Miha E. Habič

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Academic positions

- Assistant professor in Mathematics, Bard College at Simon's Rock, July 2019–present.
- Postdoctoral researcher, Czech Technical University in Prague, September 2018–May 2019.
- Postdoctoral researcher, Charles University, August 2017–June 2019.

Education

- PhD in Mathematics, The Graduate Center, CUNY, June 2017.
  Advisor: Joel David Hamkins
  Thesis title: Joint Laver diamonds and grounded forcing axioms
- MSc in Mathematics, Faculty of Mathematics and Physics, University of Ljubljana, 2012.
- BSc in Mathematics, Faculty of Mathematics and Physics, University of Ljubljana, 2010

Research interests

Mathematical logic and set theory, particularly large cardinals, their interaction with forcing, and forcing axioms; the structure of forcing extensions and countable models of set theory; infinitary combinatorics, ultrafilters and large-cardinal measures; computability theory.

Publications

[1] M. E. Habič and R. Honzík, *Capturing sets of ordinals by normal ultrapowers*, under review, 2019. https://arxiv.org/abs/1902.10638.

[2] E. Carmody, V. Gitman, and M. E. Habič, *A Mitchell-like order for Ramsey and Ramsey-like cardinals*, Fundamenta Mathematicae **248** (2020), no. 1, 1–32. MR 4036725

[3] M. E. Habič, J. D. Hamkins, L. D. Klausner, J. Verner, and K. J. Williams, *Set-theoretic blockchains*, Arch. Math. Logic **58** (2019), no. 7-8, 965–997. MR 4003645

[4] M. E. Habič, *Joint diamonds and Laver diamonds*, The Journal of Symbolic Logic **84** (2019), no. 3, 895–928. MR 4010482

[5] M. E. Habič, *The grounded Martin's axiom*, MLQ Math. Log. Q. **63** (2017), no. 5, 437–453. MR 3748486

[6] M. E. Habič, *Cardinal-recognizing infinite time Turing machines*, The nature of computation. CiE 2013, Milan. Proceedings, Lecture Notes in Comput. Sci., vol. 7921, Springer, Heidelberg, 2013, pp. 231–240. MR 3102023

[7] M. E. Habič, *Joint Laver diamonds and grounded forcing axioms*, Phd thesis, The Graduate Center, CUNY, 2017.

[8] V. Gitman and M. E. Habič, *Killing them very softly*, in preparation, 2021.

[9] M. E. Habič and J. Verner, *Surgery on Cohen reals*, in preparation, 2019.

Teaching experience

- Faculty in Mathematics, Bard College at Simon's Rock, 2019–present.

  Classes taught: MATH 099 *Algebra Workshop*, MATH 210 *Calculus I*, MATH 217 *Intro to Mathematical Proof*, MATH 220 *Linear Algebra*, MATH 221 *Vector Calculus*, CMPT 320 *Theory of Computation*

- Graduate teaching fellow, Hunter College, CUNY, 2014–2017.

  Classes taught: MATH 125 *Precalculus*, MATH 156 *Introduction to Mathematical Proofs*

- Graduate teaching assistant, Faculty of Mathematics and Physics, University of Ljubljana, 2011–2012.

  Classes supported: Real Analysis, Linear Algebra

Professional service

- Referee/reviewer for: Fundamenta Mathematicae; Mathematical Logic Quarterly; Cambridge University Press; Lecture Notes in Computer Science; MathSciNet/Mathematical Reviews; zbMATH.

- Coorganizer (with V. Gitman) of the CUNY Set Theory seminar, 2015–2017.

- Coorganizer (with K. Minden and K. Williams) of the CUNY Student Set Theory seminar, 2013–2017.

Honors, Awards and Grants

- Doctoral student research grant, The Graduate Center, CUNY, 2015–2016

- Enhanced chancellor's fellowship, The Graduate Center, CUNY, 2014–2017

- Science fellowship, The Graduate Center, CUNY, 2012–2014

- Ad Futura scholarship, Slovenian government, 2012–2017

- Faculty Prešeren prize for outstanding thesis, University of Ljubljana, 2012

Selected conference talks

- *Some results on ultrapower capturing*, Winter School in Abstract Analysis 2019, Hejnice, January 2019.

- *Embedding posets into the set-generic multiverse*, Forcing Project Networking Conference, Konstanz, September 2018.

- *Nonamalgamation in the generic multiverse*, Novi Sad Conference in Set Theory and General Topology, Novi Sad, July 2018.

- *Surgery and nonamalgability for Cohen reals*, Winter School in Abstract Analysis 2018, Hejnice, January 2018.

- *Restricting forcing axioms to ground models*, 6th European Set Theory Conference, Budapest, July 2017.

- *Joint Laver diamonds*, BEST 2015, San Francisco State University, June 2015.

- *Restricting Martin's axiom to a ccc ground model*, 2014 ASL Logic Colloquium, Vienna University of Technology, July 2014.

- *Cardinal-recognizing infinite time Turing machines*, Computability in Europe 2013, Milan, July 2013.

Selected seminar talks (by venue)

The Graduate Center, CUNY, Set theory seminar

- *Normal ultrapowers with many sets of ordinals*, August 2020.
- *Surgery and generic coding*, October 2018.
- *Tukey classes of complete ultrafilters*, May 2018.
- *Bukovský's theorem on forcing extensions*, November 2016.
- *The Mitchell order for Ramsey cardinals*, October 2015.

The Graduate Center, CUNY, Logic Workshop

- *Capturing powersets by normal ultrapowers*, October 2019.

University of Ljubljana, Seminar for mathematical foundations

- *The generic multiverse, amalgamability, and blockchains*, summer 2019.

Kurt Gödel Research Center, Research seminar

- *Capturing powersets by ultrapowers*, March 2019.

Charles University, Set theory seminar

- *The ultrapower capturing property (parts I & II)*, January 2019.
- *Surgery and generic coding*, October 2018.
- *Amalgamability between Cohen extensions*, March 2018.
- *Joint guessing principles*, November 2017.
- *The grounded Martin's axiom*, September 2017.

Rutgers University, Logic seminar

- *The grounded Martin's axiom*, April 2016.

Virginia Commonwealth University, Analysis, logic and physics seminar

- *Some guessing principles in set theory*, April 2016.
- *Cardinal-recognizing infinite time Turing machines*, March 2014.