

Beth Cory Assistant Professor of Mathematics Department of Mathematics and Statistics Sam Houston State University

Degrees Earned

Ph. D., Mathematics Education, University of Virginia, 2005 M.S., Applied Mathematics, Florida State University, 1999 B.S., Mathematics, Keyboard Performance minor, Liberty University, 1996

Peer-Review Publications and Artistic Performances/Exhibitions

Articles

Cory, B. & Garofalo, J. (January 2011). Using dynamic sketches to enhance preservice secondary mathematics teachers' understanding of limits of sequences. *Journal for Research in Mathematics Education*.

Malandro, M. & **Cory, B.** (Provisionally accepted.) Optimization on Discrete Domains Using Calculus. *The Mathematics Teacher*.

Cory, B. & Smith, K.W. (August 2011.) Delving into limit of sequences. *The Mathematics Teacher*.

Cory, B. (October 2010) Bouncing balls and graphing derivatives. *The Mathematics Teacher* 104(3), 206 – 213.

Cory, B. & Smith, K.W. (2010). Guiding students to an understanding of the formal definition of limit. In Brosnan, P., Erchick, D. B., & Flevares, L. (Eds.). In P. Brosnan, D. B. Erchick, & L. Flevares (Eds.), *Proceedings of the 32nd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 155). Columbus, Ohio: The Ohio State University.

Cory, B., Dawkins, P., Eddy, C., Epperson, J., Fuentes, S. Q., Gawlik, C., Jones, D., Jorgensen, T., Mallam, W., Ward, E., & Wheeler, A. (2010). Developing models for localized cross-institutional mathematics education research groups. In P. Brosnan, D. B. Erchick, & L. Flevares (Eds.), *Proceedings of the 32nd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1598-1604). Columbus, Ohio: The Ohio State University.

Cory, B. & Garofalo, J. (Spring 2010). Enhancing learning of limits of functions with dynamic sketches. *Journal of the National Consortium of Specialized Secondary Schools of Mathematics, Science, & Technology*, 15(2), 21-22. (Solicited and reviewed by editorial board.)

Swarthout, M., Jones, D., Klespis, M., & **Cory, B.** (Fall, 2009). Sneaking a peek at students' understanding of functions: Why not concept maps? *The Ohio Journal of School Mathematics*, (60), 24 -28.

Cory, B. (2009). Visualizing limits using dynamic sketches. *NCTM ON-Math Journal* (7), 1.

Cory, B. & Swarthout, M. (October 2008). Problems with pigeons. *The Texas Mathematics Teacher*, 10 – 13.

Garofalo, J. & **Cory, B.** (2007). Enhancing conceptual knowledge of linear programming with a Flash tool. *Journal of the National Consortium of Specialized Secondary Schools of Mathematics, Science, & Technology* 11(2), 24 -26. (Solicited and reviewed by editorial board.)

Cory, B. & Garofalo, J. (2004). Exploring calculus concepts with technology. *The Virginia Mathematics Teacher* 30 (1), 41 – 43.

Cory, B., Manizade, A., Sharp, B., Steckroth, J., & Garofalo, J. (2004). A new look at Geometer's Sketchpad: Teaching area across grade levels. *School Science and Mathematics*, 104, 232-235.

Funded External Grants

Consultant. ESC VI Texas Regional Collaborative for Excellence in Mathematics Teaching. Director: Susan Bohan. Awards: \$169,000 (2007-2008) and \$140,000 (2008-2009) from The University of Texas at Austin, the Texas Education Agency, and the U.S. Department of Education. (Fall 2007-Summer 2009)

Co-Director. Teaching Algebra the TEKS Way. Director: Dr. Max Coleman. Award:\$84,964 from the Texas Teacher Quality Grants Program. (Summer 2008 – Summer 2009).

Co-Director. Teaching Algebra the TEKS Way. Director: Dr. Max Coleman. Award:\$84,964 from the Texas Teacher Quality Grants Program. (Summer 2006 – Summer 2007).

Peer-Review Presentations/Posters

National

Cory, B. & Smith, K.W. (October, 2010). *Guiding Students to an Understanding of the Formal Definition of Limit*. Poster session presented at the annual meeting of the North American Chapter for the Psychology of Mathematics Education, Columbus, Ohio.

Cory, B., Dawkins, P. Eddy, C., Epperson, J., Gawlik, C., Jones, D.L., Jorgensen, T., Mallam, W., Quebec-Fuentes, S, Ward, E. & Wheeler, A. (October, 2010). *Developing Models for Localized Cross-Institutional Mathematics Education Research Groups*. Session presented at the annual meeting of the North American Chapter for the Psychology of Mathematics Education, Columbus, Ohio.

Cory, B.L. (March, 2010) *Conceptual Change Theories: An Overview*. Session presented at the annual meeting of the Research Council for Mathematics Learning, Conway, Arkansas.

Cory, B.L. (July, 2009). *Bouncing Balls and the Ground Factor*. Session presented to AP

Calculus and Physics teachers at the College Board's annual Advance Placement (AP) Conference, San Antonio, Texas.

Cory, B.L. (April, 2009). *Taking Limits to the Limit with Dynamic Sketches in the Calculus Classroom*. Session presented at the annual meeting of the National Council for Teachers of Mathematics, Washington, D.C.

Cory, B.L., Jones, D.L., Swarthout, M. (February, 2009). *Strengthening Probability Understanding with Cylindrical Dice*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Orlando, Florida.

Cory, B.L. (March, 2008). *Hitting the Bull's Eye: Connecting Geometry and Probability*. Session to be presented at the annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, Utah.

Cory, B.L. (January, 2008). *A Follow-Up Study: Can Dynamic Visualization of Limits Facilitate Enduring Conceptual Change?* Session presented at the annual meeting of the Association for Mathematics Teacher Educators, Tulsa, OK.

Cory, B.L. (March, 2007). *Taking Limits to the Limit: Understanding Limits of Sequences and Functions*. Session presented at the annual meeting of the National Council of Teachers of Mathematics, Atlanta, GA.

Cory, B.L. (March, 2007). *Conceptualizing Limits of Sequences*. Session presented at the annual meeting of the Research Council on Mathematics Learning, Cleveland, OH.

Cory, B.L. (January, 2006). *Using Dynamic Sketches to Enhance Preservice Teachers' Understanding of Limit*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Tampa, FL.

Timmerman, M.A. & Cory, B.L. (April, 2004). *Preparing Elementary School Teachers: Making Sense of Number Concepts*. Session presented at the annual meeting of the National Council of Teachers of Mathematics, Philadelphia, PA.

Sharp, B., Cory, B., & Sharp, D.L. (January, 2004). *Implementing Digital Cameras into Mathematics Education Courses and the K-12 Classroom*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, San Diego, CA.

Garofalo, J., Cory, B., Manizade, A., Sharp, B., & Timmerman, M. (January, 2003). *Mathematics and Handheld Devices*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Atlanta, GA.

Garofalo, J., Cory, B., Manizade, A., & Sharp, B. (January, 2003). *Using Flash-based Applications to Promote Rational Number Concepts*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Atlanta, GA.

Regional

Cory, B. (October, 2008). *Conceptualizing Limits of Functions*. Session to be presented at the annual regional meeting of the National Council of Teachers of Mathematics, Oklahoma City, Oklahoma.

Cory, B. (November, 2007). *Overcoming Misconception about Limits of Sequences and Functions*. Session presented at the annual regional meeting of the National Council of Teachers of Mathematics, Houston, TX.

Cory, B. (February, 2006). *Understanding the Formal Definitions of Limit*. Session presented at the annual meeting of the Southwest Educational Research Association, Austin, TX.

State

Cory, B. & Swarthout, M. (July, 2010). *Percentages, Pie Graphs, and Painted Cubes*. Sessions presented at the annual Conference for the Advancement of Mathematics Teaching (CAMT), San Antonio, Texas.

Swarthout, M., & Cory, B. (July, 2009). *The Pigeon Problems: Preparing Future Teachers through Problem Writing*. Session presented at the annual Conference for the Advancement of Mathematics Teaching (CAMT), Houston, Texas.

Cory, B. (July, 2006). *Bouncing Balls and Graphing Derivatives*. Session presented at the Conference for the Advancement of Mathematics Teaching, Houston, TX.

Cory, B. (March, 2005). *Exploring Limits and Derivatives Using Geometer's Sketchpad*. Session presented at the annual meeting of the Virginia Council of Teachers of Mathematics, Williamsburg, VA.

Cory, B. (March, 2003). *Teaching Calculus Using Various Technologies*. Session presented at the Virginia Council of Teachers of Mathematics, Richmond, VA.

Manizade, A. & Cory, B. (March, 2002). *Fathom*. Session presented at the Virginia Council of Teachers of Mathematics, Richmond, VA.

Local

Cory, B. *A Summary of Conceptual Change Theories*. (October, 2009) Session presented during the MERGe group seminar, a weekly seminar in mathematics education research with other mathematics educators at Sam Houston State University.

Cory, B. (September, 2008) *Understanding Limits*. Invited talk. Texas A & M University, Bryan-College Station, TX.

Cory, B. (February, 2007). *Using Motion Detectors to Explore Derivatives*. Session presented at the Conference on the Teaching of Mathematics 6 – 12, Huntsville, TX.

Cory, B. (February, 2006). *Taking Limits to the Limit: Deepening Understanding of Limits*

of Sequences and Limits of Functions. Session presented at the Conference on the Teaching of Mathematics 6 – 12, Huntsville, TX.

Work or Professional Experiences

Cory, B. (October, 2010). *The PRIME Leadership Framework: Equity Leadership*. A one-hour workshop as part of the Texas Regional Collaborative for Excellence in Mathematics Teaching for Region VI.

Cory, B. (September, 2008). *Understanding Limits*. Invited talk. Texas A & M University, Bryan-College Station, TX.

Cory, B. (October, 2009). *Research on NCTM Principles and Standards: Making Mathematics Reasonable in the Classroom*. A one-hour workshop as part of the Texas Regional Collaborative for Excellence in Mathematics Teaching for Region VI.

Swarthout, M. & Cory, B. (2008). *Examining the TEKS: The Measurement Strand*. A workshop for teachers at Hardy Elementary School in Willis, TX as a part of the ESC VI Texas Regional Collaborative for Excellence in Mathematics Teaching.

Swarthout, M. & Cory, B. (2006). *Teaching Measurement Concepts in Elementary Classrooms*. (2006). A workshop for teachers at Sam Houston Elementary.

Garofalo, J., Cory, B. & Sharp, B. (2002-2003). *Integrating Technology in Middle and Secondary School Mathematics*. A continuing professional development project with teachers as part of the XL Education Initiative, Hamilton Bermuda.

Timmerman, M.A. & Cory, B. (2003). *Using the Internet in the Mathematics Classroom*. A workshop for prospective elementary teachers at the Roanoke Center of Higher Education.

A part of a team which developed materials to help pre-service and in-service teachers effectively integrate technology into the elementary, middle, and secondary mathematics curriculum. The materials utilize technology tools such as *The Geometer's Sketchpad*, *Microsoft Excel*, *Fathom*, *ExploreMath.com*, Global Positioning Systems, interactive websites, graphing calculators and probes, as well as interactive *Flash* applets developed by the Center for Technology and Teacher Education at the University of Virginia. Materials have been disseminated for use in mathematics methods courses at other colleges and universities. (2001 – 2005)

Acted as a consultant for Explorelearning, a company based in Charlottesville, VA, as they designed applets illustrating mathematical concepts. (2005 – 2006).

Mathematics Instructor for the Summer Enrichment Program in Charlottesville, VA during Summers 2002, 2004. Created and taught two-week mathematics courses to gifted middle school students. *Graphing in the Real World* explored real world applications of functions and their graphs using TI-83+ graphing calculators and various digital probes. *To Infinity and Beyond* investigated a variety of mathematics topics involving the concept of infinity.

Mathematics Instructor for the Venable Elementary After-School Computer Program in Charlottesville, VA during Spring, 2004.

Honors and Awards

Dwight B. Goodner Fellowship Award for Excellence in Teaching, Florida State University, 1998 Kappa Mu Epsilon, National Mathematics Honor Society, 1996 Alpha Lambda Delta, Honor Society, 1992 -1996 Who's Who Among Students in American Universities and Colleges National Dean's List, 1992 – 1996 First Place, Colonna Memorial Music Scholarship for Piano Performance, 1992