Aziz Burak Gülen

guelen.1@osu.edu

Education

August 2018— *May 2024*	Ph.D., Mathematics The Ohio State University, Columbus, OH Advisor: Facundo Mémoli CGPA: 3.97/4.00
September 2013— *June 2018*	B.Sc., Mathematics Middle East Technical University, Ankara, Turkey CGPA: 3.88/4.00

Employment

August 2024— *Present*	William W. Elliott Assistant Research Professor (Postdoc) Department of Mathematics, Duke University Mentor: Ezra Miller
August 2018— *May 2024*	Graduate Teaching Associate / Graduate Research Associate Department of Mathematics, The Ohio State University
February 2016— *June 2017*	Student Assistant Department of Mathematics, Middle East Technical University

Publications / Preprints

- Orthogonal Möbius Inversion and Grassmannian Persistence Diagrams. With F. Mémoli and Z. Wan, arXiv:2311.06870
- A Generalization of the Persistent Laplacian to Simplicial Maps. With F. Mémoli, Z. Wan, and Y. Wang. In 39th International Symposium on Computational Geometry (SoCG) 2023
- Galois Connections in Persistent Homology. With A. McCleary, arXiv:2201.06650 (submitted)

Teaching Experience

DUKE UNIVERSITY

- Linear Algebra & Applications, MATH 221, two sections	Autumn 2024

THE OHIO STATE UNIVERSITY

- TA Training Instructor	Summer 2023
- Calculus III, MATH2153, TA for three sections	Autumn 2022

- TA Training Instructor   Summer 2022
- Calculus for Business, MATH1131, TA for two sections   Spring 2022
- Engineering Mathematics B, MATH2173, TA for three sections   Autumn 2021
- Combinatorics, MATH4575 & Linear Algebra, MATH2568, Grader   Spring 2021
- Precalculus, MATH1150, TA for two sections   Autumn 2020
- Engineering Mathematics A, MATH1172, TA for two sections   Spring 2020
- Calculus II, MATH1152, TA for two sections   Autumn 2019
- Calculus II, MATH1152, TA for two sections   Spring 2019
- Calculus I, MATH1151, TA for two sections   Autumn 2018

MIDDLE EAST TECHNICAL UNIVERSITY
- Calculus for Mathematics Students II, MATH154, Grader   Spring 2017
- Calculus for Mathematics Students I, MATH153, Grader   Autumn 2016
- Basic Algebraic Structures, MATH116, TA   Spring 2016

Honors and Awards

- OSU Math. Department, Speacial Graduate Assignments (SGA)   Spring 2023
- OSU Graduate Associate Teaching Award (GATA)   March 2022
- OSU Student Research Assistantship   Summer 2019, Summer 2020

Talks

- Orthogonal Möbius Inversion and Grassmannian Persistence Diagrams   March 2024
  MSU TDA Seminar
- Orthogonal Möbius Inversion and Grassmannian Persistence Diagrams   Feb. 2024
  UF TDA 2024
- Orthogonal Möbius Inversion and Grassmannian Persistence Diagrams   Feb. 2024
  FSU Topology Seminar
- Orthogonal Möbius Inversion   January 2024
  JMM 2024
- Orthogonal Möbius Inversion and Grassmannian Persistence Diagrams   Dec. 2023
  CSU Topology Seminar
- A Generalization of the Persistent Laplacian to Simplicial Map   June 2023
  SoCG 2023
- Using Galois Connections to Prove Bottleneck Stability   June 2023
  Workshop on Möbius Inversions and Reeb Spaces
- A Tutorial on Spectral Clustering   April 2023
  OSU (Topology Geometry and Applications - Graduate Student Seminar)
- Computing Topological Persistence for Simnplicial Maps   February 2023
  OSU NDA Group meeting
- Persistence Laplacian   July 2022
  OSU NDA Group meeting

- Saecular Persistence   March 2022
  OSU NDA Group meeting

- Diagrams of Persistence Modules Over Finite Posets   February 2022
  OSU TGDA Seminar

- Diagrams of Persistence Modules Over Finite Posets   February 2022
  OSU Topology, Geometry, and Applications - Graduate Student Seminar group

- Bottleneck Stability for Generalized Persistence Diagrams   November 2021
  OSU NDA Group meeting

- Generalized Persistence Diagrams   October 2021
  OSU NDA Group meeting

- Linear Systems on Metric Graphs   October 2020
  OSU Student Algebraic Geometry Seminar

Attended Conferences & Seminars & Summer Schools

- The 39th International Symposium on Computational Geometry   Summer 2023

- Geometry and Topology meet Data Analysis and   Summer 2023
  Machine Learning

- Workshop on Algebraic Combinatorics and Category   Spring 2022 (Online)
  Theory in Topological Data Analysis

- Twelve Lectures on Tropical Geometry, Max-Planck-Institut für   Summer 2020
  Mathematik (Online)

- Algebraic and Tropical Meetings (ATOM) (Online)   Summer 2020

- Facets of Algebraic Geometry, Michigan   October 2019

- GSTGC, Illinois   March 2019