American chapter of the international group for the psychology of mathematics education.* Reno, NV: University of Nevada - Reno.

Edwards, M.T., Özgün-Koca, S. A., & Meagher, M. (2010). Preservice Teachers' Initial Experiences in Shifting From "Learners/Doers of Mathematics" to "Teachers of Mathematics." In Brosnan, P. & Erchick, D., Flevares, L. (Eds.). *Proceedings of the 32nd annual meeting of the North American chapter of the international group for the psychology of mathematics education.* Columbus, OH: Ohio State University.

Harper, S., Wanko, J., Edwards, M. T., Johnson, I. & Saint Rat, M. (2010). Listening to learn: Fostering practitioner pedagogical content knowledge with thinker-doer tasks. In Brosnan, P. & Erchick, D., Flevares, L. (Eds.). *Proceedings of the 32nd annual meeting of the North American chapter of the international group for the psychology of mathematics education.* Columbus, OH: Ohio State University.

Edwards, M.T., Phelps, S., & Wanko, J. J. (2010). Mystery plots: Motivating algebraic model building with dynamic sketches. Submitted for publication in Z. Karadag (Ed.), *Conference proceedings of the first annual Geogebra-NA* (North America) conference (CD-Rom distributed at conference).

Harper, S. R. & Edwards, M. T. (2010). Purposeful dragging: Motivating deeper mathematical understanding through dynamic geometry exploration. Published in J. Foster (Ed.), *Conference proceedings of the twenty-first annual international conference on technology in collegiate mathematics.* New York: Pearson Addison-Wesley.

Meagher, M., Özgün-Koca, S. A., & Edwards, M. T. (2009). Pre-service teachers' experiences with advanced digital technologies: The interplay between technology in a pre-service classroom and in field placements. In Swars, S. L., Stinson, D. W., & Lemons-Smith, S. (Eds.). *Proceedings of the 31st annual meeting of the North American chapter of the international group for the psychology of mathematics education.* Atlanta, GA: Georgia State University.

Edwards, M.T., Özgün-Koca, S. A., & Meagher, M. (2009). Podcasting rich problems with TI-Nspire CAS. Published in P. Bogacki (Ed.), *Conference proceedings of the 20th annual international conference on technology in collegiate mathematics.* New York: Pearson Addison-Wesley.

Edwards, M. T. & Quesada, A. (2008). Dueling (dualing) solids: Enhancing student and teacher geometrical understanding with CABRI 3D. In P. Bogacki (Ed.), Conference proceedings of the 19th annual international conference on technology in collegiate mathematics (pp. 50-54). New York: Pearson Addison-Wesley. Retrieved January 26, 2009, from `http://archives.math.utk.edu/ICTCM/VOL19/S073/paper.pdf`

Quesada, A., Smith, M. & Edwards, M. T. (2008). Are textbooks addressing all accessible topics foundational to calculus? In P. Bogacki (Ed.), Conference proceedings of the 19th annual international conference on technology in collegiate mathematics (pp. 163-167). New York: Pearson Addison-Wesley. Retrieved January 26, 2009, from `http://archives.math.utk.edu/ICTCM/VOL19/S24A/paper.pdf`

Edwards, M. T., & Klein, R. (2005). Blogging pentacubes: Enhancing critical reading and writing skills through collaborative problem solving with mathematics-based web logs. In G. Lloyd, S. Wilson, L. M. Wilkins, & S.L. Behm (Eds.), Proceedings of the 27th annual meeting of the North American chapter of the international group for the psychology of mathematics education. Retrieved January 26, 2009, from `http://www.allacademic.com/meta/p24576_index.html`

Edwards, M. T. (2004). Emptying the bowl: Connecting rigorous mathematical inquiry to content that teachers teach. In D. McDougall, & J. Ross (Eds.), Proceedings of the 26th annual meeting of the North American chapter of the international group for the psychology of mathematics education. Retrieved January 26, 2009, from `http://www.allacademic.com/meta/p117524_index.html`

Ozgun-Koca, A. & Edwards, M. T. (2002). Symbolic math guide: An innovative way of teaching and learning algebra using TI-89 and TI-92+ graphing calculators. In I. Vakalis & D. Hallett, C. (Eds.). Proceedings of the second international conference on the teaching of mathematics. Retrieved January 26, 2009, from `http://www.math.uoc.gr/~ictm2/Proceedings/pap32.pdf`

CONFERENCE PRESENTATIONS (2010 – Present)

National

Can you touch a line? 4/20/13
National Council of Teachers of Mathematics (NCTM) Annual Meeting Denver, CO

Converting High-Stakes Tasks into Rich Problems 3/23/13
International Conference on Technology in Collegiate Mathematics (ICTCM) Boston, MA

Working with a Variety of Advanced Digital Technologies to Foster Pre-service Teachers' TPACK 1/24/13
Association of Mathematics Teacher Educators (AMTE) Annual Meeting Orlando, FL

Geogebra + Web 2.0 = Access For All 3/22/12
International Conference on Technology in Collegiate Mathematics (ICTCM) Orlando, FL

Linking Algebraic and Geometric Representations with Dynamic Mathematics Software 1/4/12
Mathematics Association of America (MAA) Annual Meeting Boston, MA

Project CRAFTeD: An adapted lesson study 10/22/11
Psychology of Mathematics Education North America (PME-NA) Reno, NV

How to Train Your Dragging 4/15/11
National Council of Teachers of Mathematics (NCTM) Annual Meeting Indianapolis, IN

Geometry is Everywhere! 4/15/11
National Council of Teachers of Mathematics (NCTM) Annual Meeting Indianapolis, IN

The Zone of Optimal Learning: On-Line Learning Objects in an Age of Information Overload 3/11/11
Research Council on Mathematics Learning (RCML) Annual Conference Cincinnati, OH

Two Birthday Parties on the Same Day: Is it Likely? 2/25/11
Teachers Teaching with Technology (T3) Annual Conference San Antonio, TX

Deepening Understanding of Transformational Geometry through a "What If" Approach 2/25/11
Teachers Teaching with Technology (T3) Annual Conference San Antonio, TX

Math4Free: Fostering Collaboration and Inquiry with GeoGebra and Web 2.0 Tools 11/5/10
Association of Appalachian Mathematics Teacher Educators Annual Conference Williamsburg, KY

Listening to Learn: Fostering Practitioner Pedagogical Content Knowledge 10/30/10
Psychology of Mathematics Education North America (PME-NA) Columbus, OH

Preservice Teachers' Initial Experiences in Shifting from "Learners" to "Teachers" 10/29/10
Psychology of Mathematics Education North America (PME-NA) Columbus, OH

Mystery Plots: Motivating Algebraic Model Building with Dynamic Sketches 7/27/10
North American GeoGebra Conference Ithaca, NY

Connecting Geometry and Algebra with CAS Applets 6/27/10
USACAS Conference Chicago, IL

Two Sizes Too Small? Geometry Meets the Grinch 4/21/10
National Council of Teachers of Mathematics (NCTM) Annual Meeting San Diego, CA

Paint Bucket Polygons: Geometry Concepts in High Definition 4/21/10
National Council of Teachers of Mathematics (NCTM) Annual Meeting San Diego, CA

Completing Squares? Fostering Unexpected Connections with Nspire and Smartboards 3/6/10
Teachers Teaching with Technology (T3) Annual Conference Atlanta, GA

Next generation technologies and their impact on mathematics teacher education programs 1/28/10
Association of Mathematics Teacher Educators (AMTE) Annual Meeting Irvine, CA

A Teacher's Journey with a New Generation Handheld 1/28/10
Association of Mathematics Teacher Educators (AMTE) Annual Meeting Irvine, CA

Regional

Getting Started with GeoGebra 4.2 5/22/13
GeoGebra Conference, University of New England Portland, ME

The Thrill of the Chase: Deductive Reasoning with Angle Chasing 5/2/13
Wisconsin Mathematics Council 45th Annual Conference Green Lake, WI

Transforming Routine Tasks into Rich Explorations with Dynamic Mathematics Software 2/1/13
Metropolitan Mathematics Club (MMC) Annual Conference Chicago, IL

The Thrill of the Chase with Angle Chasing 11/29/12
National Council of Teachers of Mathematics (NCTM) Regional Meeting Chicago, IL

Dynamic Mathematics Software and GeoGebra as Game Changers (Keynote Address) 5/23/12
GeoGebra Conference, University of New England Portland, ME

How to Train Your Dragging: Connecting Algebra and Geometry with Functional Models 1/28/12
Metropolitan Mathematics Club (MMC) Annual Conference Chicago, IL

Two Sizes Too Small: Solving the Grinch Heart Task with TI-Nspire 9/11/10
Teachers Teaching with Technology (T3) Regional Conference Bakersfield, CA

Two Sizes Too Small: Solving the Grinch Heart Task with TI-Nspire 6/30/10
Teachers Teaching with Technology (T3) Regional Conference Boston, MA

State

Angle Chasing 10/18/13
Ohio Council of Teachers of Mathematics (OCTM) Annual Conference Dayton, OH

edTPA: Teacher Portfolio Assessment 10/17/13
Ohio Council of Teachers of Mathematics (OCTM) Annual Conference Dayton, OH

Thinking Outside the Box with Optimization 10/18/12
Ohio Council of Teachers of Mathematics (OCTM) Annual Conference Columbus, OH

Kick it up a Notch: Transform Procedural Problems to Opportunities 10/13/11
Ohio Council of Teachers of Mathematics (OCTM) Annual Conference Toledo, OH

Explorations with GeoGebra 4/2/11
Ohio Council of Teachers of Mathematics (OCTM) Emerging Leaders Conference Columbus, OH

Acting Out: Teachers Share Action Research 10/14/10
Ohio Council of Teachers of Mathematics (OCTM) Annual Conference Akron, OH

EXTERNAL RESEARCH GRANTS AND AWARDS

Co-Principal Investigator September 2013 – Present

Project DOVETAIL: Developing Ownership & Vision: Empowering Teachers As Instructional Leaders. Ohio Mathematics and Science Partnership [Program Solicitation ODE], Co-Principal Investigators: Dana C. Cox, Jane Keiser, Suzanne Harper, Beatriz DAmbrosio, and Nirmala Naresh (Department of Mathematics, Miami University) & M. Todd Edwards (Department of Teacher Education, Miami University), $696,568.49.

Co-Principal Investigator Spring 2007 – Summer 2010

MUPET Math: Miami University Partnership for Enhancing the Teaching of Mathematics. Ohio Mathematics and Science Partnership [Program Solicitation ODE], Co-Principal Investigators: Jane Keiser, Suzanne Harper, and Beatriz DAmbrosio (Department of Mathematics, Miami University), & M. Todd Edwards (Department of Teacher Education, Miami University), $778,323.48.

EDITORIAL ACTIVITIES

Co-Editor, *Contemporary Issues in Technology and Teacher Education* Spring 2014 – Present

Editorial Board, *Journal on Excellence in College Teaching* Fall 2012 – Present

Co-Editor, *North American GeoGebra Journal* Fall 2011 – Present

Co-Editor, *Ohio Journal of School Mathematics* Fall 2008 – Fall 2013

Editorial Board, *International Journal for Technology in Mathematics Education* Fall 2008 - Present

Reviewer

Eurasian Journal of Educational Research (EJER)	Summer 2008
Learning and Individual Differences Journal	Summer 2008
Mathematics Teacher	Spring 2008 – Present
Mathematics Teaching in the Middle School	Spring 2008 – Present
Teaching Children Mathematics	Fall 2006 – Present
International Journal for Technology in Mathematics Education	Spring 2005 – Present
Ohio Journal of School Mathematics	Fall 2002 – Present

MENTORED STUDENT PUBLICATIONS

Phuong, S. (March 2014). Factoring Quadratics For Conceptual Knowledge. To be published in *CMC ComMunicator*. (Written in *Diagnostic & Prescriptive Mathematics Instruction* (EDT 566))

DuVall, L. & Davidson, J. (2014). Descartes' Coordinate Geometry and Pick's Theorem. To be published in *Centroid*. (Written in *Mathematics: History and Technology* (EDT 265))

Bialorucki, C. (2013). Is Race to the Top the Best Educational Reform Choice? To be published in *Teacher Education Journal of South Carolina* (SCATE). Available on-line at `http://www.scateonline.org/teacher.html`. (Written in *Introduction to Education* (EDT 190))

Davis, T., Allentuck, H., & Roach, J. (2013). African fractals and ethnomathematics. *Louisiana Association of Teachers of Mathematics Journal* (LATM). Available on-line at `http://www.lamath.org/journal/` (Written in *Mathematics: History and Technology* (EDT 265))

Hook, N. & Paul, K. (2013). Beyond the fold: The math, history, and technology behind origami. *Ohio Journal of School Mathematics 67*, 19-24. (Written in *Mathematics: History and Technology* (EDT 265))

Samoly, K. (2012). The history of the abacus. *Ohio Journal of School Mathematics 65*, 58-66. (Written in *Mathematics: History and Technology* (EDT 265))

Fryer, J. & Detro, C. (2011). Mersenne primes. *Ohio Journal of School Mathematics 64*, 19-22. (Written in *Mathematics: History and Technology* (EDT 265))

Espejo, T. & Deters, A. (2011). Area or Perimeter: Using Representations for the Real World. *Ohio Journal of School Mathematics 63*, 5-10. (Written in *Diagnostic & Prescriptive Mathematics Instruction* (EDT 566))

Hartnet, D. & Koepfle, L. (2011). Exploring the Rhind papyrus. *Ohio Journal of School Mathematics 62*, 31-35. (Written in *Mathematics: History and Technology* (EDT 265))

Wade, A. (2010). Catenary 'best fit.' *Ohio Journal of School Mathematics 61*, 22-30. (Written in *Adolescent Mathematics I* (EDT 429A)).

Foster, D. (2008). Diving in head first: Finding the volume of Norris Lake. *Mathematics Teacher 102*(2), 90-97 (PWritten for *Mathematics Problem Solving with Technology* (MTH 408))

Ledbetter, M. (2007). More than ladders. *Mathematics Teaching 204*, 9-11. (Written for *Math Problem Solving with Technology* (MTH 408))

PROFESSIONAL MEMBERSHIPS

Member, *Free Software Foundation*	Fall 2013 – Present
Member, *Mathematics Association of America* (MAA)	Fall 2011 – Fall 2013
Member, *Appalachian Association of Mathematics Educators* (AAMTE)	Fall 2010 – Fall 2011
Member, *National Council of Teachers of Mathematics* (NCTM)	1995 – Present
Member, *Association of Mathematics Teacher Educators* (AMTE)	2006 – 2012
Member, *Ohio Council of Teachers of Mathematics* (OCTM)	2006 – Present

COURSES TAUGHT

Department of Teacher Education, Miami University

Introduction to Education (EDT 190)
Mathematics: History and Technology (EDT 265)
Middle Childhood Mathematics (EDT 429.M)
AYA Secondary Mathematics I (EDT 429.A/529.A)
AYA Secondary Mathematics II (EDT 430/530)
Mathematics with GeoGebra (EDT 499.9/599.9)
Diagnostic & Prescriptive Mathematics Instruction (EDT 566)
Teaching Measurement and Geometry (EDT 564)
Topics in Mathematics Education (EDT 660)

Department of Mathematics, Miami University

Mathematics for Elementary Teachers (MTH 115)
Mathematical Problem Solving with Technology (MTH 408/508)
Secondary Mathematics from an Advanced Perspective (MTH 409/509)
Geometry for Secondary School Teachers (MTH 606)

Department of Education & Allied Studies, John Carroll University

Middle Childhood Methods: Mathematics (ED 336)
Adolescent Education Special Methods (ED 337)

Department of Mathematics & Computer Science, John Carroll University

Calculus and Analytic Geometry IA (MT 133)
Mathematics and Creativity (MT 160)
Foundations of Early Childhood Mathematics (MT 171)
Number Analysis (MT 521)
Mathematics Teaching Technology (MT 525)
Responsive Mathematics Instruction (MT 526)

SELECTED SERVICE

Professional

Member, Advisory Board, *Council for Technology in Math Education*	2013 – present
Member, Board of Directors, *Ohio Mathematics Education Leadership Council*	2013 – present
University Vice-President, *Ohio Council of Teachers of Mathematics*	2012 – present
Co-director, *GeoGebra Institute of Ohio*	2009 – present
Member, Publications Committee, Ohio Council of Teachers of Mathematics	Sept 2008 - present
OCTM Memorial Scholarship proposal reviewer	2012 – present
External reviewer for promotion of Dr. Dana Dodson, Indiana University	Summer 2012
External reviewer for promotion of Dr. Laurie Dunlap, University of Akron	Fall 2011
External reviewer for promotion of Dr. Doug Lapp, Central Michigan University	Fall 2010
Texas Instruments Regional T-cubed Instructor	2009 – 2013

University

Member, Middle Childhood Program Committee, EDT	2006 – Present
Member, Mathematics Education Committee	2006 – Present
Member, Search Committee for Director of Howe Student Writing Center	2009 – 2010
Member, Harassment/Discrimination Review Panel	2009 – 2011
Member, Institutional Review Board (IRB)	2009 – 2012
Participant, Paperless Professor Pilot Study	2010
Member, Faculty Advisory Council, College of Education, Health, & Society (EHS)	2010 – 2011
Member, Promotion and Tenure Committee, EDT	2010–12, 2013–14
Member, Ad-hoc Governance Committee, EDT	2011
Coordinator, Content Integration Block, Middle Childhood Program, EDT	2011
Member, Local Advisory Council, Howe Writing Center	2011 – Present
Member, Search Committee for Director of Howe Student Writing Center	2012
Member, AIMS / EHS Search Committee	2012 – 2013
Member, Chair Search Committee, Department of Teacher Education (EDT)	2012 – 2013
University Graduation Marshal	2012 – 2013
Chair, Committee for the Enhancement of Learning, Teaching, and University Assessment	2012 – Present
Member, Graduate Committee, EDT	2012 – Present
Member, Adolescent Young Adult Committee, EDT	2012 – Present
Interim chair, Local Advisory Council, Howe Writing Center	Spring 2013
Advisor, Miami University Chess Club	2011-2013
Member, Planning Committee for the Institute for a Superior Liberal Arts Education	2013 – present
Faculty Advisor, Sketched Out Improvisational Comedy Troupe	2013 – present
Search Committee, CELTUA Director	2014
Search Committee, Director of Liberal Education	2014
Search Committee, Director of the University Honors Program	2014

Community

Delivered two-day GeoGebra Workshop at Purdue University	Fall 2013
Delivered technology workshop for Lakota East High School Mathematics Department	Winter 2013
Developed and taught 3rd grade area lesson (Ms. Judy Meicenheimer's students)	Dec. 2013
Teacher Mentor, Talawanda Entry Year Teacher Mentoring Program	2012 – 2013
Parent Volunteer, Kramer Elementary School	2011 – 2012
Teacher Mentor, Talawanda Entry Year Teacher Mentoring Program	2010 – 2011