June 2014

ERIC J. KNUTH

Professor

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University of Wisconsin
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EDUCATION

Ph.D. Instruction & Curriculum
Specialization in Mathematics Education
University of Colorado-Boulder

Certificate in Cognitive Science
Institute of Cognitive Science
University of Colorado-Boulder

M.A. Mathematics
San Diego State University

Secondary Mathematics & Physics Teaching Credential
San Diego State University

B.S. Electrical Engineering
University of Illinois-Champaign/Urbana

PROFESSIONAL EXPERIENCE

Professor
University of Wisconsin-Madison, Departments of Curriculum & Instruction and Educational Psychology (August, 2009 - present)

Associate Professor
University of Wisconsin-Madison, Departments of Curriculum & Instruction and Educational Psychology (August, 2005 - August, 2009)

Assistant Professor
University of Wisconsin-Madison, Departments of Curriculum & Instruction and Educational Psychology (August, 1999 – August, 2005)

Mathematics Teacher
Granite Hills High School, El Cajon, CA

Electrical Engineer
Naval Ocean Systems Center, San Diego, CA

RESEARCH SUPPORT

Co-Principal Investigator, *The Impact of a Teacher-Led Early Algebra Intervention on Children's Algebra-Readiness for Middle School*, funded by the Institute of Education Sciences ($3,500,000). 2014-2018

Co-Principal Investigator, *Postdoctoral Fellowship Program in Mathematical Thinking, Learning and Instruction*, funded by the Institute of Education Sciences ($705,000). 2013-2016

Principal Investigator, *The Role and Use of Examples in Learning to Prove*, funded by the National Science Foundation ($995,997). 2012-2015

Principal Investigator, *The Impact of Early Algebra on Students' Algebra-Readiness*, funded by the National Science Foundation ($939,935). 2012-2015

Principal Investigator, *Mathematics Courses for Middle School Teachers: Examining the Influence on Teachers' Knowledge and Practice*, funded by the University of Wisconsin Graduate School Research Committee ($26,244). 2011-2012

Co-Principal Investigator, *Developing Algebra-Ready Students for Middle School: Exploring the Impact of Early Algebra*, funded by the National Science Foundation ($1,578,658). 2009-2012

Co-Principal Investigator, *Postdoctoral Fellowship Program in Mathematical Thinking, Learning and Instruction*, funded by the Institute of Education Sciences ($655,000). 2010-2013

Co-Principal Investigator, *How do Instructional Gestures Support Students' Mathematics Learning?* funded by the National Science Foundation ($1,000,000). 2009-2012

Principal Investigator, *Understanding and Cultivating the Connections between Students' Natural Ways of Reasoning and Mathematical Ways of Reasoning*, funded by the National Science Foundation ($741,938). 2008-2012

Co-Principal Investigator, *Does Visual Scaffolding Facilitate Students' Mathematics Learning? Evidence from Early Algebra*, funded by the Institute of Education Sciences ($683,753). 2006-2009

Principal Investigator, *Understanding and Cultivating the Connections between Students' Natural Ways of Reasoning and Mathematical Ways of Reasoning*, funded by the University of Wisconsin Graduate School Research Committee ($15,000). 2006-2007

Director, *Mentoring Mathematics Teachers*, professional development program funded by the Calculus Consortium for Higher Education ($5,340). 2005-2006

Principal Investigator, *Understanding and Cultivating the Development of Students' Competencies in Justifying and Proving*, funded by the National Science Foundation Career Program ($701,649). 2001-2006

Co-Principal Investigator, *Understanding and Cultivating the Transition from Arithmetic to Algebraic Reasoning*, funded by an Interagency Educational Research Initiative (NSF, NICHD, DOE) ($5,798,281). 2001-2006

Director, *Teaching Mathematics with Technology Project*, professional development program funded by the University of Wisconsin System ($98,804). 2000-2003

Principal Investigator, *Roles and Relationships in the Mentoring of Beginning Teachers*, funded by the University of Wisconsin Graduate School Research Committee ($13,000). 1999-2000

HONORS & AWARDS

Chair of the AERA Special Interest Group for Research in Mathematics Education, 2011 - 2013

Doris Schlesinger Award for Excellence in Mentoring finalist, 2006 & 2009

National Council of Teachers of Mathematics Research Committee, 2008 - 2011

Executive Board member of the AERA Special Interest Group in Research in Mathematics Education, 2004 - 2006

National Science Foundation Early Career Award, 2001

PUBLICATIONS

Journal Articles

Blanton, M., Stephens, A., **Knuth, E.**, Gardiner, A., Isler, I., & Kim, J.S. (Accepted). The development of children's algebraic thinking: The impact of a comprehensive early algebra intervention. *Journal for Research in Mathematics Education*.

Alibali, M., Nathan, M., Church, R. B., Wolfgram, M., Kim, S., & **Knuth, E.** (In press). Teachers' gestures and speech in mathematics lessons: Forging common ground by resolving trouble spots. *ZDM - International Reviews on Mathematical Education*.

Alibali, M., Young, A., Crooks, N., Yeo, A., Wolfgram, M., Ledesma, M., Nathan, M., Church, R. B., & **Knuth, E.** (In press). Students learn more when their teacher has learned to gesture effectively. *Contemporary Educational Psychology*.

Isler, I., Marum, T., Stephens, A., Blanton, M., **Knuth, E.**, & Gardiner, A. (In press). Engaging students in functional thinking. *Teaching Children Mathematics*.

Lockwood, E., & **Knuth, E.** (In press). Postdoctoral positions in mathematics education: Why so little interest? *Journal for Research in Mathematics Education*.

Stephens, A., Blanton, M., **Knuth, E.**, Isler, I., & Gardiner, A. (In press). Just say "YES" to early algebra. *Teaching Children Mathematics*.

Alibali, M., Nathan, M., Wolfgram, M., Church, R. B., Jacobs, S., Martinez, C., & **Knuth, E.** (2014). How teachers link ideas in mathematics instruction using speech and gesture: A corpus analysis. *Cognition & Instruction*, *32*(1), 65-100.

Ko, Y. Y., & **Knuth, E.** (2013). Validating proofs and counterexamples across content domains: Practices of importance for mathematics majors. *Journal of Mathematical Behavior*, 32(1), 20-35.

Stephens, A., **Knuth, E.**, Blanton, M., Isler, I., Murphy Gardiner, A., & Marum, T. (2013). Equation structure and the meaning of the equal sign: The impact of task selection in

eliciting elementary students' understandings. *Journal of Mathematical Behavior*, *32*(2), 173-182.

Hattikudur, S., Prather, R., Asquith, P., Alibali, M., **Knuth, E.**, & Nathan, M. (2012). Constructing graphical representations: Middle schoolers' intuitions and developing knowledge about slope and *y*-intercept. *School Science and Mathematics*, *112*(4), 230-240.

Rassmussen, C., Heck, D., Tarr, J., **Knuth, E.**, White, D., Lambdin, D., Baltzley, P., & Quander, J. (2011). Trends and issues in high school mathematics: Research insights and needs. *Journal for Research in Mathematics Education*, *42*(3), 204-219.

Boerst, T., Confrey, J., Heck, D, **Knuth, E.**, Lambdin, D., White, D., Baltzley, P., & Quander, J. (2010). Strengthening research by designing for coherence and connections to practice. *Journal for Research in Mathematics Education*, *41*(3), 216-235.

McNeil, N., Weinberg, A., Stephens, A., Hattikudur, S., Asquith, P., **Knuth, E.**, & Alibali, M. (2010). A is for apple: Mnemonic symbols hinder students' interpretation of algebraic expressions. *Journal of Educational Psychology*, *102*(3), 625-634.

Knuth, E., Choppin, J., & Bieda, K. (2009). Proof in middle school: Moving beyond examples. *Mathematics Teaching in the Middle School*, *15*(4), 206-211.

Ko, Y., & **Knuth, E.** (2009). Undergraduate mathematics majors' writing performance producing proofs and counterexamples in continuous functions. *Journal of Mathematical Behavior*, *28*(1), 68-77.

Battista, M., Boester, T., Confrey, J., **Knuth, E.**, Smith, M., Sutton, J., White, D., & Quander, J. (2009). Research in mathematics education: Multiple methods for multiple uses. *Journal for Research in Mathematics Education*, *40*(3), 216-240.

Knuth, E., Alibali, M., Hattikudur, S., McNeil, N., & Stephens, A. (2008). The equal sign: A topic of importance for middle school mathematics. *Mathematics Teaching in the Middle School*, *13*(9), 514-519.

Alibali, M., **Knuth, E.**, Hattikudur, S., McNeil, N., & Stephens, A. (2007). A longitudinal examination of middle school students' understandings of the equal sign and performance solving equivalent equations. *Mathematical Thinking and Learning*, *9*(3), 221-247.

Asquith, P.**,** Stephens, A., **Knuth, E.**, & Alibali, M. (2007). Middle school teachers' understanding of core algebraic concepts: Equal sign and variable. *Mathematical Thinking and Learning*, *9*(3), 249-272.

Hyde, J., Else-Quest, N., Alibali, M., **Knuth, E.**, & Romberg, T. (2006). Mathematics in the home: Homework practices and mother-child interactions doing mathematics. *Journal of Mathematical Behavior*, *25*(2), 136-152.

Knuth, E., Stephens, A., McNeil, N., & Alibali, M. (2006). Does understanding the equal sign matter? Evidence from solving equations. *Journal for Research in Mathematics Education*, *37*(4), 297-312.

McNeil, N., Grandau, L, **Knuth, E.**, Alibali, M., Stephens, A., Hattikudur, S., & Krill, D. (2006). Middle-school students' understanding of the equal sign: The books they read can't help. *Cognition & Instruction*, *24*(3), 367-385.

Cai, J. & **Knuth, E.** (2005). The development of students' algebraic thinking in earlier grades: Multiple perspectives. *Zentralblatt für Didaktik der Mathematik* (International Reviews on Mathematical Education), *37*(1), 1-4.

Knuth, E., Alibali, M. W., Weinberg, A., McNeil, N., & Stephens, A. (2005). Middle school students' understanding of core algebraic concepts: Equality & variable. *Zentralblatt für Didaktik der Mathematik* (International Reviews on Mathematical Education), *37*(1), 68-76.

Peressini, D., Borko, H., Romagnano, L., **Knuth, E.**, & Willis-Yorker, C. (2004). A conceptual framework for learning to teach secondary mathematics: A situative perspective. *Educational Studies in Mathematics, 56*(1), 67-96.

Knuth, E. & Peterson, B. (2003). Fostering mathematical curiosity: Highlighting the mathematics. *Mathematics Teacher*, *96*(8), 574-579.

Nathan, M. & **Knuth, E.** (2003). A study of whole classroom mathematical discourse and teacher change. *Cognition & Instruction*, *21*(2), 175-207.

Knuth, E. (2002). Secondary school mathematics teachers' conceptions of proof. *Journal for Research in Mathematics Education*, *33*(5), 379-405.

Knuth, E. (2002). Teachers' conceptions of proof in the context of secondary school mathematics. *Journal of Mathematics Teacher Education*, *5*(1), 61-88.

Knuth, E. (2002). Proof as a tool for learning mathematics. *Mathematics Teacher*, *95*(7), 486-490.

Knuth, E. (2002). Fostering mathematical curiosity. *Mathematics Teacher*, *95*(2), 126-130.

Knuth, E. & Peressini, D. (Summer/Fall, 2001). A theoretical framework for examining discourse in mathematics classrooms. *Focus on Learning Problems in Mathematics*, *23*(2/3), 5-22.

Knuth, E. & Peressini, D. (2001). Unpacking the nature of discourse in mathematics classrooms. *Mathematics Teaching in the Middle School*, *6*(5), 320-325.

Borko, H., Peressini, D., Romagnano, L., **Knuth, E**., Willis-Yorker, C., Wooley, C., Hovermill, J., & Masarik, K. (2000). Teacher education does matter: A situative view of learning to teach secondary mathematics. *Educational Psychologist*, *35*(3), 193-206.

Knuth, E. (2000). Student understanding of the Cartesian Connection: An exploratory study. *Journal for Research in Mathematics Education*, *31*(4), 500-508.

Knuth, E. (2000). Student understanding of connections between equations and graphs. *Mathematics Teacher*, *93*(1), 48-53.

Knuth, E. (May/June, 2000). The rebirth of proof in school mathematics in the United States? *International Newsletter on the Teaching and Learning of Mathematical Proof* [On-line]. Available: http://www-cabri.imag.fr/Preuve/.

Peressini, D. & **Knuth, E.** (2000). The role of tasks in developing communities of mathematical inquiry. *Teaching Children Mathematics*, *6*(6), 391-397.

Knuth, E. & Elliott, R. (1998). Characterizing the nature of students' understandings of mathematical proof. *Mathematics Teacher, 91*(8), 714-717.

Peressini, D. & **Knuth, E.** (1998). Why are you talking when you could be listening? The role of discourse in the professional development of mathematics teachers. *Teaching and Teacher Education, 14*(1), 107-125.

Books & Book Chapters

Knuth, E., & Stephens, A. (Accepted). Understanding the equal sign really does matter! In E. Silver & P. Kenney (Eds.), *More lessons learned from research* (Vol. 2). Reston, VA: National Council of Teachers of Mathematics.

Knuth, E. (In press). Teachers and proof in school mathematics. In E. Silver & P. Kenney (Eds.), *More lessons learned from research* (Vol. 1). Reston, VA: National Council of Teachers of Mathematics.

Ellis, A.B., Bieda, K., & **Knuth, E.** (2012). *Essential understandings project: Reasoning and Proving in High School Mathematics (Gr. 9-12)*. Reston, VA: National Council of Teachers of Mathematics.

Knuth, E., Kalish, C., Ellis, A., Williams, C., & Felton, M. (2011). Adolescent reasoning in mathematical and non-mathematical domains: Exploring the paradox. In V. Reyna, S. Chapman, M. Dougherty, & J. Confrey (Eds.), *The adolescent brain: Learning, reasoning, and decision making* (pp. 183-209). Washington, DC: American Psychological Association.

Cai, J., & **Knuth, E.** (2011). *Early algebraization: A global dialogue from multiple perspectives*. Heidelberg, Germany: Springer.

Knuth, E., Alibali, M., Weinberg, A., McNeil, N., & Stephens, A. (2011). Middle school students' understanding of core algebraic concepts: Equality & variable. In J. Cai and E. Knuth (Eds.), *Early algebraization: A global dialogue from multiple perspectives* (pp. 259-276). Heidelberg, Germany: Springer.

Knuth, E., Choppin, J., & Bieda, K. (2009). Middle school students' production of mathematical justifications. In D. Stylianou, M. Blanton, & E. Knuth (Eds.), *Teaching and learning proof across the grades: A K-16 perspective* (pp. 153-170). New York, NY: Routledge.

Stylianou, D., Blanton, M., & **Knuth, E.** (2009). *Teaching and learning proof across the grades: A K-16 perspective*. New York, NY: Routledge.

Knuth, E., & Elliott, R. (2008). Characterizing students' understanding of mathematical proof. In P. Elliott & C. Garnett (Eds.), *Getting into the mathematical conversation* (pp. 78-84). Reston, VA: NCTM.

Knuth, E. & Hartmann, C. (2005). Using technology to foster students' mathematical understandings and intuitions. In W. Masalski (Ed.), *2005 Yearbook, Technology-Supported Mathematics Learning Environments* (pp. 151-164). Reston, VA: National Council of Teachers of Mathematics.

Peressini, D. & **Knuth, E.** (2005). The role of technology in representing mathematical problem situations and concepts. In W. Masalski (Ed.), *2005 Yearbook, Technology-Supported*

Mathematics Learning Environments (pp. 277-290). Reston, VA: National Council of Teachers of Mathematics.

Peressini, D. & **Knuth, E.** (1998). The importance of algorithms in performance based assessments. In M. Kenney (Ed.), *1998 Yearbook, Teaching and Learning Algorithms in School Mathematics* (pp. 56-68). Reston, VA: National Council of Teachers of Mathematics.

Reports

Arbaugh, F., Herbel-Eisenmann, B., Ramirez, N., **Knuth, E.**, Kranendonk, H., & Quander, J. (2010). Linking research and practice: The NCTM Research Agenda Report. Reston, VA: NCTM.

Conference Proceedings

Lockwood, E., Ellis, A., & **Knuth, E.** (February, 2013). Mathematicians' example-related activity when proving conjectures. In S. Brown, G. Karakok, K. Hah Roh, & M. Oehrtman (Eds.), *Proceedings of the Sixteenth Annual Conference on Research in Undergraduate Mathematics Education*, 16-30. [Received Honorable Mention Award for Best Conference Paper.]

Ellis, A., Lockwood, E., Williams, C., Dogan, M., & **Knuth, E.** (November, 2012). Middle school students' example use in conjecture exploration and justification. In L. Van Zoest, J.J. Lo, & J. Kratky (Eds.), *Proceedings of the Thirty-fourth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, 135-142.

Lockwood, E., Ellis, A., Dogan, M., Williams, C., & **Knuth, E.** (November, 2012). A framework for mathematicians' example-related activity when exploring and proving mathematical conjectures. In L. Van Zoest, J.J. Lo, & J. Kratky (Eds.), *Proceedings of the Thirty-fourth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, 151-158.

Williams, C., Akinsiku, O., Walkington, C., Cooper, J., Ellis, A., Kalish, C., & **Knuth, E.** (October, 2011). Understanding students' similarity and typicality judgments in and out of mathematics. *Proceedings of the Thirty-third Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, pp. 1180–1189.

Cooper, J., Walkington, C., Williams, C., Akinsiku, O., Kalish, C., Ellis, A., & **Knuth, E.** (July, 2011). Adolescent reasoning in mathematics: Exploring middle school students' strategic approaches in empirical justifications. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the Thirty-third Annual Conference of the Cognitive Science Society*, 2188–2193.

Ko, Y., **Knuth, E.**, & Shy, H. (July, 2008). *Taiwanese undergraduates' performance constructing proofs and generating counterexamples in differentiation*. Proceedings of the Eleventh International Congress on Mathematics Education.

Ko, Y., **Knuth, E.**, & Shy, H. (February, 2008). *Taiwanese undergraduates' proof performance in the domain of continuous functions*. Proceedings of the Conference on Research in Undergraduate Mathematics Education.

Bieda, K., Holden, C., & **Knuth, E.** (October, 2006). Does proof prove? Students' emerging beliefs about generality and proof in middle school. *Proceedings of the Twenty-eighth*

Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, 395-402.

Knuth, E. & Sutherland, J. (October, 2004). Student understanding of generality. *Proceedings of the Twenty-sixth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, 561-567.

McNeil, N., Grandau, L., Stephens, A., Krill, D., Alibali, M. W., & **Knuth, E.** (October, 2004). Middle-school students' experience with the equal sign: *Saxon Math* does not equal *Connected Mathematics*. *Proceedings of the Twenty-sixth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, 271-275.

Brendefur, J. & **Knuth, E.** (July, 2004). Elementary students' use of conjectures to deepen understanding. *Proceedings of the Twenty-eighth Annual Meeting of the International Group for the Psychology of Mathematics Education,* 292.

Knuth, E., Choppin, J., Slaughter, M., & Sutherland, J. (October, 2002). Mapping the conceptual terrain of middle school students' competencies in justifying and proving. *Proceedings of the Twenty-fourth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education,* 1693-1700.

Knuth, E. & Peressini, D. (July, 2001). A theoretical framework for examining discourse in mathematics classrooms. *Proceedings of the Twenty-fifth Annual Meeting of the International Group for the Psychology of Mathematics Education,* 327.

Peressini, D. & **Knuth, E.** (November, 1998). The dualistic nature of school mathematics discourse. *Proceedings of the Twentieth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education,* 227-233.

Elliott, R. & **Knuth, E.** (October, 1997). Teacher change: Developing an understanding of meaningful mathematics discourse. *Proceedings of the Nineteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education,* 285-290.

Knuth, E. & Elliott, R. (October, 1997). Preservice secondary mathematics teachers' interpretations of mathematical proof. *Proceedings of the Nineteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education,* 545-552.

Peressini, D. & **Knuth, E.** (October, 1997). Those who talk, those who listen, ever the twain shall meet: Further examining the role of discourse in the professional development of mathematics teachers. *Proceedings of the Nineteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education,* 306.

Knuth, E. (October, 1996). Discourse and development of conceptual understanding in the elementary mathematics classroom. *Proceedings of the Eighteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education,* 157.

Knuth, E. (October, 1995). Student understanding of the equivalence between algebraic and graphical representations of a function. *Proceedings of the Seventeenth Annual Meeting of*

the North American Chapter of the International Group for the Psychology of Mathematics Education, 304.

SCHOLARLY PRESENTATIONS (last 5 years)

Invited/Plenary Talks:

February, 2014 — Leadership Seminar on Mathematics Professional Development
Teacher Development Group Annual Conference, Portland, OR
Paving the Road to Proof: Mathematical Explorations, Conjecturing, & Justifying

October, 2013 — Frontier Lecture Series
Texas A&M University
The Impact of Early Algebra on Students' Algebra Readiness

October, 2013 — Northwest Mathematics Conference
Seattle, WA
Laying a Foundation for Proving: Fostering Mathematical Curiosity, Sense Making, and Reasoning.

February, 2013 — Leadership Seminar on Mathematics Professional Development
Teacher Development Group Annual Conference, Portland, OR
Developing Teachers' Proving Eyes and Ears

July, 2012 — National Council of Teachers of Mathematics
Reasoning and Sensemaking Summer Institute, Los Angeles, CA
Fostering the Development of Students' Learning to Prove

October, 2010 — National Council of Teachers of Mathematics
Regional Conference, Denver, CO
Engaging Middle School Students in Proving

April, 2009 — Michigan State University
Middle School Students' Production of Mathematical Justifications

September, 2008 — Adolescent Reasoning Conference
National Science Foundation
The Development of Adolescents' Mathematical Reasoning

February, 2008 — Portland State University, Mathematics Department
Middle School Students' Production of Mathematical Justifications

Research Presentations:

April, 2011 — NCTM Annual Research Presession, Indianapolis, IN
The Role of Similarity and Typicality in Students' Inferential Reasoning

April, 2011 — NCTM Annual Research Presession, Indianapolis, IN
Investigating Early Algebra Learning Progressions for Grades 3-8

April, 2010 — NCTM Annual Research Presession, San Diego, CA

The (In)stability and Transition Points of Learning Trajectories

April, 2008 NCTM Annual Research Presession, Salt Lake City, UT
Research Paradigms on Teaching and Learning Proof Across the Grades

Discussant:

April, 2009 NCTM Annual Research Presession, Washington, DC
Proof in Secondary Mathematics Classrooms

COURSES TAUGHT

Teacher Certification Program (Undergraduate):
-*Methods in Secondary Mathematics Education* (C&I 393)
-*Uses of Technologies in Secondary School Mathematics* (C&I 395)

Teacher Professional Development (Graduate):
-*Action Research in School* (C&I 626)
-*Teaching Mathematics with Technology* (C&I 675)

Mathematics Education (Graduate):
-*The Study of Teaching* (C&I/EdPsych 708)
-*Goals, Content, and Programs in Mathematics Education* (C&I 810)
-*The Instruction of Mathematics* (C&I 811)
-*Curricular Issues in Mathematics Education* (C&I 812)
-*Seminar in Research on Mathematics Education* (C&I 942)

PROFESSIONAL SERVICE (last 5 years)

Activities:

2011 - 2013 Chair of the AERA Special Interest Group: Research in Mathematics Education

2011 - present Advisory Board member, *Predictors and Consequences of Early Understanding of Mathematical Equivalence*, project funded by the National Science Foundation.

2010 - present Advisory Board member, *Using Routines as an Instructional Tool for Developing Students' Conceptions of Proof*, project funded by the National Science Foundation.

2008 - 2011 Advisory Board member, *Geometry Assessments for Secondary Teachers*, project funded by the National Science Foundation.

2008 - 2010 Research Agenda writing group, National Council of Teachers of Mathematics

2008 - 2011 Research Committee, National Council of Teachers of Mathematics

2008 - 2011 Book Editor, *Journal for Research in Mathematics Education*

2007 - 2010 Advisory Board member, *Cases of Reasoning and Proving in Secondary Mathematics*, project funded by the National Science Foundation.

2007 - 2012 Advisory Board member, *Understanding and Teaching the Processes Used to Comprehend Mathematical Arguments and Proofs*, project funded by the National Science Foundation.

Research Proposal Reviewer:

National Science Foundation
Institute of Education Sciences
Social Sciences and Humanities Research Council of Canada

Manuscript & Conference Proposal Reviewer:

Journal for Research in Mathematics Education
Mathematics Teacher
Journal of Mathematics Teacher Education
Cognition and Instruction
Mathematical Thinking and Learning
Psychology of Mathematics Education annual meetings
American Educational Research Association annual meetings

FORMER PhD STUDENTS

Professor Kristen Bieda, Michigan State University
Professor Jeff Choppin, University of Rochester
Professor Michael Fish, Director of Research and Teacher Education, National Council of Teachers of Mathematics
Dr. Christopher Hartmann, Director of Curriculum and Instruction, BetterLesson
Professor Yi-Yin (Winnie) Ko, Indiana State University
Professor Joan Kwako, University of Minnesota
Professor Diler Oner, Bogazici University, Istanbul, Turkey
Dr. Rachaya Srisurichan, Ministry of Education, Thailand
Dr. Ana Stephens, Research Scientist, Wisconsin Center for Education Research, UW-Madison