Yusuf Barış Kartal

CONTACT INFORMATION	School of Mathematics University of Edinburgh Peter Guthrie Tait Road Edinburgh, EH9 3FD United Kingdom	Email:ykartal@ed.ac.uk

FIELDS OF INTEREST
Symplectic topology, mirror symmetry, homotopy theory, non-commutative geometry, algebraic geometry

EMPLOYMENT	University of Edinburgh, Research associate	Sept 2022–
	Princeton University, Instructor of Mathematics	2019-2022

EDUCATION	Massachusetts Institute of Technology	2014-2019

Ph.D. in Mathematics

- Dissertation topic: Distinguishing open symplectic mapping tori via their wrapped Fukaya categories
- Advisor: Paul Seidel
- Exchange scholar at Princeton University (Spring 2017) and Columbia University (Fall 2017)

	Middle East Technical University	2009-2014

B.S. in Mathematics

- GPA : 4.00/4.00
- Exchange student at UC Berkeley (2012-2013)

PAPERS AND PREPRINTS

Y. B. Kartal, *Dynamical invariants of mapping torus categories*, Advances in Mathematics 389 (2021) 107882.

Y. B. Kartal, *Distinguishing open symplectic mapping tori via their wrapped Fukaya categories*, Geometry & Topology 25 (2021) 1551-1630.

Y. B. Kartal, *Iterations of symplectomorphisms and p-adic analytic actions on Fukaya category*, accepted for publication at Inventiones mathematicae, arXiv:2008.08566.

L. Côté and Y. B. Kartal, *Categorical action filtrations via localization and the filtration growth as a symplectic invariant*, Journal für die reine und angewandte Mathematik (Crelles Journal) (2023).

Y. B. Kartal, *Algebraic sheaves of Floer homology groups via algebraic torus actions on the Fukaya category*, arXiv:2109.12256.

L. Côté and Y. B. Kartal, *Equivariant Floer homotopy via Morse-Bott theory*, submitted, arXiv:2309.15089.

L. Côté and Y. B. Kartal, *Recovering generalized homology from Floer homology: the complex oriented case*, submitted, arXiv:2404.02776.

EXPOSITORY PAPERS

Y. B. Kartal, *A Survey of Singular Reduction*, available at
https://math.berkeley.edu/ alanw/kartalsurvey.pdf.

INVITED TALKS	CMSA Mathematical Physics Seminar, Harvard	Nov 13, 2017
	Berkeley Topology Seminar	Oct 3, 2018
	Stanford Symplectic Geometry Seminar	Oct 8, 2018
	Harvard Student/Postdoc Symplectic Geometry Seminar	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 (Uluslarası 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 Categorical Structures in Mirror Symmetry (online)	Apr 6, 2022
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
Gökava 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
Differential Geometry & Topology Seminar, Cambridge, UK	May 1, 2024
Workshop on topology, representation theory and higher structures (contributed talk), Sabhal Mòr Ostaig	June 14, 2024
Warwick Algebraic Topology Seminar, Coventry, UK	October 8, 2024
University of Georgia Special Colloquium, Athens, US	Dec 3, 2024
Academia Sinica Algebraic Geometry Seminar, Taipei, Taiwan	Dec 11, 2024
Academia Sinica Special Colloquium, Taipei, Taiwan	Dec 12, 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) of Aknazar Kazhymurat	Summer 2018
	Vacation Scholarship mentor of Gavin McWinnie	Summer 2024
	Undergraduate dissertation supervisor of Gavin McWinnie	2024–2025
HONOURS AND AWARDS	Akamai Presidential Graduate Fellowship	2014—2015
	METU highest ranking student of the graduating class	2014
	METU Outstanding Success Scholarship	2009—2014
	TÜBİTAK Turkish Science and Research Council Scholarship	2009—2014
	Türkiye İş Bankası Golden Youth Award, due to success in University Entrance Examination	2009
ORGANIZATIONAL ACTIVITIES	Co-organizer for the Princeton/IAS joint symplectic seminar	2021-2022
	Co-organizer for the Symplectic Zoominar (CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris)	2020-2021
	Organizer for the symplectic preprint seminar (Edinburgh)	Spring 2023
	Co-organizer for the EDGE Geometry Seminar (Edinburgh)	2023-2024
	Co-organizer for the conference "Homotopy theory and Floer homology" (Institut Mittag-Leffler, upcoming)	June 23-27, 2025
LANGUAGES	Turkish (Native), English (Fluent), Persian (Beginner)	
CITIZENSHIP	Turkey	