

Rodney L. Keaton

Work Address:

Department of Mathematics and Statistics
East Tennessee State University
Johnson City, TN 37614
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CURRENT POSITION

2016-current

Assistant Professor

East Tennessee State University, Johnson City, TN.

EDUCATION

2014-2016

Postdoctoral Researcher

University of Oklahoma, Norman, OK.

2011-2014

Clemson University, Clemson, SC.

Ph.D. in Mathematical Sciences, August 2014.

Thesis: *Level Stripping of genus 2 Siegel modular forms*

Advisor: Assoc. Prof. Jim Brown

2009-2010

Clemson University, Clemson, SC.

M.S. in Mathematical Sciences, December 2010.

Thesis: *Explicit Level Lowering for 2-Dimensional Modular Galois Representations.*

Advisor: Assoc. Prof. Jim Brown and Assoc. Prof. Kevin James

2004-2007

University of North Carolina at Asheville, Asheville, NC.

B.A. in Mathematics, December, 2007.

CITIZENSHIP

United States of America.

HONORS AND AWARDS

April 2014

Excellence in Research

Clemson University, Clemson, SC.

April 2012

Excellence in Teaching

Clemson University, Clemson, SC.

RESEARCH

Current Interests

algebraic number theory, arithmetic geometry, elliptic modular forms, Siegel modular forms, special values of L -functions, Galois representations

RESEARCH PAPERS

- 2016** *Level stripping for vector-valued Siegel modular forms of genus 2* (Funct. Approx. Comment. Math., 54(2), 251-274).
- 2015** *Congruence primes for Ikeda lifts and the Ikeda ideal* with J. Brown (Pacific J. Math., 274(1), 27-52).
- 2015** *Eigenvalues of Ikeda lifts* (Ramanujan J., 37(2), 299-307).
- 2013** *Level stripping for degree 2 Siegel modular forms* (Math. Res. Lett., 20(5), 919-932)
- 2013** *Level stripping for Siegel modular forms with reducible Galois representations* with J. Brown (J. Number Theory, 133,1492-1501).

UNDERGRADUATE RESEARCH PAPERS

- 2016** *Counting tamely ramified extensions of local fields up to isomorphism* with J. Brown, R. Cass (undergraduate), K. James, S. Parenti (undergraduate), D. Shankman (undergraduate) (to appear Integers).
- 2015** *Degree 14 extensions of \mathbb{Q}_7* with J. Brown, R. Cass (undergraduate), S. Parenti (undergraduate), D. Shankman (undergraduate) (Int. J. Pure and Applied Math., 100(2), 337-345).
- 2015** *Elliptic aliquot cycles for number fields* with J. Brown, D. Heras (undergraduate), K. James, A. Qian (undergraduate) (to appear Rocky Mountain J. Math.).

INVITED TALKS

- January 29, 2016** *The congruent number problem,*
Department Seminar, ETSU, Johnson City, TN.
- November 6, 2013** *Congruent numbers, elliptic curves, and a million dollar problem,*
Coffee Talk, Davidson College, Davidson, NC.
- October 3, 2013** *Congruent numbers, elliptic curves, and a million dollar problem,*
Senior Seminar, University of North Carolina, Asheville, NC.
- June 26, 2013** *Elliptic curves and applications to number theory,*
Duke TIP program for gifted high school students, Pisgah Astronomical Research Institute, Rosman, NC.
- October 2, 2012** *Level stripping for Siegel modular forms,*
Number Theory Seminar, University of South Carolina, Columbia, SC.
- June 26, 2012** *Fermat's Last Theorem,*
Duke TIP program for gifted high school students, Pisgah Astronomical Research Institute, Rosman, NC.

TALKS AND PRESENTATIONS	
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| December 5, 2015 | <i>An Application of the Waldspurger Model to a Conjecture of Tonghai Yang</i>
PANTS XXV, Clemson University, Clemson, SC. |
| March 28, 2015 | <i>Introduction to Modular Forms</i>
TORAS I, University of Oklahoma, Norman, OK. |
| March 23, 2015 | <i>Sums of Four Squares</i>
Graduate Student Seminar, University of Oklahoma, Norman, OK. |
| March 5, 2015 | <i>Level Stripping of Degree 2 Siegel Modular Forms</i>
29th Automorphic Forms Workshop, University of Michigan, Ann Arbor, MI. |
| February 4, 2015 | <i>Congruent Numbers, Elliptic Curves, and a Million Dollar Problem</i>
OU Math Club, University of Oklahoma, Norman, OK. |
| Jan. 23 - Feb. 13, 2015 | <i>Galois Representations and Serre's Conjecture</i>
Algebra and Representation Theory Seminar, University of Oklahoma, Norman, OK. |
| September 18, 2013 | <i>Vector Valued Modular Forms</i>
Algebraic Geometry and Number Theory Seminar, Clemson University, Clemson, SC. |
| April 8, 2013 | <i>Congruence numbers, Elliptic Curves, and a Million Dollar Problem</i>
Graduate Research and Discovery Symposium, Clemson University, Clemson, SC. |
| December 1-2, 2012 | <i>A congruence between Ikeda lifts and non-Ikeda lifts</i>
PANTS XIX, University of South Carolina, Columbia, SC. |
| September 5, 2012 | <i>Introduction to Modular Symbols,</i>
Number Theory Seminar, Clemson University, Clemson, SC. |
| June 1, 2012 | <i>Introduction to Hecke Characters,</i>
Clemson Math REU, Clemson University, Clemson, SC. |
| February 15, 2011 | <i>A Construction of Siegel Theta Series Satisfying a Certain Congruence,</i>
Number Theory Seminar, Clemson University, Clemson, SC. |
| December 4, 2010 | <i>Level Lowering and the Saito-Kurokawa Lift,</i>
PANTS XIV, University of South Carolina, Columbia, SC. |
| November 9, 2010 | <i>Explicit Level-Lowering of 2-Dimensional Modular Galois Representations,</i>
Number Theory Seminar, Clemson University, Clemson, SC. |
| Sept. 1 and Sept. 22, 2010 | <i>Introduction to Hecke Operators and Newform Theory,</i>
Number Theory Seminar, Clemson University, Clemson, SC. |
| August 31, 2010 | <i>Report on MSRI Summer Workshop: Modular Symbols,</i>
Number Theory Seminar, Clemson University, Clemson, SC. |
| April 20, 2010 | <i>Report on Arizona Winter School: Ergodic Theory,</i>
Number Theory Seminar, Clemson University, Clemson, SC. |
| Mar. 23 and Apr. 13, 2010 | <i>Elliptic Curves and the Tate Module,</i>
Number Theory Seminar, Clemson University, Clemson, SC. |

TALKS AND PRESENTATIONS (cont.)	
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| December 1-2, 2012 | <i>A congruence between Ikeda lifts and non-Ikeda lifts</i>
PANTS XIX, University of South Carolina, Columbia, SC. |
| February-April, 2009 | <i>Modular Forms and Hecke Operators,</i>
Weekly Number Theory Seminar, Clemson University, Clemson, SC. |

CONFERENCES AND WORKSHOPS	
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| April 8-10, 2016 | TORA VII, University of North Texas, Denton, TX. |
| December 5, 2015 | PANTS XXV, Clemson University, Clemson, SC. |
| November 13-15, 2015 | Paul Sally Midwest Representation Theory Conference, University of Missouri, Columbia, MO. |
| March 28-29, 2015 | TORAS I, University of Oklahoma, Norman, OK. |
| March 2-5, 2015 | 29th Automorphic Forms Workshop, University of Michigan, Ann Arbor, MI. |
| September 7-8, 2013 | PANTS XX, Davidson College, Davidson, NC. |
| May 10-12, 2013 | <i>p</i> -adic Modular Forms, <i>L</i> -functions, and Galois representations, University of California Los Angeles, Los Angeles CA. |
| March 9-13, 2013 | Arizona Winter School, Southwestern Center for Arithmetic Algebraic Geometry, University of Arizona, Tucson AZ. |
| December 1-2, 2012 | PANTS XIX, University of South Carolina, Columbia, SC. |
| September 15-16, 2012 | PANTS XVIII, Wake Forest University, Winston Salem, NC. |
| July 30-August 4, 2012 | Building Bridges Summer School, RWTH Aachen University, Aachen, NRW, Germany. |
| March 30-April 1, 2012 | SERMON 2012, Western Carolina University, Cullowhee, SC. |
| March 10-14, 2012 | Arizona Winter School, Southwestern Center for Arithmetic Algebraic Geometry, University of Arizona, Tucson AZ. |
| December 3-4, 2011 | PANTS XVII, Clemson University, Clemson, SC. |
| May 17-22, 2011 | FRG/RTG Workshop on L-functions, Galois Representations, and Iwasawa Theory, University of Michigan, Ann Arbor, MI. |
| February 19-20, 2011 | PANTS XV, Clemson University, Clemson, SC. |
| February 1, 2011 | Joint Athens-Atlanta Number Theory Seminar, Emory University, Atlanta, GA. |
| December 4-5, 2010 | PANTS XIV, University of South Carolina, Columbia, SC. |
| September 25-26, 2010 | PANTS XIII, University of North Carolina at Greensboro, Greensboro, NC. |
| September 21, 2010 | Joint Athens-Atlanta Number Theory Seminar, University of Georgia, Athens, GA. |

CONFERENCES AND WORKSHOPS (cont.)	
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June 21-July 2, 2010	Sage Days 22, Mathematical Sciences Research Institute, Berkeley, CA.
March 13-17, 2010	Arizona Winter School, Southwestern Center for Arithmetic Algebraic Geometry, University of Arizona, Tucson AZ.
February 20-21, 2010	PANTS XII, Clemson University, Clemson, SC.
December 5-6, 2009	PANTS XI, University of South Carolina, Columbia, SC.
September 19-20, 2009	PANTS X, Armstrong Atlantic State University, Savannah, GA.

TEACHING	
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Fall 2016 - Present	Primary lecturer for the following courses: Fall 2016: MATH 1910 Calculus I and MATH 4217/5217 Analysis I East Tennessee State University, Johnson City, TN
Fall 2014 - Summer 2016	Primary lecturer for the following courses: Summer 2016: MATH 2924 Calculus II Spring 2016: MATH 3333 Linear Algebra Fall 2015: MATH 2443 Calculus IV (2 sections) Summer 2015: MATH 2433 and MATH 2934 (3hr and 4hr Calculus III) Spring 2015: MATH 3113 Ordinary Differential Equations (2 sections) Fall 2014: MATH 3333 Linear Algebra University of Oklahoma, Norman, OK
Fall 2010 - Spring 2014	Primary lecturer for the following courses: Spring 2014: MTHSC 207 Business Calculus II Fall 2013: MTHSC 207 Business Calculus II (2 sections) Spring 2013: MTHSC 207 Business Calculus II Fall 2012: MTHSC 207 Business Calculus II (2 sections) Spring 2012: MTHSC 207 Business Calculus II Fall 2011: MTHSC 207 Business Calculus II (2 sections) Spring 2011: MTHSC 207 Business Calculus II Fall 2010: MTHSC 102 Business Calculus I (2 sections) Clemson University, Clemson, SC

ACADEMIC SERVICE	
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November 19, 2015	Volunteer , OU Math Day, University of Oklahoma, Norman, OK.
August 2015-May 2016	Organizer , Algebra and Representation Theory Seminar, University of Oklahoma, Norman, OK.
January 2015-May 2016	Faculty Sponsor , OU Go Club, University of Oklahoma, Norman, OK.
November 20, 2014	Volunteer , OU Math Day, University of Oklahoma, Norman, OK.
Dec. 2013-Aug. 2014	Secretary and Treasurer , AMS Student Chapter, Clemson University, Clemson, SC.
December 7-8, 2013	Conference Co-Organizer , Palmetto Area Number Theory Series XXI, Clemson University, Clemson, SC.

ACADEMIC SERVICE (cont.)

Summer 2012 and 2013	Graduate Student Advisor , Clemson University, Clemson, SC. Advisor to undergraduates for the Clemson math REU.
December 3-4, 2011	Volunteer , Palmetto Area Number Theory Series XVII, Clemson University, Clemson, SC.
February 19-20, 2011	Volunteer , Palmetto Area Number Theory Series XV, Clemson University, Clemson, SC.

COMMUNITY SERVICE

February-July 2015	Volunteer , Crossroads Youth and Family Services, Norman, OK.
Spring 2015	Volunteer , Community After School Program, Norman, OK.
Fall 2005-Summer 2006	Part-Time Volunteer , Americorps, Asheville, NC.