

Peter Holt Wilson

360 S. Elm Street
Apartment 303
Greensboro, NC 27401
919.820.4473
phwilson@uncg.edu

Department of Teacher Education & Higher Education
The University of North Carolina at Greensboro
Curry Building Room 343, PO Box 26170
Greensboro, NC 27402
336.334.4669

ACADEMIC BACKGROUND

- Doctor of Philosophy in Mathematics Education 2009
North Carolina State University, Raleigh, NC
Dissertation Title: Teachers' Uses of a Learning Trajectory for Equipartitioning
Under the direction of Dr. Jere Confrey
- Curriculum Specialist Licensure 2005
East Carolina University, Greenville, NC
- Master of Arts in Education, Secondary Mathematics 2003
East Carolina University, Greenville, NC
- Bachelor of Science in Mathematics, Summa Cum Laude 2000
East Carolina University, Greenville, NC

PROFESSIONAL EXPERIENCE

College / University

- Assistant Professor of Mathematics Education 2010 – current
University of North Carolina at Greensboro
- Post Doctoral Research Associate 2009 – current
The Friday Institute for Educational Innovation, North Carolina State University
- Graduate Research Assistant 2005- 2009
The Friday Institute for Educational Innovation, North Carolina State University
- Adjunct Instructor, Johnston Community College, Fall, 2007
Smithfield, NC, College Algebra Instructor
- Adjunct Faculty, East Carolina University, Greenville, NC Spring, 2006
Supervising Student Teachers

K-12 & Other

- Consultant, Key Curriculum Press 2007 – current
Geometer's Sketchpad, Fathom, & Tinkerplots Training
- Mathematics Teacher 2000 – 2005
Johnston County Schools, NC
- Testing Data Manager, 2000 - 2002
Johnston County Schools, NC

SCHOLARSHIP

Articles, Books, & Chapters

- Lee, H. S., Hollebrands, K., & Wilson, P.H. (2010). *Preparing to teach mathematics with technology: An integrated approach*. Dubuque, IA: Kendall Hunt.
- Wilson, P.H., Mojica, G.F., & Berenson, S.B. (2010). Supporting students' development of functions using nonstandard, dynamic representations. *Meridian: A Kindergarten through High School Information and Computing Technologies Journal*, 13(1).
- Wilson, P.H. (in press). Professional development for learning trajectories in mathematics. In J. Confrey and A. Maloney (Eds.), *Learning Over Time: Learning Trajectories in Mathematics Education*. Charlotte, NC: Information Age Publishing.
- Wilson, P.H., Lee, H.S., & Hollebrands, K.F. (in press). Understanding prospective mathematics teachers' processes for making sense of students' work with technology. [*Journal for Research in Mathematics Education*].
- Wilson, P.H., Lee, H.S., & Hollebrands, K.F. (in press). An alternative development of measures of center and spread using dynamic statistics software. *The Centroid*, 36(2).

Referred Proceedings and Papers

- Wilson, P. H. (under review). Learning trajectories as instructional guides. Paper presented at the Annual Meeting of the American Education Research Association, New Orleans, LA.
- Sztajn, P., Confrey, J., Wilson, P.H., & Edgington, C. (under review). Using a professional development environment to examine teacher learning of the Equipartitioning Learning Trajectory. Paper presented at the Annual Meeting of the American Education Research Association, New Orleans, LA.
- Nguyen, K.H., Wilson, P.H., Edgington, C.W., Pescosolido, R., Confrey, J., & Maloney, A. (2010, October, accepted). Communicating learning trajectories to different stakeholders: Benefits of three contrasting representations. *Proceedings of the 32nd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*.
- Wilson, P.H. & Mojica, G. (2010). Learning trajectories in teacher development. Paper presented at the Annual Meeting of the American Education Research Association, Denver, CO.
- Confrey, J., Maloney, A., Wilson, P.H., & Nguyen, K. (2010). Understanding over time: The cognitive underpinnings of learning trajectories. Paper presented at the Annual Meeting of the American Education Research Association, Denver, CO.
- Wilson, P.H., Wiebe, E.N., Berenson, S.B., & Mojica, G.M. (2007). Innovative data collection technologies for design experiments. In Lamberg, T., & Wiest, L. R. (Eds.), *Proceedings of the 29th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 614 – 616), Stateline (Lake Tahoe), NV: University of Nevada, Reno.
- Berenson, S, Wilson, P.H., Mojica, G., Lamburtus, A., & Smith, R. (2007). Towards a theory to link mathematical tasks to student understanding. In Lamberg, T., & Wiest, L. R. (Eds.), *Proceedings of the 29th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 205 – 208), Stateline (Lake Tahoe), NV: University of Nevada, Reno.
- Hollebrands, K.F., Lee, H.S., & Wilson, P.H. (2007). Prospective teachers' use of a videocase to examine students' work when solving mathematical tasks using technology. In Lamberg, T., & Wiest, L. R. (Eds.), *Proceedings of the 29th annual meeting of the North American*

- Chapter of the International Group for the Psychology of Mathematics Education* (pp. 968-974), Stateline (Lake Tahoe), NV: University of Nevada, Reno.
- Mojica, G.M., Lambertus, A.J., Berenson, S.B., & Wilson, P.H. (2007). Representations as a means for mathematical communication. In Lamberg, T., & Wiest, L. R. (Eds.), *Proceedings of the 29th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 213), Stateline (Lake Tahoe), NV: University of Nevada, Reno.
- Russell, K. Wilson, P.H., Berenson, S.B., & Lambertus, A.J. (2007). Beginning algebra students' notions of change. In Lamberg, T., & Wiest, L. R. (Eds.), *Proceedings of the 29th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 209), Stateline (Lake Tahoe), NV: University of Nevada, Reno.
- Wilson, P. H. & Stein, C.C. (2007). Growth of understanding in pattern finding. Proceedings of the Ninth International Conference of the Mathematics into the Twenty-first Century Conference, Charlotte, NC.
- Lee, H.S., Hollebrands, K.F, & Wilson, P.H. (2007). The use of research-based methods and materials for preparing to teach mathematics with technology. *Proceedings of the Ninth International Conference of the Mathematics into the Twenty-first Century Conference*, Charlotte, NC.
- Wilson, P.H., Mojica, G.M, & Slaten, K.M. (2006). High school course pathways of high achieving girls. In J. Novotná (Ed.), *Proceedings of the Thirtieth Annual Meeting of the Psychology of Mathematics Education*, Prague, Czech Republic.
- Droujkova, M., Mojica, G.M, Wilson, P.H., & Slaten, K.M. (2006). "The Most Normal Path": High achieving girls choosing mathematics courses. In J. Novotná (Ed.), *Proceedings of the Thirtieth Annual Meeting of the Psychology of Mathematics Education*, Prague, Czech Republic.

Manuscripts Under Review & In Preparation

- Confrey, J., Maloney, A., Wilson, P.H., & Nguyen, K. (under review). Understanding over time: The cognitive underpinnings of learning trajectories. [*Journal for Research in Mathematics Education*]
- Confrey, J., Maloney, A., Nguyen, K., Wilson, P.H., Mojica, G., Myers, M., and Pescosolido, R. (under review). A learning trajectory for equipartitioning/splitting. [*Information Age Publishing*]
- Wilson, P.H., Edgington, C., Nguyen, K.H., Pescosolido, R., & Confrey, J. (under review). A learning trajectory for equipartitioning: Partitive division, ratio, and fractions. [*Mathematics Teaching in the Middle School*]
- Wilson, P.H. (in preparation). Professional development in learning trajectories. In J.Confrey and A. Maloney (Eds.), *Learning Trajectories Conference Book*.
- Wilson, P.H, & Mojica, G.M., & Confrey, J. (in preparation). Learning trajectories in teacher development. [*Journal of Mathematics Teacher Education*]
- Wilson, P.H., Myers, M., Edgington, C., & Confrey, J. (in preparation). A learning trajectory for equipartitioning: Fair sharing and the foundations of rational number reasoning. [*Teaching Children Mathematics*]
- Mojica, G.M., Wilson, P.H., & Confrey, J. (in preparation). Teachers' knowledge of equipartitioning. [*Journal of Mathematical Behavior*]

- Wilson, P.H. (in preparation). Learning trajectories in the classroom: Coordinating theory, observations, and practice. [*Journal for Research in Mathematics Education*]
- Wilson, P.H. & Confrey, J. (in preparation). Formative assessment informed by learning trajectories. [*Mathematical Thinking and Learning*]
- Wilson, P.H. & McCammon, W.L. (in preparation). Using videos and blogs to promote a focus on students' thinking. [*Contemporary Issues in Technology and Teacher Education*]
- Wilson, P.H. (in preparation). Conceptualizing research on teacher learning about student thinking. Unpublished paper.

PRESENTATIONS

International / National

- Wilson, P. H. (under review). Learning trajectories as instructional guides. Paper presented at the Annual Meeting of the American Education Research Association, New Orleans, LA.
- Sztajn, P., Confrey, J., Wilson, P.H., & Edgington, C. (under review). Using a professional development environment to examine teacher learning of the Equipartitioning Learning Trajectory. Paper presented at the Annual Meeting of the American Education Research Association, New Orleans, LA.
- Wilson, P.H. (2011, January, accepted). Learning trajectories in practice. Presentation at the annual meeting of the Association of Mathematics Teacher Educators, Irvine, CA.
- Wilson, P.H. & Mojica, G. (2010, May). Learning trajectories in teacher development. Paper presented at the annual meeting of the American Education Research Association, Denver, CO.
- Confrey, J., Maloney, A., Wilson, P.H., & Nguyen, K. (2010, May). Understanding over time: The cognitive underpinnings of learning trajectories. Paper presented at the Annual Meeting of the American Education Research Association, Denver, CO.
- Mojica, G. & Wilson, P.H. (2010, January). Elementary teachers' uses of a learning trajectory. Presentation at the annual meeting of the Association of Mathematics Teacher Educators, Irvine, CA.
- Confrey, J., Mojica, G., & Wilson, P.H. (2009, March). A learning trajectory for equipartitioning. Presentation at the Research Pre-session of the National Council of Teachers of Mathematics, Washington, DC.
- Confrey, J., Maloney, A., Nguyen, K., Wilson, P.H., & Mojica, G. (2008, April). Synthesizing research on rational number reasoning. Working Session at the Research Pre-session of the National Council of Teachers of Mathematics, Salt Lake City, UT.
- Wilson, P.H., Wiebe, E.N., Berenson, S.B., & Mojica, G.M. (2007, October). Innovative data collection technologies for design experiments. Presentation at the Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Lake Tahoe, NV.
- Berenson, S., Wilson, P.H., Mojica, G., Lamburtus, A., & Smith, R. (2007, October). Towards a theory to link mathematical tasks to student understanding. Presentation at the Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Lake Tahoe, NV.
- Hollebrands, K.F., Lee, H.S., & Wilson, P.H. (2007, October). Prospective teachers' use of a videocase to examine students' work when solving mathematical tasks using technology. Presentation at the Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Lake Tahoe, NV.

- Mojica, G.M., Lambertus, A.J., Berenson, S.B., & Wilson, P.H. (2007, October). Using representations for generalizations. Presentation at the Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Lake Tahoe, NV.
- Russell, K. Wilson, P.H., Berenson, S.B., & Lambertus, A.J. (2007, October). Beginning algebra students' notions of change. Poster presentation at the Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Lake Tahoe, NV.
- Wilson, P. H. & Stein, C.C. (2007, September). Growth of understanding in pattern finding. Paper presented at the Ninth International Conference of the Mathematics into the Twenty-first Century Conference, Charlotte, NC.
- Lee, H.S., Hollebrands, K.F, & Wilson, P.H. (2007, September). The use of research-based methods and materials for preparing to teach mathematics with technology. Paper presented at the Ninth International Conference of the Mathematics into the Twenty-first Century Conference, Charlotte, NC.
- Lee, H. S. (Chair), Alston, A., Gallmon, R., Hollebrands, K. F, Lui, Y., Maher, C., Mojica, G. M., Pedrick, L., M. & Wilson, P.H. (2007, March). Learning to Teach Probability with a Simulation Approach: Focus on Teachers. Research symposium and papers presented at the Research Pre-session of the National Council of Teachers of Mathematics, Atlanta, GA.
- Wilson, P.H., Lee, H. S., & Hollebrands, K.F. (2007, March). Integrating content, pedagogy, and technology: Teacher education materials. Poster presented at the Research Pre-session of the National Council of Teachers of Mathematics, Atlanta, GA.
- Wilson, P.H., Hollebrands, K.F., Lee, H.S. (2007, January). Preparing to teach mathematics with technology: Prospective teachers' interpretations of students' mathematical thinking. Paper presented at the annual meeting of the Association of Mathematics Teacher Educators, Irvine, CA.
- Wilson, P. H., & Hollebrands, K. F. (2006, January). Preparing to teach mathematics with technology: An integrated approach. Poster session presented at the annual meeting of the Association of Mathematics Teacher Educators, Tampa, FL.

State / Regional

- Wilson, P.H. & Mojica, G. (2010, October, accepted). Using Digital Video in Instruction and Assessment . Presentation at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC
- McGalliard, W. & Wilson, P.H. (2010, October, accepted). Using *Tinkerplots* to Enhance Data Analysis. Presentation at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Wilson, P.H. & Mojica, G. (2010, February). Supporting statistical investigations with *Tinkerplots*. Meeting of the Eastern Region of the North Carolina Council of Teachers of Mathematics.
- Mojica, G. & Wilson, P.H. (2010, February). Data and probability in the middle grades. Meeting of the Eastern Region of the North Carolina Council of Teachers of Mathematics.

- Wilson, P.H. & Mojica, G. (2009, October). Using *Tinkerplots* to support statistical investigations. Working session presented at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Wilson, P.H., Myers, M., & Mojica, G.M. (2008, October). Reasoning about fair shares. Meeting of the North Carolina Association of Mathematics Teacher Educators, Greensboro, NC.
- Wilson, P.H. & Mojica, G.M. (2008, October). Statistical inference informally. Meeting of the North Carolina Association of Mathematics Teacher Educators, Greensboro, NC.
- Wilson, P.H. & Lee, H.S. (2007, October). From univariate to bivariate analysis with Fathom. Presentation at the National Council of Teachers of Mathematics Regional Conference, Kansas City, MO.
- Stein, C. & Wilson, P.H. (2007, October). Growth of understanding in patterns: Findings from research. Presentation at the North Carolina Council of Teachers of Mathematics Regional Conference, Greensboro, NC.
- Lee, H.S., Hollebrands, K.F., & Wilson, P.H. (2007, April). Preparing to teach mathematics with technology: Research-based materials. Poster presented at the Meeting of the North Carolina Association of Mathematics Teacher Educators, Greensboro, NC.
- Berenson, S.B., Lambertus, A.J., Mojica, G.M., & Wilson, P.H. (2007, February). Young women in STEM careers—9 years of research. Poster presentation at Transforming Higher Education: Building a Women’s Agenda Symposium at North Carolina State University, Raleigh, NC.
- Wilson, P. H., Hollebrands, K. F., & Lee, H. S. (2006, October). From univariate to bivariate analysis with Fathom. Presentation at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Barnes, P.A., & Wilson, P.H. (2006, October). Ideas for Java Sketchpad. Presentation at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Lee, H. S., Hollebrands, K. F., Wilson, P. H. (2006, October). PTMT: An integrated approach. Presentation at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Wilson, P. H. & Dowd, K.F. (2004, February). Sequences and series with manipulatives and technology in Algebra I through Precalculus. Presentation at the North Carolina Council of Teachers of Mathematics Eastern Regional Conference, Raleigh, NC.
- Wilson, P.H. (2003, Fall). Using Fathom in algebra. Invited presentation to the Student Gamma Chapter of North Carolina Councils of Teachers of Mathematics at East Carolina University, Greenville, NC.
- Wilson, P.H. (2003, March). Sketchpad? This is an algebra class! Poster Session at the North Carolina Council of Teacher of Mathematics Eastern Regional Conference at the North Carolina Council of Teachers of Mathematics Eastern Regional Conference, Greenville, NC.

K-12 Professional Development

- Hendrix, T. & Wilson, P.H. (2009, Summer). Patterns of Growth and Algebraic Change. Meredith Mathematics and Science Institute. Raleigh, NC.
- Wilson, P.H. (2008, Fall). Early Rational Number Reasoning. Professional development for K-2 teachers. Buncombe County Schools, Asheville, NC.

- Wilson, P.H. (2008, August). Geometer's Sketchpad. Workshop for high school mathematics and science teachers. Nash-Rocky Mount Public Schools, Rocky Mount, NC.
- Wilson, P.H. (2003, February). Using Sketchpad in geometry and algebra. Workshop for high school mathematics teachers. Johnston County Schools, Smithfield, NC.
- Wilson, P.H. (2002, September). Using the TI-83 in Algebra I. Workshop for high school mathematics teachers. Johnston County Schools, Smithfield, NC.
- Wilson, P.H. (2001, November). Eighth grade Algebra I & the TI-83. Workshop for middle grades mathematics teachers. Johnston County Schools, Smithfield, NC.
- Wilson, P.H. (2001, August). Teaching with technology: The TI-83 and Algebra I. Workshop for middle grades mathematics teachers. Johnston County Schools, Smithfield, NC.

Other Professional Development

- Mojica, G.M. & Wilson, P.H. (2007, August). Qualitative research methods. Workshop for Students and Technology in Academia, Research, and Service (STARS, computer science faculty, graduate, and undergraduate students), University of North Carolina at Charlotte, Charlotte, NC.

GRANT ACTIVITY

Building a Conceptual Model for Learning Trajectory-based Instruction, National Science Foundation DRL# 1008364 (Principal Investigator for UNCG). The goal of this study is to develop a conceptual model for the ways in which teachers use their own knowledge of a learning trajectory to organize their instructional practice and participate in their professional communities. Principal Investigator: Paola Sztajn, North Carolina State University. August 15, 2010 – August 14, 2013. \$1,400,000 total; \$67,912 for UNCG.

OTHER PROFESSIONAL ACTIVITIES & SERVICE

Advisory Board Member	2010 - current
Diagnostic e-Learning Trajectories Approach (DRL-0758151)	
Reviewer	
<i>The High School Journal</i>	2010 – current
<i>AMTE</i>	2009 - current
<i>Centroid</i>	2008 – current
<i>ICMI / IASE Joint Study</i>	2007
<i>NCTM Research Pre-session</i>	2007
<i>PME-NA</i>	2007
Content Co-Editor	2007-2008
<i>Meridian: A Middle School Computer Technologies Journal</i>	
Editorial Board	2006 - current
<i>Meridian: A Middle School Computer Technologies Journal</i>	
Invited Guest Lecturer, University of North Carolina at Greensboro	Fall, 2006
Elementary Mathematics Methods Course for Data Analysis	
Panel Member for Graduate Students' Capstone Projects	Spring, 2004
East Carolina University	

AWARDS & HONORS

North Carolina Council of Teachers of Mathematics Eastern Regional Vice President / Secondary	2007 - 2009
Flame for Learning Award, Johnston County Schools Finalist, Teacher of the Year	2005
Outstanding First Year Teacher Award, Smithfield-Selma High	2001
Outstanding Mathematics Senior Mathematics Education Scholarship Award, East Carolina University.	2000
Semi-finalist, East Carolina University University Award	2000

CERTIFICATION / LICENSURE

North Carolina D 9-12 Mathematics, Curriculum Specialist Level I	Expires 2014
National Board of Professional Teaching Standards Certification Adolescent/Young Adult Mathematics	2004 - 2014

PROFESSIONAL ORGANIZATIONS

American Educational Research Association	2008 - current
Psychology of Mathematics Education – North America	2007 – current
Association of Mathematics Teacher Educators	2005 – current
National Council of Teachers of Mathematics	2002 – current
North Carolina Council of Teachers of Mathematics	1998 – current

REFERENCES

Dr. Jere Confrey, Joseph D. Moore Distinguished Professor
Mathematics, Science, and Technology Education
North Carolina State University
The Friday Institute for Educational Innovation
1890 Main Campus Drive, Raleigh, NC 27606
jere_confrey@ncsu.edu

Dr. Sarah Berenson, Yopp Distinguished Professor of Mathematics Education
Department of Teacher Education and Higher Education
University of North Carolina at Greensboro
301 A Curry Building,
Greensboro, NC 27402
sbberebs@uncg.edu

Dr. Paola Sztajn, Professor of Mathematics Education
Department of Elementary Education
North Carolina State University
Campus Box 7801
Raleigh, NC 27695
Paola_sztajn@ncsu.edu