Inbar Klang

Department of Mathematics
Vrije Universiteit Amsterdam -Faculty of Science
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Employment

Vrije Universiteit Amsterdam, July 2023-present. Assistant Professor.
Columbia University, Fall 2019-Spring 2023. Ritt Assistant Professor.
Mathematical Sciences Research Institute, Fall 2022. Endowed Postdoctoral Fellow.
École Polytechnique Fédérale de Lausanne, 2018-2019. Postdoctoral Researcher.

Education

Stanford University, 2013-2018
Ph.D., Mathematics, June 2018. Advisor: Ralph Cohen.
Hebrew University of Jerusalem, 2010-2013
B.Sc. Magna Cum Laude, Mathematics, 2012.

Research Interests

Algebraic topology: Hochschild homology and cohomology, fixed point theory, factorization homology; applications to manifold topology and symplectic topology.

Publications

Isovariant homotopy theory and fixed point invariants, with S. Yeakel.
Advances in Mathematics 433 (2023); 109298.

A shadow framework for equivariant Hochschild homologies, with K. Adamyk, T. Gerhardt, K. Hess, and H. Kong.
International Mathematics Research Notices (2022); rnac250.

Equivariant nonabelian Poincaré duality and equivariant factorization homology of Thom spectra, with A. Horev and F. Zou, appendix by J. Hahn and D. Wilson. ArXiv preprint arXiv:2006.13348, (2020).

Computational tools for twisted topological Hochschild homology of equivariant spectra, with K. Adamyk, T. Gerhardt, K. Hess, and H. Kong.
Topology and its Applications (2022): 108102.

The May-Milgram filtration and E_k-cells, with A. Kupers and J. Miller.
Algebraic & Geometric Topology 21:1 (2021), 105–136

Twisted Calabi-Yau ring spectra, string topology, and gauge symmetry, with R. Cohen.
Tunisian Journal of Mathematics 2-1 (2020), 147–196

The factorization theory of Thom spectra and twisted non-abelian Poincaré duality.
Algebraic & Geometric Topology 18-5 (2018), 2541–2592

Teaching

Department of Mathematics, Columbia University. *Instructor*, 2019 - 2023.
Math UN 1201: Calculus III (Fall 2019, Spring and Fall 2020, Fall 2021, Spring 2023)
Math GU 4042: Introduction to Modern Algebra II (Spring 2021)
Math GU 4053: Introduction to Algebraic Topology (Spring 2022)

École Polytechnique Fédérale de Lausanne.
Teaching Assistant, Fall 2018: Metric and Topological Spaces.

Department of Mathematics, Stanford University
Teaching Assistant, Spring 2016 and Autumn 2014
Linear Algebra and Differential Calculus of Several Variables, Calculus (Accelerated)
Course Assistant, Autumn 2015 and Winter 2015
Modern Algebra I, Calculus

Supervision

Undergraduate summer projects, Columbia University, Summer 2021 and 2022.
Undergraduate semester project, EPFL, Spring 2019. Topic: persistent homology.
Directed Reading Program, Stanford University, Winter and Spring 2018.

Conference Talks

New England Algebraic Topology and Mathematical Physics Seminar (April 2023)
Equivariant factorization homology and tools for studying it

Connections and Introductory Workshops: Floer Homotopy Theory (September 2022)
Equivariant factorization homology and tools for studying it
and *Thom spectra and orientations*

Algebraic Structures in Topology (May-June 2022)
Equivariant Hochschild theories from a shadow perspective

JMM AWM Special Session on Women in Topology (April 2022)
Isovariant fixed point theory

Equivariant techniques in stable homotopy theory (May 2021)
Equivariant factorization homology

Higher Homotopical Structures Opening Workshop (February 2021)
Equivariant factorization homology and tools for studying it

Derived, Birational, and Categorical Algebraic Geometry (November 2020)
Hochschild homology for C_n-equivariant things

Midwest Topology Seminar (October 2020)
Isovariant fixed point theory

AMS Sectional Meeting: Special Session in Homotopy Theory and
Algebraic K-theory (October 2019)
Hochschild homology for C_n-equivariant things

AMS Sectional Meeting: Special Session in Homotopy Theory (September 2019)
Hochschild homology for C_n-equivariant things

Current Directions in Homotopical Algebra (May 2019)
Twisted Calabi-Yau algebras and duality

Connections for Women: Derived Algebraic Geometry (January 2019)
Hochschild invariants and duality

Symplectic Geometry and Homotopy Theory (December 2018)
Thom spectra and Calabi-Yau algebras

AMS Sectional Meeting: Special Session in Homotopy Theory (November 2017)
Factorization homology and topological Hochschild cohomology of Thom spectra

Seminar Talks

Edinburgh Geometry Seminar (October 2023)
Dutch Differential Topology and Geometry Seminar (October 2023)
VU Amsterdam Mathematics Colloquium (September 2023)
SUNY Albany Algebra/Topology Seminar (March 2023)
MIT Algebraic Topology Seminar (April 2023)
University of Pennsylvania Topology Seminar (March 2023)
UCLA Algebraic Topology Seminar (May 2022)
UC Riverside Mathematics Colloquium (May 2022)
UNAM Algebraic Topology Seminar (May 2022)
Philadelphia Area Topology (Contact / Hyperbolic) Seminar (April 2022)
Higher Algebraic Structures in Algebra, Topology, and Geometry (March 2022)
Warwick Algebraic Topology Seminar (February 2022)
UMass Amherst Geometry and Topology Seminar (November 2021)
Syracuse Mathematics Colloquium (November 2021)
Melbourne Topology Seminar (April 2021)
UChicago / Northwestern Topology Seminar (March 2021)
Michigan State University Geometry and Topology Seminar (December 2020)
University of Nevada, Reno Topology Seminar (October 2020)
Freemath Seminar (August 2020)
Princeton/IAS Symplectic Geometry Seminar (March 2020)
Electronic Computational Homotopy Theory Seminar (February 2020)
MIT Topology Seminar (November 2019)
Binghamton University Geometry and Topology Seminar (October 2019)
University of Kentucky Topology Seminar (April 2018)
UIUC Topology Seminar (February 2018)
Columbia University Symplectic Geometry, Gauge Theory, and Categorification Seminar Seminar (February 2018)
University of Copenhagen Algebra/Topology Seminar (January 2018)
Purdue University Topology Seminar (November 2017)
University of Notre Dame Topology Seminar (October 2017)
Northwestern University Topology Seminar (October 2017)
Johns Hopkins University Topology Seminar (October 2017)
University of Chicago Algebraic Topology Seminar (April 2017)
Indiana University Topology Seminar (March 2017)
EPFL Topology Seminar (February 2017)
University of Osnabrück Topology Seminar (September 2016)

Awards and Fellowships

Donoho Endowed Postdoctoral Fellowship
Mathematical Sciences Research Institute, Fall 2022
Departmental Teaching Award
Columbia University Department of Mathematics, 2020-2021
Stanford Graduate Fellowship, Gabilan Fellow
Stanford University, 2013-2018
EDGE-STEM Fellowship
Stanford University, 2013-2018

Service

Homotopical Methods in Fixed Point Theory (July 2022)
Scientific committee member.

Referee for International Mathematics Research Notices, Mathematische Zeitschrift, and Memoires de la Société Mathématique de France

Columbia Algebraic Topology Seminar
Co-organizer. February-May 2022 and 2023.

Reviewer for Mathematical Reviews and zbMATH

Served on an NSF panel, 2021.

EPFL Topology Seminar
Organizer. September 2018-July 2019.

MIT Talbot Workshop
Co-organizer. September 2014-June 2018.

Stanford Student Topology Seminar
Organizer. September 2016-June 2018.

Stanford Pre-Talbot Seminar
Co-organizer. Winter 2015 and Winter 2016.

Assistant Dean interviews, School of Humanities and Sciences, Stanford University.
Winter and Spring 2018.

Graduate Program Review Committee, Department of Mathematics, Stanford University.
Winter 2016 and Spring 2017.

Stanford Women in Math Mentoring, Department of Mathematics, Stanford University.
Mentored three undergraduate students. September 2016-June 2018.

TA mentorship program, Department of Mathematics, Stanford University.
Mentored three first-time teaching assistants. Autumn 2016 and Autumn 2017.

EDGE-STEM Mentorship Program, Stanford University.
Mentored three younger graduate students. September 2015-September 2017.

First year graduate student mentorship, Department of Mathematics, Stanford University.
Mentored a first year graduate student. September 2015-June 2016.