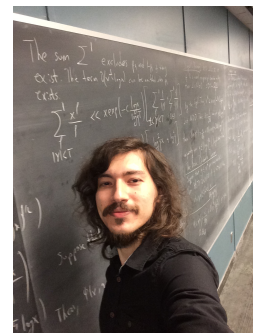


Ertan Elma

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EDUCATION

University of Waterloo

Ph.D. in Pure Mathematics, Supervisors: Yu-Ru Liu and Wentang Kuo

– Ph.D. Thesis: Some Problems in Multiplicative and Additive Number Theory

Waterloo, Canada

2015–2020

Boğaziçi University

M.Sc. in Mathematics, Supervisor: Cem Yalçın Yıldırım

– M. Sc. Thesis: Average Values of the Functional Equation Factors at the Zeros of Derivatives of Dirichlet L -functions

İstanbul, Turkey

2012–2015

Boğaziçi University

B.S. in Mathematics

İstanbul, Turkey

2007–2012

ACADEMIC EMPLOYMENT

Mathematics Research Center, ASOIU

Researcher

Baku, Azerbaijan

2024–present

University of Lethbridge

Postdoctoral Fellow, Sessional Instructor

Lethbridge, Canada

2022–2024

University of Waterloo

Teaching Assistant, Sessional Instructor

Waterloo, Canada

2015–2020

Boğaziçi University

Teaching Assistant

İstanbul, Turkey

2012–2015

RESEARCH INTERESTS

- Analytic and Elementary Number Theory
- L -functions
- Sieve Methods and Their Applications
- Exponential Sums and the Circle Method
- Probabilistic Results in Number Theory
- Number Theory in Function Fields

PUBLICATIONS

9. [On the second Hardy-Littlewood conjecture](#) (joint with Bittu Chahal, Nicolo Fellini, Akshaa Vatwani, Do Nhat Tan Vo), *submitted*.

8. [Distribution of the number of prime factors with a given multiplicity](#) (joint with Greg Martin), *Canad. Math. Bull.*, 67 (2024), no. 4, 1107–1122.
7. [A discrete mean value of the Riemann zeta function](#) (joint with Kübra Benli and Nathan Ng), *Mathematika*, 70 (2024), no. 4, Paper No. e12281, 47 pp.
6. [A Dirichlet series related to the error term in the Prime Number Theorem](#), *Int. J. Number Theory*, 20 (2024), no. 3, 715–725.
5. [On the number of irreducible factors with a given multiplicity in function fields](#) (joint with Sourabhashis Das, Wentang Kuo and Yu-Ru Liu), *Finite Fields Appl.*, 92 (2023), Paper No. 102281, 22 pp.
4. [Number of prime factors with a given multiplicity](#) (joint with Yu-Ru Liu), *Canad. Math. Bull.* 65 (2022), no. 1, 253–269.
3. [On discrete mean values of Dirichlet \$L\$ -functions](#), *Czechoslovak Math. J.* 71 (146) (2021), no. 4, 1035–1048.
2. [On a problem related to discrete mean values of Dirichlet \$L\$ -functions](#), *J. Number Theory* 217 (2020), 36–43.
1. [Mean values of the functional equation factors at the zeros of derivatives of the Riemann zeta function and Dirichlet \$L\$ -functions](#) (joint with Kübra Benli and Cem Yalçın Yıldırım), *Analytic Number Theory, Modular Forms and q -Hypergeometric Series*, Springer Proc. Math. Stat., vol. 221, Springer, Cham, (2017), 59–67.

ONGOING RESEARCH

3. A Dirichlet series related to the error term in the Prime Number Theorem, II.
2. On the Landau-Gonek formula.
1. On the fourth moment of the derivative of the Riemann zeta function (joint with Kübra Benli, Fatma Çiçek, Alia Hamieh, Nathan Ng).

AWARDS AND GRANTS

- Lethbridge Number Theory and Combinatorics Seminars Grant, \$4500, PIMS, 2023-2024
- Postdoctoral Fellow Dissemination Grant, \$1000, University of Lethbridge, 2023
- International Graduate Student Support, \$30000 per year, University of Waterloo, 2015-2020
- Bursary for the Top 0.5% Undergraduate Science Students, TÜBİTAK (The Scientific and Technological Research Council of Turkey), 2007-2012
- Bursary for Graduate Science Students, TÜBİTAK (The Scientific and Technological Research Council of Turkey), 2012-2014
- Valedictorian Prize, Sakıp Sabancı Anatolian High School, 2007

SCHOLARLY DUTIES

- Referee for the journals
 - Finite Fields and Their Applications
 - Canadian Journal of Mathematics
 - Mathematics of Computation
 - Ramanujan Journal
- Reviewer for the AMS Mathematical Reviews

ORGANIZATIONAL ACTIVITIES

- Co-organizer of the NTC (Number Theory and Combinatorics) Seminars
 - University of Lethbridge, 2023-2024
 - Applied for and received PIMS research funding, \$4500
 - Invited and hosted external guest speakers
 - Recordings: mathtube.org
 - Website: [NTC Seminars at Lethbridge](#)
- Co-leader of a research project in the summer school Inclusive Paths in Explicit Number Theory
 - University of British Columbia Okanagan Campus, Kelowna, July, 2023
 - Project Title: The Second Hardy-Littlewood Conjecture
 - Project Leader: Akshaa Vatwani
 - Collaborators: Bittu Chahal, Nicolo Fellini, Do Nhat Tan Vo
- Co-organizer of the PIMS CRG (Collaborative Research Groups) L -functions in Analytic Number Theory Seminars
 - University of Lethbridge, 2022-2024
 - Recordings: mathtube.org
 - Website: [PIMS CRG \$L\$ -functions](#)
- Organizer and the speaker of the Sieve Methods Learning Seminars
 - University of Waterloo, 2017-2018
 - 15 talks, 2-3 hours per talk
 - Number of attendees: 5-10 undergraduate/graduate students and postdocs
 - Based on the book “An Introduction to Sieve Methods and Their Applications” by Alina Carmen Cojocaru and M. Ram Murty
 - Chapters covered: Some Basic Notions, Some Elementary Sieves, The Normal Order Method, The Turán Sieve, The Sieve of Erathosthenes, Brun’s Sieve, Selberg’s Sieve, The Large Sieve, The Bombieri-Vinogradov Theorem

INVITED TALKS

- Distribution of the number of prime factors with a given multiplicity
ADA University, 2025
- Number of prime factors with a given multiplicity
Canadian Mathematical Society Winter Meeting, Montreal, 2023
- A Dirichlet series related to the error term in the Prime Number Theorem
The 20th Annual Alberta Mathematics Dialogue, Mount Royal University, 2023
- A discrete mean value of the Riemann zeta function and its derivatives
Alberta Number Theory Days XIV, Banff International Research Station, 2023
[Link for the recording](#)
- Some identities concerning Dirichlet L -functions
Number Theory and Combinatorics Seminars, University of Lethbridge, 2022
- Discrete mean values of Dirichlet L -functions
Number Theory Seminars, Queen’s University, 2020
- Discrete mean values of Dirichlet L -functions
Number Theory Seminars, University of Waterloo, 2019
- Pólya-Vinogradov inequality
Pure Mathematics Student Colloquium, University of Waterloo, 2018
[Link for the recording](#)

CONTRIBUTED TALKS

- Discrete mean values of Dirichlet L -functions
Journées Arithmétiques XXXI, Istanbul University, 2019
- Perron's formula
Joint Student Colloquium, University of Waterloo, 2017
- On a sum concerning the zeros of the k^{th} derivative of Dirichlet L -functions
International Conference on Algebra and Number Theory, Samsun, 2014

CONFERENCES AND WORKSHOPS ATTENDED

- Comparative Prime Number Theory Symposium, Vancouver (attended online), 2024
- 16th Meeting of the Canadian Number Theory Association, Toronto (attended online), 2024
- Canadian Mathematical Society Winter Meeting, Montreal, 2023
- Inclusive Paths in Explicit Number Theory Summer School, University of British Columbia Okanagan Campus, Kelowna, 2023
- The 20th Annual Alberta Mathematics Dialogue, Mount Royal University, Calgary, 2023
- Alberta Number Theory Days XIV, Banff International Research Station, Banff, 2023
- PIMS CRG L -functions in Analytic Number Theory, Launch Event, Banff International Research Station, Banff, 2022
- PIMS CRG Workshop on Moments of L -functions, University of Northern British Columbia, Prince George (attended online), 2022
- Virtual CMS Winter Meeting, Online, 2020
- AMS Fall Eastern Sectional Meetings, Online, 2020
- CMS Winter Meeting, Toronto, 2019
- Journées Arithmétiques XXXI, Istanbul University, Istanbul, 2019
- 15th Meeting of the Canadian Number Theory Association, Québec City, 2018
- CMS Winter Meeting, Waterloo, 2017
- Efficient Congruencing, The Fields Institute, Toronto, 2017
- Gainesville International Number Theory Conference, Gainesville, 2016
- 14th Meeting of the Canadian Number Theory Association, Calgary, 2016
- CMS Winter Meeting, Niagara Falls, 2016
- CMS Summer Meeting, Edmonton, 2016
- CMS Winter Meeting, Montréal, 2015
- International Conference on Algebra and Number Theory, Samsun, 2014

TEACHING EXPERIENCE

- Instructor and Tutorial Coordinator if available

University of Lethbridge

MATH 1410, Elementary Linear Algebra, Spring 2024

MATH 2570, Calculus III, Fall 2023

MATH 2560, Calculus II, Spring 2023

MATH 1565, Accelerated Calculus I, Fall 2022

University of Waterloo

MATH 128, Calculus II for the Sciences, Winter 2018

PMATH 340, Elementary Number Theory, University of Waterloo, Fall 2018

- Assistant Instructor

University of Lethbridge

PIMS Graduate Course, Analytic Number Theory I, Fall 2022

- Teaching Assistant running in-class tutorials if available

University of Waterloo, 2015-2020

PMATH 740/440, Analytic Number Theory

PMATH 351, Real Analysis

PMATH 340, Elementary Number Theory ($\times 2$)

MATH 145, Advanced Algebra

MATH 137, Calculus I for Honours Mathematics

MATH 136, Linear Algebra I for Honours Mathematics

MATH 118, Calculus II for Engineering

MATH 116, Calculus I for Engineering

MATH 115, Linear Algebra for Engineering ($\times 2$)

Boğaziçi University, 2012-2015

MATH 431, Complex Analysis I

MATH 327, Elementary Number Theory ($\times 3$)

MATH 231, Introduction to Complex Analysis

MATH 132, Calculus for Mathematics Students II

MATH 131, Calculus for Mathematics Students I

MATH 102, Calculus II ($\times 2$)

MATH 101, Calculus I ($\times 2$)

LANGUAGES

- Turkish, native
- English, fluent
- French, intermediate
- German, beginner

ARTISTIC INTERESTS

- Music production
- Songwriting and composition
- 3D animations and visual effects
- Filmmaking