

## Curriculum Vitae

## Frieda Parker

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## Education

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- **PhD Student, Educational Mathematics**, University of Northern Colorado, 2005-present  
Advisors: Dr. C. Craviotto & Dr. H. Soto-Johnson, Expected graduation: Spring 2010  
Dissertation Title: *A Study of the Role of Intuition in the Development of Students' Understanding of Span and Linear Independence in an Elementary Linear Algebra Class*
- **Master of Business Administration**, University of California, Berkeley, 1987
- **Bachelor of Arts, Economics**, Knox College, Illinois, 1981
- **Undergraduate work, Geology**, Rocky Mountain College, Billings, Montana, 1995-1996

## Teaching

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- **Graduate Teaching Assistant**, University of Northern Colorado, School of Mathematics

Instructor of Record for:

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| ▪ Geometry I  | Math 341 | Spring 2010 (expected)                         |
| ▪ Mathematics for Elementary Teachers – Geometry              | Math 283 | Fall 2009                                      |
| ▪ Geometry in Middle School Mathematics Teaching              | MFT 514  | Fall 2009                                      |
| ▪ Geometry I  | Math 341 | Spring 2009                                    |
| ▪ Mathematics for Elementary Teachers – Number and Operations | Math 181 | Fall 2007                                      |
| ▪ College Algebra   | Math 124 | Fall 2005, Spring 2006, Fall 2006, Spring 2007 |

Teaching Assistant for:

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|---------------|----------|-----------|
| ▪ Geometry I  | Math 341 | Fall 2008 |
| ▪ Geometry II | Math 342 | Fall 2008 |

Grader for:

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|------------------|----------|-------------|
| ▪ Geometry I     | Math 341 | Spring 2008 |
| ▪ Linear Algebra | Math 221 | Fall 2007   |
- **Teacher, 6<sup>th</sup>-8<sup>th</sup> Grade**, Beulah School, Beulah, Colorado, 2002-2005
    - 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade mathematics 2002-2005
    - Algebra I 2002-2003, 2004-2005
    - Technology 2002-2003
    - 6<sup>th</sup> and 7<sup>th</sup> grade social studies 2002-2004
  - **Professional Development Facilitator**, Greeley District 6, Greeley, Colorado
    - Helped plan and implement professional development in mathematics for in-service 5<sup>th</sup> grade teachers, Fall 2007-Spring 2008
  - **Student Teacher Evaluator**, University of Northern Colorado, Fall 2008 & Spring 2009
  - **Outstanding Teaching** by a Graduate Student Award, University of Northern Colorado, 2009

## Licenses

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- **Colorado Professional Teacher's License**, Secondary Mathematics, current

## Publications

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- Grassl, R., Mingus, T., Andrew, L., Diaz, R., & Parker, F. (in press). Enumeration of rectangles in a tableau shape. *Mathematics Teacher*.
- Champion, J., Parker, F., Mendoza-Spencer, B., & Wheeler, A. (in press). College algebra students' attitudes towards mathematics in their careers. *International Journal of Science and Mathematics Education*.
- Soto-Johnson, H., Craviotto, C., & Parker, F. (in press). The pursuit of mathematics: What motivates young women. *73rd NCTM Yearbook*.

## Presentations

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- *Gaining Closure*. CCTM, Denver, Colorado, September 26, 2008.
- *Developing a Model of Guided Discovery Learning*.
  - Joint Meeting, San Diego, California, January 8, 2008.
  - R. L. Moore Conference, Austin, Texas, July 9, 2008.
- *Use of Student Generated Concept Maps to Analyze Student Understanding of Linear Independence*. Rocky Mountain MAA Section Meeting, Pueblo, Colorado, April 14, 2007.

## Research

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- **Graduate Research Assistant**, Mathematics Teacher Leadership Center, University of Northern Colorado, Summer 2009-present
  - NSF grant funded project, PI: Dr. Jodie Novak
  - Researched and wrote the literature review about teacher leadership in mathematics
  - Currently assisting with the Teacher Leadership Program development including the application process and the curriculum design
- **Summer Graduate Research Assistant**, University of Northern Colorado, 2009
  - Under the direction of Dr. Hortensia Soto-Johnson and Dr. Cathleen Craviotto
  - Researched and wrote a literature review about girls' motivation and achievement in mathematics
  - Interviewed a sample of participants in the *Las Chicas de Matematicas* program about their motivations, interests, and aspirations with respect to mathematics. (The *Las Chicas* program is a residential, week-long summer mathematics camp for girls entering grades 9-12. Seventy percent of the attendees are Hispanic.)
  - The resulting paper has been accepted for publication in the *73<sup>rd</sup> NCTM Yearbook*.
- **Summer Graduate Research Assistant**, University of Northern Colorado, 2007, 2008, 2009
  - Under the direction of Dr. Nathaniel Miller
  - Analyzed interview data from students in an inquiry-based geometry class
  - Currently finalizing a paper for publication

## Research Interests

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- The role of intuition in the concept development of linear algebra students
- The assessment of learning in linear algebra
- The process of concept formation of students who have participated in an inquiry based geometry class
- Language use in mathematics classes, especially interpreting students' mathematical understanding from their written responses

## Service

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- **Graduate Student Representative**, PhD Committee, University of Northern Colorado, 2009-2010
- **Mathematics Tutor**, University of Northern Colorado, 2005-2007
- **Mathematics Tutor**, Heath Middle School, Greeley, Colorado, Fall 2005

## Professional Development

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### Conferences

- Joint Meeting, San Diego, California, January 2008
- Rocky Mountain MAA Section Meeting, Pueblo, Colorado, May 2007
- R.L. Moore Conference, Austin, Texas, May 2006, July 2008, & July 2009

### Seminars

- Seminar on *Understanding by Design* (Wiggins & McTighe, 2005), University of Northern Colorado, Fall 2009
- Seminar on Technology and Web Site Development, University of Northern Colorado, Fall 2009
- Seminar on Galois Theory, University of Northern Colorado, Spring 2008
- Seminar on Integrable Systems, University of Northern Colorado, Spring-Summer 2007
- Seminar on Proof, University of Northern Colorado, Fall 2006

### Mentoring / Course Coordination

- Mathematics for Elementary Teachers Course Coordination, UNC, Fall 2007 & Fall 2009
  - Under the supervision of a faculty member, met during the semester with fellow course instructors to discuss issues and pedagogies for the course
- Faculty mentoring, University of Northern Colorado, Fall 2006
  - Participated in a department mentoring program in which a faculty member mentored my teaching for a semester. This mentoring involved my mentor, Dr. Shandy Hauk, observing my teaching and my observing her teaching following by discussions.
- College Algebra Course Coordination, University of Northern Colorado, 2005-2007
  - Under the supervision of a faculty member, met during the semester with fellow course instructors to discuss issues and pedagogies for the course

### Workshops

- Importance of Context in Teaching, University of Northern Colorado, Fall 2007
- Graduate Teacher Intensive, University of Northern Colorado, Fall 2008

## **Professional Affiliation**

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- Mathematics Association of America (MAA), 2006-present
- Special Interest Group of the MAA on Research in Undergraduate Mathematics Education (RUME), 2006-present
- National Council of the Teachers of Mathematics (NCTM), 2002-2005, 2007-present
- American Educational Research Association (AERA), 2007-present
- Association for Supervision and Curriculum Development (ASCD), 2008-present

## **Work Experience – Non-Academic**

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### **Professional Work Experience**

- 1996-1997, Programmer, J.D. Edwards, Denver, Colorado
- 1997-1999, Programmer, Diner's Club, Denver, Colorado
- 1993-1994, Production Manager, The Publishing House, Westminster, Colorado
- 1989-1993, IT Manager, Duke Communications, International, Loveland, Colorado
- 1988, Computer Consultant
- 1985-1987, Programmer, Fusion Products International, San Rafael, California
- 1981-1985, Programmer, Professional Communication Resources, Oak Brook, Illinois and San Rafael, California

### **Internships**

- Summer 1980, Women in Management, Programmer, Illinois Tool Works, Chicago, Illinois
- Fall 1980, Programmer, Oak Ridge National Laboratory, Oak Ridge, Tennessee

## Supplemental Information

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### Graduate-Level Mathematics Courses (38 credits - GPA 4.0)

▪ Mathematical Problem Solving	Math 529	3.0 credits	Summer 2005
▪ Modern Geometry	Math 543	3.0 credits	Summer 2005
▪ Abstract Algebra and Number Theory	Math 591	3.0 credits	Summer 2005
▪ Introduction to Topology	Math 540	3.0 credits	Fall 2005
▪ Basic Analysis	Math 531	3.0 credits	Fall 2006
▪ Basic Analysis II	Math 532	3.0 credits	Spring 2007
▪ Abstract Algebra I	Math 609	3.0 credits	Fall 2007
▪ Number Theory	Math 691	3.0 credits	Fall 2007
▪ Geometry Proofs – Directed Studies	Math 622	1.0 credit	Spring 2008
▪ Abstract Algebra II	Math 623	3.0 credits	Spring 2008
▪ Real Analysis	Math 635	3.0 credits	Fall 2008
▪ Complex Variables	Math 632	3.0 credits	Spring 2008
▪ Linear Algebra – Directed Studies	Math 622	1.0 credit	Spring 2008
▪ Proofs from the Book	Math 695	3.0 credits	Fall 2009 (in progress)

### Graduate-Level Mathematics Education Courses (22 credits - GPA 4.0)

▪ Survey of Research in Math Education	MED 610	3.0 credits	Fall 2006
▪ Cognitive Processes in Math	MED 700	3.0 credits	Spring 2007
▪ Educational Math Research	MED 701	3.0 credits	Spring 2007
▪ Post-secondary Math Teaching	MED 710	1.0 credits	Spring 2007
▪ Math Ed on Post-secondary Level	MED 675	3.0 credits	Summer 2007
▪ Statistical Methods III	SRM 610	3.0 credits	Summer 2007
▪ Math Ed on Secondary Level	MED 674	3.0 credits	Spring 2008
▪ Teaching & Learning K-12 Math	MED 703	3.0 credits	Fall 2008