## Junxian Li

Contact Mathematisches Institut

INFORMATION Georg-August Universität Göttingen

Bunsenstraße 3-5 D-37073 Göttingen

Germany

RESEARCH INTERESTS L-functions, Exponential Sums, Primes, Algebraic Curves, Dynamical Systems, Ergodic Theory, Additive Combinatorics.

EMPLOYMENT

Georg-August Universität Göttingen Postdoctoral Research Assistant Advisor: Valentin Blomer

**EDUCATION** 

University of Illinois at Urbana-Champaign

Ph.D. in Mathematics, August 2018 Advisor: Alexandru Zaharescu

Nanjing University

B.A. in Mathematics, May 2013

**PUBLICATIONS** 

Zeros of a family of approximations of Hecke L-functions associated with cusp forms (with A.Roy and A. Zaharescu), Ramanujan J., 41(1-3):391–419, 2016.

junxian.li@mathematik.uni-goettingen.de

www.math.illinoi.edu/jli135

Smooth L<sup>2</sup> distances and zeros of approximations of Dedekind zeta functions (with M. Nastasescu, A. Roy, and A. Zaharescu), Manuscripta Math., 154(1-2):195–223, 2017.

A lower bound for the least prime in an arithmetic progression (with K. Pratt and G. Shakan), The Quarterly Journal of Mathematics (Oxford), 68(3):729–758, 2017.

Exact evaluation of second moments associated with some families of curves over a finite field (with R. Donepudi and A. Zaharescu), Finite Fields Appl., 48:331–355, 2017.

On distinct consecutive r-difference (with G. Shakan), J. Number Theory. to appear, arXiv preprint arXiv:1708.03742.

Leading Digits of Mersenne Numbers (with Z. Cai, M Faust, A.J. Hildebrand, and Y. Zhang), Exp. Math. to appear, arXiv preprint arXiv:1712.04425.

Ducci iterates and similar ordering on sets of visible points (with A. Tamazyan and A. Zaharescu), submitted.

A binary quadratic Titchmarsh divisor problem, arXiv preprint arXiv:1808.00837

A local Benford Law for a class of arithmetic sequences (with Z. Cai and A.J. Hildebrand), Int. J. Number Theory. to appear, arXiv preprint arXiv:1808.01496

 $Almost\ Beatty\ Partitions($  with A.J. Hildebrand, X. Li, and Y. Xie), arXiv preprint arXiv:1809.08690

The final problem: an identity from Ramanujan's lost notebook ( with B. Berndt and A. Zaharescu), submitted.

 ${\it Large\ values\ of\ degree\ 1\ L-functions\ at\ the\ zeros\ of\ other\ L-functions,\ preprint.}$ 

Honors and Awards	Bateman Fellowship in Number Theory	Spring 2018	
TEACHING EXPERIENCE	Math 231 Calculus II Math 241 Calculus III	UIUC, Fall 2017 UIUC, Spring 2017 UIUC, Spring 2016 UIUC, Fall 2016 UIUC, Spring 2015	
Professional Services	☐ Organizer of Graduate Student Number Theory Seminar in UIU☐ Illinois Geometry Lab Mentor	IC 2016-2018	
	<ul> <li>Almost Beatty Partitions</li> <li>Beatty sequences, and Partitions of the Integers</li> <li>Chaotic maps and exotic number systems</li> <li>Finding integers in group orbits</li> <li>Local Benford's Law</li> <li>Leading digit distribution</li> <li>Random Walk in number theory</li> <li>Fractals, Patterns and Randomness in Number Theory</li> <li>Fourier Series with Number theoretic coefficients</li> <li>Symmetry in Nature</li> </ul>	Fall 2018 Spring 2018 Fall 2017 Spring 2017 Fall 2016 Spring 2016 Fall 2015 Spring 2015 Fall 2014 Spring 2014	
Conferences and Seminar Talks	$Extreme\ values\ of\ L\mbox{-}functions$ Oberseminar analytic number theory, Georg-August Universität Göttingen. Nov 2018		
	Primes in arithmetic progressions Junior Mathematics Colloquium, Georg-August Universität Göttin	gen. Dec 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.	Sep 2016	
	$\label{eq:Allower bound on the least prime in an arithmetic progression,} Workshop on Automorphic Forms and Related Topics, Sarajevo .$	July 2016	
	$Approximations\ of\ L\mbox{-}functions \\ 2015\ {\rm Midwest\ Number\ Theory\ Conference\ for\ Graduate\ Students} \\ {\rm and\ Recent\ PhD's.}$	Oct 2015	
	$\label{lem:approximations} Approximations \ of \ L\mbox{-}functions$ Graduate Student Number Theory Seminar, UIUC.	Nov 2015	

Bailey Pairs and Bailey chains

	q series Seminar, UIUC.	April 2015
	Basic Hypergoemetric functions $q$ series Seminar, UIUC.	March 2015
Research Experience	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 Method	ds 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	August 2017
	PCMI Graduate Summer School on random matrices	June 2017
	University of Houston Summer School on Dynamical Systems	May 2017
	West Coast Algebraic Topology Summer School	August 2016
	Building Bridges: 3rd EU/US Summer School and workshop on Automorphic Forms	July 2016
	UNCG Summer School in Computational Number Theory	June 2016
	Houston Summer School on Dynamical Systems	May 2016
	UNCG Summer School in Computational Number Theory	May 2015
	Exchange in University of Wisconsin-Madison	Fall 2012
Outreach Activities	<ul> <li>□ Four Color Fest</li> <li>□ A Math Carnival at Illinois-Gathering for Gardener</li> <li>□ Science at the Market</li> </ul>	Nov 1-4, 2017 January 28, 2017 August, 2013
Skills	Programming: C++, Mathematica, Matlab, Python Languages: English, Chinese	