

# Rachel A. Harrington

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## Education

- Ph.D. 2008 Oregon State University (Corvallis, OR)  
Major: Mathematics Education  
Minor: Mathematics  
Dissertation Title: *The Development of Pre-service Teachers' Technology Specific Pedagogy*  
Dissertation Advisor: Dr. Margaret Niess
- M.S. 2007 Oregon State University (Corvallis, OR)  
Major: Mathematics Education  
Minor: Mathematics  
Project Title: *Creating an Account of Institutional Practice: An Analysis of One Professional Licensure Program*  
Project Advisor: Dr. Larry Enochs
- B.A.Ed. 1997 Western Washington University (Bellingham, WA)  
Major: Mathematics Education  
Minor: German

## Professional Experience/Employment

### *Certification*

Initial Teaching License, Middle Level, High School: Advanced Mathematics  
*Oregon*  
2007-present (expires November 28, 2009)

Initial Teacher License, 4-12 Mathematics  
*Washington*  
1997-2001 (expired)

## Rachel A. Harrington

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### *Teaching Experience*

**Assistant Professor of Mathematics Education:** Teacher of mathematics education courses including methods, pedagogy and advanced strategies to undergraduate and graduate education majors.

*Division of Teacher Education, Western Oregon University—Monmouth, OR  
Fall 2008-present*

- ED 436/637: Content Pedagogy II: Mathematics
- ED 453: Applied Human Learning: Mathematics
- ED 609: Term II Supervision
- ED 669: Content Pedagogy: Mathematics

**Instructor:** Instructor for online teacher education courses for practicing mathematics teachers of grades K-12.

*Department of Science and Math Education, Oregon State University- Corvallis, OR  
Department of Teacher and Counselor Education, Oregon State University-Corvallis, OR  
Summer 2008*

- TCE 553: Critical Issues in Teaching and Learning Mathematics
- SED 594: Advanced Strategies: Mathematics

**Graduate Teaching Assistant:** Instructor for prospective mathematics and science education students in a professional licensure program, designed syllabi, delivered class instruction, responsible for all assessments

*Department of Science and Math Education, Oregon State University – Corvallis, OR  
2004-present*

- SED 572: Mathematics Technology and Pedagogy II
- SED 576: Mathematics Pedagogy II
- SED 509: Summer Practicum (co-taught)
- SED 508: Integrating Mathematics Process Standards into Mid-Level Mathematics (co-taught)
- MTH 508: Mathematics Process Standards (co-taught)
- SED 552/553: Math & Science Methods/Practicum (co-taught in 2005, assisted course instructor in 2004)

## Rachel A. Harrington

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**Professional Development Provider:** Developed and delivered a variety of workshops for university faculty, in-service teachers, and pre-service teachers; topics focused on effective integration of technology tools and instructional software into K-12 instruction

*Clarion University – Clarion, PA*  
2001-2004

- Technology in My Classroom
- Building Your Electronic Portfolios Using Adobe Acrobat
- Using Kidspiration and Inspiration to Enhance Instruction
- Designing Effective PowerPoint Presentations
- Creating Teacher WebPages
- Going on a WebQuest
- Technology for the Foreign Language Teacher
- Using Technology in the Reading Classroom

**High School Mathematics Teacher:** Taught courses ranging from pre-Algebra to pre-Calculus in a public high school; led the department in integrating graphing calculators and computer software to create a dynamic curriculum emphasizing graphic, algebraic, and numeric solutions to every problem

*Sehome High School – Bellingham, WA*  
1997-2001

- Pre-Algebra
- Algebra I
- Geometry
- Trigonometry/Pre-Calculus
- Probability and Statistics

**Substitute Teacher:** Short-term substitute teacher in all subjects for 5<sup>th</sup> through 8<sup>th</sup> grade.

*Junction City School District – Junction City, OR*  
2006-present

- Mathematics-all grades including special education
- Self-contained-5<sup>th</sup> and 6<sup>th</sup> grade
- Social Studies-7<sup>th</sup> grade
- Science-8<sup>th</sup> grade
- Music-all grades
- Special education-all grades including class for students with autism spectrum disorders

## Rachel A. Harrington

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### *Supervision*

**Field Experience Supervisor:** Supervised prospective mathematics education students in a professional licensure program during practicum and student teaching experiences; advised and approved lesson plans, observed teaching, and completed mandatory assessments;

*Department of Science and Math Education, Oregon State University – Corvallis, OR  
2004-2006*

*Division of Teacher Education, Western Oregon University-Monmouth, OR  
2008-present*

### *Educational Research Experience*

**Graduate Research Assistant:** Oregon ESEA Title IIB MSP: Central Oregon Consortium (Maggie Niess & Tevian Dray, co-PIs) – interviewed past participants in order to understand how professional development opportunities influence beliefs and practice

*Oregon State University – Corvallis, OR  
2006-present*

**Graduate Research Assistant:** Researching Mathematics Leaders' Learning (Rebekah Elliott and Judy Mumme, co-PIs) – assisted in development of a research protocol and data collection in order to understand how leaders of professional development can learn from the practice of peers

*Oregon State University – Corvallis, OR  
2005-2006*

**PT 3 Area Outreach Coordinator:** Pennsylvania Preparing Tomorrow's Teachers to Use Technology Catalyst Grant (Sonja V. Heeter, PI)– developed and coordinated all aspects of local (Clarion University) grant activities including mini-grants, professional development, summer camps, and course development (<http://www.clarion.edu/academic/ec17/Technology/technology.htm>)

*Pennsylvania State System of Higher Education – Harrisburg, PA  
2001-2004*

# Rachel A. Harrington

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## Scholarly Production<sup>1</sup>

### *Publications*

Ronau, R. N., Niess, M. L., Browning, C., Pugalee, D., Driskell, S. O., & Harrington, R. (in press). Framing the research on digital technologies and student learning in mathematics. In L. Bell, E. A. Thompson, & L. Schrum, *Framing research on technology and student learning in the content areas*. Charlotte, NC: Information Age Publishing.

Harrington, R.A. & Enochs, L. (2009). Accounting for pre-service teachers' experiences with constructivist learning environments. *Learning Environments Research*. 12(1).

Harrington, R.A. (2007). Using data to improve effort. *The Oregon Mathematics Teacher*. September/October 2007. p. 34-37.

Downie, K., Harrington, R., Monosky, D., Reagle, J, Stein, I., Wolf, M., Wolfrom, K., Wynkoop, S., & Zimmerman, K. (2005). *Paraprofessional Workshop Series Manual*. Acton, MA: Copley Publishing.

†Harrington, R.A. & Beaufort, C. (2003) The Spanish e-book project. *Pennsylvania Language Forum*. 73(1). p. 63-65.

### *Publications Under Review*

Harrington, R.A. (submitted 10/08). Pre-service teachers' ideas about teaching mathematics with technology: TPACK in action. *Contemporary Issues in Technology and Teacher Education*. Special issue: Technology, Pedagogy, and Content Knowledge. 9(1).

### *Curriculum Materials*

Serfozo, J., Jacobson, M., Harrington, R., Atkins, A., & Bos, C. (1997). *You thought you had problems: A compilation of problems for extension and enrichment of mathematics*. Bellingham, WA: A Goals 2000 Project.

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<sup>1</sup> † Indicates a scholarly production that was done in collaboration with a student

## Rachel A. Harrington

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### *Presentations*

**Mathematics Teacher TPACK Standards and Revising Teacher Preparation** Society for Information Technology and Teacher Education Conference, Charleston, SC, panel presentation, to be presented, March 2009.

**Using the Ideas of Pre-Service Teachers to Understand Technology Specific Pedagogy** Rachel Harrington, 13<sup>th</sup> Annual AMTE Conference (Association of Mathematics Teacher Educators), Orlando, Florida, to be presented, February 2009

**A Collaborative Model For Developing In-Service And Pre-Service Teachers' Ability To Effectively Integrate Technology Into Mathematics Instruction** Rachel Harrington, 12<sup>th</sup> Annual AMTE Conference (Association of Mathematics Teacher Educators), Tulsa, Oklahoma, session presentation, January 2008.

**After Time Passes, What Remains of Professional Development?** Maggie Niess, Rachel Harrington & Tina Johnston, 12<sup>th</sup> Annual AMTE Conference (Association of Mathematics Teacher Educators), Tulsa, Oklahoma, session presentation, January 2008.

**A Model for Developing In-service and Pre-service Teachers' Technology Specific Pedagogy** Rachel Harrington, Emerging Researchers' Conference on Teaching and Learning, session presentation, Corvallis, OR, November 2007.

**PRGM—It's For More Than Just Crib Notes!** Rachel Harrington, Northwest Mathematics Conference, session presentation, Bellevue, WA, October 2007.

**Creating an Account of Institutional Practice: An Analysis of One Teacher Education Program** Rachel A. Harrington, Annual Meeting of the American Educational Research Association, paper presentation, Chicago, IL, April 2007.

†**The Mathematics Of Culturally Significant Games** Rachel Harrington & Michelle Vance, Northwest Mathematics Conference, workshop, Victoria, BC, October 2006.

**Graduate Programs In Mathematics Education** Rachel Harrington & Sunshine Campbell, Northwest Mathematics Conference, session presentation, Victoria, BC, October 2006.

## Rachel A. Harrington

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**Creating Learning Communities with the Summer Camp Model** Sonja V. Heeter & Rachel Harrington, Pennsylvania Educational Technology Expo and Conference (PETE &C), Hershey, PA, session presentation, February 2004.

**In Search of the Technology Proficient Educator** Sandi Sheppheard, Sonja V. Heeter & Rachel Harrington, Pennsylvania Educational Technology Expo and Conference (PETE &C), Hershey, PA, session presentation, February 2004.

†**The Allegheny-Clarion Valley Spanish e-Book Project** Rachel Harrington & Christina Beaufort, American Council on the Teaching of Foreign Language (ACTFL) National Conference, Philadelphia, PA, session presentation, November 2003.

# Rachel A. Harrington

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## Awards, Grants, Recognition

### *Awards & Recognition*

Faculty Appreciation Night & Women's Volleyball Game, Western Oregon University, 2008

Certificate of Appreciation, Science and Mathematics Education Department, Oregon State University, 2007

Phi Kappa Phi Honor Society, inducted 2006

The Stanley E. Williamson Memorial Scholarship, Oregon State University, 2005

### *Grants*

Global Climate Change NASA Curriculum Project (in preparation), Western Oregon University, 2008

## Service

### *Institutional*

#### Student Advising

- Honors Program Advisor, Stephanie Shields, Western Oregon University, 2008-present

#### Service to student clubs/organizations

- Northwest Mathematics Conference student advisor, Western Oregon University, 2008
- Graduate Teaching and Learning Association (GradTLA), co-founder, webmaster (<http://oregonstate.edu/groups/gradtla/>), Oregon State University, 2007-2008

#### Department/division level service

- Reform Curricula Library Development, Western Oregon University, 2008
- Interviewer, MAT Program, Western Oregon University, 2008
- Interviewer, Undergraduate Program, Western Oregon University, 2008

#### College level service

## Rachel A. Harrington

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- Project Kaleidoscope (PKAL) Portland Regional Network, University of Portland, 2008

### *Professional Level Service*

#### Professional Conference Work

- 2007 Emerging Researchers' Conference on Teaching and Learning, Oregon State University (<http://oregonstate.edu/groups/gradtla/emerging-researchers-conference-teaching-and-learning>)
  - Conference Planning and Development Committee
  - Registration, Housing, and Child Care Chair
  - Program Chair

#### Memberships

- American Educational Research Association (AERA), 2005 to present
- Association of Mathematics Teacher Educators (AMTE), 2007 to present
- International Society for Technology in Education (ISTE), 2007 to present
- Oregon Council of Teachers of Mathematics (OCTM), 2007 to present

#### Publication and Presentation Reviewer

- Aspiring Academics, chapter review, 2008
- TACTL-SIG proposal reviewer, American Educational Research Association (AERA), 2008
- Division K proposal reviewer, American Educational Research Association (AERA), 2008
- Association of Mathematics Teacher Educators (AMTE) proposal reviewer, 2008

### *Public or Private Community Level Service*

#### Invited Talks

**Feeling Inspired? A Software Scavenger Hunt** Rachel Harrington, Oaklea Middle School, Junction City, OR, May 2008.

**Collaborating to Develop Technology Specific Pedagogy** Rachel Harrington, Science and Mathematics Education Department, Oregon State University, departmental seminar, January 2008.

## Rachel A. Harrington

---

**Analyzing Pre-service Teacher Preparation Experiences Within Constructivist Learning Environments** Rachel Harrington, Science and Mathematics Education Department, Oregon State University, departmental seminar, April 2007.

**Celebrating Pi Day – Activities for all students** Rachel Harrington, Science and Math Investigative Learning Experiences (SMILE) Program, Oregon State University, workshop, February 2007.

**Dynamic Statistics Software For K-12 Mathematics** Rachel Harrington, Science and Mathematics Education Department, Oregon State University, departmental seminar, October 2005.