

# Yusuf Barış Kartal

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CONTACT INFORMATION	School of Mathematics University of Edinburgh Peter Guthrie Tait Road Edinburgh, EH9 3FD United Kingdom	Email: <a href="mailto:ykartal@ed.ac.uk">ykartal@ed.ac.uk</a>
FIELDS OF INTEREST	Symplectic topology, mirror symmetry, homotopy theory, non-commutative geometry, algebraic geometry	
EMPLOYMENT	University of Edinburgh, Research associate Princeton University, Instructor of Mathematics	Sept 2022– 2019-2022
EDUCATION	Massachusetts Institute of Technology Ph.D. in Mathematics <ul style="list-style-type: none"><li>• Dissertation topic: Distinguishing open symplectic mapping tori via their wrapped Fukaya categories</li><li>• Advisor: Paul Seidel</li><li>• Exchange scholar at Princeton University (Spring 2017) and Columbia University (Fall 2017)</li></ul> Middle East Technical University B.S. in Mathematics <ul style="list-style-type: none"><li>• GPA : 4.00/4.00</li><li>• Exchange student at UC Berkeley (2012-2013)</li></ul>	2014-2019       2009-2014
PAPERS AND PREPRINTS	Y. B. Kartal, <i>Dynamical invariants of mapping torus categories</i> , Advances in Mathematics 389 (2021) 107882. Y. B. Kartal, <i>Distinguishing open symplectic mapping tori via their wrapped Fukaya categories</i> , Geometry & Topology 25 (2021) 1551-1630. Y. B. Kartal, <i>Iterations of symplectomorphisms and p-adic analytic actions on Fukaya category</i> , submitted, arXiv:2008.08566. L. Côté and Y. B. Kartal, <i>Categorical action filtrations via localization and the filtration growth as a symplectic invariant</i> , Journal für die reine und angewandte Mathematik (Crelles Journal) (2023). Y. B. Kartal, <i>Algebraic sheaves of Floer homology groups via algebraic torus actions on the Fukaya category</i> , arXiv:2109.12256. L. Côté and Y. B. Kartal, <i>Equivariant Floer homotopy via Morse-Bott theory</i> , arXiv:2309.15089. L. Côté and Y. B. Kartal, <i>Recovering generalized homology from Floer homology: the complex oriented case</i> , arXiv:2404.02776.	
EXPOSITORY PAPERS	Y. B. Kartal, <i>A Survey of Singular Reduction</i> , available at <a href="https://math.berkeley.edu/~alanw/kartalsurvey.pdf">https://math.berkeley.edu/~alanw/kartalsurvey.pdf</a> .	
INVITED TALKS	CMSA Mathematical Physics Seminar, Harvard Berkeley Topology Seminar Stanford Symplectic Geometry Seminar Harvard Student/Postdoc Symplectic Geometry Seminar	Nov 13, 2017 Oct 3, 2018 Oct 8, 2018 Oct 12, 2018

Columbia Symplectic Geometry, Gauge Theory, and Categorification Seminar	Oct 19, 2018
Informal Seminar at King's College London	Oct 23, 2018
Cambridge Algebraic Geometry Seminar	Oct 24, 2018
IAS/Princeton Symplectic geometry seminar, Princeton	Nov 12, 2018
CMSA Mathematical Physics Seminar, Harvard	Nov 19, 2018
Stony Brook Symplectic Geometry Seminar	Feb 14, 2019
USC Geometry&Topology Seminar	Apr 19, 2019
Current Trends in Symplectic Topology, Montréal	July 11, 2019
Conference on Fukaya Category and Homological Mirror Symmetry, Beijing	Aug 15, 2019
Rutgers geometry symmetry and physics seminar (online)	June 11, 2020
Free Mathematics Seminar (online)	Aug 4, 2020
UCGEN (Uluslararası Cebirsel Geometri Neşesi) (online)	Aug 26, 2020
Western Hemisphere Virtual Symplectic Seminar (online)	Oct 23, 2020
Symplectic Zoominar (CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris) (online)	Feb 5, 2021
RANT (Representation and Number Theory Seminar) (online, Hong Kong time)	Feb 9, 2021
EDGE (Edinburg Hodge Seminar) (online)	Apr 28, 2021
HUJI Topology and geometry seminar (online)	Nov 9, 2021
USC Topology seminar	Mar 7, 2022
Recent developments in Lagrangian Floer theory, Simons Center	Mar 16, 2022
Joint Mathematics Meetings: AMS Special Session on Quantum	Apr 6, 2022
Categorical Structures in Mirror Symmetry (online)	
University of Maryland Informal geometric analysis seminar	Apr 26, 2022
Symplectic versus algebraic geometry, Warwick (online talk)	Jun 1, 2022
The London geometry and topology seminar	Oct 28, 2022
EDGE seminar, Edinburgh	Dec 7, 2022
Yeditepe mathematics seminars (online talk)	Dec 16, 2022
Feza Gürsey Center for Physics and Mathematics Higher Structures Seminars (online talk)	Feb 21, 2023
Columbia Symplectic Geometry, Gauge Theory, and Categorification Seminar (online talk)	Apr 21, 2023
Scottish topology seminar, Aberdeen	May 3, 2023
Gökova geometry and topology conference, Gökova	Jun 2, 2023
Bonn symplectic geometry seminar, Bonn	Sept 12, 2023
Southampton Pure Maths Colloquium, Southampton	Dec 1, 2023
MPIM Extra Talk, Bonn	Dec 14, 2023
UPenn Special Colloquium, Philadelphia	Dec 18, 2023
Symplectic Zoominar (online)	Dec 22, 2023
Koç University Math Seminar, İstanbul	Jan 4, 2024

## TEACHING

### University of Edinburgh

MATH10079 (Group theory, with David Jordan)	Fall 2023
MATH10080 (Galois theory, with Pavel Safranov)	Spring 2024

### Princeton University

MAT201 (Multivariable calculus)	2019-2020, Spring 2022
MAT469 (Advanced topology)	Fall 2020
MAT202 (Linear Algebra)	Spring 2021, Fall 2021

### MIT

Recitation instructor for 18.01 (Calculus)	Fall 2016
Recitation instructor for 18.03 (Differential equations)	Spring 2018

MENTORING	Research Science Institute mentor (high school research program) for Aknazar Kazhymurat	Summer 2018
HONOURS AND AWARDS	Akamai Presidential Graduate Fellowship METU highest ranking student of the graduating class	2014—2015 2014
	METU Outstanding Success Scholarship TÜBİTAK Turkish Science and Research Council Scholarship Türkiye İş Bankası Golden Youth Award, due to success in University Entrance Examination	2009—2014 2009—2014 2009
ORGANIZATIONAL ACTIVITIES	Co-organizer for the Princeton/IAS joint symplectic seminar Co-organizer for the Symplectic Zoominar (CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris) Organizer for the symplectic preprint seminar (Edinburgh) Co-organizer for the EDGE Geometry Seminar (Edinburgh)	2021-2022 2020-2021 Spring 2023 2023-2024
LANGUAGES	Turkish (Native), English (Fluent), Persian (Beginner)	
CITIZENSHIP	Turkey	