

**Margaret Schwan Smith**  
**Curriculum Vitae**

**Work Address:** 5515 Wesley W. Posvar Hall  
Department of Instruction and Learning, School of Education  
Pittsburgh, PA 15260  
(412) 648-7361  
email – [pegs@pitt.edu](mailto:pegs@pitt.edu)

**Education:** University of Pittsburgh, Pittsburgh, Pennsylvania (1995)  
*Doctor of Education - Mathematics Education.*

State University of New York College, Fredonia, New York (1980)  
*Master of Science - Secondary Education Mathematics.*

State University of New York College, Fredonia, New York (1975)  
*Bachelor of Science - Secondary Education Mathematics.*

**Professional  
Experience:**

2009 - Senior Scientist  
Learning Research and Development Center  
University of Pittsburgh, Pittsburgh, PA

2008 - Professor of Mathematics Education  
Department of Instruction and Learning, School of Education  
University of Pittsburgh, Pittsburgh, PA

2003 - 2009 Research Scientist  
Learning Research and Development Center  
University of Pittsburgh, Pittsburgh, PA

1999 - 2008 Assistant/Associate Professor of Mathematics Education  
Department of Instruction and Learning, School of Education  
University of Pittsburgh, Pittsburgh, PA

1997 - 1999 Assistant Professor of Mathematics Education  
Department of Curriculum and Instruction, College of Education  
The Pennsylvania State University, University Park, PA

1996 - 1997 Research Associate  
Learning Research and Development Center  
University of Pittsburgh, Pittsburgh, PA

1989 - 1995 Research Specialist and Coordinator of the QUASAR Project  
Learning Research and Development Center  
University of Pittsburgh, Pittsburgh, PA

1987 - 1989 Associate Director of Special Student Programs  
College of Arts and Sciences  
University of Pittsburgh, Pittsburgh, PA

1980 - 1986 Assistant/Associate Professor, Northwood University, Midland, MI

1978 – 1980 Mathematics Teacher, Woodbury Junior High School, Shaker Heights, OH

1975 - 1978 Mathematics Teacher, Cattaraugus Central School, Cattaraugus, NY

**Awards/Honors:**

Dean's Award for Teaching Excellence, University of Pittsburgh, School of Education, 2013  
Susan Loucks-Horsley Award, National Staff Development Council, 2010  
Excellence in Teaching in Mathematics Teacher Education, AMTE, 2009  
Visiting Distinguished Professor, Bucknell University, April 2007  
Chancellor's Distinguished Teaching Award, University of Pittsburgh, 2006  
Faculty Excellence Award, Northwood University (Midland, MI), 1986

**Research Grants (\*indicates current):**

\*Designing for Change in Teachers' Practices – Toward Implementing Explorative Mathematics Instruction. Spencer Foundation, August 1, 2014 – April 30, 2016. [PI: Einat Heyd-Metzuyanin; Co-PIs: Margaret Smith & Victoria Bill] Award Amount: \$50,000.

Developing qualified middle grades teachers with expertise in STEM disciplines. The National Science Foundation, September 1, 2012 – August 31, 2014. [PI: Jennifer Cartier; Co-PIs: Melissa Bilec, Mark Collins, Daniel Mosse, Margaret Smith] Award Amount: \$300,000.

Cases of Reasoning and Proving in Secondary Mathematics (CORP). The National Science Foundation, September 1, 2007 – August 31, 2014. [Co-principal investigator with Fran Arbaugh, Pennsylvania State University] Award amount: \$2,100,000.

Collaborative, Technology-Enhanced Lesson Planning as an Organizational Routine for Continuous, School-Wide Instructional Improvement. IES, July 1, 2009 - June 30, 2013. [CO-PIs: Mary Kay Stein, Jennifer Russell, Margaret S. Smith, Jennifer Cartier] Award Amount: \$1,500,000.

Preparing for the 'Math Wars' RCT. LRDC Internal Grants Competition, July 1, 2011 – April 30, 2013. [PI: Mary Kay Stein; CoPIs Charles Munter and Margaret Smith] Award amount: \$100,000.

System-level Professional Development: Articulating Research Ideas that Support Implementation of PD Needed for Making the Common Core State Standards in Mathematics Reality for K-12 Teachers. The National Science Foundation, January 10, 2011 – December 31, 2012. [PI: Paola Sztajn, North Carolina State University; CoPIs: Karen Marrongelle, Portland State University and Margaret Smith, University of Pittsburgh] Award Amount: \$199,705.

Measuring Classroom Discussions in Mathematics and Literacy. LRDC Internal Grants Competition, May 1, 2008 – April 30, 2010. [Co-principle investigators: Kevin Ashley, Richard Correnti, Margaret McKeown, Margaret Smith, and Mary Kay Stein] Award amount: \$150,000.

Enhancing Secondary Mathematics Teacher Preparation (ESP). The National Science Foundation, July 1, 2003 – June 30, 2009. [Co-principal investigator with Ellen Ansell, Beverly Michael, and Paul Gartside] Award amount: \$998,000.

A Study of Teacher Education: Research on Instruction Design (ASTEROID). The National Science Foundation, July 1, 2001 – June 30, 2004. [Principal investigator] Award amount: \$608,839.

Quantitative Understanding: Amplifying Student Achievement and Reasoning (QUASAR). The Ford Foundation, January 1, 2001 – August 31, 2001. [Co-principal investigator with Edward Silver] Award amount: \$816,408. [Extension of the initial QUASAR funding.]

Developing Teachers' Capacity to Reason Proportionally: An Innovative Approach to Preparing Middle School Mathematics Teachers. School of Education, University of Pittsburgh, 2000. [Co-principal investigator with Cristina Heffernan] Award amount: \$1,500.

Cases of Mathematics Instruction to Enhance Teaching (COMET). The National Science Foundation, May 1, 1998 – December 31, 2002. [Co-principal investigator with Edward Silver and Mary Kay Stein] Award amount: \$775,000.

Use of Cases in Mathematics Teacher Education. The Exxon Education Foundation, 1998. [Co-principal investigator with Edward Silver and Mary Kay Stein] Award amount: \$24,500.

**Publications** (\*indicates a graduate student – or former graduate student – of mine; °indicates other graduate students)

**In Press**

Correnti, R., Stein, M.K., Smith, M. S., °Scherrer, J., McKeown, M., Greeno, J., & Ashley, K. (in press). Improving Teaching At-Scale: Design for the Scientific Measurement and Development of Discourse Practice. In L.B. Resnick & C. A. Asterhan, & S. N. Clarke (Eds.) *Socializing Intelligence through Academic Talk and Dialogue*. Washington, D.C.: American Education Research Association.

Munter, C., Stein, M.K., & Smith, M.S. (in press). Is there a common pedagogical core?: Examining instructional practices of competing models of mathematics teaching. *NCSM Journal of Mathematics Education Leadership*.

Munter, C., Stein, M.K., & Smith, M.S. (in press). Dialogic and direct instruction: Two distinct models of mathematics instruction and the debate(s) surrounding them. *Teachers College Record*.

Silver, E.A., & Smith, M.S. (in press). Integrating powerful practices: Formative assessment and cognitively demanding mathematics tasks. In C. Suurtamm (Ed.) *Annual Perspectives in Mathematics Education (APME) 2015: Assessment to Enhance Learning and Teaching*. Reston: VA: National Council of Teachers of Mathematics.

Smith, M.S., Bill, V., & Ziegler, J. (in press). Supporting productive struggle in mathematics classrooms. *New England Mathematics Journal*.

Stein, M.K., Engle, R.A., Smith, M.S., & °Hughes, E.K. (in press). Orchestrating productive mathematical discussions: Helping teachers learn to better incorporate student thinking. In L.B. Resnick & C. A. Asterhan, & S. N. Clarke (Eds.) *Socializing Intelligence through Academic Talk and Dialogue*. Washington, D.C.: American Education Research Association.

**2015**

Smith, M.S. (2015). Reflections on the first three years of *Mathematics Teacher Educator: Successes and challenges*. *Mathematics Teacher Educator*, 3 (2). [Editorial]

**2014**

National Council of Teachers of Mathematics (2014). *Principles to Actions: Ensuring Mathematical Success for All*. Reston, VA: Author. [Writing Team: Leinwand, S., Huinker, D., Brahier, D., Berry, R., Dillon, F., Larson, M., Leiva, M., Martin, G., & Smith, M.S.] [As of 02/01/15 26,641 hard copies sold; 6,101 e-books]

Smith, M.S. (2014). Building a professional knowledge base. *Mathematics Teacher Educator*, 2 (2), 106-107. [Editorial]

Smith, M.S. (2014). Tools as a catalyst for practitioners' thinking. *Mathematics Teacher Educator*, 3 (1), 3-7. [Editorial]

Smith, M.S., °Boyle, J., Arbaugh, F., °Steele, M.D., & Stylianides, G. (2014). Cases as a vehicle for developing knowledge needed for teaching. In Y. Li, E.A. Silver & S. Li (Eds.), *Transforming mathematics instruction: Multiple approaches and practices* (pp. 311-333). New York: Springer Publishing Company.

**2013**

Cartier, J.L., Smith, M.S., Stein, M.K., & °Ross, D. (2013). *Five Practices for Orchestrating Task-Based Discussions in Science*. Reston, VA: National Council of Teachers of Mathematics. [As of 02/01/15 3,909 hard copies sold; 46 e-books]

Marrongelle, K., Sztajn, P., & Smith, M. (2013). Scaling up professional development in an era of common state standards. *Journal of Teacher Education*, 64 (3), 202-211.

Smith, M.S. (2013). Revise and resubmit: It's not a consolation prize! *Mathematics Teacher Educator*, 2 (1), 3-5. [Editorial]

Smith, M.S. (2013). Linking claims and evidence. *Mathematics Teacher Educator*, 1 (2), 105-107. [Editorial]

\*Steele, M.D., \*Hillan, A.F., & Smith, M.S. (2013). Developing mathematical knowledge for teaching in a methods course: The case of function. *Journal of Mathematics Teacher Education*. 16 (6), 451-482.

Sztajn, P., Marrongelle, K. & Smith, M. (2013). Providing professional development at scale: Recommendations from research to practice. In Lindmeier, A. M. & Heinze, A. (Eds.). *Proceedings of the 37th Conference of the International Group for the Psychology of Mathematics Education*. Kiel, Germany: PM.

## 2012

Lappan, G., Smith, M.S., & Jones, L. (Eds.) (2012). *Rich and Engaging Mathematical Tasks: Grades 5-9*. Reston, VA: National Council of Teachers of Mathematics.

Lappan, G., Smith, M.S., & Jones, L. (Eds.) *More Rich and Engaging Mathematical Tasks: Grades 5-9*. Reston, VA: National Council of Teachers of Mathematics.

Smith, M.S. (2012). The *Mathematics Teacher Educator*: An opportunity to share, verify, and improve practitioner knowledge. *Mathematics Teacher Educator*, 1 (1), 3-4. [Editorial]

Smith, M.S., Cartier, J.L., \*Eskelson, S.L., & °Tekkumru-Kisa, M. (2012). Building a school-university collaboration: A search for common ground. In J. Bay-Williams & B. Speer (Eds.), *Professional Collaborations in Mathematics Teaching and Learning: Seeking Success for All*. The Seventy-fourth Yearbook of the National Council of Teachers of Mathematics. Reston, VA: NCTM.

Sztajn, P., Marrongelle, K., & Smith, M.S. (2012). *Supporting implementation of the Common Core State Standards for Mathematics: Recommendations for professional development*. Raleigh, NC: College of Education, North Carolina State University.

## 2011

\*Boston, M.D., & Smith, M.S. (2011). A 'Task-centric Approach' to professional development: Enhancing mathematics teachers' ability to implement cognitively challenging mathematical tasks. *ZDM – The International Journal on Mathematics Education*, 43 (6-7), 965-977.

Smith, M.S. & Stein, M.K. (2011). *5 Practices for Orchestrating Productive Mathematics Discussions*. Reston, VA: National Council of Teachers of Mathematics. [As of 02/01/15 50,105 hard copies sold; 708 e-books]

Stein, M.K., Russell, J. L., & Smith, M. S. (2011). The role of tools in bridging research and practice in an instructional improvement effort. In W. F. Tate, K. King, C. R. Anderson (Eds.), *Pathways to Research and Practice in Mathematics Education* (pp.33-44). Reston, VA: National Council of Teachers of Mathematics.

## 2010

Smith, M.S., & Stein, M.K. (2010). Learning from curriculum in high school. In D. V. Lambdin & F. K. Lester (Eds.), *Teaching and Learning Mathematics: Translating Research to the High School Classroom* (pp.33-38). Reston, VA: National Council of Teachers of Mathematics.

Smith, M.S. (2010). *Effective mathematics instruction: The role of mathematical tasks*. (E-seminar and facilitation guide). Reston, VA: National Council of Teachers of Mathematics.

Stein, M.K., & Smith, M.S. (2010). The role of curricular materials in elementary mathematics classrooms. In D. V. Lambdin & F. K. Lester (Eds.), *Teaching and Learning Mathematics: Translating Research to the Elementary Classroom* (pp.61-65). Reston, VA: National Council of Teachers of Mathematics.

Stein, M.K., & Smith, M.S. (2010). The influence of curriculum on student learning. In R. Reys & B. Reys (Eds.) *K-12 Mathematics Curriculum: Issues, Trends and Future Directions* (2010 yearbook of the National Council of Teachers of Mathematics) (pp.351-362). Reston, VA: National Council of Teachers of Mathematics.

#### 2009

Battista, M.T., Boest, T., Confrey, J., Knuth, E., Smith, M.S., Sutton, J.T., White, D. & Reed, J. (2009). Research in mathematics education: Multiple methods for multiple uses. *Journal for Research in Mathematics Education*<sup>^</sup>, 40 (3), 216-240.

\*Boston, M.D., & Smith, M.S. (2009). Transforming secondary mathematics teaching: Increasing the cognitive demands of instructional tasks used in teachers' classrooms. *Journal for Research in Mathematics Education*, 40 (2), 119-156.

Debellis, V.A., Friel, S.N., Arbaugh, F., Mooney, E.S., Pugalee, D.K., Watanable, T., Smith, M.S., & House, P.A. (2009). *Navigating Through Reasoning and Problem Solving Grades 6-8*. Reston, VA: National Council of Teachers of Mathematics.

\*Hughes, E.K., Smith, M.S., °Hogel, M., & \*Boston, M.D. (2009). Case stories: Supporting teacher reflection and collaboration on the implementation of cognitively challenging mathematical tasks. In F. Arbaugh & P. M. Taylor (Eds.), *Inquiry into Mathematics Teacher Education* (pp.71-84), Monograph Series, Volume 5. San Diego, CA: Association of Mathematics Teacher Educators.

Smith, M.S. (2009). Talking about teaching: A strategy for engaging teachers in conversations about their practice. G. Zimmermann (Ed.) *Empowering the Mentor of the Preservice Mathematics Teacher* (pp.39-40); *Empowering the Mentor of the Beginning Mathematics Teacher* (pp.33-34) and *Empowering the Mentor of the Experienced Mathematics Teacher*, (pp.35-36). Reston, VA: National Council of Teachers of Mathematics.

Smith, M.S., \*Hughes, E.K., & Engle, R.A., & Stein, M.K. (2009). Orchestrating discussions. *Mathematics Teaching in the Middle School*, 14 (9), 549-556.

Stein, M.K., Smith, M.S., °Henningsen, M.A., & Silver, E.A. (2009). *Implementing standards-based mathematics instruction: A casebook for professional development (Second Edition)*. New York, NY: Teachers College Press.

#### 2008

Confrey, J., Strutchens, M.E., Battista, M.T., Smith, M.S., King, K.D., Sutton, J.T., Boest, T., & Reed, J. (2008). Situating research on curricular change. *Journal for Research in Mathematics Education*<sup>^</sup>, 39 (2), 102-112.

Markovits, Z., & Smith, M.S., (2008). Case as tools in mathematics teacher education. In D. Tirosh & T. Wood (Eds.) (2008). *International handbook of mathematics teacher education: Vol. 2: Tools and Processes in Mathematics Teacher Education*. Rotterdam, The Netherlands: Sense Publishers.

Smith, M.S., Bill, V., & \*Hughes, E.K. (2008). Thinking through a lesson protocol: A key for successfully implementing high-level tasks. *Mathematics Teaching in the Middle School*, 14 (3), 132-138. [Reprinted in Lappan, G., Smith, M.S., & Jones, L. (Eds.) (2012). *Rich and Engaging Mathematical Tasks: Grades 5-9*. Reston, VA: National Council of Teachers of Mathematics.]

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<sup>^</sup> This article was written by the National Council of Teachers of Mathematics' Research Committee.

Smith, M.S., & Friel, S. (Ed) (2008). Cases in mathematics teacher education: Tools for developing knowledge needed for teaching. *Fourth Monograph of the Association of Mathematics Teacher Educators*. San Diego, CA: AMTE.

Stein, M.K., Engle, R.A., Smith, M.S., & \*Hughes, E.K. (2008). Orchestrating productive mathematical discussions: Helping teachers learn to better incorporate student thinking. *Mathematical Thinking and Learning, 10*, 313-340.

#### 2007

Battista, M.T., Fey, J.T., King, K.D., Larson, M., Reed, J., Smith, M.S., Strutchens, M.E., & Sutton, J.T. (2007). Connecting research and practice at NCTM. *Journal for Research in Mathematics Education, 38* (2), 108-144<sup>^</sup>.

\*Hillen, A.F., & Smith, M.S. (2007). Is silence golden? Considering what silent students might learn in discourse –rich classrooms. *Mathematics Teaching in the Middle School, 13* (5), 305-311.

Smith, M.S., \*Hillen, A.F., & \*Catania, C. (2007). Using pattern tasks to develop mathematical understandings and set classroom norms. *Mathematics Teaching in the Middle School, 13* (1), 38-44.

Smith, M.S., Arbaugh, F., & Fi, C. (2007). Teachers, the school environment, and students: Influences on students' opportunities to learn mathematics in grades 4 and 8. In P. Kloosterman & F. K. Lester Jr. (Eds.), *Results from the 2003 Assessment of the National Assessment of Educational Progress* (pp.191-226). Reston, VA: The National Council of Teachers of Mathematics.

Stein, M. K., Remillard, J., & Smith, M. S. (2007). How curriculum influences student learning. In F. K. Lester Jr. (Ed.), *Second Handbook of Research on Mathematics Teaching and Learning* (pp. 319-369). Greenwich, CT: Information Age Publishing.

#### 2006

Rachlin, S., Cramer, K., Finseth, C., Foreman, L., Geary, D., Larson, J., & Smith, M. S., (2006). *Navigating Through Number in Grades 6-8*. Reston, Va.: National Council of Teachers of Mathematics.

Smith, M. S., Heid, M. K., & Zbiek, R.M (Eds.) (2006). *Learning and teaching mathematical processes. The 2005-2006 yearbook of the Pennsylvania Council of Teachers of Mathematics*.

#### 2005

Smith, M. S., Silver, E. A., Stein, M. K., \*Boston, M., & °Henningsen, M. A. (2005). *Improving instruction in rational numbers and proportionality: Using cases to transform mathematics teaching and learning, Volume 1*. New York: Teachers College Press.

Smith, M. S., Silver, E. A., Stein, M. K., °Henningsen, M. A., \*Boston, M., & \*Hughes, E.K. (2005). *Improving instruction in algebra: Using cases to transform mathematics teaching and learning, Volume 2*. New York: Teachers College Press. [Chapter 2 reprinted in Grant, C.M., Mills, V.L., Bouck, M., & Davidson, E. (2009). *Secondary Lenses on Learning: Team Leadership for Mathematics in Middle and High School*. Thousand Oaks, CA: Corwin.]

Smith, M. S., Silver, E. A., Stein, M. K., \*Boston, M., °Henningsen, M. A., & \*Hillen, A.F. (2005). *Improving instruction in geometry and measurement: Using cases to transform mathematics teaching and learning, Volume 3*. New York: Teachers College Press.

Zbiek, R.M., Blume, G. W., & Smith, M. S. (Eds.), (2005). *Assessing What Students Understand, Know, and Can Do in Mathematics*. The 2003-2004 yearbook of the Pennsylvania Council of Teachers of Mathematics.

**2004**

- Grouws, D. A., Smith, M. S., & Sztajn, P. (2004). The preparation and teaching practices of U.S. mathematics teachers: Grades 4 and 8. In P. Kloosterman & F. K. Lester Jr. (Eds.), *Results and Interpretations of the 1990 through 2000 Mathematics Assessments of the National Assessment of Educational Progress* (pp.221-269). Reston, VA: The National Council of Teachers of Mathematics.
- Smith, M. S., & \*Hughes, E (2004). The hexagon pattern train task. *Professional Development Guidebook for Perspectives on the Teaching of Mathematics* (Companion to 2004 yearbook of the National Council of Teachers of Mathematics) (pp. 11-20). Reston, VA: National Council of Teachers of Mathematics.
- Smith, M. S., Stein, M.K., Arbaugh, F., Brown, C.A., & \*Mossgrrove, J. (2004). Characterizing the cognitive demands of mathematical tasks: A sorting activity. *Professional Development Guidebook for Perspectives on the Teaching of Mathematics* (Companion to 2004 yearbook of the National Council of Teachers of Mathematics) (pp. 45-72). Reston, VA: National Council of Teachers of Mathematics.

**2003**

- \*Boston, M., Smith, M.S., & \*Hillen, A. F. (2003). Building on students' intuitive strategies to make sense of cross-multiplication. Mathematics Teaching in the Middle School, 9 (3), 150-155.
- \*Boston, M., & Smith, M. S. (2003) Providing opportunities for students and teachers to “measure up”. In D. H. Clements & G. Bright (Eds.) *Learning and Teaching Measurement* (2003 yearbook of the National Council of Teachers of Mathematics) (pp. 47-49). Reston, VA: National Council of Teachers of Mathematics.
- Smith, M.S. (2003). Developing teacher leaders in mathematics education. Math & Science Collaborative Journal, (9), p.39.
- Smith, M. S., Blume, G. W., & Heid, M. K. (Eds.), (2003). *The Role of Representation in the Teaching and Learning of Mathematics: Part 2*. The 2002 yearbook of the Pennsylvania Council of Teachers of Mathematics.
- Smith, M. S., Blume, G. W., & Heid, M. K. (Eds.), (2003). *The Role of Representation in the Teaching and Learning of Mathematics: Part 1*. The 2001 yearbook of the Pennsylvania Council of Teachers of Mathematics.
- Smith, M.S., & \*Boston, M. (2003). Creating rabbit pens: Teaching notes. In D. H. Clements & G. Bright (Eds.) *Classroom Activities for Learning and Teaching Measurement* (Companion to the 2003 yearbook of the National Council of Teachers of Mathematics) (pp. 208-219). Reston, VA: National Council of Teachers of Mathematics.
- Smith, M. S., \*Hillen, A., & \*Heffernan, C. (2003). Student-constructed representations: Vehicles for helping teachers understand students’ mathematical thinking. In M. S. Smith, G. W. Blume, & M. K. Heid (Eds.), *The Role of Representation in the Teaching and Learning of Mathematics: Part 1*, (pp.65-69). 2001 yearbook of the Pennsylvania Council of Teachers of Mathematics.

**2002**

- Silver, E.A., & Smith, M.S. (2002). Samtalsmljöer. Att få elever att samtala om matematik (Discourse communities: To get students talk about mathematics.). *Nämnaaren* 29 (1), 49-52. [*Nämnaaren* is a Swedish mathematics education journal.]
- Silver, E.A., & Smith, M.S. (2002). Samtalsmljöer 3. (Discourse Communities. Enriching problems.) *Nämnaaren* 29 (2), 39-42.
- Silver, E.A., & Smith, M.S. (2002). Samtalsmljöer 4. Att leda och stödja samtal. (Discourse Communities. To lead and to support discussions.) *Nämnaaren* 29 (3), 34-39.
- Smith, M. S. (2002). Professional development through written cases. In H. Bass, Z.P. Usiskin, and G. Burrill (Eds.) *Studying classroom teaching as a medium for professional development: Proceedings of*

a U.S. – Japan Workshop. (pp.90-98). Washington, DC: National Academy Press.

**2001**

Silver, E.A., & Smith, M.S. (2001). Samtalsmljörer. Att förverkliga reformer i klassrummer (Discourse Communities: Realizations in the classroom.). *Nämnamnaren* 28 (4), 11-15.

Smith, M. S. (2001). Using cases to discuss the changing role of the mathematics teacher. *Mathematics Teaching in the Middle School*, 7 (3), 144-149.

Smith, M. S. (2001). *Practice-based Professional Development for Teachers of Mathematics*. Reston, VA: National Council of Teachers of Mathematics. [Chapters 1 and 2 reprinted in Grant, C.M., Mills, V.L., Bouck, M., & Davidson, E. (2009). *Secondary Lenses on Learning: Team Leadership for Mathematics in Middle and High School*. Thousand Oaks, CA: Corwin.]

**2000**

Grouws, D. A., & Smith, M. S. (2000). NAEP findings on the preparation and practices of mathematics teachers. In E. A. Silver & P. A. Kenney (Eds.), *Results from the Seventh Mathematics Assessment of the National Assessment of Educational Progress* (pp. 107-141). Reston, VA: The National Council of Teachers of Mathematics.

Heid, M. K., Smith, M. S., & Blume, G. W. (Eds.), (2000). *Algebra Across the Grades: Part II*. The 2000 yearbook of the Pennsylvania Council of Teachers of Mathematics.

Simon, M. A., Tzur, R., °Heinz, K., °Kinzel, M., & Smith, M. S. (2000). Characterizing a perspective underlying the practice of mathematics teachers in transition. *Journal for Research in Mathematics Education*, 31 (5), 579-601.

Smith, M. S. (2000). Balancing old and new: An experienced middle school teacher's learning in the context of mathematics instructional reform. *Elementary School Journal*, 100 (4), 351-375.

Smith, M. S. (2000). Reflections on practice: Redefining success in mathematics teaching and learning. *Mathematics Teaching in the Middle School*, 5 (6), 378-382; 386. [Reprinted in Grant, C.M., Mills, V.L., Bouck, M., & Davidson, E. (2009). *Secondary Lenses on Learning: Team Leadership for Mathematics in Middle and High School*. Thousand Oaks, CA: Corwin and in J. Bay-Williams & K. Karp (Eds.) *Growing Professionally: Readings from NCTM Publications for Grades K-8*. Reston, VA: National Council of Teachers of Mathematics.]

Smith, M. S., & Silver, E. A. (2000). Research-based cases for mathematics teacher education: The COMET project. In M. L. Fernandez (Ed.), *Proceedings of the 22nd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 637). Columbus, OH: The ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

Stein, M. K., Smith, M. S., °Henningsen, M. A., & Silver, E. A. (2000). *Implementing Standards-based Mathematics Instruction: A Casebook for Professional Development*. New York, NY: Teachers College Press. [Chapters 1 and 2 reprinted in Grant, C. M., Mills, V. L., Bouck, M., & Davidson, E. (2009). *Secondary Lenses on Learning: Team Leadership for Mathematics in Middle and High School*. Thousand Oaks, CA: Corwin.]

\*Stylianou, D., & Smith, M. S. (2000). Examining student responses: A strategy for developing preservice elementary teachers' understanding of algebra. In M. K. Heid, M. S. Smith, and G. W. Blume (Eds.), *Algebra Across the Grades: Part II* (pp. 23-32). The 2000 yearbook of the Pennsylvania Council of Teachers of Mathematics.

**1999**

Blume, G. W., Heid, M. K., & Smith, M. S. (Eds.), (1999). *Implementing the Standards: Local, State, and National Issues*. The 1998 yearbook of the Pennsylvania Council of Teachers of Mathematics.

Heid, M. K., Smith, M. S., & Blume, G. W. (Eds.), (1999). *Algebra Across the Grades: Part I*. The 1999 yearbook of the Pennsylvania Council of Teachers of Mathematics.

Stein, M. K., Smith, M. S., & Silver, E. A. (1999). The development of professional developers: Learning to assist teachers in new settings in new ways. *Harvard Educational Review*, 69 (3), 237-269.

#### 1998

Simon, M. A., Tzur, R., Heinz, K., Kinzel, M., & Smith, M. S. (1998). Characterizing a perspective on mathematics learning of teachers in transition. In S. Berenson, K. Dawkins, M. Blanton, W. Coulombe, J. Kolb, K. Norwood, & L. Stiff (Eds.), *Proceedings of the 20th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 768-773). Columbus, OH: The ERIC Clearinghouse for Science, Mathematics, and Environmental Education

Smith, M. S., & Silver, E. A. (1998). An innovative curriculum as the basis for professional development: An example from the QUASAR project. In J. Epperson, D. Holtzman, S. May, D. Sandow, D. Stanley, R. Asera, & L. Lilliott (Authors), *The Advanced Placement Program Mathematics Vertical Teams Toolkit* (pp. 268-271). New York, NY: The College Entrance Examination Board and Education Testing Service.

Smith, M. S., & Stein, M. K. (1998). Selecting and creating mathematical tasks: From research to practice. *Mathematics Teaching in the Middle School*, 3 (5), 344-350. [Reprinted in J. Bay-Williams & K. Karp (Eds.) *Growing Professionally: Readings from NCTM Publications for Grades K-8*. Reston, VA: National Council of Teachers of Mathematics and in Lappan, G., Smith, M.S., & Jones, L. (Eds.) (2012). *Rich and Engaging Mathematical Tasks: Grades 5-9*. Reston, VA: National Council of Teachers of Mathematics.]

Stein, M. K., Silver, E. A., & Smith, M. S. (1998). Mathematics reform and teacher development from the community of practice perspective. In J. Greeno & S. Goldman (Eds.), *Thinking practices: A Symposium on Mathematics and Science Learning* (pp. 17-52). Hillsdale, NJ: Lawrence Erlbaum Associates.

Stein, M. K., & Smith, M. S. (1998). Mathematical tasks as a framework for reflection: From research to practice. *Mathematics Teaching in the Middle School*, 3 (4), 268-275.

#### 1997

Brown, C. A., & Smith, M. S. (1997). Supporting the development of mathematical pedagogy. *The Mathematics Teacher*, 90 (2), 138-143.

Silver, E. A., & Smith, M. S. (1997). Implementing reform in the mathematics classroom: Creating mathematical discourse communities. In *Reform in Math and Science Education: Issues for teachers*. [CD-ROM]. Columbus, OH: Eisenhower National Clearinghouse for Mathematics and Science Education.

#### 1996

Silver, E. A., & Smith, M. S. (1996). Building discourse communities in mathematics classrooms: A challenging but worthwhile journey. In P. C. Elliott (Ed.), *Communication in Mathematics, K-12 and Beyond* (1996 yearbook of the National Council of Teachers of Mathematics) (pp. 20-28). Reston, VA: National Council of Teachers of Mathematics.

#### 1995

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**Prior to 1995**

O'Brien, G. E., & Smith, M. S. (1990). Strategies for staff development. *Science and Children*, 27 (4), 40-41.

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***Professional Development Provided to Teachers, Leaders, and Teacher Educators:***

**Bethel Public Schools, Spanaway, WA** [August 14-15, 2006; **June 19-20, 2014**]

Provided professional development to elementary, middle and high school teachers as part of the district's effort to support the implementation of inquiry-based mathematics teaching.

**Seneca Valley School District** [2009-2011; **2014-2015**]

Worked with 15-20 teachers at Haines Elementary School interested in considering new approaches to teaching mathematics [8 ½ day sessions in 2009-2010; 7 ½ day sessions in 2010-2011]. **Worked with seventh grade mathematics teachers who were implementing *Connected Mathematics 3* for the first time and eighth grade mathematics who were struggling to see the need to teaching for understanding rather than for procedural fluency [6 ½ day sessions in 2014-2015].**

**Syracuse City School District** [2014-2015]

**Designed and provided professional development for middle school mathematics coaches and teachers as part of the Institute for Learning's effort to support systemic mathematics reform in urban school districts [6 full-day sessions for teachers and coaches; 4 additional full-day sessions for coaches]**

**Midwest Mathematics Meeting of the Minds (M4)** [March 7, 2014]

Full-day workshop for mathematics educators and teachers leaders in Nebraska, Iowa, Missouri, and Kansas focused on orchestrating productive discussions of cognitively challenging mathematical tasks.

**Institute for Learning, Learning Research and Development Center** [February 22, 2014]

Gave an address to teacher-leaders participating in the Tennessee state-wide initiative to improve mathematics instruction.

**Colorado State University-Pueblo** [September 13, 2013]

Full-day workshop on reasoning and proof for teacher-leaders participating in the Noyce Scholars program.

**Pittsburgh Public School District, Pittsburgh, PA** [1999-2013]

- Participated in the Brashear-University of Pittsburgh Urban Cohort Collaboration (2012-2013). This included co-facilitating sessions for all interns and mentor teachers (August and December) and meeting with mathematics teacher mentors and interns to plan specific lessons.
- Provided support to mathematics teachers at Pittsburgh Milliones/University Prep and participated as a member of the University of Pittsburgh/U Prep team (August 2008 – May 2012). During the 2010-

2011 school year this included meeting with teams of middle and high school mathematics teachers on a weekly basis (September – May) and participating in learning walks with district personal and/or Pitt colleagues. During the 2011-2012 school year this included meeting bi-weekly with each of three teams of mathematics teachers (grades 6-8, grades 9-10; grades 11-12) to plan for and reflect on instruction.

- Designed and provided professional development for mathematics coaches as part of the Institute for Learning's effort to support systemic mathematics reform in urban school districts (5 2-day sessions and 3 site visits in 2007-2008; 5 ½ day sessions in 2009-2010). (In collaboration with Victoria Bill and Luann Malik.)
- Provide support to IFL fellows who were designing and enacting professional development for mathematics coaches (August 2008 – April 2009).
- Participated as a member of the middle school textbook adoption committee (May, 2006).
- Provided professional development for high school instructional team leaders and members of the PRIME elementary, middle and high school teams in a effort to help teacher leaders develop their own teaching practice and their capacity to provide support to the teachers with whom they work (8 1-day sessions in 2004-2005).
- Participated as a member of the Quality Review Team, an ad hoc committee established as part of the Superintendent's Agenda for Action. The goal of the team was to identify essential features of the mathematics program and its associated professional development that could be applied to other content areas (2000).
- Conducted workshops for mathematics teachers in 1999\*, 2001\*, 2002\*, 2004\*, and 2009. [\*In collaboration with colleagues from the COMET project]

Association of Mathematics Teacher Educators [February 19, 2013]

Conducted a webinar for 100+ teachers and teacher educators on the five practices model of orchestrating productive discussions.

Denver Public Schools [November 30-31, 2012]

Conducted sessions with teachers, teacher leaders, and district administrators on how to orchestrate and support product classroom discussions in mathematics classrooms.

Rochester, NY City Schools [January - March, 2012]

Collaborated with colleagues from the Warner Center at the University of Rochester in providing 5 days of professional development to teachers and teacher-leaders in Rochester City Schools and to the professional developers with whom they work. The sessions focused on mathematical tasks that align with the Common Core State Standards and how to orchestrate productive discussions.

Boston Public Schools [2011-2012]

Worked with teacher leaders, coaches, and district administrators to develop curricular materials that aligned current district texts with the Common Core State Standards (June 2011 – February 2012). (Under the auspices of the IFL, in collaboration with Victoria Bill, Melissa Boston, Sandra Campo.)

Missouri Math Academy [July 12-14, 2009; July 11-13, 2010]

Provided professional development for 100 middle and high school teachers focused on the selection and implementation of mathematical tasks (2009) and reasoning-and-proving (2010).

Knowles Science Teaching Foundation [October 16, 2009; October 29, 2010; March 1, 2013]

Conducted a full-day session on maintaining the cognitive demands of mathematical tasks for second year mathematics teaching fellows.

National Council of Teachers of Mathematics [2009-2010]

Conducted three one-hour e-seminars for teachers on mathematical tasks (September 16, February 24,

July 20) and prepared a facilitation manual for use with the session video.

Riverview School District [September 16-17, 2009; September 2011]

2009 - Conducted observations of mathematics classroom instruction and interviews with mathematics teachers at the request of district administrators and made recommendation regarding ways in which to enhance learning opportunities for students in grades 7-12. 2011 – Conducted additional observations and wrote a report about the progress that had been made over the two intervening years.

Oakland County Schools, Oakland, MI [August 4, 2009]

Provided professional development on lesson planning for elementary, middle, and high school coaches and teachers leaders.

New York City Math Circle [July 28, 2009]

Provided professional development on orchestrating productive discussions for middle and high school teachers who participate in the New York City Math Circle.

City College of New York [August 7-8, 2007]

Collaborated with Despina Stylianou in designing and conducting the Urban Math summer workshop for middle and high school teachers in New York City.

West Ed [June 25-28, 2007]

Collaborated with Mark Driscoll (EDC), Judy Mumme (WestEd), Nanette Seago (WestEd), and Laura Van Zoest (Western Michigan University) in designing and conducting a conference for preservice teachers educators focused on adapting practice-based materials for use in teacher education.

Allegheny Intermediate Unit, Pittsburgh, PA [2003-2007]

Conducted professional development sessions for coordinators and their higher education partners from Robert Morris University, Chatham College, Carlow College, and St. Vincent's College. This work was conducted under the auspices of the NSF-funded Math and Science Partnership of Southwest Pennsylvania directed by Nancy Bunt. [2 days in 2006-2007; 3 days in 2004-2005; 2 days in 2003-2004]

Los Angeles Unified School District, Los Angeles, CA [2002-2007]

Designed professional development materials and experiences for high school algebra teachers and coaches under the auspices of the PRISMA Project, funded by the James Irvine Foundation. [4 2-day sessions for teachers and 4 2-day sessions for coaches in 2006-2007] [In collaboration with Ido Jamar, Mary Lou Metz, and members of the IFL team]

Designed and provided professional development for middle school coaches as part of the Institute for Learning's effort to support systemic mathematics reform in LAUSD [4 2-day sessions in 2005-2006 & 2004-2005 and 8 2-day sessions in 2002-2003] [In collaboration with Victoria Bill and members of the IFL team]

Dallas Independent School District, Dallas, TX [February 6-7, 2007]

Conducted sessions for district administrators on effective mathematics instruction as part of the Institute for Learning's on-going effort to support systemic reform in urban school districts.

Institute for Learning, Learning Research and Development Center [2003-2006]

Designed and provided professional development for middle and high school coaches as part of the Institute for Learning's effort to support systemic mathematics reform in urban school districts. Participating districts have included: Austin, TX, Denver, CO, Hartford, CT, Madison, WI, Providence, RI, Springfield, MA, St. Paul, MN, New York City [2 2.5-day sessions 2006; 2 2.5-day sessions in 2004-2005; 4 2-day sessions were conducted between July 2003 and March 2004] [In collaboration with Victoria Bill and members of the IFL team]

Carnegie Learning, Pittsburgh, PA [November 16, 2006].

Conducted a full-day professional development session for Carnegie Learning personnel who provide support to teachers in school districts that have adopted the Cognitive Tutor curricula.

Tri State School Study Council, University of Pittsburgh [September 2006]

Presented a two-hour session on analyzing mathematical tasks to teachers in Western PA.

California State University Northridge [March 10-11, 2006]

Presented two sessions on preservice teacher education to members of the mathematics department and other professionals in the region. [In collaboration with Edward Silver from the University of Michigan]

North Carolina Department of Public Instruction [July 18-21, 2005]

Conducted professional development sessions for 150 middle school teachers and teacher leaders focused on proportional reasoning.

University of Michigan, Ann Arbor MI [January 14, 16, 2004]

Conducted a half-day workshop for mathematics teacher leaders participating in the NSF-funded Center for Proficiency in Teaching Mathematics.

University of North Carolina, Chapel Hill, NC [December 11-12, 2003; March 1-2, 2002]

Conducted workshops for mathematics teachers and teacher leaders.

Ann Arbor School District, Ann Arbor, MI [October 17-19, 2001]

Conducted three days of workshops for middle school teachers that focused on issues of curriculum implementation. [In collaboration with Edward Silver from the University of Michigan]

University of Wyoming, Laramie, WY [August 13-14, 2001]

Conducted a two-day inservice for mathematicians and mathematics educators at the University of Wyoming who are developing a masters degree program for middle school teachers. The workshop focused on the use of cases and other practice-based materials in teacher education. [In collaboration with Mary Kay Stein]

The Center for Education and Equity in Mathematics, Science, and Technology, California State Polytechnic University, Pomona, CA [June 19, 2001]

Conducted a one-day workshop on professional development for teachers of mathematics at an academy for school administrators.

Partnership of High School Teachers, Pittsburgh, PA [October 23, 2001; March 28, 2000]

Organized and participated in a discussion on current research in mathematics education with high school mathematics teachers from western Pennsylvania high schools (Beaver Area, Bethel Park, Hampton, Meadville Area, Steele Valley). [In collaboration with colleagues Ellen Ansell, Martin Cohen, and Ido Jamar]

University of Southern Maine, Portland, ME [March 6, 2000]

Workshop for mathematics teachers and teacher leaders on the use of cases and other practice-based materials in teacher education.

***Presentations at Professional Meetings (2000-2015):***

2015

Smith, M.S. (February, 2015). *Building a Professional Knowledge Base for Mathematics Teacher Education: Reflections on the First Three Years of Mathematics Teacher Educator*. **Invited keynote** at the Nineteenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Smith, M.S. (February, 2015). *Mathematics Teaching Practices that Support Mathematics Learning for All Students*. **Invited keynote** at the annual *Connected Mathematics Users Conference*, East Lansing, MI.

Smith, M.S. (February, 2015). *Effective Mathematics Teaching Practices that Support Learning for All Students: A Focus on Middle and High School*. **Invited keynote** presentation at *Effective Teaching with Principles to Actions: Implementing College- and Career-Readiness Standards*. An NCTM Interactive Institute, Charleston, SC.

Smith, M.S., & Bill, V. (January, 2015). *Teaching Practices that Support Student Learning of and Engagement in Mathematics*. Presentation at the PACE Conference on Formative Assessment in the Classroom, Curriculum, and Culture of Schools, Oakland, CA. [To be repeated in March 2015 in Los Angeles, CA.]

Smith, M.S. (January 2015). *Reaction and Response to "Deeply Digital CMPX"*. Invited presentation at the Connected Mathematics Technology Conference, East Lansing, MI.

#### 2014

Smith, M.S., & Stein, M.K. (November, 2014). *5 Practices for Leading Productive Math Discussions in Class*. Webinar conducted for Educational Research Newsletter & Webinars.

Smith, M.S. (November, 2014). *Elicit and Use Evidence of Student Thinking to Guide Instructional Decision Making*. **Invited keynote** presentation at the Ohio Council of Teachers of Mathematics Meeting, Cleveland, OH.

Smith, M.S., & Cartier, J. (October, 2014). *Orchestrating Productive Discussions in Mathematics Classrooms*. Preconference full-day workshop presented at the National Council of Teachers of Mathematics Regional Conference, Indianapolis, IN. [To be repeated in April 2015 in Boston, MA and in November 2015 in Minneapolis, MN]

Smith, M.S. (July, 2014). *A Focus on Effective Teaching Practices*. **Invited keynote** presentation at the Engaging Students in Learning: Mathematical Practices and Process Standards. An NCTM Interactive Institute for Grades 9-12, Chicago, IL.

Smith, M.S. (July, 2014). *Promoting Algebraic Reasoning: The Role of Mathematical Tasks*. **Invited keynote** presentation at Algebra Readiness for Every Student. An NCTM Interactive Institute for Grades 6-8, San Diego, CA.

\*Eskelson, S.L., & Smith, M.S. (April, 2014). *Planning and Teaching: An Investigation of Two Teachers' Participation in Collaborative Lesson Planning Activities and the Impact of These Activities on Their Instruction*. Presentation at the Research Conference held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, New Orleans, LA.

Silver, E.A., Smith, M.S., Bill, V., & Gosen, D. (April, 2014). *The Mathematical Tasks Framework: A Vehicle for Building a Knowledge Base for Supporting Mathematics Teachers and Teaching*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, New Orleans, LA.

Smith, M.S., & Huinker, D. (April, 2014). *Teaching Practices that Support Student Learning in the Common Core Era*. **Invited keynote** presentation at the annual meeting of the National Council of Supervisors of Mathematics, New Orleans, LA.

Smith, M.S. (April, 2014). *Principles to Actions: Effective Teaching Practices*. Presentation at the annual meeting of the National Council of Teachers of Mathematics, New Orleans, LA.

Stein, M.K., & Smith, M.S. (April, 2014). *Research, Practice, and Policy: The Evolution of Research on Mathematical Tasks*. Presentation at the Learning, Research, and Development Center Board of Visitors Meeting, Pittsburgh, PA.

Smith, M.S. (February, 2014). *Mathematics Teaching Practices that Support Enactment of the Common Core State Standards*. **Invited keynote** at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2014). *Motivating the Need for Proof*. Invited session at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Adams, T.L., Confrey, J., Franke, M.L., Karp, K., Smith, M.S. & Silver, E.A. (February, 2014). *Formative Assessment: A Key Element in Fostering the Mathematical Success of All Students*. Panel discussion at the

Eighteenth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

2013

Smith, M.S. (November, 2013). *Enacting the Standards for Mathematical Practice: How the 5 Practices Can Help*. Invited keynote presentation at the Utah Council of Teachers of Mathematics Annual Meeting, Salt Lake City, UT.

Smith, M.S. (October, 2013). *Creating Opportunities for Students to Engage in Reasoning and Proof: Modifying Existing Tasks*. Invited presentation at the Northwest Math Conference, Bellevue, WA.

Smith, M.S. (October, 2013). *Tasks, Tools, and Talk: A Framework for Enacting the CCSS Mathematical Practices*. Invited presentation at the Northwest Math Conference, Bellevue, WA.

Smith, M.S. (September, 2013). *Orchestrating Productive Discussions in Math and Science*. Invited colloquium at the University of Georgia.

Smith, M.S. (September, 2013). *Engaging Students in the Standards for Mathematics Practice: The Role of Cognitively Demanding Tasks*. Invited colloquium at the University of Georgia.

Smith, M.S. (August, 2013). *Tasks, Tools, and Talk: A Framework for Enacting Mathematical Practices*. Invited keynote presentation at Engaging Students in Learning Mathematical Practices and Process Standards: An NCTM Interactive Institute For Grades 9-12, Washington, DC.

Marrongelle, K., Sztajn, P., & Smith, M. (July/August 2013). *Providing Professional Development at Scale: Recommendations from Research to Practice*. Paper presented at the 37<sup>th</sup> Conference of the International Group for the Psychology of Mathematics Education, Kiel, Germany.

Smith, M.S. (July, 2013). *Promoting Algebraic Reasoning: The Role of Cognitively Challenging Tasks and Good Questions*. Invited keynote presentation at Algebra Readiness for Every Student. An NCTM Interactive Institute for Grades 6-8, New Orleans, LA.

Smith, M.S., Cartier, J., \*Eskelson, S.L., & °Ross, D. (April, 2013). *Collaborative Lesson Planning Activities and the Impact of These Activities on Teachers' Instruction*. Paper presented as part of a symposium, "STEM Professional Development in a High-Poverty Urban Secondary School" at the annual meeting of the American Educational Research Association, San Francisco, CA.

Munter, C., Stein, M.K., & Smith, M.S. (April, 2013). *A Theory-Based Approach to Comparing Direct and Dialogic Mathematics Instruction*. Presentation at the Research Pre-session held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Denver, CO.

Smith, M.S. (April, 2013). *Productive Mathematics Discussions: A Vehicle for Supporting Engagement in the Standards for Mathematical Practice*. Invited presentation at the annual meeting of the Association of State Supervisors of Mathematics, Denver, CO.

Smith, M.S. (April, 2013). *Creating Opportunities for Students to Engage in Reasoning and Proof*. Invited presentation at the annual meeting of the National Council of Teachers of Mathematics, Denver, CO.

Smith, M.S. (February, 2013). *Tasks, Tools, and Talk: A Framework for Enacting the CCSS Mathematical Practices*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2013). *Supporting Instructional Improvement: How the 5 Practices Can Help?* Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S., Arbaugh, F., & \*Steele, M.D. (January, 2013). *What Teachers Need to Know and Be Able to Do to Engage Students in Reasoning and Proving*. Presentation at the Seventeenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

2012

Smith, M.S. (October, 2012). *Tasks, Tools, and Talk: A Framework for Enacting the CCSS Mathematical Practices*. Invited presentation at the North Carolina Council of Teachers of Mathematics Leadership Seminar, Greensboro, NC.

Smith, M.S. (October, 2012). *Creating Opportunities For Students to Engage in Reasoning and Proving: Modifying Existing Tasks*. Invited presentation at the North Carolina Council of Teachers of Mathematics annual meeting, Greensboro, NC.

Smith, M.S. (July, 2012). *Implementing Tasks that Promote Reasoning and Sense Making*. **Invited keynote** presentation at Infusing the Classroom with Reasoning and Sense Making: An NCTM Interactive Institute on High School Mathematics, Los Angeles, CA.

Smith, M.S., Arbaugh, F., \*Steele, M., \*Boyle, J., Fulkerson, W., °Knouk, N., & \*Vrabel, A. (April, 2012). *Developing Teachers' Capacity to Support Students' Reasoning and Proving*. Work session at the Research Presession held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Philadelphia, PA.

Smith, M.S. (April, 2012). *Research Frameworks and Findings: Tools for Investigating and Improving Practice*. **Invited plenary** presentation at the Research Presession held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Philadelphia, PA.

Cirillo, M., Ellis, A., Herbst, P., Smith, M., & Staples, M. (2012). *The Notion of Proof in Mathematics Teaching: Is it Changing?* Research Symposium at the Research Presession held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Philadelphia, PA.

Smith, M.S. (April, 2012). *Tasks, Tools, and Talk: A Framework for Supporting the Development of the Mathematical Practices*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Philadelphia, PA.

Smith, M.S. (February, 2012). *Lesson Planning: A Vehicle for Improving Instruction and Building Community*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2012). *Creating Opportunities for Students to Engage in Reasoning-and-Proving: Modifying Existing Tasks*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Arbaugh, F., Smith, M.S., & \*Steele, M.D. (February, 2012). *Developing Teachers' Pedagogical Practices for Reasoning-and-Proving: Learning to Modify Textbook Tasks*. Presentation at the Sixteenth Annual Conference of the Association of Mathematics Teacher Educators, Fort Worth, TX.

Smith, M.S. (February, 2012). *Supporting and Studying Teacher Learning About Reasoning-and-Proving*. Presentation at the Sixteenth Annual Conference of the Association of Mathematics Teacher Educators, Fort Worth, TX.

2011

Smith, M.S. (October, 2011). *Five Practices for Orchestrating Productive Discussions: A Model for Using and Advancing the Thinking of Students*. **Invited keynote** presentation at the Colorado Council of Teachers of Mathematics Annual Meeting, Denver, CO.

Smith, M.S. (October, 2011). *Orchestrating Productive Mathematical Discussions: A Model for Helping Teachers Move Beyond "Showing and Telling"*. Presentation at the Colorado Council of Teachers of Mathematics Annual Meeting, Denver, CO.

Smith, M.S. (August, 2011). *Cognitively Challenging Mathematical Tasks: Vehicles for Promoting Algebraic Reasoning*. **Invited keynote** presentation at Algebra Readiness for Every Student: An NCTM Interactive Institute for Grades 3-8, Baltimore, MD.

Smith, M.S. (July, 2011). *Implementing Tasks that Promote Reasoning and Sense Making*. **Invited keynote** presentation at Infusing the Classroom with Reasoning and Sense Making: An NCTM Interactive Institute on High School Mathematics, Orlando, FL.

Smith, M.S. (July, 2011). *Selecting, Sequencing, and Connecting Students Responses: Determine What and Who to Make Focal During a Discussion*. Concurrent session at the Carnegie Learning National Math Institute, Dallas, TX.

Smith, M.S. (July, 2011). *Orchestrating Productive Mathematical Discussions*. **Invited keynote** at the Carnegie Learning National Math Institute, Dallas, TX.

Smith, M.S. (April, 2011). *Orchestrating Productive Discussions: Helping Teachers Move Beyond "Showing and Telling"*. **Invited keynote** presentation at the annual meeting of the National Council of Supervisors of Mathematics, Indianapolis, IN.

Smith, M.S., \*Boyle, J., Greeno, J., \*Vrabel, A., & Gordon, E. (April, 2011). *Supporting and Studying Teacher Learning about Reasoning-and-Proving*. Work Session at the Research Presession held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Indianapolis, IN.

Stylianides, G., & Smith, M.S. (April, 2011). *The Use of Narrative Cases to Develop Teachers' Knowledge about Reasoning-and-Proving*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Indianapolis, IN.

Smith, M.S. (February, 2011). *Orchestrating Productive Discussions of Cognitively Challenging Tasks*. **Invited plenary** session at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2011). *Supporting the Development of Students' Capacity to Reason-and-Prove*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2011). *Developing Teachers' Understanding of Proof*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2011). *Orchestrating Productive Discussions of Student Responses: Helping Teachers Move Beyond "Showing and Telling"*. Invited presentation America's Choice National Conference, Atlanta, GA.

\*Hillen, A.F., Smith, M.S., & Arbaugh, F. (January 2011). *Tasks, Tools, and Talk: A Framework for Supporting Students' Capacity to Reason-and-Prove*. Presentation at the Fifteenth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

\*Steele, M., Smith, M.S., & \*Hillen, A.F. (January 2011). *Content-focused Methods Courses: Integrating Pedagogy and Mathematical Content*. Presentation at the Fifteenth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

## 2010

Smith, M.S. (October, 2010). *Orchestrating Productive Discussions of Cognitively Challenging Tasks*. **Invited keynote** at the Statewide Algebra III Forum, sponsored by the Santa Clara County Office of Education, San Jose, CA.

Smith, M.S. (October, 2010). Orchestrating Productive Mathematical Discussions. Invited presentation at the National Council of Teachers of Mathematics Regional Meeting, Denver, CO.

Smith, M.S., (August, 2010). A 'Task-Centric' Approach to Professional Development: Enhancing Mathematics Teachers' Ability to Implement Cognitively Challenging Mathematical Tasks. **Invited keynote** presentation at the Mid-Atlantic Center for Mathematics Teaching and Learning Graduate Student Research Conference, State College, PA.

Smith, M.S., Stein, M.K., Corenti, R., & Scherer, J. (April, 2010). *Measuring Discussions in Mathematics Classrooms*. Presentation at the Research Pre-session held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, San Diego, CA.

Smith, M.S. (April, 2010). *Exploring the Potential of Narrative Cases in Developing Teachers' Capacity to Reason and Prove*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, San Diego, CA.

Smith, M.S., & Stylianides, G. (January, 2010). *Redefining the Focus of High School Mathematics: Developing Teachers' Capacity to Reason and Prove*. Presentation at the Fourteenth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

## 2009

Smith, M.S. (November, 2009). *Developing Students' Capacity to Reason and Prove*. Invited session at the National Council of Teachers of Mathematics Regional Conference, Minneapolis, MN.

Smith, M.S. (October, 2009). *Developing the Capacity to Reason and Prove*. Invited session at the Virginia Council for Mathematics Supervision, Richmond, VA.

Smith, M.S. (July, 2009). *Orchestrating Productive Mathematical Discussions*. Invited presentation at the Annual Conference for the Advancement of Mathematics Teaching, Houston, TX.

\*Boston, M.D. & Smith, M.S. (April, 2009). *Are Mathematics Teachers' Instructional Improvements Sustained over Time?* Presentation at the Research Pre-session held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Washington, D.C.

Smith, M.S. & Arbaugh, F. (April, 2009). *Developing Teachers' Capacity to Engage Students in Reasoning and Proving Activities*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Washington, D.C.

Smith, M.S. (February, 2009). *Developing Teachers' Capacity to Reflect on and Learn from Teaching*. **Invited keynote** at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2009). *Learning to Ask Good Questions*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2009). *Designing Instruction: The Key to Effective Teaching*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2009). *Developing Teachers' Capacity to Reflect on and Learn from Teaching*. Invited presentation at the Thirteenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Arbaugh, F., Smith, M.S., & Steele, M.D. (February, 2009). *Cases of Reasoning and Proving: Materials for Secondary Mathematics Teachers*. Presentation at the Thirteenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Mumme, J., Carroll, C., Smith, M.S., Philips, E., & Lappan, G. (February, 2009). *Orchestrating Rich Mathematical Discussions with K-12 Students and Teachers: Can the Same Set of Practices Support Learning at Both Levels?* Presentation at the Thirteenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Smith, M.S., (January, 2009). *Transforming Secondary Mathematics Teaching: Making and Sustaining Changes in Instructional Practices Overtime*. Presentation to the Learning Sciences and Policy Group, University of Pittsburgh, Pittsburgh, PA.

2008

Smith, M.S., (2008, December). *Orchestrating Productive Mathematical Discussions*. Invited presentation at the Annual Meeting of the California Math Council (North) Meeting, Asilomar, CA.

Smith, M.S., (2008, October). *Rich Mathematical Tasks: The Cornerstone of Rigorous Instruction*. Invited session at the Virginia Council for Mathematics Supervision, Richmond, VA.

Smith, M.S. (2008, October). *Rich Mathematical Tasks: Vehicles for Promoting Thinking and Reasoning*. Invited session at the National Council of Teachers of Mathematics Regional Conference, Cleveland, OH.

Battista, M., Boest, T., Confrey, J., Lehrer, R., & Smith, M.S. (2008, April). *Four Frames for Conceptualizing Links between Research and Practice*. Panel discussion at the Research Presession held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT.

Chazan, D., Davis, B., Hiebert, J., Kirshner, D., Schifter, D., & Smith, M.S. (2008, April). *Knowledge-for-Teaching as Represented in a Lesson Plan*. Panel discussion at the Research Presession held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT.

Smith, M.S., \*Hillen, A.F., & \*Rupert, C. (2008, April). *Using Geometric Pattern Tasks to Develop Mathematical Understandings and Set Classroom Norms*. Presentation at the annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT.

Smith, M.S., & \*Boston, M.D., (2008, March). *Examining the Instructional Practices of Mathematics Teachers Over Time: Are Instructional Improvements Sustained?* Paper presented as part of a symposium, "The Enhancing Secondary Mathematics Teacher Preparation Project: Research on Mentor and Preservice Teachers' Instructional Change" at the annual meeting of the American Educational Research Association, New York, NY.

2007

Smith, M.S. (2007, October). *Challenging Mathematical Tasks: The Cornerstone of Equitable Instruction*. Presentation at the National Council of Teachers of Mathematics Regional Conference, Kansas City, MO.

Smith, M.S. (2007, April). *Focusing on Challenging Mathematical Tasks: A Strategy for Improving Teaching and Learning*. Invited presentation at the First Annual Conference of the Pennsylvania Association of Mathematics Teacher Educators, Shippensburg, PA.

\*Boston, M., & Smith, M.S. (2007, March). *Linking Professional Development to Changes in Teachers' Instructional Practices*. Presentation at the Research Presession held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Atlanta, GA.

Smith, M.S. (2007, March). *Orchestrating Productive Mathematical Discussions of Student Responses*. Presentation at the annual meeting of the National Council of Teachers of Mathematics, Atlanta, GA.

Smith, M.S., (2007, March). *Thinking through a lesson: Collaborative lesson planning as a vehicle for improving the quality of teaching*. **Invited keynote** presentation at the Los Angeles City Teachers of Mathematics Annual Meeting, Los Angeles, CA.

Smith, M.S., & \*Boston, M. (2007, March). *Selecting and Adapting Rich Mathematical Tasks*. Invited presentation at the Council of Presidential Awardees in Mathematics Leadership Seminar, Atlanta, GA.

Smith, M.S. (February, 2007). *Focusing on Challenging Mathematical Tasks: A Strategy for Improving Teaching and Learning*. **Invited keynote** presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2007). *Building Teachers Capacity to Create and Enact Tasks that Engage Students in Challenging Mathematical Activity*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2007). *Providing All Students with Access to High Quality Mathematics*

*Instruction: The Role of Tasks in Achieving Equity*. Invited presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S., & Engle, R.A. (2007, January). *Orchestrating Productive Mathematical Discussions of Student Responses: Helping Teachers Move Beyond "Showing and Telling"*. Presentation at the Eleventh Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

#### 2006

Smith, M.S., (2006, November). *What Leaders Can Do To Help Teachers Move Beyond 'Showing and Telling'*. Invited presentation at the 47<sup>th</sup> Annual Meeting of the California Math Council – South, Palm Springs, CA.

Smith, M.S. (2006, October). *Supporting Students' Understanding of Mathematical Ideas*. Invited presentation at Network Connections, Sponsored by the Allegheny Intermediate Unit 3, Pittsburgh, PA.

Smith, M.S. (February, 2006). *Orchestrating Productive Mathematical Discussions*. **Invited keynote** at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2006). *Selecting, Sequencing, and Connecting Students Responses: Critical Steps in Orchestrating Productive Discussions*. Invited session at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2006). *Thinking Through a Lesson: Lesson Planning as a Vehicle for Teacher Learning*. **Invited plenary** session at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S., \*Boston, M.B., \*Steele, M.D. (2006, January). *Focusing on Challenging Mathematical Tasks: A Strategy for Improving Teaching and Learning*. Presentation at the Tenth Annual Conference of the Association of Mathematics Teacher Educators, Tampa, Florida.

#### 2005

Franke, M. L., & Smith, M.S. (2005, April). *The Relationship Between Research and Practice in Mathematics Education: Mapping Out the terrain*. **Invited keynote** presentation at the Research Pre-session held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Anaheim, CA.

Stein, M.K., Remillard, J., & Smith, M.S., (2005, April). *How Curriculum Influences Student Learning*. Symposium at the Research Pre-session held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Anaheim, CA.

Smith, M.S. (2005, April). *Focusing on Challenging Mathematical Tasks: A Strategy for Improving Teaching and Learning*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Anaheim, CA.

°Hogel, M., & Smith, M.S. (2005, April). *Talking about Teaching: A Strategy for Engaging Teachers in Conversations about Their Practice*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Anaheim, CA.

Smith, M. S. (2005, February). *Supporting Students' Understanding of Proportionality – Part 2*. Invited presentation at Network Connections, Sponsored by the Allegheny Intermediate Unit 3, Pittsburgh, PA.

Smith, M.S. (February, 2005). *Learning Mathematics Through the Exploration and Analysis of Narrative Cases*. Invited session at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M. S., \*Hughes, E. K., & °Hogel, M. L. (2005, January). *Improving the Quality of the Student Teaching Experience: Making Mentor Teachers Part of the Equation*. Presentation at the Ninth Annual Conference of the Association of Mathematics Teacher Educators, Dallas, TX.

2004

Smith, M. S., (2004, October). *Supporting Students' Understanding of Proportionality – Part 1*. Invited presentation at Network Connections, Sponsored by the Allegheny Intermediate Unit 3, Pittsburgh, PA.

Smith, M.S., (2004, October). *Engaging Teachers and Students in Sustained Mathematics Learning: Lessons from Urban Schools*. Invited presentation at the annual meeting of the Michigan Council of Teachers of Mathematics, Detroit, MI.

Smith, M.S., (2004, October). *Thinking Through A Lesson: Collaborative Lesson Planning as a Means for Improving the Quality of Teaching*. Presentation at the annual meeting of the Michigan Council of Teachers of Mathematics, Detroit, MI.

Smith, M.S., (2004, September). *Supporting Students' Understanding of Mathematical Ideas*. Invited presentation at the annual meeting of the Colorado Council of Teachers of Mathematics, Denver, CO.

Smith, M.S., (2004, September). *Thinking Through A Lesson: Collaborative Lesson Planning as a Means for Improving the Quality of Teaching*. Presentation at the annual meeting of the Colorado Council of Teachers of Mathematics, Denver, CO.

Smith, M.S. (2004, May). *Using the Practice of Teaching as a Basis for the Professional Development of Teachers: Tasks that Promote Learning and Reflection*. **Invited keynote** presentation at the annual meeting of the Wisconsin Mathematics Council, Green Lake, WI.

\*Hughes, E.K., & Smith, M.S. (2004, April). *Thinking Through a Lesson: Lesson Planning as Evidence of and a Vehicle for Teacher Learning*. Poster presented as part of a symposium, "Developing a Knowledge Base for Teaching: Learning Content and Pedagogy in a Course on Patterns and Functions " at the annual meeting of the American Educational Research Association, San Diego, CA.

Smith, M.S., Leinhardt, G., & Silver (2004, April). *Cases as a Vehicle for Building Representational Flexibility*. Poster presented as part of a symposium, "Developing a Knowledge Base for Teaching: Learning Content and Pedagogy in a Course on Patterns and Functions " at the annual meeting of the American Educational Research Association, San Diego, CA.

Smith, M.S. (April, 2004). *Practice-Based Professional Development: Developing Knowledge Needed for Teaching by Investigating the Actual Work that Teachers Do*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Philadelphia, PA.

Smith, M.S. (February, 2004). *Practice-Based Professional Development for Teachers of Mathematics: An Overview and What We're Learning About Teacher Learning*. **Invited keynote** presentation at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S. (February, 2004). *Cases of Mathematics Instruction to Enhance Teaching*. Invited session at the Teachers Development Group Winter Leadership Seminar on Mathematics Professional Development, Portland, OR.

Smith, M.S., (2004, January). *Designing, Studying, and Enacting Opportunities for Teacher Learning*. Invited colloquium for the NSF-funded Center for Proficiency in Teaching Mathematics, Ann Arbor, MI.

Smith, M.S. & Bill, V. (2004, January). *Thinking through A lesson: Collaborative lesson planning as a means for improving the quality of teaching*. Presentation at the annual meeting of the Association of Mathematics Teacher Educators, San Diego, CA.

Seago, N., Branca, N., Elliott, R., Mumme, J., Romagnano, L., & Smith, M.S. (2004, January). *Adapting professional development materials for preservice*. Presentation at the annual meeting of the Association of Mathematics Teacher Educators, San Diego, CA.

2003

Smith, M.S., & Bill, V. (2003, December). *Rigorous Instruction in Mathematics*. Presentation at the SCALE Goal 3 IHE Conference sponsored by the Institute for Learning, Pittsburgh, PA.

Smith, M.S. & Bill, V. (2003, April). *Thinking through A lesson: Collaborative lesson planning as a means for improving the quality of teaching*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, San Antonio, TX.

Smith, M.S., Silver, E.A., Leinhardt, G., & \*Hillen, A.F. (2003, April). *Distinguishing Between Additive and Multiplicative Relationships: Tracing the Development of Teachers' Understanding of Proportionality In a Practice-Based Course*. Paper presented as part of a symposium, "Studying Teacher Learning from Cases and Other Practice-Based Materials" at the annual meeting of the American Educational Research Association, Chicago, IL.

Smith, M.S. & Silver, E.A., (2003, January). *Studying teacher learning from cases and other practice-based materials*. Invited presentation at the annual meeting of the Association of Mathematics Teacher Educators, Atlanta, GA.

## 2002

Smith, M.S., (2002, October). *Mathematical tasks as a framework for reflection*. Invited presentation for the Greater Cleveland Council of Teachers of Mathematics, Cleveland, OH.

Smith, M. S., & Simon, M. A. (2002, April). *An account of a preservice elementary mathematics teacher's developing practice*. Presentation at the annual meeting of the American Educational Research Association, New Orleans, LA.

Smith, M. S., & Silver, E. A. (2002, April). *Helping mathematics teachers redefine "success" for themselves and their students*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Las Vegas, NV.

Beal, S., Thompson, D., Watanabe, T., & Smith, M. S. (2002, February). *What makes professional development effective?* Panel discussion at the annual meeting of the Association of Mathematics Teacher Educators, San Antonio, TX.

## 2001

Stein, M. K., & Smith, M. S. (2001, August). *Studying the enactment of and teacher learning from cases and other practice-based materials*. Paper presented as part of a symposium "Developing teachers' pedagogical content knowledge and beliefs: Studies on building teaching expertise in mathematics" for the annual meeting of the European Association for Research on Learning and Instruction, Fribourg, Switzerland.

Smith, M. S., Stein, M. K., & Wilkinson, M. (2001, July). *Ratcheting up expectations and instruction*. Invited presentation at the annual QuEST conference of the American Federation of Teachers, Washington, DC.

Smith, M. S. (2001, April). *Practice-based professional development for teachers of mathematics*. Presentation at the annual meeting of the National Council of Teachers of Mathematics, Orlando, FL.

Schram, P., Allinger, G., & Smith, M. S. (2001, April). *Professional development is your business – But we're ready to help*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Orlando, FL.

Smith, M. S., & \*Boston, M. (2001, April). *Using the practice of teaching as a basis for professional development: What it means and why you would do it*. Presentation at the annual meeting of the National Council of Supervisors of Mathematics, Orlando, FL

Smith, M. S., Stein, M. K., Silver, E. A., \*Hillen, A., & \*Heffernan, C. (2001, April). *Toward a practice-based curriculum for teaching: Integrating narrative cases and other artifacts of practice within a course*

*for teachers of mathematics*. Symposium presented at the annual meeting of the American Educational Research Association, Seattle, WA.

Smith, M. S. (2001, January). *Developing teachers' capacity to reason proportionally: An innovative approach to preparing middle school mathematics teachers*. Presentation at the annual meeting of the Association of Mathematics Teacher Educators, Costa Mesa, CA.

#### **2000**

Smith, M. S., & Stein, M. K. (2000, October). *Providing students with opportunities to think and reason in mathematics classrooms*. Presentation at the national seminar of the Institute for Learning, Pittsburgh, PA.

Smith, M. S. (2000, August). *Professional development through written cases*. Invited work session conducted at the U.S./Japan Workshop on the Study of Teaching Practice as a Medium for Professional Development, sponsored by the Mathematical Sciences Education Board with funding from the National Science Foundation, Makuhari, Japan.

Smith, M. S. (2000, May). *Using cases as a basis for teacher professional development*. Presentation at the national seminar of the Institute for Learning, Kansas City, MO.

Smith, M. S. (2000, May). *The COMET project*. Presentation at the Show-Me Conference on Middle School Mathematics Teacher Preparation, Branson, MO.

Stein, M. K., Smith, M. S., & Silver, E. A. (2000, April). *Studying the enactment of case-based instruction*. Paper presented at the research pre-session held in conjunction with the annual meeting of the National Council of Teachers of Mathematics, Chicago, IL.

Smith, M. S., Stein, M. K., \*Heffernan, C., °Arbaugh, F., °Henningesen, M. A., Fennell, F., °McGraw, R., & Zawojewski, J. (2000, February). *Cases in mathematics teacher education: What do teachers learn from these experiences?* Work session conducted at the annual meeting of the Association of Mathematics Teacher Educators, Charlotte, NC.

#### **Advisory Board Membership (\*indicates current):**

\*Member, Board of Directors of Teachers Development Group (Linda Foreman, President, Portland, OR), 2009 – 2016.

\*Member, Advisory Board for the NSF-funded Mathematically Significant Pedagogical Opportunities to Build on Student Thinking (Keith Leatham, Brigham Young University, Director), 2013-2017.

\*Member, Advisory Board for the NSF-funded Marking Mathematical Reasoning Explicit (Libby Knott, Washington State University, Director), 2011-2015.

Member, Advisory Board for the NSF-funded Learning to Learn from Mathematics Teaching (Rossella Santagata, UC Irvine, Director), 2010-2014.

Member, Advisory Board for the NSF-funded Teaching Practices that Support Fraction-Based Algorithmic Thinking (Deborah Johanning, University of Toledo, Director), 2010-2014.

Member, Advisory Board for the NSF-funded CME Project Mathematical Practices Study (Al Cuoco, Educational Development Center, Director), 2010-2014.

Member, Advisory Board for the NSF-funded Dynamic Geometry in Classrooms (Gilberto Cuevas, University of Texas at Austin, Director), 2009-2014.

Member, Advisory Board for the NSF-funded Mathematics Discourse in Secondary Classrooms: A Case-Based Professional Development Curriculum (Beth Herbel-Eisemann, Michigan State University,

Director), 2009-2014.

Member, Advisory Board for the NSF-funded Learning Mathematics from Practice: Developing Professional Teaching Cases for Preservice Content Courses (Alison Castro and Phil Wagreich, University of Chicago, Co-Directors), 2009-2014.

Member, Advisory Board for the NSF-funded Mathematics Robust Learning of Rational Numbers Using Intelligent Tutoring Systems with Multiple Interactive Representations (Vincent Aleven, Carnegie Mellon University and Nikol Rummel, University of Freiburg, Co-Directors), 2009-2012.

Member, Advisory Board for the NSF-funded Development of a Research Agenda for Understanding the Influence of the Common Core State Standards in Mathematics (Iris Weiss, Horizon Research Director), 2010-2012.

Member, Advisory Board for the NSF-Funded Teaching Mathematical Knowledge for Teaching (K-8): Adapting Locally Developed Materials and Approaches for Use in Diverse Institutions and Settings (Hyman Bass, Laurie Sleep, Mark Thames, Kara Suzuka, and Deborah Ball, University of Michigan, Co-Directors), 2008 – 2011.

Member, Advisory Board for the NSF-funded The Training of Arithmetical Fluency Project (Julie Fiez and Christian Schunn, University of Pittsburgh, Co-Directors), 2008-2011.

Member, Advisory Board for the NSF-funded Research on Mathematics Leader Learning Project (Judy Mumme, WestEd, Director), 2006-2010.

Member, Advisory Board for the NSF-funded Urban Math Project (Despina Stylianou, City College, Director), 2005-2009.

Member, Board of Directors of ASSET -- Achieving Student Success Through Excellence in Teaching (Reeny Davison, Executive Director, Pittsburgh, PA), 2005-2009.

Co-chair, Advisory Board for the NSF-funded Center for Proficiency in Teaching Mathematics, (Deborah Ball, University of Michigan, Jeremy Kilpatrick & Pat Wilson, University of Georgia, Co-Directors), 2003-2008.

### ***Activities in Professional Organizations:***

First Editor of *Mathematics Teacher Educator*, a joint publication of the Association of Mathematics Teacher Educators and The National Council of Teachers of Mathematics (2011-2015)

#### Association of Mathematics Teacher Educators

Member of the Research Task Force (2008-2011); Chair (2010-2011)  
 Chair of the Nomination and Elections Committee (2007)  
 Co-Editor of the Fourth Monograph (2006-2007)  
 Co-Chair of Teaching Resources Task Force (2005-2007)  
 Elected Member of the Board of Directors (2001-2003; 2003-2005)

#### National Council of Supervisors of Mathematics

Proposal Review Committee (2010 Annual Meeting)  
 Member of the Nominations Committee (2009-10)

#### National Council of Teachers of Mathematics

Chair of the *Principles to Actions Teaching and Learning Working Group* (2014-2015)  
 Member of Writing Team for *Principles to Action* (2012-2014)  
 Elected Member of the Board of Directors (2006-2009)  
 Board Liaison to the Research Committee (2006-2009)

Co-Leader for working group on teaching at the Research Agenda Conference (2008)  
 Board Liaison to the Professional Development Continuum Task Force (2007-2008)  
 Member of the Professional Development Services Committee (2003-2005)

Pennsylvania Council of Teachers of Mathematics  
 Board of Directors (1999 – 2006)  
 Co-Editor for the Yearbook (1999-2006)

***Service to Department, School, and University (\*indicates current):***

*Mentor for Junior Tenure-Track Faculty	DIL	2011-
*Promotion and Tenure Committee (chair 2013-14; 14-15)	SOE	2003-2006; 2010-2013; 2013-2016
*Search Committee for Science Education	DIL	2014-2015
*Teacher Education Steering Committee	DIL	2014-2015
Search Committee for Measurement (co-chair w/Lane)	SOE/LRDC	2013-2014
EdD Admissions Committee	SOE	2013-2014
Committee to Develop School-wide PhD	SOE	2012-2013
Executive Committee	DIL	2009-2011; 2011-2013
Committee to Redesign Secondary MAT Program	DIL	2012
Search Committee for Research Scientist	LRDC	2011-2012
Search Committee for Helen Faison Chair	SOE	2011-2012
Search Committee for Mathematics Education (chair)	SOE	2009-2010
Academic Affairs (co-chair 2009-2010)	SOE	2007-2010
Design Team for Redesign of 5 <sup>th</sup> year Program	DIL	2008-2009
Strategic Planning Committee	LRDC	2008-2009
Advisory Council on Instructional Excellence	University	2006-2009
Best Practices Committee	University	2006-2009
Executive Committee	LRDC	2007-2009
Design Team for Principal Preparation Initiative	SOE	2007-2008
Design Team for Learning Sciences and Policy	SOE	2006-2007
Student/Faculty Research Committee (co-chair 2002-03)	SOE	2000-2003
Qualitative Methods Task Force	SOE	2001-2002
Doctoral Studies Committee	DIL	2000-2002
Search Committee for Science Education	DIL	2000-2001
Search Committee for Elementary Social Studies	DIL	1999-2000