

Jenny G. Fuselier, Ph.D.

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Citizenship: USA

Employment

High Point University

Associate Professor of Mathematics	August 2016 - Present
Interim Department Chair, Mathematical Sciences	May 2018 - August 2019
Assistant Professor of Mathematics	August 2009 - July 2016
Assistant Director, Honors Scholar Program	January 2013 - May 2016

United States Military Academy

Assistant Professor of Mathematics	July 2007 - June 2009
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Education

Ph.D., Mathematics

Texas A&M University Thesis Advisor: <i>Dr. Matthew Papanikolas</i>	August 2007
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Bachelor of Science, Mathematics

Texas A&M University Magna Cum Laude	August 2002
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Research Interests

Number Theory

- Hypergeometric functions over finite fields
- Modular forms
- Elliptic curves
- Mahler measure

Mathematics Education

- Flipped classroom pedagogy
- Growth mindset among mathematics students
- Metacognition and its effect on mathematics students

Publications

(with L. Long, R. Ramakrishna, H. Swisher, F.T. Tu) "Hypergeometric series, truncated hypergeometric series, and Gaussian hypergeometric functions," 1-111. To appear in *Memoirs of the American Mathematical Society*.

(with A. Deines, L. Long, H. Swisher, F.T. Tu) "Hypergeometric series, truncated hypergeometric series, and Gaussian hypergeometric functions," *Directions in Number Theory: Proceedings of the 2014 WIN3* (2016), 125-160.

(with A. Deines, L. Long, H. Swisher, F.T. Tu) "Generalized Legendre curves and quaternionic multiplication," *Journal of Number Theory* 161 (2016), 175-203.

(with D. McCarthy) “Hypergeometric type identities in the p -adic setting and modular forms,”
Proceedings of the American Mathematical Society 144 (2016), 1493-1508.

(with A. Graham-Squire, R. Lamb, K. O’Hara, L. Zack) “Flipping Freshman Mathematics,”
PRIMUS 25: 9-10 (2015), 803-813.

(with M.J. Bertin, A. Feaver, M. Lalín, M. Manes) “Mahler measure of some singular K3-surfaces,”
Contemporary Mathematics 606 (2013), 149-169.

“Traces of Hecke operators in level 1 and Gaussian hypergeometric functions,”
Proceedings of the American Mathematical Society 141 (2013), 1871-1881.

“Hypergeometric functions over \mathbb{F}_p and relations to elliptic curves and modular forms,”
Proceedings of the American Mathematical Society 138 (2010), 109-123.

Teaching Experience

High Point University Courses

Finite Mathematics
Precalculus
Business Calculus
Calculus I
Calculus II
Calculus III
Introduction to Mathematical Thought
Linear Algebra
Number Theory
Abstract Algebra
First Year Seminar: Mathematics and Music
Graph Theory and the Science of Networks (honors quantitative seminar)

High Point University Student Research Projects

<i>Set Squares</i> , Sarah Poiani	2018
<i>Prime Graph Labelings</i> , Alexis Newton	2017
<i>Partitions with Particular Summands</i> , Joshua Parsons	2015
<i>Elliptic Curves and Cryptology</i> , Samantha Allen	2012
<i>Optimal Assignment Problems</i> , Kaitlin Brindley	2010

United States Military Academy Courses

Mathematical Modeling and Introduction to Calculus
Differential Calculus
Integral Calculus
Foundations in Mathematics
Algebraic Number Theory (Independent Study)
Number Theory (Independent Study)
Senior Thesis II (Coordinator)

Texas A&M University Courses

Finite Mathematics
Integral Calculus (TA)
Differential Calculus (TA)

Conference Presentations

- Southern Regional Number Theory Conference** April 2019
Louisiana State University
Hypergeometric functions over finite fields (plenary speaker)
- MAA Southeastern Section Meeting** March 2019
Lee University
Effectiveness of metacognitive study skills intervention in first year math courses
- MAA Session on the Scholarship of Teaching and Learning Mathematics** January 2018
Joint Mathematics Meetings
Increasing growth mindset in business calculus students
- MAA Session on Mathematical Themes in a First Year Seminar** January 2018
Joint Mathematics Meetings
An honors first year seminar in network science
- Southeastern Regional Meeting on Numbers** April 2017
University of North Florida
Hypergeometric functions over finite fields
- MAA Session on Using Flipping Pedagogy to Engage Students in Learning Mathematics** January 2015
Joint Mathematics Meetings
Flipping freshman mathematics: discouraging results and how to adapt for the future
- Women in Numbers 3** April 2014
Banff International Research Station
Gaussian hypergeometric functions and complex multiplication
- North Carolina Council of Teachers of Mathematics Annual Meeting** October 2014
Greensboro, NC
Flipping freshman mathematics
- Western Section Meeting of the AMS** April 2014
Special Session on Number Theory
Texas Tech University
Traces of Hecke operators in level 1 and Gaussian hypergeometric functions
- Mathematical Congress of the Americas** August 2013
Special Session on Number Theory
Guanajuato, Mexico
Traces of Hecke operators in level 1 and Gaussian hypergeometric functions
- Southeastern Regional Meeting on Numbers** March 2012
Western Carolina University
Mahler measures of some K3-surfaces
- Southeastern Section Meeting of the AMS** September 2011
Special Session on Modular Forms, Elliptic Curves, and Related Topics
Wake Forest University
An update on traces of Hecke operators in level 1 and Gaussian hypergeometric functions

Southeastern Regional Meeting on Numbers Armstrong Atlantic State University <i>Traces of Hecke operators in level 1 and Gaussian hypergeometric functions</i>	April 2011
Southeastern Regional Meeting on Numbers Davidson College <i>Hypergeometric functions over \mathbb{F}_p and counting points</i>	April 2010
MAA Southeastern Sectional Meeting Elon University <i>Patterns and integer valued polynomials</i>	March 2010
AMS Special Session on Automorphic and Modular Forms Joint Mathematics Meetings <i>Traces of Hecke operators in level 1 and Gaussian hypergeometric functions</i>	January 2009
Annual Workshop on Automorphic Forms and Related Topics Texas A&M University <i>Traces of Hecke operators in level 1 and hypergeometric functions over \mathbb{F}_p</i>	March 2008
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
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

Colloquium Talks

Pi Mu Epsilon Colloquium Series Elon University <i>From passing notes to breaking codes</i>	September 2017
Mathematics Seminar High Point University <i>Integer valued polynomials</i>	September 2012
Research Experiences for Undergraduates Clemson University <i>Patterns and integer valued polynomials</i>	June 2012
Computational Mathematics Seminar University of North Carolina at Greensboro <i>What are Gaussian hypergeometric functions?</i>	April 2011
Center for Faculty Development United States Military Academy <i>Ramanujan's τ-function and elliptic curves</i>	February 2008
Faculty Seminar United States Military Academy <i>Elliptic curves and the congruent number problem</i>	September 2007

Number Theory Seminar February 2007
 Texas A&M University
Hypergeometric functions over finite fields and relations to elliptic curves

Workshops

re:boot Number Theory June 2017
 Duke University

re:boot Number Theory April 2016
 Duke University

Women in Numbers 3 April 2014
 Banff International Research Center
 Invited Participant

Summer Teaching Institute May 2013
 NC A&T University

SCALE-UP and Flipped Classrooms April 2013
 UNC Pembroke

Women in Numbers 2 November 2011
 Banff International Research Center
 Invited Participant

MAA PREP Workshop on Algebraic Number Theory June 2010
 Williams College

Funding Received

Growth Mindset Scholar, High Point University: \$6500 2016-2018

Think Big Grant, High Point University 2013
 Project: Flipped Classroom Experiment: \$15,000

American Mathematical Society Travel Grant: \$1800 2013

Professional Service

Organizer

MAA Southeastern Section Meeting March 2020
 re:boot Number Theory June 2017
 Association for Women in Mathematics Research Symposium,
 Special Session on Number Theory April 2015
 Southeastern Conference for Undergraduate Women in Mathematics November 2014
 Southeastern Regional Meeting on Numbers April 2013

Referee (12 articles)

Archiv der Mathematik
Journal of Number Theory
 PRIMUS
Proceedings of the American Mathematical Society
The Ramanujan Journal
Research in Number Theory

Reviewer, *Mathematical Reviews* (18 articles) 2010 - Present

University Service

High Point University, General

College of Arts & Sciences Curriculum Committee	2018-present
Deputy Faculty Marshal	2017-present
Chair, College of Arts & Sciences Curriculum Committee	2015-2018
Faculty Mentor	2012-2018
Employee Wellness Committee	2015-2017
Honors Director Search Committee	2015-2016
Co-Chair, Honors Scholar Committee	2013-2016
Faculty Advisor, Alpha Lambda Delta	2013-2016
Honors Scholar Committee	2010-2016
Undergraduate Research and Creative Works Committee	2012-2013
Student Life Committee	2010-2012

High Point University, Departmental

Chair, Statistics Search Committee	2018
Departmental Awards Committee	2014-2018
Independent Reader: Honors Senior Thesis	2013-2016
Chair, Departmental Awards Committee	2012-2013
Chair, Mathematics Search Committee	2011-2012
Mathematics Search Committee	2009-2010

United States Military Academy

Chair, Departmental Awards Committee	2009
Department Academic Counselor	2008-2009
Independent Reader: Honors Senior Thesis	2008
Fundamental Concepts Mentor	2008

Selected Honors and Awards

NSF VIGRE Fellowship	2004-2005
	2002-2003
Outstanding Teaching Assistant Award	2004
AUF Tuition Award	2003-2004
Outstanding Mathematics Graduate	2002

Memberships

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

Computer Skills

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

Professional references are available upon request.