

Wanlin Li

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Education and Employment

Assistant Professor of Mathematics and Statistics, [Washington University in St. Louis](#), St. Louis, MO, USA, 2022/08-.

CRM-ISM Postdoc fellow, [Centre de recherches mathématiques](#), Montreal, QC, Canada, 2021/01-2022/08, Mentors: [Chantal David](#), [Andrew Granville](#), [Matilde Lalin](#).

Course Lecturer, [McGill University](#), Montreal, QC, Canada, 2021/07-2021/12.

Research Scientist, [Simons Collaboration on Arithmetic Geometry, Number Theory, and Computation](#), [Massachusetts Institute of Technology](#), Cambridge, MA, USA, 2019/09-2021/01, Supervisors: [Bjorn Poonen](#), [Andrew V. Sutherland](#)

PhD Mathematics, [University of Wisconsin–Madison](#), Madison, WI, USA, August 2019, under Advisor: [Jordan Ellenberg](#).

BA Mathematics, Nanjing University, Nanjing, Jiangsu, China, June 2013.

Publications (authors are listed in alphabetical order)

- “On the Northcott property of zeta functions over function fields”, with X. G en ereux, M. Lalin, submitted, [arXiv](#)
- “Abelian varieties of prescribed order over finite fields”, with R. van Bommel, E. Costa, B. Poonen, and A. Smith, submitted, [arXiv](#)
- “Data for Shimura varieties intersecting the Torelli locus”, with E. Mantovan, and R. Pries, submitted, [arXiv](#)
- “Doubly isogenous genus-2 curves with D_4 -action”, with V. Arul, J. Booher, S. R. Groen, E. W. Howe, V. Matei, R. Pries, and C. Springer, submitted, [arXiv](#)
- “Vanishing of Dirichlet L-functions at the central point over function fields”, with R. Donepudi, submitted, [arXiv](#)
- “Surface bundles and the section conjecture”, With D. Litt, N. Salter and P. Srinivasan, submitted, [arXiv](#)

- “The Ceresa class: tropical, topological, and algebraic”, with D. Corey and J. Ellenberg, submitted, [arXiv](#).
- “Group-theoretic Johnson classes and a non-hyperelliptic curve with torsion Ceresa class”, with D. Bisogno, D. Litt, and P. Srinivasan, submitted, [arXiv](#).
- “Nonvanishing of hyperelliptic zeta functions over finite fields”, with J. Ellenberg and M. Shusterman, *Algebra & Number Theory* 14 (2020), no. 7, 1895–1909, [arXiv](#).
- “Newton polygon stratification of the Torelli locus in PEL-type Shimura varieties”, with E. Mantovan, R. Pries and Y. Tang, *International Mathematics Research Notices*, posted on 2020, DOI 10.1093/imrn/rnaa306. [arXiv](#).
- “Ranks, 2-Selmer groups, and Tamagawa numbers of elliptic curves with $\mathbb{Z}/2\mathbb{Z} \times \mathbb{Z}/8\mathbb{Z}$ -torsion”, with S. Chan and J. Hanselman, *Proceedings of the Thirteenth Algorithmic Number Theory Symposium*, 173–189, Open Book Ser., 2, Math. Sci. Publ., Berkeley, CA [arXiv](#).
- “Newton Polygons Arising for Special Families of Cyclic Covers of the Projective Line”, with E. Mantovan, R. Pries and Y. Tang, *Res. Number Theory* 5 (2019), no. 1, [arXiv](#).
- “Newton polygons of cyclic covers of the projective line branched at three points”, with E. Mantovan, R. Pries and Y. Tang, *Research Directions in Number Theory: Women in Numbers IV*, [arXiv](#).
- “Effective Bounds on the Dimensions of Jacobians Covering Abelian Varieties”, with J. Bruce, *Proc. Amer. Math. Soc.* 148 (2020), no. 2, 535-551, [arXiv](#).
- “Vanishing of Hyperelliptic L-functions at the Central Point”, *J. Number Theory* 191 (2018), 85-103, [arXiv](#).

Grant and Award

- CRM-ISM postdoctoral fellowship, 2021-2022
- Elizabeth Hirschfelder Prize, 2018-2019
- Postdoctoral Ambassadorship from the Women and Mathematics Program at the Institute for Advanced Study, 2017-2018

Upcoming and Recent Presentations

- Around Frobenius distributions and related topics III, Oct 2022
- A celebration of analytic number theory, a conference in honor of Andrew Granville, CRM Montreal, Sep 2022
- Algebraic and Arithmetic Geometry seminar, Washington University in St. Louis, Aug 2022

- Analytic Number Theory @ UCI '22, UC Irvine, Aug 2022
- AWM Research Symposium, University of Minnesota, Jun 2022
- Session on Arithmetic statistics, CMS Summer meeting, Jun 2022
- Anabelian Days Down In Georgia (ADDING), Apr 2022
- Number theory seminar, Pennsylvania State University, Apr 2022
- AMS Special Session on Analytic Methods in Arithmetic Statistics, Tufts University, Mar 2022
- Number theory seminar, Arizona State University, Mar 2022
- Number theory seminar, University of Utah, Mar 2022
- Algebra and algebraic geometry seminar, MacMaster University, Mar 2022
- “Growing up in science” seminar, Bowdoin College, Mar 2022
- XXIII International Symposium on Mathematical Methods Applied to Science, Number Theory and Cryptography session, Universidad de Costa Rica, Feb 2022
- Colloquium, Georgia Institute of Technology, Feb 2022
- Colloquium, Texas A&M University, Feb 2022
- Colloquium, University of Notre Dame, Jan 2022
- Colloquium, Concordia University, Jan 2022
- 3rd Kyoto-Hefei workshop on arithmetic geometry, Dec 2021
- Colloquium, Johns Hopkins University, Nov 2021
- Colloquium, Washington University in St. Louis, Nov 2021
- Number theory seminar, Shandong University, Nov 2021
- VaNTAGe math seminar, Nov 2021
- Ottawa/Carleton Number Theory Seminar, Oct 2021
- Maine-Québec Number Theory Conference, Oct 2021
- PALmetto Joint Arithmetic, Modularity, and Analysis Series, Sep 2021
- Number theory seminar, University of Wisconsin-Madison, Sep 2021
- Quebec-Vermont Number Theory Seminar , Montreal, Sep 2021
- Workshop on Arithmetic Statistics Problems, Jul 2021
- Curves over finite fields: past, present, future, May 2021

- MOBIUS analytic number theory seminar, Montreal, Mar 2021
- Session on Arithmetic statistics, CMS Winter meeting, Dec 2020
- Number theory seminar, University of Arizona, Sep 2020
- Madison Moduli Weekend, Sep 2020
- Connecticut Summer School in Number Theory, CTNT online, Jun 2020
- Arithmetic Geometry is Online in Zoom, Everyone, Mar 2020, [video](#)
- AMS Special Session on Youth and Enthusiasm in Arithmetic Geometry and Number Theory, Charlottesville, Mar 2020 (canceled)
- AMS Special Session on Curves, Jacobians, and Abelian Varieties, Charlottesville, Mar 2020 (canceled)
- AMS Special Session on Arithmetic Galois Actions, Denver, Jan 2020
- AMS Special Session on Rational Points on Algebraic Varieties: Theory and Computation, Denver, Jan 2020
- Johns Hopkins Junior Number Theory Days, Dec 2019
- joint NYU-CUNY-Columbia Number Theory Seminar, NYU, Dec 2019
- Number theory seminar, Boston University, Nov 2019
- Number theory seminar, University of Georgia, Oct 2019
- Number theory seminar, Tufts University, Oct 2019
- Number theory seminar, University of Connecticut, Oct 2019
- Number theory seminar, MIT, Sept 2019
- AMS Special Session on Arithmetic of Shimura Varieties, Madison, Sept 2019
- Arithmetic of Low-Dimensional Abelian Varieties, ICERM, Jun 2019, [video](#)
- 49th John H. Barrett Memorial Lectures conference, University of Tennessee, May 2019
- Automorphic Forms and Arithmetic seminar, Columbia University, Apr 2019
- AMS Special Session on Arithmetic Geometry and its connections, Hawaii, Mar 2019
- Hawaii Number Theory conference, Hawaii, Mar 2019
- AMS Special Session on Arithmetic Statistics, Baltimore, Maryland, Jan 2019
- Quebec-Vermont Number Theory Seminar (QVNTS), Montreal, Quebec, Dec 2018
- Algebraic Geometry and Number Theory seminar, Rice University, Nov 2018

- Front Range Algebraic Geometry and Number Theory Seminar, Colorado State University, Jul 2018
- Canadian Number Theory Association Conference (CNTA XIV), Quebec, Aug 2018
- Connecticut Summer School in Number Theory (CTNT), Jun, 2018
- Maine-Quebec Number Theory Conference, Oct 2017

Teaching

Course Lecturer at McGill university

Linear Algebra and Geometry, Fall 2021.

Teaching assistant at UW-Madison

Algebra and Trigonometry, Fall 2018.

Calculus and Analytic Geometry I, Fall 2017.

Introduction to Discrete Mathematics, Spring 2016.

Techniques in Ordinary Differential Equations, Fall 2015.

Calculus–Functions of Several Variables, Spring 2015, 2019.

Calculus and Analytic Geometry II, Fall 2014, 2016, Spring 2017, 2018.

Service

Referee and Quick opinions for Algebra & Number theory, Journal de Théorie des Nombres de Bordeaux, Journal of Algebraic Combinatorics, Proceedings of AMS, International Journal of Number Theory

Organizer for the MOBIUS analytic number theory seminar seminar, a local seminar for students and postdocs in Montreal, 2021-

Co-organizer (with Chantal David, Matilde Lalín) for CMS Winter Meeting: Arithmetic Statistics Session, Dec 2021

Co-advisor (with Matilde Lalín) for Xavier G en ereux with CRM-ISM Undergraduate Summer Scholarship program, May-August, 2021

Panelist for [MathPath](#)(math camp in the US), July 2021

Panelist for [Workshop: Women in Mathematics during the time of COVID](#), CRM, March 2021

Co-organizer (with Juliette Bruce, Daniel Erman) for conference: [Geometry and Arithmetic of Surfaces](#), Feb 2019

Co-organizer (with Rachel Davis, Melanie Matchett-Wood) for conference: [Arithmetic of Algebraic Curves](#), Apr 2018

Graduate Program Committee, UW-Madison, 2015-2018

Math Girls Night Out, UW-Madison, Fall 2015

Directed Reading Program, UW-Madison, Fall 2016, Spring 2017