

Ece Karacam

[Website](#) | [GitHub](#) | [LinkedIn](#)

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ABOUT ME

I am a fifth year Ph.D. candidate in Biomathematics at Florida State University, advised by Washington Mio. My research focuses on geometric and topological data analysis, where I develop mathematically rigorous frameworks drawing on metric geometry, probability, and optimal transport to understand complex, non-Euclidean data.

EDUCATION

Ph.D. Candidate & M.S. in Biomathematics

Florida State University, Tallahassee, FL

Aug 2021 – Aug 2027

- GPA: 3.48/4.0

B.S. in Pure Mathematics

Ege University, Izmir, Turkey

Jul 2015 – Jun 2021

- GPA: 3.47/4.0 (Honors Degree)
- Exchange Student: Studied mathematics for Fall 2018 at the University of Aberdeen, Scotland

PUBLICATIONS

Preprint

- Ece Karacam, Washington Mio, Osman Berat Okutan (2025) "Observable Covariance and Principal Observable Analysis". [arXiv:2506.04003](#)

PROFESSIONAL EXPERIENCE

Graduate Teaching Assistant

Florida State University, Department of Mathematics, Tallahassee, FL

Aug 2021 – Present

Instructor of Record

- Calculus III (Fall 2025)
- Calculus II (Spring 2025, Summer 2025, Spring 2026)
- Calculus I (Fall 2024)
- Precalculus Algebra (Spring 2024, Fall 2023)

Teaching Assistant / Lab & Recitation

- Trigonometry (Fall 2022, Spring 2023)
- Business Calculus (Fall 2021, Fall 2022, Spring 2023)
- College Algebra (Fall 2021, Spring 2022, Fall 2022, Spring 2023)
- Mathematics for Liberal Arts I (Spring 2022)
- Practical Finite Mathematics (Spring 2022)

PRESENTATIONS

- Topological Data Analysis Conference 2025, University of Missouri, Columbia, MO — *Principal Observable Analysis*, Poster Presentation (Nov 23, 2025).
- Florida State University, Tallahassee, FL — *Principal Observable Analysis*, Candidacy Exam (July 16, 2024).

EVENTS ATTENDED

- Topological Data Analysis Conference 2025, University of Missouri, Columbia, MO.
- ComPer Workshop 2025: Computational and Persistent Topology (Online).
- AMS Spring Southeastern Sectional Meeting, Florida State University.
- UF–FSU Topology Meeting, Florida State University.

CERTIFICATIONS & AWARDS

Certificates

- The Erdos Institute Data Science Boot Camp Summer 25 : [Decoding Human Activity](#)
- The Erdos Institute Data Science Boot Camp Spring 24 : [Tallahassee Crime Map](#)
- The Erdos Institute Data Science Boot Camp Fall 23 : [Near Earth Objects](#)

Awards and Honors

- Clara Kibler Davis Scholarship in Mathematics (2026).
- Clara Kibler Davis Scholarship in Mathematics (2025).
- Outstanding Teaching Assistant Award (OTAA) – Nominated (2022–2023).

VOLUNTEER EXPERIENCE

FSU Math Fun Day Volunteer

An annual event for local people to experience math at FSU Mathematics Department.

- *10th FSU Math Fun Day* - Volunteered in fractal room (Feb 1, 2025).
- *8th FSU Math Fun Day* - Assisted in geometric constructions room (Mar 25, 2023).

SKILLS

Technical Skills

- Python (Pandas, NumPy, scikit-learn, NetworkX, POT, CVXPY)
- \LaTeX
- Microsoft Office

Languages

- Turkish - Native
- English - Professional Proficiency