

## CURRICULUM VITAE

MIRELA ÇIPERIANI

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### Education

2002-2006 Princeton University, Ph.D. (April 2006).

2000-2002 Princeton University, Master's Degree.

1996-2000 Smith College, B.A (Summa cum Laude).

### Research interests

Arithmetic Algebraic Geometry, Algebraic Number Theory.

### Employment

2009- Assistant Professor at The University of Texas at Austin.

2005-2009 Ritt Assistant Professor at Columbia University.

Spring 2006 Postdoctoral Fellow at The Mathematical Sciences Research Institute.

### Teaching experience

#### The University of Texas at Austin:

Spring 2015: Graduate Algebra II.

Fall 2014: Differential and Integral Calculus.

Fall 2013: Graduate Algebra I.

Spring 2013: Graduate Algebra II.

Fall 2012: Differential and Integral Calculus.

Spring 2012: Algebraic Number Theory.

Fall 2011: Algebraic Structures I.

Spring 2011: Graduate Algebra II.

Fall 2010: Algebraic Structures I.

Spring 2010: Introduction to Number Theory

Fall 2009: Algebraic Structures I.

#### Conference (reading) Courses:

Fall 2014: Yuan Yan.

Summer 2012, 2013: Keenan Kidwell.

Summer 2011: Keenan Kidwell, Brandon Carter, Joseph Cunningham.

Spring 2011: Keenan Kidwell.

Fall 2010: Keenan Kidwell, Joseph Gunther, Eric Baker, Jeffrey Escamilla.

Summer 2010: Keenan Kidwell, Khalid Hourani.

2009/10: Keenan Kidwell.

#### Columbia University:

2008/09: Linear Algebra (three sections).

Spring 2008: Linear Algebra.

Fall 2007: Calculus I and Linear Algebra.

2006/07: Linear Algebra (two sections).

Fall 2005: Calculus I (two sections).

### Princeton University:

Fall 2002: Linear Algebra with Applications.

### Papers

- Local points of supersingular elliptic curves on  $\mathbb{Z}_p$ -extensions, in preparation.
- Shadow lines in the arithmetic of elliptic curves (with J. Balakrishnan, J. Lang, B. Mirza, R. Newton), submitted.
- Local to global trace questions and twists of genus one curves (with E. Ozman), to appear in Proceedings of the American Mathematical Society.
- $p$ -adic heights of Heegner points and  $\Lambda$ -adic regulators (with J. Balakrishnan and W. Stein), *Mathematics of Computation* 84 (2015), no. 292, 923–954.
- Weil–Châtelet divisible elements in Tate–Shafarevich groups II: On a question of Cassels (with J. Stix), *Journal für die Reine und Angewandte Mathematik* 700 (2015), 175–207.
- Galois sections for abelian varieties over number fields (with J. Stix), to appear in *Journal de Théorie des Nombres de Bordeaux*.
- Weil–Châtelet divisible elements in Tate–Shafarevich groups I: The Bashmakov problem for elliptic curves over  $\mathbb{Q}$  (with J. Stix), *Compositio Mathematica* 149 (2013), no. 5, 729–753.
- Relative Brauer groups of genus 1 curves (with D. Krashen), *Israel Journal of Mathematics* 192 (2012), 921–949.
- Tate–Shafarevich groups in anticyclotomic  $\mathbb{Z}_p$ -extensions at supersingular primes, *Compositio Mathematica* 145 (2009), 293–308.
- Solvable points on genus one curves (with A. Wiles), *Duke Mathematical Journal* 142 (2008), no. 3, 381–464.

### Invited talks

April 10, 2006 - Number Theory Seminar, University of Michigan.

April 17, 2006 - Number Theory Seminar, MSRI.

April 25, 2006 - Penn Galois Workshop, University of Pennsylvania.

May 1, 2006 - Number Theory Seminar, UCLA.

May 12, 2006 - Postdoc Seminar, MSRI.

June 8, 2006 - Groupes Réductifs et Formes Automorphes, Chevaleret, France.

June 21, 2006 - Workshop: Automorphic Galois Representations, L-functions and Arithmetic, Columbia University.

November 16, 2006 - Québec-Vermont Number Theory Seminar, Concordia University, Canada.

April 10, 2007 - Algebra and Number Theory Seminar, University of Arizona.

May 18, 2007 - Arithmetic and Differential Galois Groups, Oberwolfach, Germany.

November 5, 2007 - Number Theory Seminar, UCLA.

February 18, 2008 - Number theory and representation theory seminar, University of Michigan.

March 28, 2008 - Recent Developments in Number Theory: Selmer Groups, L-functions, and Galois Deformations; UCLA.

April 17, 2008 - Number Theory Seminar, MIT.

October 9, 2008 - Colloquium, Rice University.

November 4, 2008 - WIN Workshop, Banff International Research Station, Canada.

July 7, 2009 - Research Program, PCMI 2009.

July 31, 2009 - Non-abelian Fundamental Groups in Arithmetic Geometry-Introductory Workshop, Newton Institute, UK.

October 15, 2009 - Number Theory Seminar, University of Texas at Austin.  
 December 4, 2009 - Clay Mathematics Institute Workshop: Sage Days 18.  
 December 5, 2009 - Palmetto Number Theory Series XI, University of South Carolina.  
 January 11, 2010 - Number Theory Seminar, University of Heidelberg, Germany.  
 January 13, 2010 - Number Theory Seminar, University of Nottingham, UK.  
 May 15, 2010 - Southern California Number Theory Day, Caltech.  
 May 24, 2010 - Number Theory Seminar, Northwestern University.  
 June 15, 2010 - Field Arithmetic workshop, Tel-Aviv University, Israel.  
 July 9, 2010 - Iwasawa 2010 Conference, Fields Institute, Canada.  
 October 14, 2010 - Colloquium, University of Oklahoma.  
 November 17, 2010 - Number Theory Seminar, Arizona State University.  
 November 18, 2010 - Colloquium, Arizona State University.  
 March 3, 2011 - Number Theory Seminar, University of Texas at Austin.  
 May 5, 2011 - Conference on the Birch and Swinnerton-Dyer Conjecture, Cambridge, UK.  
 June 3, 2011 - Number Theory Seminar, Stanford University.  
 October 15, 2011 - Workshop on Iwasawa Theory, University of Arizona.  
 November 3, 2011 - Cycles on Modular Varieties, Banff International Research Station, Canada.  
 January 11, 2012 - Number Theory Seminar, University of Chicago.  
 January 30, 2012 - Number Theory Seminar, University of Michigan.  
 February 16, 2012 - Number Theory Seminar, University of California, Irvine.  
 February 22, 2012 - Sage Days 36 / Number Theory Seminar, University of California, San Diego.  
 November 13, 2012 - Arithmetic of Abelian Varieties in Families Workshop, Bernoulli Center, EPFL, Lausanne, Switzerland.  
 January 12, 2013 - AWM Workshop, Joint Mathematics Meetings, San Diego.  
 May 14, 2013 - Collaborative Explorations and Developments in Arithmetic Research, University of Illinois at Chicago.  
 June 18, 2013 - Arithmetic of Fields, Oberwolfach, Germany.  
 September 5, 2013 - Number Theory Seminar, University of Texas at Austin.  
 October 23, 2013 - Number Theory Seminar, Texas A&M University.  
 December 3, 2013 - Number Theory Seminar, University of California, San Diego.  
 April 22, 2014 - Women in Numbers 3, Banff International Research Station, Canada.  
 February 21, 2015 - Bay Area Algebraic Number Theory and Arithmetic Geometry Day 10, Stanford University.  
 March 2, 2015 - Number Theory Seminar, Boston University.  
 March 30, 2015 - Number Theory Seminar, UCLA.

### **Memberships, Honors, and Awards**

2014-2019 NSF CAREER Grant DMS-1352598.  
 2013-2015 NSF Grant: Conferences and Meetings: Southwest Center for Arithmetic Geometry.  
 2011-2014 NSA Grant.  
 Spring 2011 College of Natural Sciences Teaching Excellence Award.  
 2008-2011 NSF Grant DMS-07-58362.  
 2000- Member of the Phi Beta Kappa Society, the Sigma Xi Society, the AMS and AWM.

### **Mentoring**

Fall 2009 - Spring 2014 Keenan Kidwell, Ph.D. candidate at UT Austin.  
 2007 - 2008 Rebecca Bellovin, Columbia University.  
 Summer 2007 Undergraduate Research Program at Columbia University.

### **Service**

- Referee for: *Compositio Mathematica*, *Journal of Number Theory*, *Canadian Journal of Mathematics*, *Math. Research Letters*, *Journal de Théorie des Nombres de Bordeaux*.
- Member of the Undergraduate Studies Committee, Department of Mathematics, Academic year 2014/15.
- Faculty advisor for the Distinguished Women Lecture Series at the University of Texas at Austin, 2013 - present.
- Co-organizer of the Number Theory Seminar, Fall 2009 - present.
- Co-organizer of the Arizona Winter School, Spring 2013 - 2016.
- Scientific co-organizer of the Arizona Winter School, Spring 2013.
- Member of the Postdoctoral Hiring Committee, Department of Mathematics, Academic year 2009/10.
- Member of the Algebra Prelim Exam Committee, August 2010, August 2011, January 2012, August 2013, August 2014, January 2015.
- Member of the Appointments Committee, Department of Mathematics, Academic year 2010/11.
- Member of the Dean's Scholars Steering Committee, Spring 2011-present.
- Member of the Undergraduate Program Review Committee, Department of Mathematics, Academic year 2011/12.
- Member of the Honors Program Committee, Department of Mathematics, Academic year 2011/12.
- Member of Candidacy Committee for: Keenan Kidwell (August 2010), Adam Hughes (August 2012), Gil Moss (October 2012), Jen Berg (February 2013), Alessandro Macedo (April 2015).
- Member of the dissertation committee for: Paul Fili (April 2010), Zachary Miner (April 2011), Mark Lewko, David Page (April 2012), Nikolas Rauh (April 2013), Keenan Kidwell (April 2014), Gil Moss (April 2015), Adam Hughes, Jen Berg.