

MEHMET KIRTIŞOĞLU

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<https://mkirtisoglu.github.io>

RESEARCH INTEREST

- My research interest lies in algebraic (combinatorial) topology: Homotopy, homology, cohomology, and category theory.

EDUCATION

Bilkent University

Ph.D. in Mathematics

Advisor: [Prof. Dr. Ergün Yalçın](#)

Ankara, Turkey

2024–2028 (expected)

Bilkent University

M.Sc. in Mathematics

- Master’s Thesis: “[Thomason’s Homotopy Colimit Theorem and Cohomology of Categories](#)” ,
Advisor: [Prof. Dr. Ergün Yalçın](#)

Ankara, Turkey

2022–2024

Bilkent University

B.Sc. in Mathematics

- Senior Project: “[Reconstruction of Networks of Chaotic Systems](#)” ,
Advisor: [Prof. Dr. Fatihcan Atay](#)

Ankara, Turkey

2018–2022

TAKEN COURSES

- **In Ph.D.:** Topics in Representation Theory, Probabilistic Analysis, Reel Analysis, Methods of Applied Mathematics I, Methods of Applied Mathematics II
- **In M.Sc.:** Cohomology of Groups, Group Representations, Algebra II, Algebraic Topology I ([Homology and Cohomology by eCHT research community](#)), , [Homotopy Theory by eCHT research community](#), Complex Analysis, Quantum Computation, Manifold Theory
- **In B.Sc.:** Abstract Mathematics I-II, Calculus I-II, Advanced Calculus I-II, Linear Algebra I-II, Differential Equations, Finite and Discrete Mathematics, Complex Analysis, Algebra I-II, Topology, Complex Geometry, Algebraic Geometry, Topics in Ordinary Differential Equations, Probability and Statistics, Graduate Algebra I, Number Theory, Real Analysis, Representation Theory, Modeling and Optimization, Programming in Python

WORKSHOPS

- [Nesin Math Village](#) Summer and Winter Schools, Turkey 2016–2024
- [Cakilarasi Math Village](#) Topology of Surfaces, Turkey 14 - 18 Aug 2023
- [DRP Türkiye](#) Direct Reading Program,Turkey (mentored by [Assist. Prof Feride Ceren Köse](#)) Summer 2022
- [Cakilarasi Math Village](#) Five Selected Topics for an Introduction to Graph Theory, Turkey 10 - 14 Sep 2018

ACADEMIC EXPERIENCE

Bilkent University

Graduate Assistantship, TA

- Calculus I, Calculus II, Linear Algebra, Topology

Ankara, Turkey

Sep 2022 –present

Network Oriented Dynamics and Data Science Research Group ([NODDS](#))

Internship at Kadir Has University

- Worked on Graph Theory, Stability Theory, Synchronization Theory, and executed related simulations in Python.

Istanbul, Turkey

Nov 2020 –May 2022

SCHOLARSHIPS AND AWARDS

2024-2028	National Ph.D. Scholarship Program (2211-A) by The Scientific and Technological Research Council of Turkey
2022-2028	Graduate Assistantship by Bilkent University
2017-2022	Outstanding Success Scholarship by Turkish Educational Foundation
2017-2022	National Undergraduate Scholarship Program (2205) by The Scientific and Technological Research Council of Turkey
2017-2022	Comprehensive Scholarship of Bilkent University
2017	Ranked in first 4000 in Nationwide University Entrance Exam among 2 million high school students in Turkey

CONTRIBUTED TALKS

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| 1. Bilkent Mathematics Graduate Seminar Series
<i>“An Introduction to Cohomology of Small Categories”</i> | Feb 2025 |
| 2. Bilkent Mathematics Topology Seminars
<i>“Thomason’s Homotopy Colimit Theorem”</i> | October 2023 |
| 3. Bilkent Mathematics Topology Seminars
<i>“Simplicial Quantum Contextuality”</i> | December 2022 |
| 4. DRP Turkey Symposium at Bogazici University
<i>“Seifert Van Kampen Theorem and Its Applications”</i> | Aug 2022 |
| 5. Network Oriented Dynamics and Data Science Research Group
<i>“Generalized Synchronization of Chaos”</i> | Jul 2021 |
| 6. Bahar Mathematics Meeting VI, Hacettepe University
<i>“An Algebraic Topological Proof of the Fundamental Theorem of Algebra”</i> | October 2019 |
| 7. Bahar Mathematics Meeting IV, Middle East Technical University
<i>“An Introduction to Modern Geometry: Inversion”</i> | October 2018 |

ORGANIZING

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| • Bilkent Mathematics Graduate Seminar Series
Graduate Student seminars series. The meeting aims to foster collaboration and discussion among graduate mathematics students of Bilkent University and to showcase the topics being studied in our department for undergraduate students. | Fall 2024-2025 |
| • IV. Mathematics Meeting, Middle East Technical University
Student seminars series. The meeting is held at different universities each semester and five to six hundred students attend. | Oct 2018 |
| • V. Mathematics Meeting, Istanbul Bilgi University | March 2019 |
| • VI. Mathematics Meeting, Hacettepe University | Oct 2019 |

SKILLS AND HOBBIES

- **Languages:** English (Fluent, TOEFL=99), Turkish (Native), German (A2.1)
- **Computer Skills:** Python, SQL, CPLEX, LaTeX, Html, Css
- **Hobbies:** Playing Saz, GO (Weichi), Fitness