

Junxian Li

CONTACT INFORMATION	Max Planck Institute for Mathematics Vivatsgasse 7, 53111 Bonn Germany	jli135@mpim-bonn.mpg.de https://jligit.github.io/
RESEARCH INTERESTS	L -functions, Primes, Exponential sums, Additive Combinatorics Automorphic Forms	
EMPLOYMENT	Max Planck Institute for Mathematics Mentors: Valentin Blomer and Pieter Moree	Sept 2019–
	Georg-August Universität Göttingen Mentors: Valentin Blomer and Harald Helfgott	Sept 2018–Aug 2019
EDUCATION	University of Illinois at Urbana-Champaign Ph.D. in Mathematics Advisor: Alexandru Zaharescu	Sept 2009–Aug 2013
	Nanjing University B.A. in Mathematics	Sept 2009–Aug 2013
PUBLICATIONS	<ol style="list-style-type: none">1. Zeros of a family of approximations of Hecke L-functions associated with cusp forms (with A. Roy and A. Zaharescu), <i>Ramanujan J.</i> 41(1-3): 391–419, 2016.2. Smooth L^2 distances and zeros of approximations of Dedekind zeta functions (with M. Nastasescu, A. Roy, and A. Zaharescu), <i>Manuscripta Math.</i> 154(1-2): 195–223, 2017.3. A lower bound for the least prime in an arithmetic progression (with K. Pratt and G. Shakan), <i>Q. J. Math.</i>, 68(3): 729–758, 2017.4. Exact evaluation of second moments associated with some families of curves over a finite field (with R. Donepudi and A. Zaharescu), <i>Finite Fields Appl.</i> 48: 331–355, 2017.5. On distinct consecutive r-differences (with G. Shakan), <i>J. Number Theory</i> 199: 363–376, 2019.6. Leading Digits of Mersenne Numbers (with Z. Cai, M Faust, A. J. Hildebrand, and Y. Zhang), <i>Exp. Math.</i> to appear, arXiv:1712.04425.7. Ducci iterates and similar ordering on sets of visible points (with A. Tamazyan and A. Zaharescu), <i>Int. J. Number Theory</i> 16(1): 1–28, 2020.8. A binary quadratic Titchmarsh divisor problem <i>Acta Arithmetica</i> 192(4): 341–361, 2020.9. A local Benford Law for a class of arithmetic sequences (with Z. Cai and A. J. Hildebrand), <i>Int. J. Number Theory</i> 15(3): 613–638, 2019.10. Almost Beatty Partitions (with A. J. Hildebrand, X. Li, and Y. Xie), <i>J. Integer Seq.</i> 22(4): Art. 19.4.6, 34 pp, 2019.	

	11. The final problem: an identity from Ramanujan's lost notebook (with B. Berndt and A. Zaharescu), <i>J. Lond. Math. Soc.</i> 100(2): 568–591, 2019.	
	12. The surprising accuracy of Benford's law in mathematics (with Z. Cai, M. Faust, A. J. Hildebrand and Y. Zhang), <i>Amer. Math. Monthly</i> 127(3): 217–237, 2020.	
	13. Value distribution of $L'(\rho)$ (with A. Zaharescu), <i>J. Math. Anal. Appl.</i> 480(1): 123400, 24 pp, 2019.	
	14. Large values of Dirichlet L -functions at zeros of a class of L -functions <i>Canad. J. Math.</i> to appear.	
	15. Lower bounds for discrete negative moments of the Riemann zeta function (with W. Heap and J. Zhao), arXiv:2003.09368.	
	16. Uniform Titchmarsh divisor problems (with E. Assing and V. Blomer), arXiv:2005.13915.	
CONFERENCE PROCEEDINGS	1. On primes in arithmetic progressions Automorphic forms and related topics, 165–167, <i>Contemp. Math.</i> 732, Amer. Math. Soc., Providence, RI, 2019	
	2. The Final Problem: A Series Identity from the Lost Notebook (with B. C. Bruce and A. Zaharescu), <i>George Andrews - 80 Years of Combinatory Analysis</i> , 2020.	
HONORS AND AWARDS	Bateman Fellowship in Number Theory	Spring 2018
	On the List of Teachers Ranked as Excellent by their Students	Fall 2017
TEACHING EXPERIENCE	Math 415 Linear Algebra, Instructor	UIUC, Fall 2017
	Math 415 Linear Algebra, Instructor	UIUC, Spring 2017
	Math 231 Calculus II, Instructor	UIUC, Spring 2016
	Math 241 Calculus III, Instructor	UIUC, Fall 2016
	Math 241 Calculus III, Instructor	UIUC, Spring 2015
UNDERGRADUATE MENTORING	<input type="checkbox"/> Illinois Geometry Lab Graduate Student Mentor <ul style="list-style-type: none"> • Almost Beatty Partitions • Beatty sequences, and Partitions of the Integers • Chaotic maps and exotic number systems • Finding integers in group orbits • Local Benford's Law • Leading digit distribution • Random Walk in number theory • Fractals, Patterns and Randomness in Number Theory • Fourier Series with Number theoretic coefficients • Symmetry in Nature 	Fall 2018 Spring 2018 Fall 2017 Spring 2017 Fall 2016 Spring 2016 Fall 2015 Spring 2015 Fall 2014 Spring 2014
PROFESSIONAL SERVICES	<input type="checkbox"/> Organizer of AMS Special Session at the Joint Mathematics Meeting <ul style="list-style-type: none"> • Number Theoretic Methods in Hyperbolic Geometry <input type="checkbox"/> Organizer of Graduate Student Number Theory Seminar in UIUC <input type="checkbox"/> Referee: <ul style="list-style-type: none"> • J. Number Theory • Math. Reports • Rev. Roumaine Math. Pures Appl. • J. Math. Sci. Adv. Appl. 	2019 2016–2018

CONFERENCES
AND SEMINAR
TALKS

- ❑ Joint Value Distribution of L -functions.
Oberseminar Analytic Number Theory, Bonn(online). Nov 2020
- ❑ Derivative of the Riemann zeta function at its zeros.
Analytic Number Theory Meeting, IHP (online). Jun 2020
- ❑ Extreme values of L -functions
Number theory lunch seminar, MPIM. Oct 2019
- ❑ Extreme values of L -functions
Oberseminar analytic number theory, Georg-August Universität Göttingen. Nov 2018
- ❑ The Unreasonable Effectiveness of Benford's Law in Mathematics
Joint with A. J. Hildebrand, Number Theory Seminar, UIUC. Apr 2018
- ❑ Primes in arithmetic progressions
Junior Mathematics Colloquium, Georg-August Universität Göttingen. Dec 2017
- ❑ Randomness in Number Theory
Graduate Student Colloquium, UIUC. Nov 2017
- ❑ Primes in arithmetic progressions
Where Geometry meets Number Theory, a conference in honor of
the 60th birthday of Per Salberger, Gothenburg. July 2017
- ❑ The least prime in an arithmetic progression
Joint Mathematics Meeting, Atlanta. Jan 2017
- ❑ On the least prime in an arithmetic progression
Number Theory Seminar, UIUC. Sept 2016
- ❑ A lower bound on the least prime in an arithmetic progression,
Workshop on Automorphic Forms and Related Topics, Sarajevo . Jul 2016
- ❑ Approximations of L -functions
2015 Midwest Number Theory Conference for Graduate Students
and Recent Ph. D's. Oct 2015
- ❑ Approximations of L -functions
Graduate Student Number Theory Seminar, UIUC. Nov 2015
- ❑ Bailey Pairs and Bailey chains
 q -series Seminar, UIUC. Apr 2015
- ❑ Basic Hypergeometric functions
 q -series Seminar, UIUC. Mar 2015

RESEARCH
EXPERIENCE

- ❑ Zeta functions, CIRM Dec 2019
- ❑ Second Symposium on Analytic Number Theory, Cetraro July 2019
- ❑ Rational points on irrational varieties, IHP June 2019
- ❑ L -functions and Multiplicative Number Theory, U of Mississippi May 2019
- ❑ Distribution of values of zeta functions and L -functions, RIKEN Mar 2019
- ❑ Workshop and Winter School on Local Statistics of Point Sequences, Linz Feb 2019
- ❑ Building Bridges: 4th EU/US Summer School
and Workshop on Automorphic Forms and Related Topics July 2018
- ❑ Hausdorff School: L -functions: Open Problems and Current Methods June 2018
- ❑ MRC: Number Theoretic Methods in Hyperbolic Geometry June 2018
- ❑ Probability in Number Theory May 2018
- ❑ Arbeitsgemeinschaft in Oberwolfach Oct 2017
- ❑ MSRI Summer Graduate School on Automorphic Forms
and the Langlands Program Aug 2017
- ❑ PCMI Graduate Summer School on random matrices June 2017
- ❑ University of Houston Summer School on Dynamical Systems May 2017
- ❑ MSRI: Analytic Number Theory Jan, May 2017
- ❑ West Coast Algebraic Topology Summer School Aug 2016
- ❑ Building Bridges: 3rd EU/US Summer School
and workshop on Automorphic Forms July 2016
- ❑ UNCG Summer School in Computational Number Theory June 2016

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| <input type="checkbox"/> Houston Summer School on Dynamical Systems | May 2016 |
| <input type="checkbox"/> UNCG Summer School in Computational Number Theory | May 2015 |
| <input type="checkbox"/> Exchange in University of Wisconsin-Madison | Fall 2012 |

OUTREACH
ACTIVITIES

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| <input type="checkbox"/> Four Color Fest | Nov 1-4 2017 |
| <input type="checkbox"/> A Math Carnival at Illinois-Gathering for Gardener | Jan 28 2017 |
| <input type="checkbox"/> Science at the Market | Aug 2013 |

SKILLS

Programming: C++, Mathematica, Matlab, Python
 Languages: English, Chinese