

Burçin Güneş

CONTACT INFORMATION

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RESEARCH INTEREST

- Algebraic Curves
- Algebraic Number Theory
- Applications to Coding Theory

EDUCATION

Sabancı University, Istanbul, Turkey

Ph.D. in Mathematics, 2019

Dissertation Title: Contributions to the theory of function fields in positive characteristic

Thesis Advisors: Prof. Dr. Cem Güneri & Assist. Prof. Nurdagül Anbar

Koç University, Istanbul, Turkey

M.Sc. in Mathematics, 2013

Thesis Title: On Rosenthal's ℓ^1 -Theorem

Thesis Advisor: Prof. Dr. Ali Ülger

Istanbul Bilgi University, Istanbul, Turkey

B.Sc. in Mathematics, 2010

Graduation Project: Gelfand Theory

Project Supervisor: Prof. Dr. Selçuk Demir

RESEARCH EXPERIENCE

Sabancı University, Istanbul, Turkey

Postdoctoral Researcher, November 2019 - February 2020

University of Perugia, Perugia, Italy

Visiting Research Fellow, August 2018 - April 2019

TEACHING EXPERIENCE

Özyeğin University, *Instructor*

- Math 102, Mathematics for Social Sciences II, Fall 2022, Spring 2022, Summer 2023, Fall 2023, Spring 2024
- Math 112, Discrete Mathematics, Summer 2022, Fall 2022, Spring 2022, Summer 2023, Fall 2023, Spring 2024
- Math 101, Mathematics for Social Sciences I, Fall 2023

Sabancı University, *Instructor*

- Math 201, Linear Algebra, Summer 2020, Summer 2022
- Math 102, Calculus II, Summer 2021

Istanbul Bilgi University, *Instructor*

- Math 217, Linear Algebra, Fall 2020
- Math 233, Discrete Mathematics, Fall 2020, Spring 2021
- Math 235, Calculus for Economists and Administrative Sciences, Fall 2020, Spring 2021

Sabancı University, *Academic Support Programme*

- Math 101, Calculus I, Fall 2017, Spring 2018

Sabancı University, *Teaching Assistant*

- Math 204, Discrete Mathematics, Spring 2014, Spring 2015, Spring 2017
- Math 201, Linear Algebra, Fall 2014, Fall 2015, Spring 2016, Fall 2016
- Math 101, Calculus I, Fall 2013

Istanbul Bilgi University, Teaching Assistant

- Math 220, Algebra II, Spring 2013
- Math 169, Calculus for Scientists and Engineers I, Spring 2013
- Math 233, Discrete Mathematics, Spring 2013
- Math 111, Intuitive Set Theory, Fall 2012
- Math 321, Measure Theory, Fall 2012
- Math 411, Field and Galois Theory, Fall 2012

Koç University, Teaching Assistant

- Math 302, Real Analysis II, Spring 2012
- Math 301, Real Analysis I, Fall 2011
- Math 200, Matrix Algebra and Multivariable Calculus, Spring 2011
- Math 101, Finite Mathematics, Fall 2010

Istanbul Bilgi University, Student Teaching Assistant

- Math 159, Numeracy for Mathematicians I, Fall 2009

PUBLICATIONS AND
PREPRINTS

- *On nilpotent automorphism groups of function fields*, with N. Anbar, *Advances in Geometry*, <https://doi.org/10.1515/advegeom-2021-0006>
- *An inductive construction of minimal codes*, with D. Bartoli and M. Bonini, *Cryptogr. Commun.* <https://doi.org/10.1007/s12095-021-00474-2>
- *Non-ordinary curves with a Prym variety of low p -rank*, with T. O. Celik, Y. Elias, R. Newton, E. Ozman, R. Pries and L. Thomas, *Women in Numbers Europe 2: Research Directions in Number Theory, AWM Series vol 11. Springer, Cham.* https://doi.org/10.1007/978-3-319-74998-3_8

TALKS

- On Nilpotent Automorphism Groups of Function Fields, December 2020, UCGEN
- On Nilpotent Automorphism Groups of Function Fields, October 2019, Algebra Seminar, Sabancı University
- Algebraic Geometric Codes, April 2017, Graduate Student Seminar, Sabancı University

HONORS AND
AWARDS

- **TÜBİTAK International Research Fellowship for doctoral students**
August 2018 - April 2019
- **Sabancı University Full Scholarship (for doctoral program)**
September 2013 - August 2018
- **University Courses Teaching Assistant Incentive Award**,
Fall 2013, Sabancı University Faculty of Engineering and Natural Sciences
- **Koç University Full Scholarship (for masters program)**
September 2010 - August 2012

OTHER
EXPERIENCE

- **GAeL XXIV (Géométrie Algébrique en Liberté), Local Organizing Committee Member**
September 2015 - June 2016
- **Sabancı University, Course Coordinator**
Fall 2014, Fall 2015, Spring 2016, Summer 2017
Responsible for (i) the preparation and grading of quizzes/exams, (ii) coordinating the students, assistants and recitations, (iii) helping the instructors as needed.
- **Nesin Mathematics Village, Senior Advisor**
June 2009 - June 2010
Responsible for responding students' questions on courses (three different groups of twenty high school students, attending the summer school for two weeks)

ATTENDED
CONFERENCES AND
MEETINGS

- **Curves over Finite Fields: Past, Present and Future**,
24 - 28 May 2021, online
- **Workshop on Polynomials and Curves over Finite Fields**,
20 - 22 May 2019, Istanbul, Turkey
- **Summer School on Effective Geometry and Arithmetic of Curves**,
4-8 June 2018, Istanbul, Turkey

- **Workshop on Finite Fields, Function Fields and Their Applications**,
26-27 April 2018, Istanbul, Turkey
- \mathbb{F}_q 13 **The 13th International Conference on Finite Fields and their Applications**,
4-10 June 2017, Gaeta, Italy
- **Women in Numbers - Europe 2**,
26-30 September 2016, Leiden, Netherlands
- **GAeL XXIV (Géométrie Algébrique en Liberté)**,
13-17 June 2016 Nesin Mathematics Village Şirince - Selçuk - Izmir, Turkey
- **Antalya Algebra Days**, Antalya, Turkey
Attended in May 2009, in May 2010, in May 2013, in May 2014, in May 2018
- **TMD (Turkish Mathematical Society) Summer School**,
Nesin Mathematics Village Şirince - Selçuk - Izmir, Turkey
Attended summer schools each year from 2007 to 2012
- **XXII. National Mathematics Symposium**,
31 August - 04 September 2009 Nesin Mathematics Village Şirince - Selçuk - Izmir, Turkey
- **TMD Summer School**, Çanakkale, Turkey
Attended the summer school at Çanakkale in 2006

PROGRAMMING MAGMA

LANGUAGES Turkish (Native), English (Advanced), French (Beginner), Italian (Intermediate)