

Kübra Benli

✉ kubra.k.benli@gmail.com | [Website](#)

ACADEMIC POSITIONS

Lecturer, Boğaziçi University, İstanbul	February 2025-present
PIMS Postdoctoral Fellow, University of Lethbridge	Oct. 2022-Sept. 2024
Postdoctoral Fellow, Institut Élie Cartan de Lorraine, Nancy	May 2021-Sept. 2022
Graduate Teaching Assistant, University of Georgia, Athens	2015- 2020
Graduate Teaching Assistant, Boğaziçi University, İstanbul	2012- 2015

EDUCATION

2015 - 2020	Ph.D. in Mathematics, University of Georgia, Athens Dissertation Title: Three Topics in Analytic Number Theory Advisor: Paul Pollack
2012 - 2015	M.S. in Mathematics, Boğaziçi University, İstanbul M.S. Thesis Title: The mean values of the functional equation factor χ_ψ at the zeros of $\zeta^{(k)}(s)$ and $L^{(k)}(s, \psi_2)$ Advisor: Cem Yalçın Yıldırım
2007 - 2012	B.S. in Mathematics, Boğaziçi University, İstanbul

RESEARCH: PUBLICATIONS AND PREPRINTS

Research Interests: Analytic and Elementary Number Theory

Joint distributions of error terms for primes in arithmetic progressions modulo 11 (with G. Martin and P. Péringuey), *submitted*, preprint available at <https://www.arxiv.org/pdf/2510.05427>.

Explicit zero repulsion of Dirichlet L -functions (with S. Goel, H. Twiss and A. Zaman), *to appear in Proc. Amer. Math. Soc.*, preprint available at <https://www.arxiv.org/abs/2410.06082>.

An annotated bibliography for comparative prime number theory, with G. Martin, P. J. S. Yang, A. Bahrini, P. Bajpai, J. Downey, Y. Y. Li, X. Liang, A. Parvardi, R. Simpson, E. White, and C. H. Yip., *Expo. Math.* **43** (2025), no. 3, Paper No. 125644.

A discrete mean value of the Riemann zeta function (with E. Elma and N. Ng), *Mathematika* **70** (2024), no. 4, Paper No. e12281, 47 pp.

Sums of proper divisors with missing digits (with G. Cesana, C. Dartyge, C. Dombrowsky, and L. Thompson), *Research Directions in Number Theory*, Springer AWMS **32** (2024), 93-110.

Small prime k th power residues, *Proc. Amer. Math. Soc.* **148** (2020), no. 9, pp. 3801-3809; corrigendum *ibid.* **152**, No. 11, 4989-4991.

On the number of prime factors of the composite numbers resulting after a change of digits of primes, *J. Théor. des Nombres Bordeaux* **31** (2019), no. 3, pp. 689-696.

Small prime k th power residues for $k = 2, 3, 4$: a quadratic reciprocity approach (with P. Pollack), *Proc. Amer. Math. Soc.* **147** (2019), pp. 987–994.

On the number of pure fields of prime degree, *Colloquium Mathematicum* **153(1)**, (2018), pp. 39-50.

Mean values of the functional equation factors at the zeros of derivatives of the Riemann Zeta-Function and Dirichlet L -functions (with E. Elma and C. Y. Yıldırım), *Analytic Number Theory, Modular Forms and q -Hypergeometric Series*, Springer Proc. Math. Stat. **221**, Springer, Cham, 2017, pp. 59-67.

Explicit zero free regions for Dirichlet L -functions (with H. Kadiri), *preprint, in preparation*, pp. 20.

On the discrete fourth moment of the derivative of the Riemann zeta function (with F. Çiçek, E. Elma, A. Hamieh and N. Ng), *preprint, in preparation*.

On the large values of short character sums, *preprint, in preparation*. pp. 10.

Subword complexity of the Fibonacci-Thue-Morse sequence along polynomials (with T. Stoll), *preprint, in preparation*, pp. 15 .

HONORS, SCHOLARSHIPS, AWARDS

PIMS funding for the Alberta Number Theory Days XIV, at the Banff International Research Station (BIRS) \$5,000CAD Spring 2023

PIMS (Pacific Institute for the Mathematical Sciences) Postdoctoral Fellowship, 2021

William Armor Wills Memorial Scholarship Award, Dept. of Mathematics, University of Georgia 2020
(awarded to one or two of the graduate students each year at the department of Mathematics at the University of Georgia)

Gülnihal Yücel Outstanding Teaching Assistant Award, Department of Mathematics, Boğaziçi University 2014
(awarded annually to one of the TAs at the Department of Mathematics at Boğaziçi University)

TÜBİTAK (The Scientific and Technological Research Council of Türkiye) Scholarship for Graduate Students (awarded to those who continue graduate studies in Türkiye) 2012-2014

TÜBİTAK Scholarship for Undergraduate Students 2007-2012
(awarded to the top 0.1% in the university placement examination (OSS) in Türkiye who pursue degrees in Science)

Honors Student - Boğaziçi University 2012

Boğaziçi University Certificate in French 2012

Silver Medal in Mathematical Olympiad for High School Students (ILMO) at Koç University 2007

ORGANIZATIONAL ACTIVITIES, REVIEWS, MENTORING

Co-organizer-Alberta Number Theory Days XIV, Banff, Alberta March 31, 2023-April 2, 2023

Co-leader to the project “Explicit Zero Repulsion of Dirichlet L -functions” in the Inclusive Paths in Explicit Number Theory, Summer School, BIRS at UBC–Okanagan, Kelowna, BC July 2022

Co-organizer-CRG L -functions in Analytic Number Theory Weekly Seminars (Online) Fall 2022- Summer 2024 (31 talks scheduled, <https://sites.google.com/view/crgl-functions/crg-weekly-seminar>)

Co-mentor with Cécile Dartyge to M1 project titled “Systèmes de congruences couvrant et applications” (Covering congruence systems and applications) by Ayoub Benterkia Spring 2022

Reviewer for ZBMath June 2021-present

Reviewer for AMS Reviews September 2020-present

Refereeing for Acta Arithmetica, Advances in Mathematics, American Math Monthly

MATH CAMP at the University of Georgia for middle and high school students, Summer 2018

Mentor in the Directed Reading Program at the University of Georgia, Fall 2017, Fall 2018

Mentees: Yidi Chen, Miranda Hermes.

Co-organizer of the Student Seminars in the Department of Mathematics at Boğaziçi University 2014

TEACHING

Lecturer, Boğaziçi University Spring 2025-present

Math 327, Number Theory.

Math 101, Calculus I.

Math 527, Number Theory.

Math 201, Matrix Theory.

PIMS Postdoctoral Fellow, University of Lethbridge 2022 - 2024

Math 1410, Elementary Linear Algebra,

Math 3400, Group and Ring Theory,

Math 1560, Calculus I (x2).

Graduate Teaching Assistant, Department of Mathematics, University of Georgia 2015 - August 2020

Math 2250E, Online Calculus I (Instructor of Record),

Math 2250, Calculus I (x3) (Instructor of Record),

Math 1113, Precalculus (x3) (Instructor of Record),

Math 2200, Analytic Geometry and Calculus (Recitation Instructor),

Math 3200, Introduction to Higher Mathematics (WIP- Writing Intensive Program TA),

Math 5200/7200, Foundations of Geometry I (Grader),

Math 3100E, Sequences and Series (Honors) (Grader),

Math 4670, Combinatorics (Grader),
 Math 4400, Number Theory (Grader).

Teaching Assistant, Department of Mathematics, Boğaziçi University, İstanbul

2012 - 2015

Math 431, Complex Analysis ($\times 3$),
 Math 327, Number Theory ($\times 2$),
 Math 321, Algebra I,
 Math 322, Algebra II,
 Math 202, Differential Equations ($\times 2$),
 Math 101, Calculus I.

TALKS

Prime numbers in residue classes	October 13, 2025
Boğaziçi University GT Seminars	
Distribution of primes in residue classes	May 6, 2025
Koç University Mathematics Seminars	
Explicit Deuring-Heilbronn phenomenon for Dirichlet L -functions	March 18, 2025
CRG: L functions Weekly Seminars (online)	
Short Character Sums with Large Values	June, 2024
Canadian Number Theory Association Conference XVI, Toronto	
Discrete moments of the derivatives of the Riemann zeta function (<i>invited</i>)	March, 2024
The Quebec-Vermont Number Theory Seminar, Montréal	
Sums of proper divisors with missing digits	March, 2024
Alberta Number Theory Days XV, Banff International Research Station (<i>invited</i>)	
Sums of proper divisors with missing digits	January, 2024
University of British Columbia Number Theory Seminar (online, <i>invited</i>)	
Discrete moments of the derivatives of the Riemann zeta function (<i>invited</i>)	December 2, 2023
CMS Winter Meeting, Montréal	
Sums of proper divisors with missing digits	October 2023
PIMS-Lethbridge Number Theory and Combinatorics seminar	
Character Sums and Primes	July 2022
IECL Réunion, IECL, Metz	

Factor complexity along polynomial subsequences of the Fibonacci-Thue-Morse sequence ArithRand 2022, TU Graz	July 2022
Changes in digits of primes (<i>invited</i>) Zahlentheoretisches Kolloquium, TU Graz	April 2022
Small prime k th power residues modulo p Emergent Research: The PIMS Postdoctoral Fellow Seminar (online)	February 2022
Small prime k th power residues modulo p (<i>invited</i>) Séminaire Ernest, Institut de Mathématiques de Marseille	January 2022
Changes in digits of primes Metz-Nancy Number Theory Seminar, IECL, Nancy	December 2021
Changes in digits of primes (<i>invited</i>) Rencontres de théorie analytique et élémentaire des nombres, Paris	November 2021
Small prime power residues modulo p Metz-Nancy Number Theory Seminar, IECL, Nancy (online)	May 2021
Prime power residues modulo p (<i>invited</i>) PIMS-Lethbridge Number Theory and Combinatorics seminar (online)	September 2020
Short sums of Dirichlet characters Mock AMS Graduate Student Conference, University of Georgia (online)	July 2020
On the number of prime power residues (<i>invited</i>) Number Theory Seminar, University of Waterloo, Ontario	November 2019
On the number of prime power residues (<i>invited</i>) Emory Algebra and Number Theory Seminars, Emory University, Atlanta	October 2019
Changes of Digits of Primes PANTS XXXII, University of North Carolina at Charlotte	September 2019
Squares modulo p Mock AMS Graduate Student Conference, University of Georgia	July 2019
Small prime power residues Journées Arithmétiques XXXI, İstanbul University, İstanbul	July 2019
Small prime power residues modulo p PANTS XXXI, Palmetto Number Theory Series, University of South Carolina	December 2018
Small prime power residues	October 2018

UGA Number Theory Seminar, University of Georgia

Small prime power residues July 2018

Mock AMS Graduate Student Conference, University of Georgia

Sieve methods and an application to prime power residues March 2018

Graduate Students Seminars, University of Georgia

Counting Pure Fields July 2017

Graduate Student Summer Conference, University of Georgia

Switching Digits of Primes July 2016

Mock AMS Conference, University of Georgia

Mean value theorems for the derivatives of Riemann Zeta-Function and Dirichlet L -functions 2016

Graduate Student Seminars, University of Georgia

On the Gaps Between Primes 2014

Graduate Student Seminars, Boğaziçi University

Order of an Entire Function 2013

Student Seminars, Boğaziçi University

WORKSHOPS AND CONFERENCES ATTENDED

Comparative Prime Number Theory Symposium, University of British Columbia, Vancouver June 17-21, 2024

Canadian Number Theory Association Conference XVI, Fields Institute, Toronto, ON June 10-14, 2024

Inclusive Paths in Explicit Number Theory, Summer School, BIRS at UBC–Okanagan, Kelowna, BC

July 2-15, 2023

Alberta Number Theory Days XIV (co-organizer), Banff, AB March 31, 2023-April 2, 2023

CRG Launch Event, BIRS in Banff, AB November 18-20, 2022

Women in Numbers Europe 4, Utrecht August 29-September 2, 2022

“Pre-images of the sum of proper divisors function” led by Lola Thompson and Cécile Dartyge

Journée Scientifique “Pseudorandomness, cryptography and number theory”, Nancy December 2021

BIRS Alberta Number Theory Days XIII (hybrid, attended online) November 2021

2020 Virtual CMS Winter Meeting December 2020

AMS Fall Eastern Sectional Meetings (held online) October 2020

PANTS XXXII, University of North Carolina at Charlotte, NC September 2019

Journées Arithmétiques XXXI, İstanbul July 2019

NSF-CBMS Conference: L -functions and Multiplicative Number Theory, University of Mississippi	May 2019
Joint Mathematics Meetings, Baltimore, MD	January 2019
PANTS XXXI, Palmetto Number Theory Series, University of South Carolina	December 2018
MRC Workshop on Number Theoretic Methods in Hyperbolic Geometry, Whispering Pines, RI.	June 2018
NSF-CBMS Conference on Additive Combinatorics from a Geometric Viewpoint, USC	May 2018
CRM Workshop on Probability in Number Theory, University of Montréal	May 2018
Gainesville International Number Theory Conference, University of Florida	March 2016
AMS Spring Southeastern Sectional Meeting, University of Georgia	March 2016
Palmetto Number Theory Series XXV, Clemson University	December 2015
International Conference on Algebra and Number Theory, Samsun, Turkey	August 2014
Turkish Mathematical Society (TMD) 27 th National Mathematics Symposium, İstanbul	August 2014

LANGUAGES

Turkish (native), English (fluent), French (advanced), Spanish (beginner), Latin (beginner).