

# Ece Karacam

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

Location: Tallahassee, FL, USA

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## ABOUT ME

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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

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

Aug 2021 – Aug 2027

Florida State University, Tallahassee, FL

- GPA: 3.48/4.0

### B.S. in Pure Mathematics

Jul 2015 – Jun 2021

Ege University, Izmir, Turkey

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

## PUBLICATIONS

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### Preprint

- Ece Karacam, Washington Mio, Osman Berat Okutan (2025) "*Observable Covariance and Principal Observable Analysis*". [arXiv:2506.04003](https://arxiv.org/abs/2506.04003)

## PROFESSIONAL EXPERIENCE

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### Graduate Teaching Assistant

Aug 2021 – Present

Florida State University, Department of Mathematics, Tallahassee, FL

### 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

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- 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

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- [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

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### 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

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### FSU Math Fun Day Volunteer

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

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

## SKILLS

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### Technical Skills

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

### Languages

- Turkish - Native
- English - Professional Proficiency