

# Curriculum Vitae of Tom Benhamou

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**Primary Research Interest:** Logic & Foundations, Set Theory, Ultrafilters Combinatorics, Cardinal Arithmetics, Infinite Combinatorics and Ramsey Theory, Topology.

## Research Positions

*August 2023-present: Rutgers University, Hill assistant professor, postdoc under the supervision of Dima Sinapova.*

*August 2022-August 2023: University of Illinois at Chicago, Research assistant professor, postdoc under the supervision of Dima Sinapova.*

## Education

*2017- September 2022: Tel-Aviv University, Ph.D. in Mathematics under the supervision of Prof. Moti Gitik.*

*2015-2016: Tel-Aviv University, M.Sc. in Mathematics summa cum laude, research and thesis under the supervision of Prof. Moti Gitik.*

*2012-2015: Tel-Aviv University, B.Sc. in Mathematics cum laude.*

## Awards and Grants

NSF Research Grant, PI on DMS -2346680 (2023-2026)

AIM SQuRE with Cummings, Goldberg, Hayut, Poveda and Rinot (2024-2026)

Sackler Award and Scholarship for Research Student (2017)

Excellence honor of school of Mathematics (2016)

Excellence Scholarship (2014,2015,2016)

Dean's honor list (2013-2014, 2014-2015)

## Publications

- Benhamou, T. and Dobrinen, N. Cofinal types of ultrafilters over measurable cardinals, *The Journal of Symbolic Logic*, to appear (2023).
- Benhamou, T. and Jirattikansakul, S. Small ultrafilter number at every singular cardinal, *Acta Mathematica Hungaria*, to appear (2023).
- Benhamou, T. and Garti, S. and Gitik, M. and Poveda, A. Non-Galvin Filters, *Journal of Mathematical Logic*, to appear (2023).
- Benhamou, T. and Garti, S. and Poveda, A. Galvin's property at large cardinals and partition calculus, *Israel Journal of Mathematics*, to appear (2023).
- Benhamou, T. and Gitik, M. On Cohen and Prikry forcing notions, *The Journal of Symbolic Logic*, to appear (2022).
- Benhamou, T. and Garti, S. and Poveda, A. Negating the Galvin Property, *Journal of the London Mathematical Society*, 108:1, 190-237 (2023).
- Benhamou, T. and Gitik, M. and Hayut, Y. The Variety of Projections of a Tree Prikry Forcing, *Journal of Mathematical Logic*, to appear (2022).
- Benhamou, T. and Garti, S. and Shelah, S. Kurepa trees and the failure of the Galvin property, *Proceedings of the American Mathematical Society*, to appear (2022).
- Benhamou, T. and Gitik, M. Intermediate Models of Magidor-Radin Forcing-Part II, *Annals of Pure and Applied Logic* 173, 103107 (2022).
- Benhamou, T. and Gitik, M. Intermediate models of Magidor-Radin Forcing-Part I. *Israel Journal of Mathematics* (2022).
- Benhamou, T. and Gitik, M. Sets in Prikry and Magidor Generic Extensions, *Annals of Pure and Applied Logic* 172, 102926 (2021).
- Benhamou, T. Prikry forcing and Tree Prikry Porcing of Various Filters. *Archive for Mathematical Logic* 58, 787–817 (2019).

## Preprints

Benhamou T., Commutativity of cofinal types, submitted (2024).

Benhamou, T., Dobrinen N. On the Tukey types of Fubini products, submitted (2023).

Benhamou, T. and Zhang, J. Transferring Compactness, submitted (2023).

Benhamou, T. and Goldberg, G. The Galvin Property Under the Ultrapower Axiom, submitted (2023).

Benhamou, T. Saturation Properties of Ultrafilters in Canonical Inner Models, submitted (2022).

## Teaching and Mentoring

### *Instructor at Rutgers University*

- Spring 2023: Math 461- Mathematical Logic  
Math 300- Introduction to Mathematical Reasoning
- Fall 2022: Math 361- Set Theory

### *Instructor at the University of Illinois at Chicago*

- Spring 2023: Math 504- Advanced Set Theory (Graduate)
- Fall 2022: Math 2015- Introduction to Advanced Mathematics

### *Instructor at Tel-Aviv University*

- Fall 2017-Spring 2022: Introduction to Set Theory.

### *Leading Mathematical instructor at [Odyssey Program](#)*

- Fall 2019-Spring 2022: Discrete Mathematics for computer science, Combinatorics, Linear Algebra 1&2, Probability.
- Fall 2017-Spring 2018: Discrete Mathematics for computer science, Combinatorics, Linear Algebra 1.

\*Certificates and references will be given upon request

*Instructor At Tel-Aviv University's [SAWA Program](#)*

- 2014-2021 Linear Algebra, Discrete Mathematics, Calculus, Set Theory, Summer Preparations.

*Teaching Assistant At Tel-Aviv University*

- Fall 2014-Spring 2016: Discrete Mathematics for computer science, Advanced set theory, Differential equations.

**Non-Academic Teaching**

*Instructor At Xtra student*

- 2015-2021: Discrete mathematics, Calculus, Linear algebra.

*Academic supervisor and advisor at SNC, [Adva Program](#)*

- 2019-2020: Discrete Mathematics, Linear Algebra 1&2, Calculus 1&2.

*Academic Mentor and Leading Instructor at [Pituchim program](#)*

- 2017-2018: Discrete Mathematics, Calculus, Linear algebra, Differential geometry, Probability.

**Professional Membership**

*American Mathematical Society (AMS).*

*Association of Symbolic Logic (ASL).*

**Organization**

*Co-organizing the Logic Seminar at Rutgers University, August 2023-Present.*

*Co-organizing the UIC Logic seminar, August 2022-August 2023.*

\*Certificates and references will be given upon request

## Research Workshops

(upcoming) *oberwolfach Set Theory Workshop*, oberwolfach (2024)

*AIM workshop*, from  $\aleph_2$  to infinity, San Jose (2023)

## Conferences and Seminars talks

*Subforcings of Prikry forcing*, TAU Set Theory Seminar, 2015

*New Subsets In Magidor Generic Extensions*, TAU Set Theory Seminar, 2016

*Local and Global Chang's Conjecture*, TAU Set Theory Seminar, 2016

*The Tree Property at  $\omega_2$* , BIU Set Theory Seminar, 2017

*Subforcings Prikry-Type forcings*, TAU Set Theory Seminar, 2018

*Distributive forcings inside those of Prikry-Type*, TAU Set Theory Seminar, 2019

*Projections of Tree-Prikry forcing*, HUJI Set Theory Seminar, 2019

*Intermediate Models of Radin-Magidor Generic Extensions*, YSTW conference Vienna, 2019

*The Forcing Method and Prikry-Type Forcing*, IMU conference, 2020

*Intermediate Models of Prikry-Type Forcing*, Prikry Forcing Workshop, 2020

*Sets of ordinals in Magidor-Radin extensions*, TAU Set Theory Seminar, 2021

*Intermediate models, quotients, and the Galvin property*, CUNY Set Theory Seminar, 2021

*On Cohen and Prikry forcing notions*, TAU Set Theory Seminar, 2022

*The Galvin property at successors of singulars*, Advances in Set Theory Conference, 2022

*The Galvin Property*, UIC Logic seminar, 2022

*The Galvin Property*, Notre Dame Logic Seminar, 2022

*Singular cardinals, the forcing method and Prikry-type forcing*, UIC Dep. Colloquium, 2022

*Intermediate models of Prikry-Type forcing*, Rutgers Logic Seminar, 2022

*Saturation properties of ultrafilters*, JMM Boston, 2023

\*Certificates and references will be given upon request

*Saturation properties of ultrafilters*, CMU Set Theory Seminar, 2023

*The Tukey order on ultrafilters over uncountable cardinals*, STDS 2023

*Galvin's Property and its applications*, UCLA Logic Colloquium 2023

*New results about the Tukey order on sigma complete ultrafilters*, TAU Set Theory seminar 2023

*The Ultrapower Axiom and the Galvin property*, HUJI Set Theory Seminar 2023

*The Tukey order on ultrafilters, the Galvin property, and UA*, Rutgers Logic Seminar 2023

*Cofinal types of ultrafilters on measurable and non-measurable cardinals*, VCU ALPS 2023

*Tukey-top ultrafilters under UA*, CUNY Set Theory Seminar 2024

*Commutativity of cofinal types*, CUNY Logic Workshop 2024

*Commutativity of cofinal types of ultrafilters*, UC Berkeley Logic Colloquium 2024

### **Service for the Mathematical Community**

- Referee: Advances in Mathematics, Israel Journal of Mathematics, Annals of Pure and Applied Logic, The Journal of Symbolic Logic, Mathematical Logic Quarterly.
- NSF Proposal Referee.

### **Language**

Hebrew (native), French (native), English (fluent).

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