

Michael John Griffin

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Academics

PRINCETON UNIVERSITY Princeton, NJ

June 2015 –

- NSF Postdoctoral fellow

EMORY UNIVERSITY Atlanta, GA

Aug 2011 – May 2015

- PhD candidate in Mathematics, studying under Dr. Ken Ono

BRIGHAM YOUNG UNIVERSITY Provo, UT

Aug 2008 – Apr 2011

Aug 2005 – Apr 2006

- Bachelor degree in Mathematics with Computer Science minor
- Graduated Magna Cum Laude and with University Honors

Work Experience

MICROSOFT CORPORATION Redmond, WA

Summer 2011

Intern, Software Developer

- Created a prototype application for intuitive data manipulation
- Coded in C# and MS Silverlight for efficient handling of very large data sets

BOY SCOUTS OF AMERICA, Ogden, UT

COPE Course Director

Summer 2009

High Adventure Area Director

Summer 2008

LDS CHURCH; INDIA, BANGALORE MISSION India

May 2006 – May 2008

Volunteer Missionary

Awards and Honors

- NSF postdoctoral fellowship
- Emory Dept. of Math. Graduate Student Research Award
- NSF Graduate Research Fellowship
- National Physical Science Consortium (NPSC) Fellow
- Barry M. Goldwater Scholarship Honorable Mention
- BYU Orson Pratt Prize for outstanding graduating senior in Mathematics
- BYU Gordon B. Hinckley Presidential Scholar
- Member of Phi Kappa Phi Honor Society
- BSA Eagle Scout

Teaching

Emory

- Math Circle outreach program Fall 2013—Present
- Emory REU project advisor Summer 2013
- Math 111: Beginning Calculus Fall 2012—Spring 2013

BYU

Fall 2010

- Teaching assistant for Math 485: Mathematical Cryptography

Publications

1. Umbral Moonshine. (with K. Ono and J. Duncan), in preparation
2. Asymptotic formulas for values of shifted convolution Dirichlet series. (with K. Mahlburg), in preparation.
3. Moonshine. (with K. Ono and J. Duncan), *Research in the Mathematical Sciences*, to appear.
4. A framework of Rogers-Ramanujan identities and their arithmetic properties. (with K. Ono and S. O. Warnaar), submitted.
5. Weierstrass mock modular forms and elliptic curves, (with C. Alfes, K. Ono and L. Rolén), *Research in Number Theory*, to appear.
6. Singular Moduli for a Distinguished Non-Holomorphic Modular Function. (with V. Dose, N. Green, T. Mao, L. Rolén, and J. Willis), *Proceedings of the American Mathematical Society*, to appear.
7. Ramanujan's Mock Theta Functions. (with K. Ono and L. Rolén), *Proceedings of the National Academy of Science*, Volume 110, Number 15, 2013, Pages 5765-5768
8. $SU(2)$ Donaldson invariants of the projective plane. (with A. Malmendier and K. Ono), *Forum Mathematicum*, to appear.
9. Properties of Class Polynomials for Non-holomorphic Modular Functions. (With L. Rolén), *Journal of the Ramanujan Society*, to appear.
10. On Matrices Arising in the Finite Field Analogue of Euler's Integral Transform. (with Larry Rolén), *Mathematics*, Volume 1, 2013, Pages 3-8
11. Divisibility Properties of Coefficients of Weight 0 Weakly Holomorphic Modular Forms. *International Journal of Number Theory*, Volume 7, Number 4, 2011, Pages 933-941

Presentations

"On the distribution of moonshine and umbral moonshine." UNC-Duke Number Theory Seminar. Durham NC, 21 Jan. 2014

"Weierstrass mock modular forms." Joint math meetings. San Antonio TX, 13 Jan. 2015

"Algebraic units arising from a framework of Rogers-Ramanujan identities." Joint math meetings. San Antonio TX, 11 Jan. 2015

"Weierstrass mock modular forms." SASTRA Prize Conference. Kumbakonam India, 21 Dec. 2014

"On the distribution of moonshine and other theorems at the interface of number theory and representation theory.." Texas A&M Number Theory Seminar. Provo UT, 3 Dec. 2014

"On the distribution of moonshine and other theorems at the interface of number theory and representation theory.." BYU Number Theory Seminar. Provo UT, 20 Nov. 2014

"Theorems at the interface of number theory and representation theory." University of Tennessee Algebra and Number Theory Seminar. Knoxville TN, 3 Nov. 2014

"Theorems at the interface of number theory and representation theory." Penn State Number Theory Seminar. University Park PA, 27 Oct. 2014

"On the distribution of moonshine." Emory Algebra/Number Theory Seminar. Atlanta GA, 16 Sept. 2014

"A framework of Rogers-Ramanujan identities and their arithmetic properties." 28th Automorphic forms workshop. Moab UT, 12 May 2014.

"A framework of Rogers-Ramanujan identities and their arithmetic properties." AMS spring sectional meeting, Texas Tech University. Lubbock TX, 12 April 2014.

"Weierstraass mock modular forms and elliptic curves." AMS spring sectional meeting, Texas Tech University. Lubbock TX, 11 April 2014.

"A framework of Rogers-Ramanujan identities." University of South Carolina Number Theory Seminar. Clemson SC, 23 Oct. 2013.

"Weierstraass mock modular forms and elliptic curves." Clemson Number Theory Seminar. Clemson SC, 23 Oct. 2013.

"Mock modular forms." TIFR number theory seminar. Mumbai India, 1 Aug. 2013.

"Mock modular forms." IMSc number theory colloquium. Chennai India, 22-23 July. 2013.

"Ramanujan's mock-theta functions." BYU Number Theory Seminar. Provo UT, 8 Jan. 2013.

"SU(2) Donaldson invariants of the projective plane." Ramanujan 125 Conference. Gainesville FL, 6 Nov. 2012.

"Integrality properties of class polynomials for non-holomorphic modular functions." AMS Sectional Meeting. Honolulu, 3 Mar. 2012.

"U_p congruences modulo powers of primes." 25th Automorphic Forms Workshop. Corvallis OR, 24 Mar. 2011.

"Divisibility properties of coefficients of weight 0 weakly holomorphic Modular Forms." 24th Automorphic Forms Workshop. Honolulu, 23 Mar. 2010.

"A new perspective on some non-simple periodic orbits." Spring Research conference, Brigham Young University College of Physical and Mathematical Sciences. Provo UT, 21 Mar. 2009.