

Name: Mary B. Swarthout  
Title: Associate Professor of Mathematics  
Department: Mathematics and Statistics  
College: Sciences

### Degrees Earned

Ph.D. in Mathematics Education                      March, 2002  
The Ohio State University in Columbus, Ohio

M.A. in Mathematics                                      August, 1984  
Miami University in Oxford, Ohio

B.A. in Mathematics                                      May, 1982  
Berea College in Berea, Kentucky

### Professional Licensure and Certifications

N/A

### Peer-Review Publications and Artistic Performances/Exhibitions, Articles, Books, Chapters

Shirley M. Matteson, Mary B. Swarthout & Linda Reichwein Zientek (2011). Student Motivation: Perspectives from Mathematics Teachers, *Action in Teacher Education*, 33(3), 283-297.

Swarthout, M., Jones, D., Klespis, M. and Cory, B. (2009). Sneaking A Peek at Students' Understanding of Functions: Why Not Concept Maps? *Ohio Journal of School Mathematics*, 60, 24 – 27.

Sandall, B., & Swarthout, M. B. (2005). *Helping Students Understand Algebra I*. Hannibal, MO: Mark Twain Publishers.

Sandall, B., & Swarthout, M. B. (2005). *Helping Students Understand PreAlgebra*. Hannibal, MO: Mark Twain Publishers.

Swarthout, M. (2003). Responses to the Average Days of Spring Problem. *Teaching Children Mathematics*, 9(7), 404-406.

Swarthout, M. (2003). Perfect-Square Geometry Partners. *Teaching Children Mathematics*, 9(5), 262-263.

Swarthout, M. (2002). Fractionberry Pie. *Teaching Children Mathematics*, 9(2), 120-121.

Swarthout, M. (2002). Responses to the Turning the Table Problem. *Teaching Children Mathematics*, 9(1), 59-63.

Swarthout, M. (2002). Shape Search. *Teaching Children Mathematics*, 9(8), 455-456.

Swarthout, M. (2002). Average Days of Spring. *Teaching Children Mathematics*, 8(7), 412-413.

Swarthout, M. (2001). Great garlands. *Teaching Children Mathematics*, 8(4), 217-218.

Swarthout, M., Mann, R., & Hartweg, K. (2001). Turning the tables. *Teaching Children Mathematics*, 8(1), 42-43.

Served as Co-Editor for the Problem Solvers Department of the National Council of Teachers of Mathematics journal, *Teaching Children Mathematics*, 2001 – 2003

### **Proceedings, Artistic Performances, Artistic Exhibitions**

A Summary of PRIME Leadership Framework. (2009). In D. Jones (Ed.), *Proceedings: Second conference on mathematics education research in Texas*. Huntsville, TX: Sam Houston State University.

### **Research Monographs and Technical Reports**

Program Report of the Preparation of Secondary Mathematic Teachers. National Council For Accreditation of Teacher Education [NCATE]. September, 2011. Response report to results of NCATE review of 2008 report.

Olson, J., Olson, M., Hartweg, K., & Swarthout, M. B. (2007). Meeting Special Needs in Mathematics Through Stations. In E. F. Bazik & C. Greenes (Eds.), *Teaching Mathematics to Children with Special Needs* (2007 National Council of Supervisors of Mathematics Monograph).

### **Funded External Grants**

*Mathematics for English Language Learners- Year 2*. An grant proposal by Jasper and Swarthout funded by the Texas Education Agency through the Texas State University System for \$296,000. (January, 2005 – February 2007).

*Improving Mathematics Instruction for English Language Learners Through Learning Stations*. An incubator grant proposal funded by the Texas Education Agency through the Texas State University System for \$50,000. (January, 2005 – August, 2005).

*Improving the Teaching of Mathematics through Lesson Study*. A grant proposal funded by the Illinois State Board of Education by J. Olson, Swarthout, Kalantari, Mann, Olsen, M. Olson, and Hartweg for \$30,000. (May, 2002 – August, 2002).

*A Collaborative Approach to Expanding Preservice Elementary Teachers Mathematical Experiences Through Course Restructuring*. A grant proposal funded by the Texas Statewide Systemic Initiative by Swarthout and Klespis for \$15,000. (Summer, 1996)

*Implementing and Extending Course Restructuring For Preservice Elementary Teachers: A Collaborative Approach*. A grant proposal funded by the Texas Statewide Systemic Initiative by Swarthout and Klespis for \$20,000s. (September, 1996 - September, 1997)

*Mathematics Through Problem Solving: Exploring Arithmetic Operations in Grades 3-5.* Project director of a \$65,000 grant funded by Texas Higher Education Coordinating Board, Eisenhower Mathematics and Science Program for a collaborative 18-month inservice program (Sam Houston State University and Region VI Educational Service Center). (September, 1994 - November, 1995)

### **Peer-Review Presentations/Posters**

*Popsicle Sticks, Ping Pong Balls, and Painted Pennies* (July, 2011) presentation with D. Jones at the annual Conference for the Advancement of Mathematics Teaching held in Grapevine, TX.

*Tasks and Instruction Designed for Place Value Understanding* (March, 2011) presentation at the annual conference of the Research Council on Mathematics Learning held in Cincinnati OH.

*Patterns, Pies, and Painted Cubes.* (July, 2010) presentation with B. Cory at the annual Conference for the Advancement of Mathematics Teaching held in San Antonio, TX.

*PRIME-ing Mathematics Teacher Mentors (MTMs) for Leadership* (April, 2010) presentation with S. Bohan at the annual conference of the National Council of Supervisors of Mathematics in San Diego, CA.

*Strengthening Probability Understanding with Cylindrical Dice* (January, 2009) presentation with D. Jones and B. Cory at the annual conference of the Association of Mathematics Teacher Educators held in Orlando, FL.

*Evidence of Understanding: Assessments That Support Instructional Decision-Making for Improved Student Learning* (April, 2008) an extended presentation with S. Bohan at the annual conference of the National Council of Supervisors of Mathematics held in Salt Lake City, UT

*Using Concept Maps to Assess Prospective Middle Grades Mathematics Teachers' Understanding of Function* (January, 2008) presentation with D. Jones and M. Klespis at the annual conference of the Association of Mathematics Teacher Educators held in Tulsa, OK.

*Learning Stations and ELLs: Mathematical Success in the classroom* (November, 2007) presentation with S. Bohan at the Regional conference of the National Council of Teachers of Mathematics held in Houston, TX.

*Texas MELL: A Model to Enhance Mathematics Instruction for English Language Learners* (March, 2007) an extended presentation at the annual conference of the National Council of Supervisors of Mathematics held in Atlanta, GA.

*Mathematics Vocabulary: An Intentional Approach for ALL Language Learners* (February, 2007) presentation at the 34th annual conference of the Research Council on Mathematics Learning held in Cleveland, OH.

### **Work or Professional Experiences**

2004 — current	<b>Assistant/Associate Professor</b> at Sam Houston State University
2004 — 2005	<b>Visiting Assistant Professor</b> at Sam Houston State University
2000 — 2005	<b>Assistant Professor</b> at Western Illinois University
1998 — 2000	<b>Graduate Teaching Assistant</b> at The Ohio State University
1992 — 1998	<b>Assistant Professor</b> at Sam Houston State University
1989 — 1992	<b>Graduate Teaching Assistant</b> at The Ohio State University
1985 — 1989	<b>Lecturer in Mathematics</b> at Baylor University
1984 — 1985	<b>Visiting Instructor</b> at Wabash College

### **Honors and Awards**

### **Other Competencies**