

# Jennifer Froelich

## Education

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- 2003-present**    **The University of Iowa**, Iowa City, Iowa.  
*Ph.D., Mathematics, Expected May 2008*  
*Thesis Title: Universal Deformation Rings Related to the Symmetric Group  $S_5$*   
*Advisor: Professor Frauke Bleher*  
*Comprehensive Exams Completed August 2006*
- 1999-2003**    **University of North Dakota**, Grand Forks, North Dakota.  
*B.S., Mathematics, Summa Cum Laude*

## Research Area

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Representation theory of finite groups and finite dimensional algebras, AMS MSC: 20, 16.

## Teaching Experience

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**VIGRE Teaching Assistant and Graduate Research Mentor:** Organized an undergraduate research project, assisted students with LaTeX, sharpened students' mathematical reasoning, proof writing, and problem solving skills for a graph theory class, facilitated discussion sessions, and evaluated student work.

- VIGRE Heartland REU, The University of Iowa (Summer 2007)

**Teaching Assistant:** Lead discussion sessions which complement the lectures, determined grades, designed quizzes, graded tests, quizzes, and homework, held office hours, and worked at The University of Iowa Math Tutorial Lab.

- Calculus and Matrix Algebra for Business, The University of Iowa (Fall 2004 - Spring 2005)
- Engineering Math I: Single Variable Calculus, The University of Iowa (Fall 2005 - Spring 2006)

**Summer Mathematics Program for Women Undergraduates Teaching Assistant:** Evaluated students' homework, held office hours, sharpened students' mathematical reasoning, proof writing, and problem solving skills for a topology class, encouraged enthusiasm for mathematics, and provided a supportive environment for young female mathematicians.

- Summer Mathematics Program for Women Undergraduates, Carleton College (Summer 2003)

## Awards and Recognition

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- Presidential Fellowship, The University of Iowa (Fall 2003 - Fall 2006, Fall 2007 - Present)
- VIGRE Traineeship, awarded on a yearly basis, The University of Iowa (Fall 2006 - Summer 2007)

- The University of Iowa President's Award for State Outreach and Public Engagement Nominee (2007)
- Catherine Wegner Outstanding Mathematics Teaching Assistant Award, The University of Iowa (2005, 2006)
- The University of Iowa Outstanding Teaching Award Nominee (2005)
- Presidential Scholar, University of North Dakota (1999 - 2003)
- President's Honor Roll, University of North Dakota (1999 - 2003)
- University of North Dakota Dean's List (1999 - 2003)
- National Dean's List (1999 - 2003)
- Who's Who Among Students in American Colleges and Universities (1999 - 2003)
- Mathematical and Theoretical Biology Institute Invited Participant, Cornell University (2002)
- National Science Foundation Computer Science, Math, and Engineering Scholarship (2001- 2002)
- Summer Mathematics Program for Women Undergraduates Invited Participant, Carleton College (2001)
- Nine additional University of North Dakota named scholarships

## Presentations

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- **Dots, Arrows, and Representation Theory.** Graduate and Undergraduate Student Seminar (GAUSS), The University of Iowa (2007)
- **Universal Deformation Rings and Blocks Related to the Symmetric Group  $S_5$ .** MathFest, San Jose, CA (2007)
- **Quivers and Representations.** The Wabash Summer Institute in Algebra (WSIA), Wabash College (2007)
- **Quivers and Representations.** VIGRE Conference on Representation Theory and L-functions, The University of Iowa (2007)
- **Row and Column Finite Matrices.** Algebra Seminar, The University of Iowa (2007)
- **An Introduction to Path Algebras and Their Relationship to Basic Algebras (Part 1 and 2).** Algebra Seminar, The University of Iowa (2006)
- **The Human Papilloma Virus: Effects of Male Screening.** Joint Mathematics Meetings, Baltimore, MA (2003)
- **The Human Papilloma Virus: Effects of Male Screening.** Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Conference, Anaheim, CA (2003)

## Service

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- Sonia Kovalevsky Day, The University of Iowa, Co-Chair (2007) and Volunteer and Panelist (2006)
- Pi Beta Phi Alumnae Advisory Committee, The University of Iowa, Chair (2007) and Advisor to Vice President of Communications (2006)
- Math Grads Board, The University of Iowa, Chair (2006) and Social Chair (2005)
- Graduate Student Senate, The University of Iowa (2005 - 2006)
- The University of Iowa High School Mathematics Competition, Volunteer (2004)
- Student Ambassador, University of North Dakota (2001 - 2003)

## Conferences Attended

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- Career Mentoring Workshop, West Point, NY (2007)
- MAA MathFest, San Jose, CA (2007)
- AMS Spring Western Section Meeting, Tucson, AZ (2007)
- Joint Mathematics Meetings, New Orleans, LA (2007)
- Career Options for Women in Mathematical Sciences, University of Minnesota (2005)
- Joint Mathematics Meetings, Atlanta, GA (2005)
- Joint Mathematics Meetings, Baltimore, MA (2003)
- Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Conference, Anaheim, CA (2003)
- SIAM 50th Anniversary and 2002 Annual Meeting, Philadelphia, PA (2002)
- Nebraska Conference for Undergraduate Women (2002)

## University and Departmental Seminars Attended

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- Algebra Seminar
- Graduate and Undergraduate Student Seminar (GAUSS)
- Representation Theory Seminar
- Seminar in College Teaching

## Professional Memberships

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- American Mathematical Society
- Association for Women in Mathematics
- Mathematical Association of America

- Gamma Sigma Alpha Honor Society
- Golden Key National Honor Society
- National Society of Collegiate Scholars
- Phi Beta Kappa Honor Society

## Undergraduate Experiences

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- Mathematics Tutor, University of North Dakota (2000 - 2003)
- Summer Mathematics Program for Women Undergraduates Invited Participant, Carleton College (2001)
- Mathematical and Theoretical Biology Institute Invited Participant, Cornell University (2002)

## References

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