

**VITA**  
**JENNIFER ANNE WILHELM**

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Curriculum & Instruction  
College of Education  
101B Taylor Education Building  
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University of Kentucky  
Partnership Institute for Mathematics and  
Science Education Reform (PIMSER)

**Academic Degrees and Preparation**

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University of Texas at Austin Austin, Texas	Math/Science Education Secondary Mathematics	Ph.D. 2002 Teaching Certificate 1998
Michigan State University Argonne National Laboratory	Physics Student Researcher/Raman Spectroscopy	M.S. 1991 1987-1988
Bowling Green State University	Major: Physics, Minor: Mathematics	B.S. 1988

**Professional Experience**

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2009 – present	University of Kentucky	Associate Professor, Tenured
2008 – 2009	Texas Tech University, Lubbock, Texas	Associate Professor, Tenured
2007 – 2009	Texas Tech University, Lubbock, Texas	Science & Mathematics Program Coordinator
2002 – 2008	Texas Tech University, Lubbock, Texas	Assistant Professor
1998 – 2002	University of Texas, Austin, Texas	Graduate Research Assistant
1997 – 1998	Travis High School, Austin, Texas	Physics/Calculus Teacher
1997 – 1998	Austin Community College, Austin, Texas	Physics Instructor
1992 – 1996	Lansing Community College, Lansing, Michigan	Physics Instructor

**Honors and Awards**

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- Recipient of Texas Tech University President's Academic Achievement Award (2009)
- Recipient of Texas Tech Ex-Student Association Alumni New Faculty Award (Texas Tech College of Education and Texas Tech University, 2006)

- Who's Who in America (2008)
- Nominated for the Hemphill-Wells New Professor Excellence in Teaching Award (2005)
- Nominated for the Barnie E. Rushing, Jr. Faculty Distinguished Research Award (2007 and 2008)
- Nominated for Chancellor's Council Distinguished Research Award (2008)

## **Scholarship**

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### **Funded Research**

**\$3,000,000 – Wilhelm, J. (PI)**, Aguirre-Munoz, Z., Casadonte, D., Dwyer, J., Baker, M., McGinley, M., and Lamp, D. (2008-2009). *Middle School Math and Science (MS)<sup>2</sup>: Understanding by Design*. Greater Texas Foundation.

**\$2,723,642 – Casadonte, D. (PI), Wilhelm, J., Dwyer, J., Baker, M., and Perry, K. (2008-2009).** *NSF GK-12 Building Bridges: Integrating Mathematics, Science, and Engineering Education on the South Plains*. National Science Foundation.

**\$44,001 – Wilhelm, J. (PI)** and Wilhelm, R. (2006-2008), *Cratering Analysis for REAL: Investigating Craters in the Solar System*. NASA – IDEAS AWARD.

**\$1,400 – Wilhelm, J. (PI)** and Wilhelm, R. (2005). *Bridging Mathematical and Scientific Understandings using a Lunar Context*. College of Education Research Award.

**\$25,000 – McMillan, S. and Wilhelm, J. (2003-2005).** *Moon Journals: Students Forging New Mathematical and Literacy Identities*. Co-Principal Investigator of an AERA/IES Research Award.

**\$2,000 – Wilhelm, J. (PI)** and McMillan, S. (2003). *Interdisciplinary Projects and Narratives: Building Diverse Pathways to Success*. College of Education Research Award.

**\$4,310 – Wilhelm, J. and McMillan, S. (2002).** *Moon Studies and Other Environmental Investigations: Students Forging New Literacy and Mathematical Identities*. Faculty Course Release Texas Tech University.

### **Publications**

**Wilhelm, J. (2009).** Gender differences in lunar-related scientific and mathematical understandings. *International Journal of Science Education*, 31(15), p. 2105-2122.

**Wilhelm, J. (2009).** A case study of three children's original interpretations of the moon's changing appearance. *School Science and Mathematics*, 109(5), p. 258-273.

Sherrod, S. and **Wilhelm, J. (2009).** A study of how classroom dialogue facilitates the development of geometric spatial concepts related to understanding the cause of moon phases. *International Journal of Science Education*, 31(7), p. 873-894.

- Wilhelm, J., Clem, D., and She, X. (2009).** Graduate fellows and secondary teachers participate as learners in interdisciplinary institutes and classroom experiences. *Conference Proceedings of the annual meeting of the National Association of Research in Science Teaching* (NARST – Garden Grove, CA).
- She, X., **Wilhelm, J.**, and Clem, D. (2009). A summer institute as a tool to facilitate NSF GK-12 program preparation. *Conference Proceedings of the annual meeting of the National Association of Research in Science Teaching* (NARST – Garden Grove, CA).
- Clem, D., She, X., and **Wilhelm, J. (2009).** Experiencing integration: Changes in one NSF GK-12 “Building Bridges” cohort. *Conference Proceedings of the annual meeting of the National Association of Research in Science Teaching* (NARST – Garden Grove, CA).
- Ganesh, B., **Wilhelm, J.**, and Sherrod, S. (2009). The development of a tool for assessment of geometric spatial visualization concepts. *School Science and Mathematics*. 109(8), p. 461-472.
- Wilhelm, J.**, Sherrod, S., and Walters, K. (2008). Experiencing project-based learning environments: Challenging pre-service teachers to act in the moment. *The Journal of Educational Research*, 101(4), p. 220-233.
- Wilhelm, J.**, Thacker, B., and Wilhelm, R. (2007). Creating Constructivist Physics for Introductory University Classes. *Electronic Journal of Science Education*, 11(2), p. 19-37. [http://ejse.southwestern.edu/volumes/v11n2/articles/art02\\_wilhelm.pdf](http://ejse.southwestern.edu/volumes/v11n2/articles/art02_wilhelm.pdf)
- Wilhelm, J.**, Smith, W., Walters, K., Sherrod, S., and Mulholland, J. (2007). Engaging pre-service teachers in multinational, multi-campus scientific and mathematical inquiry. *International Journal of Science and Mathematics Education*.(6), p. 131-162. <http://www.springerlink.com/content/l436m526208333w3/>
- McMillan, S. and **Wilhelm, J. (2007).** Students’ stories: Adolescents constructing multiple literacies through nature journaling. *Journal of Adult and Adolescent Literacy*, 50(5), p. 370-377.
- Dwyer, J., Duke, B., Moskal, B., and **Wilhelm, J. (2007).** Complex Variables in Secondary School. *Mathematics Teaching Incorporating Micromath 201*, (March, 2007), p. 32-34.
- Wilhelm, J.** and Walters, K. (2007). Creating interdisciplinary lunar liaisons. *The Hoosier Science Teacher*, 32(4), p. 143-148.
- Duke, B., Dwyer, J., **Wilhelm, J.**, and Moskal, B. (2007). Complex variables in junior high school: the role and potential impact of an outreach mathematician. *Teaching Mathematics and its Applications*; doi:10.1093/teamat/hrm019; <http://teamat.oxfordjournals.org/papbyrecent.dtl>
- Box, C. and **Wilhelm, J. (2007).** One teacher’s voice as she enacts project-based instruction with middle school students for the first time. *Conference Proceedings of the annual meeting of the National Association of Research in Science Teaching* (NARST – New Orleans, Louisiana).

- Wilhelm, J., Sherrod, S., and Walters, K. (2007).** Pre-service teachers experience an interdisciplinary project-based learning environment. *Conference Proceedings of the annual meeting of the National Association of Research in Science Teaching (NARST – New Orleans, Louisiana).*
- Wilhelm, J., and Sherrod, S. (2007).** Gender differences in lunar-related science and mathematics domains. *Conference Proceedings of the annual meeting of the National Association of Research in Science Teaching (NARST – New Orleans, Louisiana).*
- Wilhelm, J. and Walters, K. (2006)** Pre-service mathematics teachers become full participants in inquiry investigations, *International Journal of Mathematical Education in Science and Technology*, 37(7), p. 793-804.
- Wilhelm, J., McMillan, S., Walters, K. and Lovering, E. (March, 2006).** Phasing in lunar observations. *Science Scope*, p. 64-66.
- Wilhelm, J. and Walters, K. (2006).** Assessing students' understanding of the moon's phases through interdisciplinary inquiry. *Conference Proceedings of the annual meeting of the National Association of Research in Science Teaching (NARST – San Francisco, CA).*
- Wilhelm, J. and Confrey, J. (2005).** Designing project-enhanced environments: Students investigate waves and sound. *The Science Teacher*, 72(9): 42-45.
- Castro-Filho, J., **Wilhelm, J.,** and Confrey, J. (May, 2005). Understanding rate of change using motion detectors: One teacher's voice, perspective, and growth. *International Journal for Mathematics Teaching and Learning*.  
<http://www.cimt.plymouth.ac.uk/journal/default.htm>
- Wilhelm, R. and **Wilhelm, J. (March, 2004).** Water and life on mars: Exploring the possibilities through an Astronomy Laboratory. *Journal of College Science Teaching*. (p. 31-44).
- Wilhelm, J. and McMillan, S. (2004).** Moon investigations: Students forging new literacy and scientific-mathematical identities. *Electronic Journal of Literacy through Science*.  
[http://www.sjsu.edu/elementaryed/ejlt/archives/language\\_development/wilhelm\\_mcmillan.pdf](http://www.sjsu.edu/elementaryed/ejlt/archives/language_development/wilhelm_mcmillan.pdf)
- Berg, J., Holtz, M., Yu, S., Bunuan, R., **Wilhelm, J.,** Dallas, T., Gale, R., Gollahon, L., Gangopadhyay, S., and Temkin, H. (2004). Towards integrating graduate research and education with 'internal research internships': Experiences and assessment. In W. Aung et al. (Eds.) *Innovations 2004: World Innovations in Engineering Education and Research*, BEGELL House Publishing, Arlington, VA. (p. 291-302).
- Wilhelm, J., Cooper, S., and McMillan, S. (2004).** Pre-service teachers experiencing mathematics through moon projects and spinning tops. In D. McDougall and J. Ross (Eds.) *Proceedings of the 26<sup>th</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Toronto: OISE/UT. Vol 3, p. 1167-1174.
- Wilhelm, J.A., and Confrey, J. (2003).** Projecting rate of change in the context of motion onto the context of money. *International Journal of Mathematical Education in Science and*

*Technology*, Taylor & Francis Ltd. Oxfordshire, UK. 34 (6), (p. 887 – 904).

- Wilhelm, J.** and Confrey, J. (2002). Students understanding of sound waves and trigonometric reasoning in a project-enhanced environment. In D. Mewborn, P. Sztajn, D. White, H. Wiegel, R. Bryant, and K. Nooney (Eds.) *Proceedings of the Twenty-fourth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. ERIC Clearinghouse for Science, Mathematics, and Environmental Education. Vol. 2, (p. 1067).
- Confrey, J. Castro-Filho, J. and **Wilhelm, J.** (2000). Implementation research as a means to link systemic reform and applied psychology in mathematics education. In Ron Marx (Eds.) *Special issue of the Educational Psychologist*, 35 (3), (p. 179-191).
- Castro-Filho, J., **Wilhelm, J.**, and Confrey, J. (1999). Motion detectors in the school: Teachers making sense of rate of change and motion. In F.Hitt and M.Santos (Eds.) *Proceedings of the Twenty-First Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. ERIC Clearinghouse for Science, Mathematics, and Environmental Education. Vol. 2, (p. 703-708).
- Wilhelm, J.**, Confrey, J., Castro-Filho, J., and Maloney, A. (1999). Interactive diagrams to address key student conceptions in mathematics. In D. Thomas (Eds.) *International Conference on M/Set 99 Mathematics/Science Education & Technology*. Charlottesville, VA. Association for the Advancement of Computing in Education (p. 231-236).
- Castro-Filho, J., Confrey, J., **Wilhelm, J.**, and Meletiou, M. (1999). Using interactive diagrams as a means to promote deeper content knowledge by students and teachers. In D. Thomas (Eds.) *International Conference on M/Set 99 Mathematics/Science Education & Technology*. Charlottesville, VA. Association for the Advancement of Computing in Education (p. 222-226).

### **National and Regional Paper Presentations**

- Valles, J., She, X., and **Wilhelm, J.** (submitted). How self-beliefs influence minority students' success in high school: A mixed methods study. *Texas National Association of Multicultural Education*, University of North Texas, Denton, Texas (March, 2010).
- Clem, D., She, X., and **Wilhelm, J.** (2010). Changes experienced during year one of an NSF GK-12 program: A mixed methods study. *Paper to be presented at the annual meeting of the American Education Research Association* (AERA – Denver, Colorado).
- She, X., Lan, W., and **Wilhelm, J.** (2010). A comparative study on pedagogical content knowledge of mathematics teachers in China and the U.S. *Paper to be presented at the annual meeting of the American Education Research Association* (AERA – Denver, Colorado).
- Wilhelm, J.** (2009). Gender differences in lunar-related spatial understandings. *Paper presented at the annual meeting of the North American Chapter of the International Group for the*

*Psychology of Mathematics Education* (PME-NA – Atlanta, Georgia).

- Wilhelm, J., She, X., and Clem, D. (2009).** Graduate fellows and secondary teachers participate as learners in an interdisciplinary institute. *Paper presented at the annual meeting of the American Education Research Association* (AERA – San Diego, CA).
- Clem, D., **Wilhelm, J.,** and She, X. (2009). Experiencing integration: Changes in one NSF GK-12 “Building Bridges” cohort. *Paper presented at the annual meeting of the American Education Research Association* (AERA – San Diego, CA).
- Wilhelm, J. (2009).** A case study of children’s original interpretations of the moon’s changing appearance. *Paper presented at the annual meeting of the National Association of Research in Science Teaching* (NARST – Garden Grove, CA).
- She, X., **Wilhelm, J.,** and Clem, D. (2009). A summer institute as a tool to facilitate NSF GK-12 program preparation. *Paper presented at the annual meeting of the National Association of Research in Science Teaching* (NARST – Garden Grove, CA).
- Walters, K. and **Wilhelm, J. (2009).** The impact of student-generated art on sixth graders’ understanding of the moon’s phases. *Paper presented at the annual meeting of the Association of Teacher Educators* (ATE, 2009, Dallas, Texas).
- Ortiz, R., **Wilhelm, J.,** and Ganesh, B. (2009). Pre-service teachers engage in contextual mathematics. *Paper presented at the annual meeting of the Research Council on Mathematics Learning* (RCML – Rome, Georgia).
- Wilhelm, J.** and Wilhelm, R. (2008). Real explorations in astronomical learning. *Paper presented at the 211<sup>th</sup> national meeting of the American Astronomical Society* (Austin, Texas).
- Wilhelm, J. (2008).** Stories about the moon: Case studies of three children’s early thoughts concerning the moon’s appearance. *Paper presented at the annual meeting of the American Education Research Association* (AERA, 2008, New York City, New York).
- Wilhelm, J.** and Wilhelm, R. (2008). The REAL Curriculum. *Paper presented at the On Being an Engineer: Cognitive Underpinnings of Engineering Education conference* (Texas Tech University, Lubbock, Texas).
- Wilhelm, J.** and Sherrod, S. (2007). Children's stories about the moon: Case studies of three children. *Paper presented at the 17th European Early Childhood Education Research Association (EECERA) Annual Conference "Exploring Vygotsky's Ideas: Crossing Borders"* (August 2007, Prague, Czech Republic).
- Wilhelm, J., Sherrod, S., and Walters, K. (2007).** Mathematizing the heavens: Pre-service middle level teachers engage in project-based science and mathematics. *Paper presented at the annual meeting of the Association for Science Teacher Education* (ASTE – Clearwater Beach, Florida).
- Wilhelm, J., Sherrod, S., and Walters, K. (2007).** Experiencing a project-based learning environment: Challenging pre-service teachers to act in the moment. *Paper presented at*

- the annual meeting of the American Education Research Association (AERA, 2007, Chicago, Illinois).*
- Wilhelm, J.** and Sherrod, S. (2007). Gender differences in lunar phases understanding. *Paper presented at the annual meeting of the American Education Research Association (AERA, 2007, Chicago, Illinois).*
- Box, C., and **Wilhelm, J.** (2007). One teacher's voice as she enacts project-based instruction with middle school students for the first time. *Paper presented at the annual meeting of the National Association of Research in Science Teaching (NARST – New Orleans, Louisiana).*
- Wilhelm, J.**, Sherrod, S., and Walters, K. (2007). Pre-service teachers experience an interdisciplinary project-based learning environment. *Paper presented at the annual meeting of the National Association of Research in Science Teaching (NARST – New Orleans, Louisiana).*
- Wilhelm, J.** and Sherrod, S. (2007). Gender differences in lunar-related science and mathematics domains. *Paper presented at the annual meeting of the National Association of Research in Science Teaching (NARST – New Orleans, Louisiana).*
- Wilhelm, J.**, Sherrod, S., and Walters, K. (2007). Pre-service teachers experience project-based mathematics. *Paper presented at the annual meeting of the Research Council on Mathematics Learning (RCML – Cleveland, Ohio).*
- Ganesh, B., Ji, J., Sherrod, S., and **Wilhelm, J.** (2007). The development of a geometric spatial visualization assessment. *Paper presented at the annual College of Education Spring Research Conference at Texas Tech University.*
- Bacon, V., Lovering, E., and **Wilhelm, J.** (2007). An 'out of this world' math-science connection. *Paper to be presented at the 2007 Conference for the Advancement of Science Teaching (Austin, Texas).*
- Wilhelm, J.** and Walters, K. (2006). Assessing students' understanding of the moon's phases through interdisciplinary inquiry. *Paper presented at the annual meeting of the National Association of Research in Science Teaching (NARST – San Francisco, CA).*
- Smith, W., Beller, C., Mulholland, J., and **Wilhelm, J.** (2006). Engaging preservice elementary teachers in multinational, multi-campus scientific inquiry. *Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE – Portland, Oregon).*
- Wilhelm, J.**, Walters, K., and Sherrod, S. (2006). The math in the moon: Pre-service teachers thinking like scientists and mathematicians. *Paper presented at the To Think and Act Like a Scientist: The Roles of Inquiry, Research, and Technology conference (Texas Tech University, Lubbock, Texas).*
- Wilhelm, J.** and Walters, K. (2005). Preservice teachers become full participants through engagement in mathematical inquiry. *Paper presented at the annual meeting of the School, Science, and Mathematics Association (SSMA - Fort Worth, Texas).*

- Wilhelm, J., McMillan, S., and Walters, K. (2005).** Pre-service mathematics teachers engage in astronomical inquiry. *Paper presented at the annual meeting of the American Education Research Association* (Montreal, Canada).
- McMillan, S., **Wilhelm, J.**, and Walters, K. (2005). Nature journaling as a path to new literacy identities. *Paper presented at the annual meeting of the American Education Research Association* (Montreal, Canada).
- Wilhelm, J. (2005).** The role of technology in sound waves understanding. *Paper presented at the annual meeting of the National Science Teachers Association* (Dallas, Texas).
- Wilhelm, J.** and Walters, K. (2005). Pre-service math teachers become full participants in inquiry investigations. *Paper presented at the annual meeting of the Research Council of Mathematics Learning* (Little Rock, Arkansas).
- McMillan, S., **Wilhelm, J.**, and Walters, K. (2005). Students' stories: Adolescents constructing multiple literacies through nature journaling. *Paper presented at the Texas Tech University College of Education Research Day*.
- Wilhelm, J., McMillan, S., and Hintze, E. (2004).** Interdisciplinary moon projects and narratives. *Paper presented at the National Science Teachers Association Regional Conference* (Indianapolis, Indiana).
- Wilhelm, J., Cooper, S., and McMillan, S. (2004).** Pre-service teachers experiencing mathematics through interdisciplinary moon projects and spinning tops. *Paper presented at the North American Chapter of the International Group for the Psychology of Mathematics Education* (Toronto, Ontario).
- Wilhelm, J. (2004).** Students understanding trigonometric relationships through sound waves. *Paper presented at the annual meeting of the Research Council on Mathematics Learning* (Oklahoma City, Oklahoma).
- Cooper, S. and **Wilhelm, J. (2004).** Pre-service teachers experiencing mathematics through inquiry. *Paper presented at the annual meeting of the Research Council on Mathematics Learning* (Oklahoma City, Oklahoma).
- McMillan, S. and **Wilhelm, J. (2003).** Moon studies and other environmental investigations: Students forging new literacy and mathematical identities. *Paper presented at the annual meeting of the American Education Research Association* (Chicago, Illinois).
- Wilhelm, J.** and Cooper, S. (2003). Mathematics learning in an inquiry-enhanced environment for pre-service teachers. *Paper presented at the annual meeting of the Research Council on Mathematics Learning* (Tempe, Arizona).
- Wilhelm, J.** and Confrey, J. (2003). Designing a project-enhanced classroom. *Paper presented at the annual meeting of the National Council of Teachers of Mathematics* (San Antonio, Texas).
- Wilhelm, J.** and McMillan, S. (2003). Moon investigations: Students forging new literacy and scientific-mathematical connections. *Paper presented at the National Science Teachers*

*Association Regional Conference (Kansas City, Missouri).*

McMillan, S. and **Wilhelm, J. (2003)**. Moon journaling: Students, teachers, and families partnering to form new literacy identities. *Paper presented at the National Council of Teachers of English, National Conference (San Francisco, California).*

**Wilhelm, J.** and Cooper, S. (2003). Inquiry investigations with tops. *Paper presented at the Tenth Annual Panhandle Area Mathematics and Science Conference (Canyon, Texas).*

Turner, E., **Wilhelm, J.**, and Confrey, J. (2000). Exploring rate of change through technology with elementary students. *Paper presented at the annual meeting of the American Educational Research Association (New Orleans, Louisiana).*

**Wilhelm, J.** and Confrey, J. (2000). Rate of change in the contexts of money and motion. *Paper presented at the annual meeting of the American Educational Research Association (New Orleans, Louisiana).*

### **Invitational Presentations and Conference Participation**

**Wilhelm, J. (2009)**. Invited to participate in an NSF-STEM Symposium entitled *Mathematics Infusion into Science, Technology and Engineering*. (Hofstra University).

**Wilhelm, J. (2006)**. Creating constructivist physics for introductory university classes. *Presented at the weekly Mathematics Education Seminar sponsored through the Department of Mathematics and Statistics.*

**Wilhelm, J. (2004)**. Projecting rate of change in the context of motion onto the context of money. *Presented at the weekly Mathematics Education Seminar sponsored through the Department of Mathematics and Statistics.*

**Wilhelm, J.** and McMillan, S. (April 6<sup>th</sup>, 2004). *Interdisciplinary projects and narratives: Building diverse pathways to success*. Invited presentation at the College of Education's Research Committee Brown Bag Series.

### **Teaching Activities**

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#### **Graduate Courses Taught at University of Kentucky**

EDC 730 – Project-based Environments in Science and Mathematics Education

#### **Undergraduate Courses Taught at Texas Tech University**

PHYS 1403 – Introductory Physics I

EDCI 3370 – Teaching Mathematics at the Middle Level

EDCI 4370 – Middle Level Mathematics: Knowledge, Practice, and Theory

EDCI 4375 – Integrated Mathematics and Science Methods  
EDSE 4320 – Secondary Mathematics Methods  
EDSE 4311 – Secondary Math/Science Curriculum and Instruction  
EDSE 4376 – Secondary Science Methods

### **Graduate Courses Taught at Texas Tech University**

EDCI 5321 – Curriculum Theory: Design and Development  
EDEL 5370 – Developing Math Programs in Elementary Education  
EDEL 5375 – Developing Science Programs in Science Education  
EDCI 5371 – Curriculum and Instruction in Science and Mathematics Education  
EDCI 5372 – Assessment Issues in Mathematics and Science Education  
EDCI 5373 – Designing Project-Enhanced Environments in Mathematics and Science Classrooms  
EDCI 6306 – Advanced Seminar in Curriculum and Instruction

### **New Courses Developed**

Graduate Courses for the University of Kentucky STEM Education (Science, Technology, Engineering, and Mathematics) Program - *Designing Project-Enhanced Environments for STEM Classrooms*, and *History of STEM Education*.

Undergraduate Courses for the middle level program at Texas Tech University - *Teaching Mathematics at the Middle Level* (EDCI 3370); *Middle Level Mathematics: Knowledge, Practice and Theory* (EDCI 4370); and *Integrated Mathematics and Science Methods* (EDCI 4375).

### **Co-Designer of the Realistic Explorations in Astronomical Learning (REAL) curriculum**

Developed by R. Wilhelm and J. Wilhelm through funded NASA- IDEAS grant - Cratering Analysis for REAL: Investigating Craters in the Solar System.  
<http://www.uky.edu/~jwi229/access/REAL/>

### **Courses Taught at Travis High School, Austin, Texas**

Calculus (AP); Physics (Honors, Pre-AP); Pre-Calculus (Honors, Pre-AP); Algebra

### **Courses Taught at Austin Community College, Austin, Texas**

Engineering Physics I and General Physics II

### **Courses Taught at Lansing Community College, Lansing, Michigan**

Introductory Physics I and II, Calculus-Based Physics I and II, College Algebra

### **Courses Taught at Western Kentucky University, Bowling Green, Kentucky**

Physics of Light, Color, and Optics; Physics I and II

## Courses Taught at Montcalm Community College, Sidney, Michigan

Calculus, College Algebra

## Graduate Students Advised and Served on Committees

**Ph.D. Students (13):** Y. Zhang\* (TTU), M. Cruz\* (TTU), B. Ganesh\* (TTU), C. Cross\* (TTU), K. Walters (TTU), D. Cook (TTU), J. Ji\* (TTU), C. Box (TTU), X. She\* (TTU), M. Biggers\* (TTU), C. Sanchez (TTU), Virginia Utterback (TTU), Darrellee Clem\* (TTU).

\* Committee Chair

**Masters in Education (10):** C. Hayes\* (TTU), A. Malouf (TTU), B. Ganesh\* (TTU), A. Bentley\* (TTU), A. Hardin\* (TTU), R. Bunuan\* (TTU), K. Walters\* (TTU), G. Kim (TTU), K. Jewel (TTU), J. Middleton\* (TTU). \* Committee Chair

**Masters in Science (3):** J. Middleton (TTU, Education and Biology), T. Hollingsworth and B. Duke (TTU, Mathematics and Statistics Department).

## Service

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### Professional Service

National Science Foundation Panels:

- Served on the Innovative Technology Experiences for Students and Teachers (ITEST) National Science Foundation Panel (Spring, 2009)
- Served on the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) National Science Foundation Panel (Summer, 2009).

Reviewer for:

- *School Science and Mathematics*. Editor: Gerald Kulm
- *Electronic Journal of Science Education*. Editor: Dr. John Cannon/Dr. Michael Kaman;
- *Journal of Research in Science Teaching*. Editors: J. Randy McGinnis, Angelo Collins;
- *International Journal of Mathematical Education in Science and Technology*. Editor: Dr. M. C. Harrison;
- *Cognition and Instruction*. Editors: Dr. Richard Lehrer and Dr. Annemarie Palincsar
- *The Science Teacher*. Editor: Stephen Metz;
- *Science Scope*. Editor: Inez Liftig;
- *Mathematics Teaching in the Middle School*. Editor: Sandy Berger;
- *Issues in the Undergraduate Mathematics Preparation of School Teachers: The Journal*. Editor: Gary Harris;
- *Bilingual Research Journal*. Editor: Dr. Alfredo Benavides.

### University Service

- University of Kentucky Co-Chair of the 2010 STEM Education Symposium: Education Infusion into Science, Technology, Engineering, and Mathematics.

- Texas Tech University Women in Science and Engineering (WISE) organization where I served as a University Wise Mentor (2007 – 2009).
- Served on the Steering Committee for the 2004 and 2005 ExxonMobil Texas State Science and Engineering Fairs hosted by Texas Tech University.
- Judge for the 2004 Regional (West Texas) Science Fair.
- Judge for the 2004 Texas State Science and Engineering Fair .

### **College of Education Service**

- University of Kentucky Search Committee Chair for Mathematics Education Faculty Position (2010)
- University of Kentucky Faculty Council (Fall 2009)
- Texas Tech University (TTU) Program Coordinator of Science and Mathematics Education Program (2007 – 2009)
- TTU Search Committee Chair for Mathematics Education Faculty position (2009)
- TTU Research Committee (2005 – 2007) – Served as Chair (2006-2007)
- TTU Faculty Council (2002-2005)
- TTU Search Committee Chair for Mathematics Education and Science Education Faculty positions (2007 – 2008)
- TTU Search Committee Member for College of Education Associate Dean of Graduate Education and Research
- TTU Leadership Council (2006 – present)
- TTU Graduate Adhoc Committee (2006 – present)
- TTU Search Committee Member for Science Education Faculty position (2005)
- TTU Search Committee Member for Chair of Curriculum and Instruction Department (2006)
- TTU Search Committee Member for Educational Psychology Faculty position (2007)
- TTU Undergraduate Multidisciplinary Science advisor
- TTU Adhoc College of Education Technology Committee (2003)
- TTU College Wide Technology Committee (2003-2004)
- TTU Co-Developer of joint Math/Science Middle Level Program
- TTU Co-Developer of Math/Science Education Ph.D. Program

### **Community Service**

- Organized and conducted fieldtrips to Skyview Observatory (2006-2007)
- Obtained a NASA Space Science IDEAS Grant that funded projects, curricular materials development, and computers for Irons and Dunbar Middle Schools (2006-2007)
- Designed and Implemented an afterschool program at Rush Elementary School (Lubbock, Texas) – *Science in Our World* (Spring, 2005)
- Conducted Moon, Planet, and Galaxy Observations (using Telescopes) with Rush Elementary, Wheatley Elementary, and a Lubbock Girl Scout Troop (2004).
- Co-Designed and implemented an interdisciplinary Math/Science/English unit at Irons and

Dunbar Middle Schools (2003 – 2009).

**Professional Affiliations**

American Educational Research Association
School Science and Mathematics
National Science Teachers Association
Research Council on Mathematics Learning
National Association of Research in Science Teaching
National Council of Teachers of Mathematics
The Society for College Science Teachers
Association for Science Teacher Education
North American Chapter of the International Group for the Psychology of Mathematics Education