

John J. B. Webb

Department of Mathematics
University of South Carolina
Columbia, SC 29208

webbjj3@email.sc.edu
<http://www.math.sc.edu/~webbjj3>

Curriculum Vitae

(Updated: 5/9/11)

Citizenship: USA

Date of Birth: February 4, 1979

Place of Birth: Orange, California

Current Position: Teacher-Scholar Postdoctoral Fellow, Wake Forest University
Starting in Fall, 2011.

Education:

- University of South Carolina, Columbia
Ph.D. in Pure Mathematics, May, 2011
Dissertation: “Behavior of partition values modulo powers of primes”
Advisor: Matthew Boylan
- Dartmouth College, Hanover, NH
B.A., June 2001, Pure Mathematics

Research Interests:

- Classical Modular Forms
- Partitions
- L -Functions
- Harmonic Weak Maass Forms
- Algebraic Number Theory

Publications:

- *Partition values and central critical values of certain modular L -functions.* Proc. Amer. Math. Soc. 138 (2010), 1263-1272.
- *Arithmetic of the 13-regular partition function modulo 3.* Ramanujan Journal. 25 (2011), no. 1, 49-56.
- *On the vanishing of Fourier coefficients of certain newforms.* (with M. Boylan and S. Garthwaite) Int. J. Number Theory. Accepted for publication.
- *The partition function modulo prime powers.* (with M. Boylan) In progress.
- *Hecke operators on $SL_2(\mathbb{Z})$ modulo 2 and 2^t -core partitions.* In progress.

Invited Talks:

- Clemson University Algebra and Combinatorics Seminar, September 2009: *Partition values and central critical values of certain modular L-functions*
- Number Theory of Partitions, Emory University, January 2011: *The zoom rate of F-K-O fractals*
- Wake Forest University, February 2011: *Partitions and Modular Forms*

Conference Talks:

- South East Regional Meeting on Numbers (SERMON), UNC Greensboro, April 2009: *Partition values and central critical values of certain modular L-functions*
- Palmetto Number Theory Series XI (PaNTS), USC, December 2009: *Arithmetic of the 13-regular partition function modulo 3*
- Automorphic Forms Workshop, University of Hawai'i, Manoa, March 2010: *Partition values and central critical values of certain modular L-functions*
- PaNTS XV, Clemson University, February 2011: *The zoom rate of F-K-O fractals*
- SERMON, Armstrong Atlantic State University, April 2011: *Hecke nilpotency and 2^t -core partitions*

Seminar Talks:

- November 2008: *Tunnell's solution to the congruent number problem*
Number Theory Seminar, University of South Carolina
- January 2009: *Gross, Zagier, and Kolyvagin's work on the Birch, Swinnerton-Dyer Conjecture*
Number Theory Seminar, University of South Carolina
- April 2009: *Partition values and central critical values of certain modular L-functions*
Number Theory Seminar, University of South Carolina
- November 2009: *Arithmetic of the 13-regular partition function modulo 3*
Number Theory Seminar, University of South Carolina
- January 2011: *Regarding the ℓ -adic behavior of partition numbers*
Number Theory Seminar, University of South Carolina

Teaching:

- Dartmouth College, Hanover, NH:
 - Real Analysis, Teaching Assistant: Fall 2000
- University of South Carolina, Columbia:
 - Vector Calculus: Spring 2008, Summer 2008
 - Calculus II: Summer 2007, Spring 2009, Spring 2011
 - Pre-Calculus: Fall 2010
 - Finite Mathematics: Spring 2010
 - College Algebra: Fall 2007, Fall 2008, Fall 2009
 - Calculus II Teaching Assistant: Fall 2006, Spring 2007

Other Mathematics Activities:

- July 2009: *Arithmetic of L-functions*, Park City Mathematics Institute Graduate Summer School, attended with full funding.
- June 2011: *The Pretentious View of Analytic Number Theory*, AMS Math Research Community.
- Conferences and Seminars Attended:
 - Fall 2006: Palmetto Number Theory Series (PaNTS I), University of South Carolina
 - Fall 2007 - Spring 2011: University of South Carolina Number Theory Seminar
 - Spring 2009 - Fall 2010: Co-organizer with Matthew Boylan, Samuel Gross, and Andrew Vincent
 - Fall 2007: PaNTS III, College of Charleston
 - Fall 2007: PaNTS IV, University of South Carolina
 - Spring 2008: PaNTS V, Furman College
 - Spring 2008: SERMON, Clemson University
 - Fall 2008: Combinatory Analysis 2008, Penn State University
 - Fall 2008: PaNTS VIII, University of South Carolina
 - Spring 2009: SERMON, UNC Greensboro
 - Fall 2009: Student Algebraic Geometry Seminar, University of South Carolina
 - Fall 2009: PaNTS XI, University of South Carolina
 - Spring 2010: PaNTS XII, Clemson University
 - Spring 2010: Automorphic Forms Workshop, University of Hawai'i, Manoa
 - Spring 2010: SERMON, Davidson College
 - Fall 2010: PaNTS XII, UNC Greensboro
 - Fall 2010: PaNTS XIII, University of South Carolina
 - Spring 2011: Number Theory of Partitions, Emory University
 - Spring 2011: PaNTS XV, Clemson University
 - Spring 2011: SERMON, Armstrong Atlantic State University
- Putnam Exam Team, Dartmouth College:
 - 1998 - 2000: Team Member
- Pi Mu Epsilon, University of South Carolina:
 - Fall 2008 - Spring 2009: Co-organizer for an after-school mathematics tutoring program at a local high school.

Awards and Honors

- Thayer Prize,
Department of Mathematics, Dartmouth College, 1998
- Cum Laude,
Dartmouth College, 2001
- Graduate Student Travel Award
College of Arts & Sciences, University of South Carolina, 2010
- Outstanding Graduate Student
Department of Mathematics, University of South Carolina, 2011