

Jenny G. Fuselier

MADN-MATH
United States Military Academy
646 Swift Road
West Point, NY 10996-1905

Office: 845.938.5218

Fax: 845.938.2409

Homepage: http://www.dean.usma.edu/math/people/fuselier_j

Email: jenny.fuselier@usma.edu

Home: 845.859.4645

Mobile: 979.574.6797

Citizenship: USA

Birthplace: Augusta, GA

Employment

Assistant Professor
United States Military Academy

July 2007 - Present

Education

Ph.D., Mathematics
Texas A&M University
Thesis Advisor: *Dr. Matthew Papanikolas*

August 2007

Bachelor of Science, Mathematics
Texas A&M University
Magna Cum Laude

August 2002

Research Interests

Number Theory
Modular forms
Hypergeometric functions over finite fields
Elliptic curves

Publications

Hypergeometric functions over \mathbb{F}_p and relations to elliptic curves and modular forms, submitted
March 2008

Hypergeometric functions over finite fields and relations to modular forms and elliptic curves,
Ph.D. Thesis, Texas A&M University, 2007.

Teaching Experience

United States Military Academy

- **Instructor: Foundations in Mathematics**
Bridge course for math majors, including logic, set theory, modular arithmetic, and elementary number theory, all with an emphasis on developing proof writing skills

Fall 2008

- **Instructor: Elementary Number Theory** Fall 2008
Independent study course with one advanced student; topics including divisibility, prime numbers, congruences, multiplicative functions, primitive roots, and quadratic residues
- **Instructor: Differential Calculus** Spring 2008
Single and multivariate differential calculus course for students of all majors; utilized Mathematica
- **Instructor: Integral Calculus** Fall 2007
Single and multivariate integral calculus course, including some differential equations, for students of all majors; utilized Mathematica
- **Instructor: Calculus Bridge for Math/CS Majors** Fall 2007
Seven lesson proof writing curriculum for math and computer science majors at the end of their calculus sequence

Texas A&M University

- **Instructor: Finite Math** Summer 2004
Introductory course, primarily for education and business majors; content including matrices and systems of linear equations, set theory, counting, and elementary probability and statistics
- **Teaching Assistant: Integral Calculus** Spring 2004 - Spring 2006
Integral calculus course for engineering majors; teaching included weekly recitation sessions and weekly computer labs using Maple
- **Teaching Assistant: Differential Calculus** Fall 2003
Differential calculus course for engineering majors; teaching included weekly recitation sessions and weekly computer labs using Maple
- **Grader** Spring 2007
 Graduate Algebra II Summer 2005
 Advanced Linear Algebra Spring 2002
 Modern Algebra Fall 2001
 Discrete Math Fall 2000
 Differential Equations

Research Addresses

- Annual Workshop on Automorphic Forms and Related Topics** March 2008
 Texas A&M University
Traces of Hecke operators in level 1 and hypergeometric functions over \mathbb{F}_p
- Colloquium: Center for Faculty Development** February 2008
 United States Military Academy
Ramanujan's τ -function and elliptic curves

AWM Workshop for Graduate Students and Recent PhDs Joint Mathematics Meetings <i>On hypergeometric functions over \mathbb{F}_p and Ramanujan's τ-function</i>	January 2008
Summer Program for Women in Mathematics Reunion Joint Mathematics Meetings <i>Ramanujan's τ-function and counting points on elliptic curves</i>	January 2008
Faculty Seminar United States Military Academy <i>Elliptic Curves and the Congruent Number Problem</i>	September 2007
Illinois Number Theory Fest University of Illinois at Urbana-Champaign <i>Hypergeometric Functions over \mathbb{F}_p and Ramanujan's τ-function</i>	May 2007
Prospective Graduate Student Luncheon Texas A&M University <i>On Ramanujan's τ-function</i>	March 2007
Number Theory Seminar Texas A&M University <i>Hypergeometric functions over finite fields and relations to elliptic curves</i>	February 2007
Graduate Student Seminar Texas A&M University <i>Patterns and integer valued polynomials</i>	September 2004
Algebra and Combinatorics Seminar Texas A&M University <i>Patterns and integer valued polynomials</i>	March 2004
Professional Service	
Department Academic Counselor United States Military Academy	March 2008 - Present
Independent Reader: Honors Senior Thesis United States Military Academy	April 2008
Fundamental Concepts Mentor United States Military Academy	Spring 2008
Women's Basketball Math Volunteer United States Military Academy	Spring 2008
Summer Educational Enrichment in Math Texas A&M University Cryptography Instructor	July 2007
Math Mini Fair Texas A&M University Problem Solving Contest Grader	April 2007

Summer Educational Enrichment in Math
Texas A&M University
Undergraduate Teaching Assistant

July 2002

Selected Honors and Awards

NSF VIGRE Fellowship
Texas A&M University

Fall 2004 - Spring 2005

Outstanding Teaching Assistant Award
Texas A&M University

May 2004

AUF Tuition Award
Texas A&M University

Fall 2003 - Spring 2004

NSF VIGRE Fellowship
Texas A&M University

Fall 2002 - Spring 2003

Outstanding Mathematics Graduate
Texas A&M University

August 2002

Summer Program for Women in Mathematics
The George Washington University

Summer 2001

Professional Activities

American Mathematical Society

Member

Mathematical Association of America

Member

Association for Women in Mathematics

Member

Master Teacher Program (2007-2008)

Participant

Graduate Teaching Academy 2005

Participant

Computer Skills

Maple, Mathematica, Pari/GP, L^AT_EX, HTML

References

Dr. Sharon Frechette
sfrechet@mathcs.holycross.edu
508.793.2257

COL Steve Horton, Ph.D.
steve.horton@usma.edu
845.938.5870

Dr. Matthew Papanikolas
map@math.tamu.edu
979.845.1615

LTC Archie Wilmer, Ph.D.
archie.wilmer@usma.edu
845.938.6726