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Employment

Boston University, Clare Boothe Luce Assistant Professor of Mathematics 2016 –
University of Oxford, Mathematical Institute, Titchmarsh Research Fellow 2013 – 2016
University of Oxford, Balliol College, Junior Research Fellow 2013 – 2016
Harvard University, NSF Postdoctoral Fellow (sponsoring scientist: Barry Mazur) 2011 – 2013

Education

Massachusetts Institute of Technology, Ph.D., Mathematics 2011
Thesis: *Coleman integration for hyperelliptic curves: algorithms and applications*, advised by Kiran Kedlaya
Harvard University, A.M., Mathematics 2006
Harvard University, A.B., Mathematics *magna cum laude* 2006

Preprints and publications

1. “Chabauty-Coleman experiments for genus 3 curves,” (with F. Bianchi, V. Cantoral-Farfán, M. Çiperiani, A. Etropolski) [arxiv:1805.03361](https://arxiv.org/abs/1805.03361).
2. “An effective Chabauty-Kim theorem” (with N. Dogra) [arxiv:1803.10102](https://arxiv.org/abs/1803.10102).
3. “Explicit Chabauty-Kim for the split Cartan modular curve of level 13” (with N. Dogra, J. S. Müller, J. Tuitman, J. Vonk), [arxiv:1711.05846](https://arxiv.org/abs/1711.05846).
4. “Explicit Coleman integration for curves” (with J. Tuitman), [arxiv:1710.01673](https://arxiv.org/abs/1710.01673).
5. “Quadratic Chabauty and rational points II: Generalized height functions on Selmer varieties” (with N. Dogra), [arxiv:1705.00401](https://arxiv.org/abs/1705.00401).
6. “Quadratic Chabauty and rational points I: p -adic heights” (with N. Dogra), [arxiv:1601.00388](https://arxiv.org/abs/1601.00388), *Duke Math. J.*, to appear.
7. “A non-abelian conjecture of Tate-Shafarevich type for hyperbolic curves” (with I. Dan-Cohen, M. Kim, S. Wewers), [arxiv:1209.0640](https://arxiv.org/abs/1209.0640), *Math. Ann.*, to appear.
8. “Constructing genus 3 hyperelliptic Jacobians with CM” (with S. Ionica, K. Lauter, C. Vincent), *LMS J. Comput. Math.* **19**, Issue A (Algorithmic Number Theory Symposium XII) (2016), 283 – 300.
9. “Databases of elliptic curves ordered by height and distributions of Selmer groups and ranks” (with W. Ho, N. Kaplan, S. Spicer, W. Stein, J. Weigandt), *LMS J. Comput. Math.* **19**, Issue A (Algorithmic Number Theory Symposium XII) (2016), 351 – 370.
10. “Computing integral points on hyperelliptic curves using quadratic Chabauty” (with A. Besser, J. S. Müller), *Math. Comp.* **86** (2017), 1403–1434.
11. “Shadow lines in the arithmetic of elliptic curves” (with M. Çiperiani, J. Lang, B. Mirza, R. Newton), *Directions in Number Theory: Proceedings of the WIN3 Workshop*, Springer, 2016, 33 – 55.

12. "Explicit p -adic methods for elliptic and hyperelliptic curves," *Advances on Superelliptic Curves and their Applications*, IOS Press, 2015, 260 – 285.
13. "Quadratic Chabauty: p -adic heights and integral points on hyperelliptic curves" (with A. Besser, J. S. Müller), *J. Reine Angew. Math.* **720** (2016), 51 – 79.
14. "A p -adic Birch and Swinnerton-Dyer conjecture for modular abelian varieties" (with J. S. Müller, W. Stein), *Math. Comp.* **85** (2016), 983 – 1016.
15. "Coleman integration for even degree models of hyperelliptic curves," *LMS J. Comput. Math.* **18** (2015), 258 – 265.
16. "On 3-adic heights on elliptic curves," *J. Number Theory* (Special issue – in honor of Wen-Ching Winnie Li), **161** (2016), 119 – 134.
17. " p -adic heights of Heegner points and Λ -adic regulators" (with M. Çiperiani, W. Stein), *Math. Comp.* **84** (2015), 923 – 954.
18. "Comparing arithmetic intersection formulas for denominators of Igusa class polynomials" (with J. Anderson, K. Lauter, J. Park, B. Viray), *Women in Numbers 2: Research Directions in Number Theory, Contemp. Math.* **606**, AMS, 2013, 65 – 82.
19. "Coleman-Gross height pairings and the p -adic sigma function" (with A. Besser), *J. Reine Angew. Math.* **698** (2015), 89 – 104.
20. "Iterated Coleman integration for hyperelliptic curves," *ANTS-X: Proceedings of the Tenth Algorithmic Number Theory Symposium*, Open Book Series **1**, MSP, 2013, 41 – 61.
21. "Computing local p -adic height pairings on hyperelliptic curves" (with A. Besser), *Int. Math. Res. Notices* (2012) **2012** (11): 2405 – 2444.
22. "Appendix and erratum to 'Massey products for elliptic curves of rank 1'" (with K. S. Kedlaya, M. Kim), *J. Amer. Math. Soc.* **24** (2011), 281 – 291.
23. "Explicit Coleman integration for hyperelliptic curves" (with R. Bradshaw, K. S. Kedlaya) in *Algorithmic Number Theory (ANTS-IX)*, LNCS **6197**, Springer, 2010, 16 – 31.
24. "Pairings on hyperelliptic curves" (with J. Belding, S. Chisholm, K. Eisenträger, K. Stange, E. Teske), *WIN – Women in Numbers*, Fields Inst. Comm., **60**, AMS, 2011, 87 – 120.

Academic honors and grants

Sloan Research Fellowship, 2018 – 2020.

Simons Collaboration in Mathematical and Physical Sciences: *Arithmetic Geometry, Number Theory, and Computation*, 2017 – 2021.

NSF DMS-1702196, Algebra and Number Theory, 2017 – 2020.

Clare Boothe Luce Professorship (Henry Luce Foundation), 2016 – 2022.

AMS-Simons Travel Grant, 2013 – 2016.

NSF Mathematical Sciences Postdoctoral Research Fellowship, 2011 – 2015.

Sigma Xi, Massachusetts Institute of Technology, 2010.

NSF Graduate Research Fellowship, 2006 – 2011.

National Defense Science and Engineering Graduate (NDSEG) Fellowship, 2006 – 2008.

Phi Beta Kappa, Harvard University, 2006.

USA Today All-USA Academic First Team (1 of 20 nationally), 2002.

Intel Science Talent Search Finalist, 2002.

Siemens-Westinghouse Science and Technology Competition Finalist, 2001.

Conference grants

NSA and NTF conference grants (co-PI): *Connecticut Summer School in Number Theory*, 2018.

NSF conference grant (co-PI): *Workshops in Geometry and Mathematical Physics, Dynamical Systems, and Number Theory*, 2017-2020.

NSF, NTF, Clay Mathematics Institute, Microsoft Research conference grants (co-PI): *Women in Numbers 4*, 2017.

Microsoft Research conference grant: *Women in Sage Days*, 2017.

Clay Mathematics Institute workshop: *Explicit p -adic methods in number theory*, 2015.

Clay Mathematics Institute workshop: *Computational number theory, geometry, physics*, 2013.

Talks

Lecture series and mini-courses

Alpbach 2018, Austria

Lecture course: TBC

Eastern Africa Universities Mathematics Programme (EAUMP) 2016: Number Theory, East African Institute of Fundamental Research, University of Rwanda

Lecture course: *Elliptic and hyperelliptic curves*

Oxford CoDEC (Computing Databases of Elliptic Curves) Summer 2016, University of Oxford, UK

Lecture course: *Elliptic curves, Sage, and databases*

PIMS CRG Explicit Methods for Abelian Varieties Summer School 2016, University of Calgary, Canada

Lecture course: *p -adic heights on Jacobians of hyperelliptic curves*

EAUMP 2015: Experimental Pure Mathematics, Makerere University, Uganda

Lecture course: *Experimental number theory with Sage*

NATO Advanced Study Institute 2014: Arithmetic of Hyperelliptic Curves, Ohrid, Macedonia

Lecture course: *Explicit p -adic methods for hyperelliptic curves*

Invited conference and workshop talks

Jul 2019: JNT Biennial, Cetraro, Italy (planned).

Mar 2019: Hawaii Number Theory (plenary), Honolulu (planned).

Sept 2018: Open questions in cryptography and number theory, UC Irvine (planned).

Jul 2018: Algorithmic Number Theory Symposium (ANTS XIII) (plenary), University of Wisconsin, Madison (planned).

Jul 2018: Sage Days 95: Women in Sage, Montréal, Canada (planned).

Jul 2018: Rational points on Schiermonnikoog, Schiermonnikoog, Netherlands (planned).

Feb 2018: Numerical methods for curves, Rennes, France.

Feb 2018: Graduate workshop in algebraic geometry, Harvard/MIT.

Jan 2018: Arithmetic and Arakelov geometry, University of Clermont-Ferrand, France.

Dec 2017: Palmetto Number Theory Series (PANTS) XXIX (plenary), Clemson University.

Sept 2017: Arithmetic of hyperelliptic curves, ICTP, Trieste, Italy.

Aug 2017: Sage Days: Opening Workshop for a Year of Coding Sprints, IMA.

- Aug 2017: Women in Numbers 4, BIRS, Canada.
- Jul 2017: Rational points 2017, Schney, Germany.
- Jun 2017: Arithmetic geometry and computer algebra, Oldenburg, Germany.
- Jun 2017: Journées Algophantiennes Bordelaises 2017 (plenary), Bordeaux, France.
- May 2017: Arithmetic aspects of explicit moduli problems, BIRS, Canada.
- Apr 2017: Sage Days 86, Université du Québec à Montréal, Montréal, Canada.
- Mar 2017: Galois theory of periods and applications, MSRI.
- Jan 2017: Women in Sage, Institut Henri Poincaré, Paris, France.
- Nov 2016: Johns Hopkins-University of Maryland Algebra and Number Theory Day.
- Aug 2016: Number theory and quantum field theory, POSTECH, Korea.
- Jun 2016: Canadian Number Theory Association (CNTA XIV), Calgary, Canada.
- May 2016: Arithmetic L -functions and differential geometric methods (Regulators IV), Paris, France.
- Mar 2016: Explicit p -adic methods in number theory, CMI/Oxford, UK.
- Jan 2016: Number theory and cryptography, Joint AMS/MAA Meeting, Seattle.
- Oct 2015: Arithmétique en plat pays, Ghent, Belgium.
- Sept 2015: Modular forms and curves of low genus: computational aspects, ICERM.
- Jul 2015: Explicit methods in number theory, Oberwolfach, Germany.
- Jul 2015: Rational points 2015, Schney, Germany.
- Jun 2015: Analytic and arithmetic geometry, University of Oxford, UK.
- Jun 2015: Non-archimedean geometry, University of Michigan.
- Mar 2015: Recent trends in p -adic cohomology, Imperial College London, UK.
- Mar 2015: Arithmetic of hyperelliptic curves, AMS Special Session, Michigan State University.
- Feb 2015: Computational number theory, Kyushu University, Japan.
- Feb 2015: Mathematical software winter school, Kyushu University, Japan.
- Jan 2015: Selmer groups, Joint AMS/MAA Meeting, San Antonio.
- Nov 2014: Across arithmetic, Barcelona Mathematical Days 2014, Barcelona, Spain.
- Jul 2014: Impact of computation on number theory, NCTS, Taiwan.
- May 2014: Antalya algebra days XVI, Turkey.
- Apr 2014: Alberta number theory days VI (plenary), Banff International Research Station, Canada.
- Apr 2014: Applications of automorphic forms in number theory and combinatorics, LSU.
- Apr 2014: Number theory workshop, British Mathematical Colloquium 2014, QMUL, UK.
- Sept 2013: Computational number theory, geometry, and physics, CMI/Oxford, UK.
- Aug 2013: Number theory and curves, SIAM applied algebraic geometry, Colorado State University.
- Jul 2013: Rational points 2013, Thurnau, Germany.
- May 2013: Collaborative Explorations and Developments in Arithmetic Research (CEDAR), UIC.

- Jan 2013: L -functions and arithmetic geometry, Joint AMS/MAA Meeting, San Diego.
- Jan 2013: Number theory and geometry, Joint AMS/MAA Meeting, San Diego.
- Jan 2013: AWM Workshop on number theory, Joint AMS/MAA Meeting, San Diego.
- Sept 2012: Rational points on curves, University of Oxford, UK.
- Jul 2012: Algorithmic Number Theory Symposium (ANTS X), University of California, San Diego.
- Jun 2012: Canadian Number Theory Association (CNTA XII), Lethbridge, Canada.
- May 2012: Bellairs workshop in number theory: pro-unipotent fundamental groups, Barbados.
- Apr 2012: Atkin memorial conference, University of Illinois at Chicago.
- Feb 2012: Complex and arithmetic dynamics program, ICERM (two lectures).
- Sept 2011: Number theory, AWM celebration, Brown University.
- Jul 2011: Foundations of Computational Mathematics (FoCM '11), Budapest, Hungary.
- May 2011: Atkin memorial conference, University of Illinois at Chicago.
- Nov 2010: Applications of non-archimedean geometry, AMS Special Session, University of Richmond.
- Jul 2010: Algorithmic Number Theory Symposium (ANTS IX), LORIA, Nancy, France.
- Mar 2010: Effective methods in p -adic cohomology, University of Oxford, UK.
- Jun 2008: Workshop on L -functions and modular forms, University of Washington, Seattle.
- Aug 2006: Graduate workshop in modular forms, MSRI.

Seminars and colloquia

- Apr 2018: Number theory seminar, Harvard University.
- Jan 2018: Number theory seminar, Stanford University.
- Nov 2017: Algebra seminar, Brown University.
- Nov 2017: Joint Columbia-CUNY-NYU Number theory seminar.
- Oct 2017: Algebra and number theory seminar, University of Rochester.
- May 2017: Quebec-Vermont Number Theory Seminar.
- Apr 2017: Galois seminar, University of Pennsylvania.
- Feb 2017: Colloquium, Washington University in St. Louis.
- Feb 2017: Number theory seminar, University of California, San Diego.
- Feb 2017: Seminar, Center for Communications Research, La Jolla.
- Jan 2017: Colloquium, Pennsylvania State University.
- Jan 2017: Séminaire de théorie des nombres, Institut de Mathématiques de Jussieu, France.
- Dec 2016: Number theory seminar, Boston University.
- Nov 2016: Colloquium, University of Illinois at Chicago.
- Sept 2016: Number theory seminar, Harvard University.
- Jun 2016: Belgian-Dutch Intercity Number theory seminar, Leuven, Belgium.

Apr 2016: Algebra seminar, Kyushu University, Japan.
Mar 2016: Colloquium, Oakland University.
Feb 2016: Arithmetic geometry seminar, University of Oxford, UK.
Jan 2016: Number theory seminar, Boston University.
Jan 2016: Colloquium, University of Washington.
Dec 2015: Colloquium, Ohio State University.
Dec 2015: London Number theory seminar, Imperial College London, UK.
Nov 2015: Colloquium, Rice University.
Nov 2015: North-meets-South Colloquium, University of Oxford.
Nov 2015: Number theory seminar, University of Warwick, UK.
Nov 2015: Number theory seminar, Max Planck Institute for Mathematics, Bonn, Germany.
Oct 2015: Algebra seminar, Brown University.
Sept 2015: Joint Boston College-MIT Number theory seminar.
Oct 2014: Number theory seminar, University of Cambridge, UK.
May 2014: Number theory seminar, University of Sheffield, UK.
Apr 2014: Number theory seminar, University of Calgary, Canada.
Apr 2014: Number theory seminar, University of Nottingham, UK.
Mar 2014: Algebraic geometry and number theory seminar, Ben Gurion University, Israel.
Mar 2014: Heilbronn seminar, University of Bristol, UK.
Feb 2014: Number theory seminar, University of Cambridge, UK.
Nov 2013: Number theory seminar, University of Oxford, UK.
Nov 2013: Numerical analysis group internal seminar, University of Oxford, UK.
Nov 2013: Number theory seminar, University of Warwick, UK.
Jun 2013: Number theory seminar, Tohoku University, Japan.
May 2013: Algebra and number theory seminar, UC Irvine.
Apr 2013: Algebra seminar, Georgia Institute of Technology.
Apr 2013: Number theory seminar, Harvard University.
Nov 2012: Five College Number theory seminar, Amherst College.
Oct 2012: Number theory seminar, University of Chicago.
Oct 2012: Everytopic seminar, Brandeis University.
Feb 2012: Number theory and arithmetic geometry seminar, Universität Hamburg, Germany.
Dec 2011: Number theory seminar, Arizona State University, Tempe.
Nov 2011: Algebra, number theory, and combinatorics seminar, University of Texas, Austin.
Oct 2011: Number theory seminar, Boston University.
Nov 2010: Algebra/number theory seminar, Brown University.

Nov 2010: Number theory seminar, University of Washington, Seattle.

Nov 2010: Colloquium, Dartmouth College.

Nov 2010: Number theory seminar, Dartmouth College.

Oct 2010: Seminar, Center for Communications Research, La Jolla.

Oct 2010: Number theory seminar, University of California, San Diego.

Jul 2006: Theory group seminar, Microsoft Research, Redmond.

Aug 2004: Special seminar, Okayama University, Japan.

Expository and outreach

Apr 2017: Keynote speaker at Women in Math and Statistics Conference, Harvard University.

Mar 2017: Mathematics Colloquium (2 lectures), University of Guam.

Jul 2016: PROMYS Europe, CMI/University of Oxford, UK.

Apr 2016: Mathematics Colloquium (3 lectures), University of Guam.

May 2015: Invariants Society, University of Oxford, UK.

Teaching

Boston University

MA 242 (Linear algebra), Spring 2018.

MA 123 (Calculus I), Fall 2016, Fall 2017.

MA 842 (Explicit methods for elliptic and hyperelliptic curves), Spring 2017.

University of Oxford

Lecturer, Part A Number Theory, Trinity Term 2015, Trinity Term 2016.

Consultation sessions for B9b/B3.4 Algebraic Number Theory, Trinity Term 2014, Trinity Term 2015.

Consultation sessions for C9.1b Elliptic Curves, Trinity Term 2014.

Intercollegiate classes for B9b/B3.4 Algebraic Number Theory: 3 sections in Hilary Term 2014, 2 sections in Hilary Term 2015.

Intercollegiate classes for B3.1 Galois Theory (2 sections), Michaelmas Term 2014.

Intercollegiate classes for C9.1b Elliptic Curves (1 section), Hilary Term 2014.

Tutor for Analysis I: Sequences and Series, Brasenose College, Michaelmas Term 2013.

Tutor for Algebra I: Linear Algebra, Brasenose College, Michaelmas Term 2013.

Harvard Summer School

Instructor, Mathematics S-Ar (Pre-calculus mathematics), 2005, 2008, 2009, 2011.

Course Assistant and Grader, Mathematics 1-ab (Calculus I, II), 2007.

Math Question Center Tutor, 2007.

Students supervised

Undergraduate research

Summer 2016: Director, Oxford CoDEC

Participants: Henrique Aguiar, Samuel Banks, William Biggs, Stephanie Chan, Miguel Pereira Torres da Costa, Aashraya Jha, Shati Patel, Thomas Perry, Carl Mackintosh, Jay Swar, Yao Yao

Summer 2015: Stephanie Chan (Oxford), p -adic cohomology

Undergraduate theses

2016: Oana Adascalitei, MMath (Mathematics Part C Dissertation), Oxford.
Dissertation: *Torsion subgroups of elliptic curves over low degree number fields*

2016: Stephanie Chan, MMath (Mathematics Part C Dissertation), Oxford.
Dissertation: *Topics in the theory of zeta functions of curves*

2016: David Fitzpatrick, MMath (Mathematics Part C Dissertation), Oxford.
Dissertation: *p -adic zeta and L -functions*

2016: Andrew Kirk, MMath (Mathematics Part C Dissertation), Oxford.
Dissertation: *Local class field theory via Lubin-Tate theory*

2015: John Musson, MMath (Mathematics Part C Dissertation), Oxford.
Dissertation: *Bounded gaps between consecutive primes*

2015: Samuel Porritt, MMath (Mathematics Part C Dissertation), Oxford.
Dissertation: *p -adic analysis and rational points on curves*

2015: Florence Walton, MMathPhil (Mathematics Part C Dissertation), Oxford.
Dissertation: *The congruent number problem and the Birch and Swinnerton-Dyer conjecture*

Graduate research and supervised reading

Spring 2018: MA 944, Oana Adascalitei and Berke Karagoz, PhD candidates, Boston University.

Spring 2018: MA 946, Sachi Hashimoto, PhD candidate, Boston University.

2016 – present: Nicholas Triantafillou, PhD candidate (student of Bjorn Poonen), MIT.

Graduate theses

2018 – present: Oana Adascalitei, PhD candidate, Boston University.

2017 – present: Alexander Best, PhD candidate, Boston University.

2017 – present: Sachi Hashimoto, PhD candidate, Boston University.

2015 – present: Francesca Bianchi, DPhil candidate, Oxford (jointly supervised with Alan Lauder).

2015: Michelle Kovesi, MSc (Mathematics and the Foundations of Computer Science), Oxford.
Dissertation: *Proving the weak BSD conjecture for elliptic curves in the Cremona database*

2015: Bo Schmidt, MSc (Mathematics and the Foundations of Computer Science), Oxford.
Dissertation: *Solutions to systems of multivariate p -adic power series*

2014: Charlene Soh, MSc (Mathematics and the Foundations of Computer Science), Oxford.
Dissertation: *Explicit methods for the Birch and Swinnerton-Dyer conjecture*

2014: Haikal Yeo, MSc (Mathematics and the Foundations of Computer Science), Oxford.
Dissertation: *Computations motivated by the p -adic Birch and Swinnerton-Dyer conjecture*

Professional service

Conference and workshop leadership

Organizer

CMI-HIMR Postgraduate Mathematics Summer School in Computational Number Theory, Bristol, UK, 2019 (with T. Dokchitser).

BU-Keio Workshop in Number Theory, Boston, 2019.

Simons Collaboration Conference, ICERM, 2019 (with N. Elkies, B. Hassett, B. Poonen, A. Sutherland, J. Voight).

Simons Collaboration Conference, MIT, 2018 (with N. Elkies, B. Hassett, B. Poonen, A. Sutherland, J. Voight).

Connecticut Summer School in Number Theory, 2018 (with K. Conrad, Á. Lozano-Robledo, L. Xiao).

Sage Days: Opening Workshop, IMA, 2017 (with B. Brubaker, M. Koeppel, G. Musiker).

WIN4: Women in Numbers 4, Banff International Research Station, 2017 (with C. David, M. Manes, B. Viray).

Sage Days 87: p -adics+, Vermont, 2017 (with X. Caruso, E. Costa, T. Dupuy, D. Roe, W. Stein, C. Vincent).

Sage Days 82: Women in Sage, Paris, 2017 (with V. Pons, J. Striker).

Sage Days 81: Improving SageMath, Hawaii, 2016 (with T. Clemons, A. Deines, J. Jeng, W. Stein).

Explicit p -adic Methods in Number Theory (Sage Days 71), CMI/Oxford, 2016 (with D. Roe).

Sage Days 69: Women in Sage 6, San Diego, 2015 (with A. Deines).

Sage Days 68: Bug Days, Seattle, 2015 (with A. Deines, W. Stein).

Sage Days 64.25: Bug Days, San Diego, 2015 (with A. Deines, W. Stein).

It All Adds Up (LMS Women in Mathematics), Oxford, 2015 (with R. Cotton-Barratt, A. Etheridge, E. Hunsicker, F. Kirwan, U. Martin, V. Neale, A. Pilot).

Sage Days 56: Computational Number Theory and the Cloud, Hawaii, 2014 (with A. Deines, W. Stein).

Computational Number Theory, Geometry, and Physics (Sage Days 53), CMI/Oxford, 2013 (with V. Braun).

Sage Days 50: Women in Sage 4, Seattle, 2013 (with A. Deines).

Sage Days 46: Computational Number Theory, Hawaii, 2013 (with A. Deines, X. Faber, M. Manes, W. Stein).

Arithmetic Statistics at Joint AMS/MAA Meeting (JMM), San Diego, 2013 (with K. McGown, E. Smith).

Sage Days 42: Women in Sage 3, Seattle, 2012 (with A. Deines, L. Thompson).

Rational Points on Varieties at JMM, Boston, 2012 (with B. Poonen, B. Viray, K. Wickelgren).

Sage Days 33: Women in Sage 2, Seattle, 2011 (with A. Deines, W. Stein).

Sage Days 26: Women in Sage, Seattle, 2010 (with A. Deines, W. Stein).

Scientific committee

Mathématiques Expérimentales: Méthodes et Pratiques (École Jeunes Chercheurs), Saint-Flour, France, 2018.

IMA Review Board for SageMath development workshops, 2017 – 2018.

Algorithmic Number Theory Symposium XII (ANTS XII), Kaiserslautern, Germany, 2016.

NATO Advanced Study Institute: Arithmetic of Hyperelliptic Curves, Ohrid, Macedonia, 2014.

Project leader

Curves and L -functions Summer School (co-leader: S. Chan), ICTP, Italy, 2017.

Women in Numbers 4 (co-leader: M. Çiperiani), BIRS, Canada, 2017.

Women in Numbers 3 (co-leader: M. Çiperiani), BIRS, Canada, 2014.

*Editorial and review activities***Editorial board**

Research in Number Theory, 2017 – .

Refereeing (publisher)

American Mathematical Society

Refereeing (journals and conference proceedings)

American Journal of Mathematics, *European Journal of Mathematics*, *International Mathematics Research Notices*, *Journal of Symbolic Computation*, *Quarterly Journal of Mathematics*, *Research in Number Theory*, *SIAM Journal on Applied Algebra and Geometry (SIAGA)*, *AMS Proceedings of Symposia in Pure Mathematics*, *Algorithmic Number Theory Symposium XI (ANTS XI)*, *International Symposium on Symbolic and Algebraic Computation 2015 (ISSAC 2015)*, *Algorithmic Number Theory Symposium XII (ANTS XII)*

Refereeing (grants)

NSA Mathematical Sciences Program, NSF, Fields Institute, DFG (German Research Foundation)

*Departmental service***Boston University**

Graduate Committee, 2016 – .

Hiring committee member, Postdoctoral Faculty Fellow in Number Theory, 2016 – 2017.

University of Oxford

Examiner, Confirmation of status viva of Francesca Balestrieri, 2016.

Assessor, Part C dissertation, 2016.

Examiner, Transfer dissertation viva of Christopher Nicholls, 2015.

MSc general supervisor, Javier Silva Velón, 2015 – 2016.

MSc general supervisor, Trevor van Loon, 2014 – 2015.

MSc general supervisor, Bo Schmidt, 2014 – 2015.

Developed materials for Computational Mathematics course, 2013, 2014, 2015.

Examiner, Transfer dissertation viva of Francesca Balestrieri, 2014.

Hiring committee member, EPSRC-funded postdoctoral fellowship, 2014.

Member of Good Practice Committee, 2013 – 2016.

MIT

Mathematics Cofactor (mentoring incoming graduate students), 2007 – 2011.

Organizer of STAGE (Seminar on Topics in Arithmetic, Geometry, Etc.), with B. Poonen, J. Suh, 2009 – 2011.

Math Transfer Credit Examiner (Calculus, Differential Equations, Linear Algebra), Fall 2008, Spring 2009.

Other activities

Question Reviewer, National Science Bowl, 2017.

PhD defense committee, Lubjana Beshaj (Oakland University), 2016.

WIN Steering Committee, 2015 – .

Reviewer, *AMS Mathematical Reviews*, 2011 – .

Non-resident tutor in mathematics at Cabot House, Harvard University, 2010 – 2013.

Girls' Angle mentor, 2010 – 2012.

MIT Friends of the Arts, co-founder and organizer, 2007 – 2011.

Research Science Institute (2005 TA, 2007 judging panel, minicourses in Sage/Magma), 2003 – 2008.