

CRISTINA GÓMEZ

EDUCATION

- University of Wisconsin-Madison Madison, WI 1995-2000
- PhD in Curriculum and Instruction. Major in Mathematics education. Minor in Educational Administration focused on higher education.
 - Dissertation “Learning in practice: engagement, alignment, and imagination in a secondary mathematics teacher community”. The study focuses on the struggles of a group of teachers and researchers during a two-year period trying to form a community focused on student understanding of algebraic concepts. The study was developed in an urban setting with bilingual high school teachers.
- Universidad de los Andes Bogotá, Colombia 1982-1986
- Graduate courses in mathematics.
- Universidad Pedagógica Nacional Bogotá, Colombia 1978-1982
- Bachelor of Science in Mathematics.

OTHER COURSES

- University of Wisconsin-Madison Madison, WI 1999
- Certification on Cognitively Guided Instruction by the National Institute for Professional Developers.
- University of Los Andes Colombia 1995
- Certification on Strategic planning in information technologies by the Department of computer sciences.

EXPERIENCE

- Ithaca College** **Ithaca, NY** **2007-Present**
Assistant Professor
- Taught math courses at college level, taught methods courses, supervised student teachers in the childhood and secondary teacher education programs, taught teacher education courses. Administrative work in the teacher education program. LiveText coordinator.
- Ithaca College** **Ithaca, NY** **2006-2007**
Lecturer
- Taught math courses at college level.
- NSF** **Washington, DC** **Summer 2006**
Panel Reviewer
- Reviewed proposals submitted to the CCLI program, Phase 1, and served in the panel July 5-6.

SUNY-Cortland **Cortland, NY** **2005-2006**

Visiting Assistant Professor

- Taught methods courses in mathematics education for elementary at the College of Education.
- Taught graduate courses in education.
- Taught math courses for preservice teachers at the Math Department.

NSF **Washington, DC** **Summer 2005**

Panel Reviewer

- Reviewed proposals submitted to the CCLI program, Phase 1, and served in the panel July 25-26.

The University of Alabama **Tuscaloosa, AL** **2002-2005**

Assistant Professor

- Taught methods courses in mathematics education for elementary and secondary teachers at the College of Education.
- Taught mathematics courses for elementary preservice and inservice teachers at the Mathematics Department.
- Supervised student teachers in the secondary math program and in the elementary teacher education program.
- Taught graduate courses in mathematics education.
- Worked with faculty from the Math Department designing a new sequence of 3 courses for elementary teachers, writing curriculum materials, training faculty for teaching the course.
- Worked as NCOLR research faculty associate, developing online course materials and conducting research on online learning.
- Organized the Math Carnival at Northington Elementary School and Oakdale Elementary School. Organized the Family Math Fair at Northington Elementary School.
- Treasurer of the Alabama Council of Teachers of Mathematics.
- President of the West Alabama Council of Teachers of Mathematics.
- Associate member of the Graduate Faculty.

West Virginia University **Morgantown, WV** **2000-2001**

Assistant Professor

- Prepared the NCATE report for the mathematics programs in elementary and secondary education.
- Taught graduate courses in mathematics education.
- Taught mathematics methods courses for elementary and for secondary teachers at the Educational Theory and Practice Department.
- School liaison for East Fairmont High School as part of the Benedum Collaborative.
- Higher Education Advisor for the WV State Department of Education Project MERIT (Mathematics Education Reform Initiative for Teachers).

- Faculty advisor for the Student Education Association.

University of Wisconsin-Madison Madison, WI 1999-2000

Teaching Assistant

- Taught mathematics methods course for elementary teachers at the Curriculum and Instruction department.
- Participated in the PK-16 initiative in professional development in instructional technology for teachers.

University of Wisconsin-Madison Madison, WI 1998-1999

Project Assistant

- Participated as researcher in the secondary design collaborative for the National Center for Improving Student Learning and Achievement in Mathematics and Science. This center is part of the Wisconsin Center for Educational Research.

University of Wisconsin-Madison Madison, WI 1997

Teaching Assistant

- Taught algebra courses at the Mathematics department.
- Participated as instructor in the College Access Program, offered by the School of Education to disadvantaged students to prepare them for college.

University of Los Andes Bogotá, Colombia 1989-1995

Researcher

- Participated as researcher in different projects related with mathematics education. Within a project in curricular design for a graphic calculator-aided pre-calculus course, my research was focused on the influence of the use of graphic calculators on teachers' beliefs.
- Participated in the design and implementation process of professional development courses for mathematics teachers. Wrote materials for those courses.
- Participated in the organization of the First National Symposium in Mathematics Education in Colombia. The event took place at the Universidad de los Andes, with Professor Jeremy Kilpatrick, from Georgia University, and Professor Luis Rico, from the Universidad de Granada, as principal lecturers.
- Collaborated as editor in the journal for mathematics teachers called "Revista EMA".
- Performed administrative duties related with the management of the center of research on mathematics education called "una empresa docente".
- Conducted different projects in multimedia related with information systems for corporations.

University of Los Andes Bogotá, Colombia 1984-1995

Lecturer

- Taught different math courses at college level. Those course included:

Differential calculus, Integral calculus, Linear algebra, Algebra and trigonometry, Geometry for architecture, Basic mathematics, Structural mathematics, Basic statistics, Pre-calculus, and Analytic geometry.

- Participated in the design-process of different courses such as Algebra and trigonometry, Geometry for architecture, Basic mathematics, and Pre-calculus. Wrote materials for those courses.

Instituto Pedagógico Nacional Bogotá, Colombia 1983-1984

High School Math Teacher

- Taught mathematics courses in high school including algebra, trigonometry, calculus.
- Participated as cooperating teacher for student teachers.

INTERESTS

- Principal area of interest: mathematics teachers pedagogical content knowledge and teacher learning of mathematical concepts needed for teaching mathematics for understanding.
- Online learning environments based on sociocultural and constructive views of learning.
- Content areas of interest:: worked specially with concepts of elementary school mathematics and algebraic reasoning in middle school.
- Other interest: equity issues in mathematics education, access to quality mathematics.

CONFERENCE PRESENTATIONS

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| Cornell Educators Day | Ithaca | 2009 |
| ■ Fractions in Everyday Mathematics | | |
| TMU Mathematics Institute | Albany | 2007 |
| ■ Calculators in the classroom | | |
| AMS MAA Joint meeting | San Antonio | 2006 |
| ■ Content courses for preservice teachers. | | |
| ■ Engaging math faculty in teacher preparation. | | |
| Psychology of Mathematics Education-NA | Roanoke | 2005 |
| ■ Engaging math faculty in teacher preparation. | | |
| NCTM Southern Regional Conference | Birmingham | 2005 |
| ■ Data analysis in early grades | | |
| PDS National conference | Orlando | 2005 |
| ■ Authentic teaching in teacher education courses: what is that?. | | |
| Alabama Association of College Teachers of Mathematics | Dothan | 2005 |
| ■ Preparing prospective elementary school teachers in mathematics. | | |

- AMS MAA Joint meeting Atlanta 2005
- The problems of posing problems with fractions.
 - Teaching visualization skills in a geometry course for elementary school teachers.
 - Data analysis and statistics for practicing teachers: understanding student's statistical ideas.
- Alabama Council of Teachers of Mathematics Montgomery 2004
- Data analysis in early grades.
- National Council of Teachers of Mathematics Philadelphia 2004
- Worthwhile task for teacher candidates.
- The Holmes Partnership Eighth Annual Conference San Diego 2004
- Students, parents, one and all.
- Alabama Council of Teachers of Mathematics Montgomery 2003
- Alternative assessments: interviewing students.
- Alabama Council of Teachers of Mathematics Montgomery 2002
- Developing proportional reasoning in elementary school.
- Psychology of Mathematics Education-NA Athens, GA 2002
- The struggles of a community of mathematics teachers: developing a community of practice.
- Psychology of Mathematics Education Norwich 2002
- The struggles of a community of mathematics teachers: developing a community of practice.
- III Institute for Project MERIT Canaan Valley 2001
- Making sense: teaching mathematics for understanding.
- II Institute for Project MERIT Charleston 2001
- Assessment in middle school mathematics.
- Higher Education Symposium Charleston 2001
- Mathematics teachers professional development: an experience with case studies.
- America Educational Research Association Seattle 2001
- An eco-systems approach to professional development and systemic reform. Symposium presented with Walter Secada, Jonathan Brendefur, and Jeanie Behrend.
- International Congress on Mathematical Education Japan 2000
- The struggles of a community of mathematics teachers: developing a community of practice in an urban bilingual high school.

- American Educational Research Association U.S. 2000
- Examining relationships between students' solution strategies, algebraic reasoning, and achievement.
- American Educational Research Association Canada 1999
- Organizational resources in support of teaching for understanding in mathematics and science: the context of mathematics reform in a bilingual high school.
 - Student understanding and teaching strategies of mathematics: Analysis of student construction of ratio understanding in a classroom setting.
 - The interrelationships among mathematics teachers' knowledge/beliefs, classroom environment, and student experience that promote student understanding in algebra: Students' understanding of algebraic rate of change across representations.
- Psychology of Mathematics Education Spain 1996
- Precalculus and graphic calculators: the influence on teacher's beliefs.
- II International Symposium in Mathematics Education Colombia 1994
- More about infinity.
- Iberoamerican Congress on Math Education Brazil 1994
- Precalculus and graphic calculators: the influence on teacher's beliefs.
 - Didactigramas matematicos
 - Experiences in teacher professional development.
- Iberoamerican Congress in Educational Technology Portugal 1994
- Didactigramas Matemáticos.
- I Foro de Informática Educativa RIBIE-Col Colombia 1994
- Didactigramas Matemáticos.
- Ciclo de conferencias del Club EMA Colombia 1993
- Problem solving and learning mathematics.
- International Congress on Mathematics Education Canada 1992
- Modeling a real situation: MARS in geometry.

PUBLICATIONS

- Gomez, C., & Quigley, K., (2006). Becoming highly qualified. *Teaching Children Mathematics*, 13(4), 232-235.
- Gomez, C., Laurie, C., & Hsia, W. (2006). Content courses for preservice teachers. *Abstracts of papers presented to the American Mathematical Society, USA*, 27, 252.
- Laurie, C., Gomez, C., & Hsia, W. (2006). Engaging math faculty in teacher preparation *Abstracts of papers presented to the American Mathematical Society, USA*, 27, 312.
- Gomez, C., Laurie, C., & Hsia, W. (2005). The problems of posing problems with fractions *Abstracts of papers presented to the American*

Mathematical Society, USA, 26, 237.

- Laurie, C., Gomez, C., & Hsia, W. (2005). Teaching visualization skills in a geometry course for pre-service elementary school teachers. *Abstracts of papers presented to the American Mathematical Society, USA, 26, 262.*
- Hsia, W., Gomez, C., & Laurie, C. (2005). Data analysis and statistics for practicing teachers: understanding student's statistical ideas. *Abstracts of paper presented to the American Mathematical Society, USA, 26, 292.*
- Gomez, C. (2002). The struggles of a community of mathematics teachers: developing a community of practice. *Proceedings of the 24th annual meeting of the North American Chapter of the PME, Vol. 3, (pp. 1616-1619).* Athens, GA.
- Gomez, C. (2002). The struggles of a community of mathematics teachers: developing a community of practice. In *Proceeding of the 26th International Conference for the Psychology of Mathematics Education, Vol. 3 (pp. 9-16).* Norwich: University of East Anglia.
- Gomez, C., Rousseau, C., Steinhórsdóttir, O., Valentine, C., Wagner, L., Wiles, P. (2002). Multiplicative Reasoning: developing student's shared meanings. In B. Litwiller (Ed.) *NCTM Yearbook: Making Sense of Fractions, Ratios and Proportions (pp.213-223).* Reston, VA: NCTM.
- Gómez, C. & Steinhórsdóttir, O. (2001). Enacted curriculum and mathematics: students' opportunity to learn. In S. Cueto & W. Secada (Eds.). *Mathematics Learning and Achievement in Quechua, Aymara and Spanish Boys and Girls in Bilingual and Spanish Schools in Puno, Peru.* (pp. 53-78). Report for the World Bank.
- Gomez, C. (2000). *Learning in practice: engagement, alignment, and imagination in a secondary mathematics teacher community.* Unpublished doctoral dissertation. University of Wisconsin-Madison.
- Gomez, C. (2000, April). *Examining relationships between students' solution strategies, algebraic reasoning, and achievement.* Paper presented at the AERA, New Orleans, LA. ERIC ED443716.
- Gomez, C., Steinhórsdóttir, O., Uselman, L. (1999, April). *Student's understanding of rate of change: use of different representations.* Paper presented at the AERA, Montreal, Canada. ERIC ED430807.
- Gomez, C. (1998). Rational numbers and proportional reasoning: a curricular program based on the NCTM standards. *Revista EMA: Research and innovation in mathematics education, 3(2), 112-132.*
- Gomez, P., Mesa, V., Gomez, C., Carulla, C., Valero, P. (1996). *Problematic situation in precalculus: the study of functions using explorations with graphing calculators.* Grupo Editorial Iberoamérica, México.
- Gomez, P. & Gomez, C. (1994). Didactigramas Matemáticos. *Revista de Informática Educativa, 7(1), 93-116.*
- Gomez, P. & Gomez, C. (1992). *Formal systems, informally.* una empresa docente, Bogotá, Colombia.

FUNDED GRANTS

- Preparing Prospective elementary school teachers in mathematics: Dissemination to community colleges. (2005). Grant submitted to Mathematical Association of America program, Preparing Mathematicians to Educate Teachers (\$4,000).
- Data Analysis and Statistics for Practicing Teachers: understanding student's statistical ideas. (2004). Grant submitted to the Alabama State Department of Education (\$54,768).
- Preparing Prospective elementary school teachers in mathematics. (2004). Grant submitted to Mathematical Association of America program, Preparing Mathematicians to Educate Teachers (\$4,000)
- Teacher learning about children's thinking of mathematics (2003). Grant submitted to the College of Education Research Grant (\$2,000.00).

OTHER ACTIVITIES

- Reviewer of proposals for the Course, Curriculum, and Laboratory Improvement (CCLI) NSF program, July 2005 and July 2006.
- Designer and instructor for the professional development courses for the Teaching Middle Grades Mathematics for Understanding (TMU) program from the City School District of Albany, the Schenectady City School District and the State University of New York at Albany. This program is supported by a Mathematics-Science Partnership Grant from the New York State Department of Education, 2005-2007.

MEMBERSHIP

- American Mathematical Society
- International Group for the Psychology of Mathematics Education
- North American Chapter of the PME
- American Educational Research Association
- National Council of Teachers of Mathematics