

Doğancan Karabaş

Boas Assistant Professor

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Education

- Jan 2016 - Mar 2019 Ph.D. in Mathematics, King's College London
Advisor: Yankı Lekili.
- Sep 2014 - Jan 2016 M.S. in Mathematics, Boğaziçi University
Advisor: Çağrı Karakurt.
- Sep 2009 - Aug 2014 B.S. in Mathematics and Physics, Boğaziçi University
High Honors, ranked 1st.

Appointments

- Mar 2020 - Boas Assistant Professor, Northwestern University
Research Mentor: Eric Zaslow.
- May 2019 - Feb 2020 Postdoctoral Research Fellow, IBS Center for Geometry and Physics
Research Mentor: Yong-Geun Oh.

Research Interests

Symplectic Topology • Microlocal Sheaves • Mirror Symmetry • Higher Categories • Representation Theory • Low-dimensional Topology

Grants and Honours

- 2016 - 2019 The Royal Society Grant
- 2014 - 2016 TUBITAK Scholarship for Graduate Students
2014 Ranked 1st in graduating class — Department of Mathematics, Boğaziçi University
2014 High Honor Student — Boğaziçi University
- 2009 - 2014 TUBITAK Scholarship for Undergraduate Students

Publications and Preprints

- Nov 2021 Exotic Families of Symplectic Manifolds with Milnor Fibers of ADE-type (joint work with Dongwook Choa and Sangjin Lee)
Preprint [on my website](#) (to appear on arXiv on November 17, 2021).
- Sep 2021 Homotopy Colimits of Semifree DG Categories and Fukaya Categories of Cotangent Bundles of Lens Spaces (joint work with Sangjin Lee)
Preprint [arXiv:2109.03411](#). Submitted.
- Oct 2018 Microlocal Sheaves on Pinwheels
Preprint [arXiv:1810.09021](#).

Scientific Journal Referee

- Mar 2019 Transactions of the American Mathematical Society

Seminar Organization

- Oct 2021 - [Weekly Symplectic Group Meeting](#), Northwestern University
Sep 2020 - [NU Geometry and Physics Seminar](#), Northwestern University

Invited Talks

- Nov 2021 Homotopy Colimit of DG Categories, Wrapped Fukaya Categories, and Lens Spaces
Freemath, Imperial College London, duration 1 hour, remote (November 30, 2021).
- Oct 2021 Homotopy Colimit of DG Categories, Wrapped Fukaya Categories, and Lens Spaces
Northwestern University, duration 1 hour.
- Mar 2021 Microlocal Sheaves, and the Case of Rational Homology Balls
UCGEN, Boğaziçi University, duration 1 hour, remote.
- Feb 2021 Wrapped Fukaya Category via Gluing Sheaves, and the Case of Pinwheels
Michigan State University, duration 1 hour, remote.
- Oct 2020 Microlocal Sheaves on Pinwheels and Fukaya Categories of Rational Homology Balls
University of Illinois Urbana-Champaign, duration 1 hour, remote.
- Apr 2020 Fukaya Categories of Some Rational Homology Balls via Microlocal Sheaves
Northwestern University, duration 1 hour, remote.
- Oct 2019 Wrapped Fukaya Category of Some Rational Homology Balls via Microlocal Sheaf Theory
2019 Korean Mathematical Society Annual Meeting, Hongik University, duration 20 minutes.
- Jul 2019 Wrapped Fukaya Category of Some Rational Homology Balls via Microlocal Sheaf Theory
Aspects of Mirror Symmetry in Chiba 2019, Chiba University, duration 1.5 hours.
- Mar 2019 Sheaf-theoretical Approach to Symplectic Geometry
Boğaziçi University, duration 2 weeks (1 hour each week).
- Jan 2019 Microlocal Sheaves on Pinwheels
Imperial College London, duration 1 hour.
- Jan 2019 Microlocal Sheaves on Pinwheels
University of Oxford, duration 1 hour.
- Jun 2018 Microlocal Sheaves on Pinwheels
University College London, duration 2 hours.

Mentoring

Summer 2021 Student: Raunak Kundagrami (University of Chicago, second-year undergraduate)
Project: Categorical Methods for Detecting Lagrangians of Particular Homotopy Type

Teaching

Spring 2020 - Instructor, Department of Mathematics, Northwestern University
Foundations of Higher Mathematics (Winter 2021),
Single-variable Integral Calculus,
Single-variable Differential Calculus (coordinator),
Multivariable Differential Calculus ($\times 2$).

Fall 2017 Teaching Assistant, Department of Mathematics, King's College London
Algebraic Curves.

2017 Tutor, King's Factor
Harris City Academy Crystal Palace in London,
Harris Academy Battersea in London.

2014 - 2016 Teaching Assistant, Department of Mathematics, Boğaziçi University
Real Analysis I,
Differential Equations,
Calculus for Mathematics Students III.

2013 - 2016 Teaching Assistant, Department of Physics, Boğaziçi University
Science ($\times 3$).

Languages

Turkish (native) • English (fluent) • German (fair)