

**KEVIN JAMES**  
Associate Professor  
Mathematical Sciences  
Clemson University  
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May 22, 2012

## EDUCATION.

Ph.D., University of Georgia, 1997, Mathematics.

B.S., University of Georgia, 1991, Mathematics and Computer Science.

## PROFESSIONAL EXPERIENCE.

**Clemson University**, 8/2006 - present, Associate Professor.

**Clemson University**, 7/2000 - 8/2006, Assistant Professor.

**The Pennsylvania State University**, 8/1997 - 6/2000, S. Chowla Research Assistant Professor.

**University of Georgia**, 6/1991 - 8/1997, Teaching/Research Assistant.

## MEMBERSHIPS.

American Mathematical Society.

## PUBLICATIONS.

### Refereed Journal Publications.

1. K. James, *L-series with non-zero central critical value*, Journal of the American Mathematical Society, **11** (1998), 635–641.
2. K. James and K. Ono, *On the irreducibility of Hecke polynomials*, Journal of Number Theory, **73** (1998), 527–532.
3. K. James and K. Ono, *Selmer groups of quadratic twists of elliptic curves*, Math. Ann., **314**, (1999), no. 1, 1–17.
4. K. James, *Elliptic Curves satisfying the Birch and Swinnerton-Dyer conjecture mod 3*, Journal of Number Theory, **76** (1999), 16–21.
5. D. Farmer and K. James, *The irreducibility of some level-1 Hecke polynomials*, Math. Comp. **71** (2002) no. 239, 1263–1270.

6. K. James, *Average Frobenius distributions for elliptic curves with 3-torsion*, Journal of Number Theory **109** (2004) no. 2, 278–298.
7. K. James, *Averaging Special Values of Dirichlet L-series*, Ramanujan Journal, **10**, (2005), no. 1, 75–87.
8. J. Battista, J. Bayless, D. Ivanov and K. James, *Average Frobenius distributions for elliptic curves with nontrivial rational torsion*, Acta Arith. **119** (2005), no. 1, 81–91.
9. K. Bowman, N. Calkin, Z. Cochran, T. Flowers, K. James and S. Purvis, *Linear independence in a random binary vector model*, 36th Southeastern International Conference on Combinatorics, Graph Theory, and Computing. Congr. Numer. **172** (2005), 29–32.
10. N. Calkin, K. James, S. Purvis, S. Race, K. Schneider, M. Yancey, *Counting Kings: Explicit Formulas, Recurrence Relations, and Generating Functions! Oh My!* Congressus Numerantium **182** (2006), 41–51.
11. N. Calkin, K. James, S. Purvis, S. Race, K. Schneider, M. Yancey, *Counting Kings: As easy as  $\lambda_1, \lambda_2, \lambda_3, \dots$*  Congressus Numerantium **183** (2006), 83–95.
12. K. James and G. Yu, *Average Frobenius distribution of elliptic curves*, Acta Arith. **124** (2006), 79–100.
13. M. Brown, N. Calkin, K. James, A. King, S. Purvis and R. Rhoades, *Trivial Selmer groups and the number of even partitions of a graph.*, INTEGERS: ELECTRONIC JOURNAL OF COMBINATORIAL NUMBER THEORY, **6** (2006), #A33.
14. N. Calkin, J. Davis, K. James, E. Perez and C. Swannack, *Computing the integer partition function.*, Math. Comp. **76** (2007), 1619–1638.
15. B. Faulkner and K. James, *A graphical approach to computing Selmer groups of congruent number curves*, Ramanujan Journal, **14** (2007) no. 1, 107–129.
16. B. Brown, N. Calkin, T. Flowers, K. James, E. Smith and A. Stout, *Elliptic Curves, Modular Forms, and Sums of Hurwitz Class Numbers.*, Journal of Number Theory, **128**, no. 6, (2008), 1847–1863.
17. N. Calkin, N. Drake, K. James, S. Law, P. Lee, D. Pennsiton, J. Radder, *Divisibility properties of the 5-regular and 13-regular partition functions*, INTEGERS: ELECTRONIC JOURNAL OF COMBINATORIAL NUMBER THEORY, **8(1)** (2008) # **A60**.
18. J. Burkhart, N. J. Calkin, S. Gao, J. C. Hyde-Volpe, K. James, H. Maharaj, S. Manber, J. Ruiz, E. Smith, *Finite field elements of high order arising from modular curves*, Designs, Codes and Cryptography, **51:3** June 2009.
19. N. Calkin, J. Davis, M. Delcourt, Z. Engberg, J. Jacob, K. James, *Discrete Bernoulli convolutionns: An algorithmic approach toward bound improvement*, Proc. Amer. Math. Soc. **139** (2011), 1579–1584.
20. K. James, E. Smith *Average Frobenius Distributions for elliptic curves over Galois extensions*, Math Proc Camb Phil Soc. **150** issue 03 (2011) 439–458.

21. N. Calkin, B. Faulkner, K. James, M. King, D. Penniston, *Average Frobenius distributions for elliptic curves over abelian extensions*, Acta Arith. **149** (2011), no. 3, 215-244.
22. J. Beyerl, K. James, C. Trentacoste, H. Xue, *Products of Nearly Holomorphic Eigenforms*, Ramanujan Journal, **27**, Issue 3 (2012), 377–386.
23. N. Calkin, J. Davis, M. Delcourt, Z. Engberg, J. Jacob, K. James, *Taking the convoluted out of Bernoulli convolutions: A discrete approach*, INTEGERS (accepted modulo revision).
24. J. Beyerl, K. James, H. Xue, *On the divisibility of Eigenforms by other Eigenforms*, (accepted modulo revision, revised and resubmitted).
25. K. James and E. Smith, *Average Frobenius distribution for the degree two primes of a number field*, (submitted).
26. K. James, C. Trentacoste, H. Xue, *A graph theoretic approach to the 3-Selmer groups of certain elliptic curves*, (revised and resubmitted).
27. K. James, T. Flowers, G. J. Schaeffer, C. T. South and C. J. Wu, *Average Frobenius distributions for rational elliptic curves with prescribed torsion subgroup*, (in preparation).
28. K. James and N. Jones, *Elliptic champion primes*, (in preparation).

**Conference Proceedings** (Reviewed).

1. K. James, *An example of an elliptic curve with a positive density of prime quadratic twists which have rank zero*, Proceedings of Topics in Number Theory [Editors: G. Andrews, K. Ono], Kluwer Acad. Publ. (1999), 223–227.
2. J. Brunier, K. James, W. Kohlen, K. Ono, C. Skinner and V. Vatsal, *Central critical values of quadratic twists of modular L-functions and some applications*, Proceedings of Topics in Number Theory [Editors: G. Andrews, K. Ono], Kluwer Acad. Publ. (1999), 115–125.
3. N. Calkin and K. James, *Clemson REU in Computational Number Theory and Combinatorics*, Proceedings of the Conference on Promoting Undergraduate Research in Mathematics, Joseph A. Gallian (editor), American Mathematical Society, 2007, 57–60.

**PRESENTATIONS.**

**Plenary Lectures.**

1. K. James, *Prime distribution and elliptic curves*, Plenary Lecture given at the UGA Graduate Student Mock AMS Conference, University of Georgia, Athens, GA (07/2010).

**Invited Research Lectures.**

1. K. James *The distribution of the traces of Frobenius for elliptic curves.*, AMS special session on Automorphic and Modular Forms, 2012 Spring Western Section Meeting, University of Hawaii at Manoa, Honolulu, HI (3/3-4/2012)

2. K. James *Prime distribution and elliptic curves*, AMS special session on Modular Forms, Elliptic Curves, and Related Topics, 2011 Fall Southeastern Section meeting, Wake Forest University, Winston-Salem, NC. (9/24-25/2011).
3. K. James *Sums of Hurwitz Class Numbers*, Senior Seminar, University of North Carolina - Asheville, Asheville, NC (2/3/2010).
4. K. James *Prime distribution and elliptic curves*, Noontime seminar, University of North Carolina - Asheville, Asheville, NC (2/4/2010).
5. K. James *Elliptic Curves and the distribution of primes*, Québec-Vermont Number Theory Seminar, McGill University, Montreal, Québec, Canada (10/30/2008).
6. K. James *The parity of the 5-regular and 13-regular partition functions and related results*, 2008 Southeastern sectional meeting of the Mathematical Association of America, The Citadel, Charleston, SC (3/29/08).
7. K. James *Undergraduate Research in Computational Number Theory and Combinatorics*, Session on Interdisciplinary Research Projects for Undergraduates at the International Conference on Advances in Interdisciplinary Statistics and Combinatorics, University of North Carolina-Greensboro, Greensboro, NC. (10/13/07).
8. K. James *Average Frobenius Distributions of Elliptic Curves*, Number Theory Seminar, University of South Carolina, Columbia SC. (9/20/07).
9. K. James *Some recent averaging results related to the Lang-Trotter conjecture*, AMS special session on Analytic Number Theory and Modular Forms, 2006 Fall Southeastern Section Meeting, Fayetteville, AR. (11/3/2006).
10. N. Calkin and K. James, *Research Experiences for Undergraduates*, Spellman College, Atlanta GA. (2/08/06).
11. K. James, *The Lang-Trotter conjecture on average*. Number Theory seminar, University of South Carolina, Columbia SC. (2/25/05).
12. K. James, *The Lang-Trotter conjecture on average*. Number Theory seminar, Texas A&M University, College Station, TX. (2/17/05).
13. K. James, *Average Frobenius distributions for elliptic curves with rational torsion*. AMS special session on Arithmetic Algebraic Geometry, Joint Mathematics meetings, Atlanta, GA (1/2005).
14. K. James, *Sums of Hurwitz class numbers*. UGA Department of Mathematics VIGRE seminar, University of Georgia, Athens, GA. (2/24/2004).
15. K. James, *Average Frobenius distributions for elliptic curves with non trivial rational torsion subgroups*. AMS special session "Modular Forms, Elliptic Curves, and Related Topics," 2003 Joint Mathematics Meetings, Baltimore, MD (1/15-18/2003).
16. K. James, *The Lang-Trotter Conjecture on average*. AMS special session on Number Theory, 2002 Spring South East Sectional Meeting in Atlanta, GA (3/2002).

17. K. James, *The Lang-Trotter Conjecture for elliptic curves with 3-torsion*. Number Theory seminar, University of Georgia, Athens, GA (2/2002).
18. K. James, *Average Frobenius distributions for elliptic curves with prescribed torsion subgroup*. AMS special session on Number Theory, 2001 Spring Central Section Meeting, Lawrence, KS (3/2001).
19. K. James, *Average Frobenius distributions for elliptic curves with prescribed torsion subgroup*. AMS special session on Analytic Number Theory, 2001 Spring Southeastern Section Meeting, Columbia, SC (3/2001).
20. K. James, *What is number theory good for anyway*. Davidson College, Davidson, North Carolina (2/2000).
21. K. James, *On Selmer groups of quadratic twists of elliptic curves*. AMS special session on automorphic forms, 2000 Joint meetings of the AMS and MAA, Washington DC (1/2000).
22. K. James, *On Selmer groups of quadratic twists of elliptic curves*. New York Number Theory Seminar, City University of New York, New York, New York (5/1999).
23. K. James, *On Selmer groups of quadratic twists of elliptic curves*. Modular forms meeting, Oberwolfach Institute, Oberwolfach, Germany (12/1998).
24. K. James, *How to multiply really fast*. Undergraduate informal mathematics seminar, Bucknell College, Lewisburg, PA (4/1998).
25. K. James, *Density Theorems related to the non-vanishing of  $L$ -series of Modular Forms*. AMS special session on Modular Identities and  $Q$ -series, Philadelphia, PA (4/1998).
26. K. James, *On quadratic twists of elliptic curves*. AMS special session in Number Theory, University of Montreal, Montreal, Canada (9/1997).
27. K. James, *On quadratic twists of elliptic curves*. AMS special session on number theory, Rutgers University, Newark, NJ (3/1997).
28. K. James, *On quadratic twists of elliptic curves*. University of Missouri, Columbia, MO (11/1996).

### Invited Colloquia.

1. K. James, Math Honors Banquet, East Tennessee State University, Johnson City, Tennessee (4/2005).
2. K. James, University of Missouri, Columbia, Missouri (3/2000).
3. K. James, Clemson University, Clemson, South Carolina, (2/2000).
4. K. James, University of North Texas, Denton, Texas (2/2000).
5. K. James, Bucknell University, Lewisburg, Pennsylvania (2/2000).
6. K. James, Western Carolina University, Cullowhee, North Carolina (2/2000).

### Contributed Lectures.

1. K. James, *Sums of Hurwitz class numbers*. South East Regional Meeting On Numbers (SERMON), College of Charleston, Charleston, SC (4/17/2004).
2. K. James, *The Lang-Trotter conjecture for elliptic curves with rational 3-torsion*. 7-th meeting of the Canadian Number Theory Association (CNTA), Universite de Montreal, Montreal, Canada (5/22/2002).
3. K. James, *Average Frobenius distributions for elliptic curves with prescribed torsion subgroup*. SERMON, Furman University, Greenville, SC (3/2001).
4. K. James, *On Selmer groups of quadratic twists of elliptic curves*. CNTA-6, Winnipeg, Manitoba, CANADA (6/1999).
5. K. James, *On the irreducibility of Hecke Polynomials*. 12th annual workshop on automorphic forms and related topics, University of Missouri, Columbia, Missouri (2/1998).
6. K. James, *On quadratic twists of elliptic curves*. Algebra Weekend, University of Missouri, Columbia, Missouri (10/1997).
7. K. James, *L-series with non-zero central critical value*. Topics in Number Theory, The Pennsylvania State University, State College, Pennsylvania (7/1997).
8. K. James, *On the non-vanishing of L-series of quadratic twists of modular forms*. West Coast Number Theory Conference, University of Nevada, Las Vegas, NV (12/1996).
9. K. James, *An example of an elliptic curve with an infinite number of rank zero twists*. CNTA-5, Carleton University, Ottawa, Canada (8/1996).
10. K. James, *An example of an elliptic curve with an infinite number of rank zero twists*. NSF-CBMS Regional Conference: Euler Products and Eisenstein Series, Texas Christian University, Fort Worth, TX (5/1996).
11. K. James, *Modular Forms of Half Integral Weight and Waldspurger's Theorem*. SERMON, Wake Forest University, Winston-Salem, NC (3/1996).
12. K. James, *Modular Forms and Elliptic Curves*. SERMON, College of Charleston, Charleston, SC (4/1995).

## Seminar Talks.

1. K. James *Prime Distribution and Elliptic Curves* given in the Number Theory Seminar at Clemson University, Clemson, SC (Fall 2011).
2. J. Brown, N. Calkin and K. James “*How we spent our summer*” or “*The 2010 Clemson REU*” given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2010).
3. N. Calkin and K. James “*How we spent our summer*” or “*The 2009 Clemson REU*” given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2009).
4. N. Calkin and K. James “*How we spent our summer*” or “*The 2008 Clemson REU*” given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2008).
5. N. Calkin and K. James “*How we spent our summer*” or “*The 2007 Clemson REU*” given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2007).
6. K. James, *Problems related to factoring*, given in the First Year Graduate Seminar at Clemson University, Clemson South Carolina (Spring 2007).
7. N. Calkin and K. James “*How we spent our summer*” or “*The 2006 Clemson REU*” given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2006).
8. K. James, *Recent undergraduate research on elliptic curves* given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2005).
9. K. James, *Research Topics in Number Theory* given in the First Year Graduate Seminar at Clemson University, Clemson South Carolina (Spring 2005).
10. K. James, *The Lang-Trotter conjecture on average*, given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Spring 2005).
11. N. Calkin and K. James, “*How we spent our summer*” or “*The 2004 Clemson REU*,” given along with N. Calkin in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2004).
12. K. James, *Galois Representations associated to elliptic curves*, given in the Informal Algebra and Number Theory seminar, Clemson University, Clemson South Carolina (Fall 2004).
13. K. James, *Research Topics in Number Theory* given in the First Year Graduate Seminar at Clemson University, Clemson South Carolina (Spring 2004).
14. K. James, *Introduction to Projective Geometry* given in the Informal Algebra and Number Theory seminar at Clemson University, Clemson South Carolina (Fall 2003).

15. K. James, *Research Topics in Number Theory* given in the First Year Graduate Seminar at Clemson University, Clemson South Carolina (Spring 2003)
16. N. Calkin and K. James, *REU in computational number theory and combinatorics* given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2002).
17. K. James, *A new polynomial time primality testing algorithm* given in the Algebra and Discrete Math seminar at Clemson University, Clemson South Carolina (Fall 2002).
18. K. James, *A summary of the congruent number problem* given in the Informal Algebra and Number Theory seminar at Clemson University, Clemson South Carolina (Fall 2002).
19. K. James, *The Lang Trotter conjecture* given in the Informal Algebra and Number Theory seminar at Clemson University, Clemson South Carolina (Spring 2002).
20. K. James, *Research Topics in Number Theory* given in the First Year Graduate Seminar at Clemson University, Clemson South Carolina (Spring 2002)
21. K. James, *Some interesting Class Number Formulas* given in the Informal Algebra and Number Theory seminar at Clemson University, Clemson South Carolina (Fall 2001).
22. K. James, *Recent Progress on the Lang-Trotter conjecture.* given in the Algebra and Discrete Math Seminar at Clemson University, Clemson South Carolina (Fall 2001).
23. K. James, *Explicit Formulae for the group law of elliptic curves over finite fields II* given in the Informal Algebra and Number Theory seminar at Clemson University, Clemson South Carolina (Spring 2001).
24. K. James, *Explicit Formulae for the group law of elliptic curves over finite fields I* given in the Informal Algebra and Number Theory seminar at Clemson University, Clemson South Carolina (Spring 2001).
25. K. James, *Research Topics in Number Theory* given in the First Year Graduate Seminar at Clemson University, Clemson South Carolina (Spring 2001)
26. K. James, *An introduction to elliptic curves II* given in the Informal Algebra and Number Theory seminar at Clemson University, Clemson South Carolina (Spring 2000).
27. K. James, *An introduction to elliptic curves I* given in the Informal Algebra and Number Theory seminar at Clemson University, Clemson South Carolina (Spring 2000).
28. K. James, *Research Topics in Number Theory* given in the First Year Graduate Seminar at Clemson University, Clemson South Carolina (Spring 2000)
29. K. James, *Nonvanishing Theorems for elliptic curves II.*, given in the Algebra and Discrete Math Seminar at Clemson University, Clemson South Carolina (Fall 2000).

30. K. James, *Nonvanishing Theorems for elliptic curves I*, given in the Algebra and Discrete Math Seminar at Clemson University, Clemson South Carolina (Fall 2000).
31. K. James, *A computational approach to Frobenius distributions* given in the Number Theory Seminar at The Pennsylvania State University University Park, Pennsylvania (Fall 1999).
32. K. James, *Selmer groups of quadratic twists of elliptic curves II* given in the Informal Number Theory Seminar at The Pennsylvania State University University Park, Pennsylvania (Fall 1998).
33. K. James, *Selmer groups of quadratic twists of elliptic curves I* given in the Informal Number Theory Seminar at The Pennsylvania State University University Park, Pennsylvania (Fall 1998).
34. K. James, *Non-vanishing of modular  $L$ -series in families of quadratic twists* given in the Number Theory Seminar at The Pennsylvania State University University Park, Pennsylvania (Fall 1997).
35. K. James, *Apéry's proof that  $\zeta(3)$  is irrational* given in the Informal Number Theory Seminar at The Pennsylvania State University University Park, Pennsylvania (Fall 1997).
36. K. James, *On the non-vanishing of  $L$ -series attached to modular forms of high weight* given in the Informal Number Theory Seminar at The Pennsylvania State University University Park, Pennsylvania (Fall 1997).
37. K. James, *On the non-vanishing of modular  $L$ -series at level one* given in the Informal Number Theory Seminar at The Pennsylvania State University University Park, Pennsylvania (Fall 1997).
38. K. James, *On the irreducibility of Hecke polynomials* given in the Informal Number Theory Seminar at The Pennsylvania State University University Park, Pennsylvania (Fall 1997).
39. K. James, *On the reduction of elliptic curves* given in the Arithmetic Geometry Seminar at University of Georgia Athens, Georgia (Spring 1996).
40. K. James, *An example of an elliptic curve with a positive density of prime quadratic twists having rank zero* given in the Number Theory Seminar at University of Georgia Athens, Georgia (Spring 1996).
41. I gave two lectures on modular forms and one on using quadratic forms to build modular forms in the Graduate Elliptic Curves and Modular Forms Class at University of Georgia, Athens, Georgia (Spring 1996).
42. K. James, *Elliptic curves, modular forms and the congruent number problem* given in the Number Theory Seminar at University of Georgia Athens Georgia (Winter 1995).
43. I gave various talks on Modular Forms and Elliptic Curves. in the weekly Student Number Theory Seminar at University of Georgia, Athens, Georgia (1994-1997). I was an organizer of this seminar from 1994 to 1996.

## HONORS AND AWARDS.

Invited to give the plenary address at a Mock AMS conference organized by the University of Georgia Department of Mathematics and to represent the success of UGA's graduate mathematics program. I was also invited to lead a discussion on pursuing a career in mathematics. (2010).

Invited and funded to participate in an AMS-NSA sponsored Workshop on "Promoting Undergraduate Research in Mathematics".

Nominated and accepted for participation in the 2004 National Effective Teaching Institute (2004).

Included in AcademicKeys Who's Who in Sciences Higher Education. (2004)

Received the Robert C. Anderson memorial award for excellence in research from University of Georgia (2000).

Invited to give a talk at a conference on modular forms at the Oberwolfach Institute in Germany (1998).

Received Franklin College of Arts and Sciences Distinguished Doctoral Research Assistantship at the University of Georgia (1996-1997).

Received 1 year Graduate School Research Assistantship (1995-1996).

Received Outstanding Graduate Teaching Award (1995).

Received 9 month Graduate School Research Assistantship (1994-1995).

Received 1 year Graduate School Research Assistantship (1991-1992).

Graduated Magna Cum Laude with high honors from University of Georgia (1991).  
 $\Phi BK$  (1991).

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## SPONSORED RESEARCH.

*Collaborative Research: Research Experience for Undergraduates: Algebraic geometry, combinatorics, and number theory*, NSF, CoPI, \$ 234,455, (\$ 70,337) 5/31/2012 - 5/30/2014.

*Palmetto Number Theory Series/ SouthEast Regional Meeting on Numbers*, NSA, CoPI, \$ 14,483, (\$ 7,242) 8/1/2011 - 7/31/2012.

*Palmetto Number Theory Series/ SouthEast Regional Meeting on Numbers*, NSF, CoPI, \$ 11,223 , (\$ 3,704) 8/1/2011 - 7/31/2012.

*Acquisition of Large-Memory, Many-Core Compute Node for Mathematical Science Research*, NSF, CoPI, \$ 132,196, (\$ 10,576) 7/1/2010 - 6/30/2011.

*Palmetto Number Theory Series*, NSF, CoPI, \$ 13,423 , (\$ 2685) 8/1/2010 - 7/31/2011.

*Palmetto Number Theory Series*, NSF, CoPI, \$ 11,096 , (\$ 3662) 8/1/2009 - 7/31/2010.  
*Palmetto Number Theory Series*, NSA, CoPI, \$ 13,057 , (\$ 4352) 8/1/2009 - 7/31/2010.  
*Palmetto Number Theory Series*, NSF, CoPI, \$ 7,950, (\$ 1590) 8/1/2008 - 7/31/2009.  
*Palmetto Number Theory Series* , NSF, CoPI, \$ 8,250, (\$ 1650) 8/1/2007 - 7/31/2008.  
*South Carolina Number Theory Meeting - Palmetto Number Theory Series (PANTS)*,  
 NSA, CoPI, \$ 15,000, (\$ 3000), 9/1/2007 - 8/31/2008.  
*REU Site: Computation, Combinatorics and Number Theory*, NSF, PI, \$ 559,816  
 (\$ 279,908), 4/1/2006 - 3/31/2011.  
*Supplement to 2003 REU in Computational Number Theory and Combinatorics*, NSF,  
 PI, \$ 28,389 (\$ 14,195), 5/1/2006 - 4/30/2007.  
*Acquisition of Parallel Computing Cluster for Large-Scale Computational Problems  
 in the Mathematical Sciences*, NSF, Co-PI, \$ 140,000 (\$ 12,600), 10/01/2005 -  
 10/01/2006.  
*2003 REU in Computational Number Theory and Combinatorics*, NSF, PI, \$ 245,556  
 (\$ 122,778), 5/1/2003 - 4/30/2006.  
*REU in Computational Number Theory and Combinatorics*, NSF, PI, \$ 64,109 (\$ 32,055),  
 6/01/2002 - 5/31/2003.  
*Modular Forms and Related Topics*, NSF, PI, \$ 51,993 (\$ 51,993), 8/15/2000 - 7/31/2003.

## **OTHER SPONSORED ACTIVITY.**

Travel Grant, National Science Foundation, \$1,000 (1998).  
 Travel support, National Security Agency (2006).

## **GRADUATE STUDENT ADVISING.**

### **PhD Graduates**

1. Bryan Faulkner, “Estimates related to the arithmetic of elliptic curves,” (August 2007).
2. Ethan Smith, (Ph. D. Math. Sci.) “On Elliptic Curves, Modular Forms, and the Distribution of Primes” (May 2009).
3. Jeff Beyerl, “On factoring Hecke eigenforms, nearly holomorphic modular forms, and applications to L-values,” (May 2012), co-advised with Hui Xue..
4. Catherine Trentacoste, “Modular Forms, Elliptic Curves and Drinfeld Modules,” (May 2012), co-advised with Hui Xue..

### **Masters Graduates**

1. Travieso Gonzalez, “Exploring the partition function,” (May 2003).
2. Ethan Smith, “Bases of modular forms,” (May 2005).

3. Matthew J. Lafferty, “Building squares of ideals in number fields” (May 2008).
4. Jeff Beyerl, “Binary Quadratic Forms over  $\mathbb{F}[T]$  and Principal Ideal Domains,” (May 2009), co-advised with Hui Xue..
5. Catherine Trentacoste, “Construction of a dimension two rank one Drinfeld Module,” (May 2009), co-advised with Hui Xue..
6. Rodney Keaton, “Explicit Level Lowering for 2-Dimensional Modular Galois Representations,” (December 2010), co-advised with Jim Brown.
7. Jason Hedetniemi, “Champion Primes For Elliptic Curvers,” (May 2012), co-advised with Hui Xue..

### **Current Graduate Advising**

1. Jeff Beyerl, (PhD Math. Sci.) May 2012, co-advised with Hui Xue.
2. Catherine Trentacoste, (PhD Math. Sci.) May 2012, co-advised with Hui Xue..
3. Jason Hedetniemi, (MS Math. Sci.), May 2012, co-advised with Hui Xue..

## TEACHING.

### Clemson University (7/00 - Present)

MthSc. 106 (Calculus, 2 sections)	Fall 2000
MthSc. 119 (Intro. Discrete Math.)	Spr 2001
MthSc. 106 (Calculus)	Fall 2001
MthSc. 853 (Linear Algebra)	Fall 2001
MthSc. 311 (Undergrad Linear Algebra)	Spr 2002
MthSc. 119 (Intro. Discr. Math.)	Fall 2002
MthSc. 985 (Number Theory)	Fall 2002
MthSc. 410 (Number Theory)	Spr 2003
MthSc. 985 (Algebraic Number Theory)	Spr 2003
MthSc. 119 (Intro. Discr. Math.)	Fall 2003
MthSc. 985 (Primes of the form $x^2 + ny^2$ )	Fall 2003
MthSc. 410 (Number Theory)	Spr 2004
MthSc. 311 (Undergrad Linear Algebra)	Spr 2004
MthSc 106 (Calculus)	Fall 2004
MthSc 985 (Elliptic Curves & Modular Forms)	Fall 2004
MthSc 129 (Problem solving in Discr. Math.)	Spr 2005
MthSc 410 (Number Theory)	Spr 2005
MthSc. 119 (Intro. Discr. Math.)	Fall 2005
MthSc. 985 (Number Theory)	Fall 2005
MthSc. 311 (Undergrad Linear Algebra)	Spr 2006
MthSc. 851 (Abstract Algebra)	Spr 2006
MthSc. 311 (Undergrad Linear Algebra)	Fall 2006
MthSc. 852 (Abstract Algebra)	Fall 2006
MthSc. 129 (Problem solving in Discr. Math.)	Spr 2007
MthSc. 985 (Analytic Number Theory)	Spr 2007
MthSc. 311 (Undergrad Linear Algebra)	Fall 2007
MthSc. 985 (Graduate Number Theory)	Fall 2007
MthSc. 311 (Undergrad Linear Algebra)	Spr 2008
MthSc. 985 (Graduate Algebraic Number Theory)	Spr 2008
MthSc. 311H (Undergrad Linear Algebra)	Fall 2008
MthSc. 412 (Undergraduate Abstract Algebra)	Fall 2008
MthSc. 311H (Undergrad Linear Algebra)	Spr 2009
MthSc. 853 (Graduate Linear Algebra)	Spr 2009
MthSc. 311 (Undergrad Linear Algebra)	Fall 2009
MthSc. 412 (Undergraduate Abstract Algebra)	Fall 2009
MthSc. 311 (Undergrad Linear Algebra)	Spr 2010
MthSc. 412 (Undergraduate Abstract Algebra)	Spr 2010
MthSc. 311 (Undergrad Linear Algebra)	Fall 2010
MthSc. 412 (Undergraduate Abstract Algebra)	Fall 2010

MthSc. 206 (Multivariable Calculus)	Spr 2011
MthSc. 410 (Undergraduate Number Theory)	Spr 2011
MthSc. 102 (Business Calculus) )	Summer 2011
MthSc. 853 (Linear Algebra)	Summer 2011
MthSc. 206 (Multivariable Calculus)	Fall 2011
MthSc. 851 (Abstract Algebra)	Fall 2011
MthSc. 206 (Multivariable Calculus)	Spring 2012
MthSc. 852 (Abstract Algebra)	Spring 2012

**The Pennsylvania State University (8/97 - 5/2000)**

MATH 140 (Calculus)	Fall 1997
MATH 311 (Intro. to higher math)	Spring 1998
MATH 467 (Factoring and Primality Testing)	Fall 1998
MATH 597 <i>B</i> (Grad. class in modular forms)	Fall 1998
MATH 251H (Honors Ordinary Diff. Eq.)	Spring 1999
MATH 436 (Linear Algebra)	Fall 1999
MATH 465 (Undergrad. Number Theory)	Spring 2000
MATH 251.101 (1 hr. course on PDE's and Fourier Series)	Spring 2000

**University of Georgia (6/91 - 6/97)**

MATH 116 (Precalculus)	Fall 1992
MATH 116	Winter 1993
MATH 116	Fall 1993
MATH 105 (Intro. to Math)	Winter 1994
MATH 106 (Intro. to Math)	Winter 1995
MATH 106	Fall 1995

Other Duties performed: grading, assisting in teaching calculus.

**UNIVERSITY AND PUBLIC SERVICE.**

**Continuing Education**

Co-organized with Jim Brown and Hui Xue, the fall 2011 meeting of the Palmetto Number Theory Series (PANTS).

Co-organized with Jim Brown and Hui Xue, the spring 2011 meeting of the Palmetto Number Theory Series (PANTS).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2010).

Co-organized with Jim Brown, Hiren Maharaj and Hui Xue, the spring 2010 meeting of the Palmetto Number Theory Series (PANTS).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2009).

Co-organized with Jim Brown, Hiren Maharaj and Hui Xue, the spring 2009 meeting of the Palmetto Number Theory Series (PANTS).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2008).

Organized the Spring 2008 Southeastern Regional Meeting on Numbers (April 2008).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2007).

Co-organized with Hiren Maharaj and Hui Xue, the spring 2007 meeting of the Palmetto Number Theory Series (PANTS).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2006).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2005).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2004).

Attended the Florida-Georgia Louis Stokes Alliance For Minority Participation in Science, Engineering and Mathematics Career Expo in order to recruit potential graduate students for our department and participants for our REU from under represented areas. (January 2004).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2003).

Hosted a roundtable discussion on R.E.U.'s at the at the Spring 2003 joint meeting of the southeastern section of the MAA and the Atlantic section of SIAM held at Clemson University, Clemson SC. (March 2003).

Served as a judge of graduate student research posters at Clemson University's Forum on Research (April 2003).

Directed along with Neil Calkin an NSF supported Research Experience for Undergraduates. (Summer 2002).

Co-organizer along with Neil Calkin of the Spring 2002 Southeastern Regional Meeting on Numbers (March 2002).

Co-organizer along with Neil Calkin of the Informal Algebra and Number Theory seminar which meets weekly in our department (1/2001 - present).

Co-organized, along with W. Li a special session *Automorphic forms and arithmetic geometry* at the Fall 1998 Eastern sectional meeting of the American Mathematical Society (October 1998).

Participated in the Upward Bound Math and Science Center's 1998 Career Fair at The Pennsylvania State University, University Park Pennsylvania (July 1998).

Co-organized a mathematics workshop along with Ken Ono at the 1998 National Youth Science Camp at Camp Pocahontas West Virginia (July 1998).

Chaired a session of lectures at *Algebra Weekend* at University of Missouri, Columbia, Missouri (October 1997).

Chaired two sessions of lectures at *Topics in Number Theory* at Pennsylvania State University, University Park, Pennsylvania (July 1997).

Organized a weekly graduate student number theory seminar (1994-1996).

### **Committees**

College	Member	Selection committee, ACC Meeting of the Minds	2006.
Department	Member	Graduate Committee	2002-present
Department	Member	Undergraduate Committee	2001-2002

### **Other Service**

Served on NSF REU panel (1/2010).

Served on NSF REU panel (11/2008).

Referee for several journals including *Involve*, *Advances in Mathematics*, *International Journal of Number Theory*, *Transactions of the American Mathematical Society*, *Acta Arithmetica*, *Journal of Number Theory*, *Ramanujan Journal*, *Topics in Number Theory* conference proceedings and *International Journal of Mathematics and the Mathematical Sciences*.

Undergraduate curriculum adviser for students majoring in Mathematical Sciences (Fall 2005- present).

Reviewed a potential textbook for McGraw Hill (11/2005).

Usher, United Assembly of God, Seneca SC (2001-2008).

Board of Directors, United Assembly of God, Seneca SC (Feb. 2002 - June 2010).

Elder, United Assembly of God, Seneca SC (June 2010 - present).