

Padmavathi Srinivasan

Employment

- 2019–current **Limited Term Assistant Professor**, *University of Georgia*, Athens, GA.
2016–2019 **Hale Visiting Assistant Professor**, *Georgia Institute of Technology*, Atlanta, GA.

Visiting Positions

- July 2019 **Research in pairs**, *Mathematisches Forschungsinstitut Oberwolfach (MFO, Oberwolfach Research Institute for Mathematics)*, Oberwolfach, Germany.

Education

- 2011–2016 **PhD in Mathematics**, *Massachusetts Institute of Technology*, Cambridge, MA.
Advisor: Bjorn Poonen
2009–2011 **MSc in Mathematics**, *Chennai Mathematical Institute*, Chennai, India.
2006–2009 **BSc (Honours) in Physics**, *Chennai Mathematical Institute*, Chennai, India.

Preprints and Publications

- 1 Conductor-discriminant inequality for hyperelliptic curves in odd residue characteristic (with Andrew Obus), arxiv:1910.02589.
- 2 Conductors and minimal discriminants of hyperelliptic curves: a comparison in the tame case, arxiv:1910.08228.
- 3 An arithmetic count of the lines meeting four lines in \mathbb{P}^3 (with Kirsten Wickelgren), *Submitted*, arxiv:1810.03503.
- 4 Explicit computation of Tamagawa numbers and sizes of component groups of Neron models of Jacobians using Matrix-Tree theorems, Thesis, Chapter 4.
- 5 A virtually ample field that is not ample, *Israel Journal of Mathematics*. October 2019. 1-8., arxiv.org:1810.05184, doi:10.1007/s11856-019-1934-y.
- 6 Conductors and discriminants of hyperelliptic curves with rational Weierstrass points, *Submitted*, arxiv:1508.05172.
- 7 Zeta functions of a class of Artin-Schreier curves with many automorphisms (with Irene Bouw, Wei Ho, Beth Malmskog, Renate Scheidler and Christelle Vincent), *Association for Women in Mathematics Series*, 3. 2016. 87-124. arxiv:1410.7031, doi:10.1007/s118978-3-319-30976-7₄.

Honours

- CMI Medal of Excellence**, MSc in Mathematics
CMI Medal of Excellence, BSc (Honours) in Physics

Conference organization

March 2020 AMS Special Session on **Curves, Jacobians, and Abelian Varieties** at the AMS Spring Southeastern Sectional Meeting (Co-organizing with Andrew Obus and Tony Shaska)

Past conferences that I have helped organize

- June 2019 AMS Mathematical Research Communities, **Explicit methods in arithmetic geometry in characteristic p** (Co-organized with Renee Bell, Julia Hartmann, Valentijn Karemarker and Isabel Vogt)
- March 2019 **GATTACA: Georgia Tech Tropical, Arithmetic and Combinatorial Algebraic geometry** (Co-organized with Matt Baker, Philipp Jell, and Yoav Len.)

Upcoming talks

- August 2019 University of Georgia, Oberseminar
- September 2019 AMS Fall Central Sectional Meeting, University of Wisconsin-Madison, Special Session on Geometry and Topology in Arithmetic
- September 2019 MANTIS: Michigan Algebra and Number Theory Intercity Symposium, University of Michigan
- November 2019 MAAIM–Modular forms, Arithmetic, and Women, Emory university
- November 2019 Front Range Number Theory Day, Colorado State University
- January 2020 Joint Mathematics Meetings, AMS Special Session on Rational Points on Algebraic Varieties: Theory and Computation

Research talks and presentations

- July 2019 University of Groningen, Number theory seminar
- June 2019 Arithmetic of Low-Dimensional Abelian Varieties, ICERM, Lightning talk
- April 2019 AMS Spring Eastern Sectional Meeting, University of Connecticut Hartford, Special Session on Mathematical Cryptology, University of Connecticut Hartford
- March 2019 AMS Spring Central and Western Joint Sectional Meeting, University of Hawai'i at Mānoa, Special Session on Algebraic Points
- February 2019 Braids, Resolvent Degree and Hilbert's 13th Problem, IPAM, Lightning talk
- February 2019 Stanford university, Algebraic geometry Seminar
- January 19 Joint Mathematics Meetings, AMS Special Session on Number Theory, Arithmetic Geometry, and Computation
- December 2018 Brown university, Algebra seminar
- November 2018 University of Washington (Seattle), Number theory seminar
- November 2018 University of Pennsylvania, Galois seminar
- October 2018 Northwestern university, Number theory seminar
- March 2018 AMS Central Sectional Meeting, Columbus, Ohio, Special Session on Algebraic and Combinatorial Aspects of Tropical Geometry

- February 2018 Georgia Algebraic Geometry Symposium, Georgia Institute of Technology
- September 2017 AMS Central Sectional Meeting, Denton, Texas, Special Session on Numbers, Functions, Transcendence, and Geometry
- January 2017 Joint Mathematics Meetings, AMS Special Session on Minimal integral models of algebraic curves
- December 2016 Georgia Institute of Technology, Algebra seminar
- November 2016 Junior number theory days, Rutgers, Newark
- November 2016 Emory university, Algebra seminar
- October 2016 University of South Carolina, Algebraic geometry, arithmetic geometry and commutative algebra seminar
- September 2016 TAAAG: Topological approaches to algebra and arithmetic geometry
- April 2016 3rd Annual Graduate Student Math Conference in Algebra/Number Theory, Brown University
- February 2016 Ohio State University, Number theory seminar
- February 2016 University of Wisconsin, Madison, Number theory seminar
- January 2016 Joint Mathematics Meetings, AMS Special Session on Higher Genus Curves and Fibrations of Higher Genus Curves in Mathematical Physics and Arithmetic Geometry
- October 2015 Rice University, Algebraic geometry and number theory seminar
- October 2015 University of Georgia, Number theory and arithmetic geometry seminar
- October 2015 Young women in Algebraic Geometry, Universität Bonn, Bonn
- September 2015 University of Maine, Mathematics Colloquium and the Number theory seminar
- July 2015 Contributed talks, Week 3, 2015 Algebraic Geometry Summer Institute, Utah
- June 2015 Mathematics Colloquium, The Institute of Mathematical Sciences, Chennai

Expository lectures

- October 2017 *An introduction to dynamical analogues of Mazur's theorem and uniform boundedness conjecture for abelian varieties*, Random Algebra and Number Theory, Emory graduate student seminar
- August 2016 *Formal moduli for one-parameter formal Lie groups*, West Coast Algebraic Topology Summer School (WCATSS)
- May 2016 *A p -adic proof of the transcendence of π* , Pure Mathematics Graduate Student Seminar (PuMaGraSS)
- November 2015 *Compactifications of the moduli space of abelian varieties*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)
- May 2015 *The Chabauty-Coleman method*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)
- February 2015 *Good reduction of abelian varieties*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)

- December 2014 *Mixed Tate motives over \mathbb{Z} and multi-zeta values*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)
- September 2014 *Tannakian Categories*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)
- March 2014 *The weight monodromy conjecture*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)
- April 2013 *Fermat's last theorem for regular primes*, Pure Mathematics Graduate Student Seminar (PuMaGraSS)
- February 2013 *Hodge Theory*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)
- November 2012 *Hilbert's irreducibility theorem*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)
- October 2012 *Rational points on curves*, 18.725 Guest lecture
- April 2012 *The fundamental group of an algebraic curve and the outer Galois action*, Seminar on Topics in Arithmetic, Geometry, Etc.(STAGE)
- March 2012 *The inverse Galois problem for $\mathbb{C}(t)$* , Pure Mathematics Graduate Student Seminar (PuMaGraSS)

Teaching

- Fall 2019 **Math 2250: Calculus for science and engineering.**
Instructor
- March 2018 **Arizona Winter School, \mathbb{A}^1 -enumerative geometry course by Kirsten Wickelgren.**
Study group leader
- Spring 2019 **Math 6122: Graduate algebra 2, Galois theory and algebraic number theory.**
Instructor
- Fall 2018 **Math 1553: Introduction to linear algebra.**
Instructor
- February 17-18, 2018 **Graduate Workshop in Algebraic Geometry for Women and Mathematicians of Minority Genders, Harvard and MIT.**
Teaching assistant
- Spring 2018 **Math 4150: Elementary number theory and applications.**
Instructor
- Fall 2017 **Math 1553: Introduction to linear algebra.**
Instructor
- Spring 2017 **Math 6122: Graduate algebra 2: Introduction to algebraic number theory.**
Instructor
- Fall 2016 **Math 1553: Introduction to linear algebra.**
Instructor
- Spring 2016 **18.726: Algebraic geometry II.**
Grader
- Spring 2015 **18.786: Number theory II.**
Grader
- January 2015 **Directed Reading Program.**
Mentor. Text: A course in arithmetic, by Jean-Pierre Serre
- Fall 2014 **18.821: Project Laboratory in Mathematics.**
Graduate student instructor

- Spring 2014 **18.781: Introduction to the theory of numbers.**
Teaching assistant
- Spring 2014 **18.726: Algebraic Geometry II.**
Grader
- Spring 2013 **18.726: Algebraic Geometry II.**
Grader
- January 2013 **Directed Reading Program.**
Mentor. Text: The arithmetic of elliptic curves, by Joseph Silverman
- Fall 2012 **18.725: Algebraic Geometry I.**
Grader
- January 2012 **Directed Reading Program.**
Mentor. Text: Riemann surfaces, by Otto Forster

Service

- Fall 2018 Georgia Tech Algebra seminar, *Co-organizer*
- Fall 2018 Algebra qualifying exam, *Cowriter*
- February 2018 Panel discussion at the Graduate Workshop in Algebraic Geometry for Women and Mathematicians of Minority Genders, Harvard and MIT, *Panelist*
- Fall 2017 Algebra qualifying exam, *Cowriter*
- May 2016 Panel discussion for graduate students on Life after quals: learning to do research, *Organizer & moderator*
- Spring 2015 STAGE: Seminar on Topics in Arithmetic, Geometry, Etc., *Co-organizer*
- 2014–2015 MIT Friends of the Arts, *Co-organizer*
- Spring 2013, Mathematics department Transfer Credit Examiner
- Fall 2013
- 2012–2013 PuMaGraSS: Pure Mathematics Graduate Student Seminar, *Co-organizer*