

# MIHA E. HABIČ

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and

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## Employment

- Postdoctoral researcher, Czech Technical University in Prague, September 2018–present.  
Postdoc on OP VVV grant: International Mobility of Researchers.
- Postdoctoral researcher, Charles University, August 2017–present.  
Postdoc on FWF–GAČR grant 17-33849L: Filters, Ultrafilters and Connections with Forcing.

## 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; set-theoretic topology.

## Publications

- [1] Erin Carmody, Victoria Gitman, and Miha E. Habič, *A Mitchell-like order for Ramsey and Ramsey-like cardinals*, accepted to Fund. Math., arXiv:1609.07645 [math.LO], 2018.
- [2] Miha E. Habič, *The grounded Martin's axiom*, MLQ Math. Log. Q. **63** (2017), no. 5, 437–453. MR 3748486
- [3] Miha 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
- [4] Miha E. Habič, Joel David Hamkins, Lukas Daniel Klausner, Jonathan Verner, and Kameryn Williams, *Set-theoretic blockchains*, submitted, arXiv:1808.01509 [math.LO], 2018.
- [5] Miha E. Habič, *Joint diamonds and Laver diamonds*, submitted, arXiv:1708.02145 [math.LO], 2017.
- [6] Miha E. Habič, *Joint Laver diamonds and grounded forcing axioms*, Phd thesis, The Graduate Center, CUNY, 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

## Teaching experience and professional activities

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

*Introduction to mathematical proofs, Math 15600 (Spring 2015, Summer 2016, Spring 2017)*

I was the principal instructor, solely responsible for the course. I composed the syllabus, including the selection of particular topics aimed at developing the students' understanding of a mathematical proof and its structure. I developed a grading policy, prepared all lectures and course materials, assigned homework, designed all exams and graded them. I held regular office hours and made all final grading decisions regarding my students.

*Precalculus, Math 12500 (Fall 2014, Fall 2015, Spring 2016, Fall 2016)*

I was the principal instructor, solely responsible for the course. I prepared all lectures and course materials, assigned homework, designed all midterm exams, and was fully responsible for all grading, including the final grade decisions. I held regular office hours. I was also asked to write recommendation letters for a few of my better students, and was glad to do so.

- Graduate teaching assistant, Faculty of Mathematics and Physics, University of Ljubljana, 2011–2012.  
I worked with faculty to supplement the introductory courses by holding weekly problem sessions for a small group of students and grading their homework. My assigned subjects were basic real analysis, linear algebra and topology of metric spaces.
- 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.

## Conference talks

- *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.
- *A Mitchell-like order for Ramsey cardinals*, 2017 Joint Mathematics Meetings, Atlanta, January 2017.

- *The grounded Martin's axiom*, NY Graduate Student Logic Conference, The Graduate Center, CUNY, May 2016.
- *Joint Laver diamonds*, Set Theory Day, The Graduate Center, CUNY, March 2016.
- *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.
- *Restricting Martin's axiom to a ccc ground model*, 2014 Joint Mathematics Meetings, Baltimore, January 2014.
- *Cardinal-recognizing infinite time Turing machines*, Computability in Europe 2013, Milan, July 2013.

#### Seminar talks (by venue)

##### Charles University, Set theory seminar

- *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.

##### University of Ljubljana, Seminar for mathematical foundations

- *Infinite time Turing machines*, December 2012.
- multi-part tutorial on forcing, March 2012.

##### The Graduate Center, CUNY, Set theory seminar

- *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.
- *Constructing joint diamonds from a single diamond*, May 2015.
- *Joint Laver diamonds*, September 2014.
- *The consistency strength of PFA for posets preserving  $\aleph_2$  or  $\aleph_3$* , March 2014.
- *Grounded Martin's axiom*, November 2013.