Curriculum Vitae

Victoria Gitman

CUNY Graduate Center,
365 5th Avenue,
New York, NY, 10016.
Email: vgitman@nylogic.org
Website/blog: http://boolesrings.org/victoriagitman

Research Interests

Mathematical Logic

- Set theory – forcing, large cardinals, and their interactions
- Models of Peano Arithmetic – properties of uncountable models

Appointments

(Some course materials available at: **http://boolesrings.org/victoriagitman/teaching**)

- **Adjunct Lecturer**, CUNY Brooklyn College, 2003-2006.
  - Undergraduate courses: *Precalculus*, *Calculus I*, *Calculus II*.
- **Assistant Professor in Mathematics**, CUNY New York City College of Technology, 2007-2013.
  - Undergraduate courses: *College Algebra*, *Statistics and Probability*, *Calculus I*, *Calculus II*, *Differential Equations*, *Linear Algebra*.
  - Graduate courses: *Logic* (CUNY Graduate Center) .
  - Undergraduate research projects in *theoretical computer science*, *chaos theory*.
- **Visiting Scholar**, CUNY Graduate Center, 2014-present.

Professional Development

- **Ph.D. in Mathematics** (supervisor: Joel David Hamkins), CUNY Graduate Center, 2007.
- **B.S. in Mathematics** (summa cum laude), CUNY Brooklyn College, 2001.

Publications

(PDF available at: **http://boolesrings.org/victoriagitman/research**)

1. B. Cody, V. Gitman, C. Lambie-Hanson, *A $\square(\kappa)$-like principle consistent with weak compactness*, submitted.
2. C. Antos, S.D. Friedman, and V. Gitman. *Boolean valued class forcing*, submitted.
3. S. D. Friedman, V. Gitman, and Vladimir Kanovei, *A model of second-order arithmetic satisfying* AC *but not* DC, accepted to the **Journal of Mathematical Logic**.
4. V. Gitman, J. D. Hamkins, P. Holy, P. Schlicht, K. Williams, *The exact strength of the forcing theorem*, submitted.
5. V. Gitman and J. D. Hamkins, *A model of the generic Vopěnka principle in which the ordinals are not Mahlo*, to appear in **Archive for Mathematical Logic**.
6. V. Gitman and R. Schindler, *Virtual large cardinals*, to appear in **Proceedings of the Logic Colloquium 2015.**
7. E. Carmody, V. Gitman, and M. Habič, *Mitchell order for Ramsey and Ramsey-like cardinals*, to appear in **Fundamenta Mathematicae**.

8. J. Bagaria, V. Gitman, and R. Schindler, *Generic Vopěnka's principle, remarkable cardinals, and a weak Proper Forcing Axiom*, to appear in **Archive for Mathematical Logic**.
9. V. Gitman and J. D. Hamkins, *Open determinacy for class games,* **Foundations of Mathematics, Logic at Harvard, Essays in Honor of Hugh Woodin's 60th Birthday**, Series: Contemporary Mathematics, American Mathematical Society, 2016 (expected).
10. G. Fuchs, V. Gitman, and J. D. Hamkins, *Incomparable ω_1-like models of set theory*, to appear in **Mathematical Logic Quarterly**.
11. G. Fuchs, V. Gitman, and J. D. Hamkins, *Ehrenfeucht's Lemma in set theory*, to appear in **Notre Dame Journal of Formal Logic**.
12. Y. Cheng and V. Gitman, *Indestructibility for remarkable cardinals*, **Archive for Mathematical Logic,** vol. 54, no. 7, pp. 961-984, 2015.
13. V. Gitman, T. Johnstone, and J. D. Hamkins, *What is the theory ZFC without power set*, **Mathematical Logic Quarterly**, vol. 62, no. 4-5, pp. 391-406, 2016.
14. B. Cody and V. Gitman, *Easton's theorem for Ramsey and strongly Ramsey cardinals*, **Annals of Pure and Applied Logic**, vol. 166, no. 9, pp. 934-952, 2015.
15. V. Gitman and T. Johnstone, *On ground model definability*, **Infinity, Computability, and Metamathematics: Festschrift in honour of the 60th birthdays of Peter Koepke and Philip Welch**, Series: Tributes, College publications, London, GB, 2014.
16. A. Apter, V. Gitman, and J. D. Hamkins, *Inner models with large cardinal features usually obtained by forcing* , **Archive for Mathematical Logic,** vol. 51, no. 3, pp. 257-283, 2012.
17. V. Gitman and J. D. Hamkins, *A natural model of the multiverse,* **Notre Dame Journal of Formal Logic**, vol.51, no. 4, pp. 475-484, 2010.
18. V. Gitman and P. D. Welch, *Ramsey like cardinals II*. **Journal of Symbolic Logic**, vol. 76, no. 2, pp. 541-560, 2011.
19. V. Gitman, *Ramsey-like cardinals*. **Journal of Symbolic Logic**, vol. 76, no. 2, pp. 519-540, 2011.
20. V. Gitman, *Proper and piecewise proper families of reals.* **Mathematical Logic Quarterly** vol 55, no. 5, pp.542-550, 2009.
21. V. Gitman, *Scott's Problem for proper Scott sets.* **Journal of Symbolic Logic**, vol. 73, no. 3, pp.845–860, 2008.

Work in Progress

(Some summaries available at: **http://boolesrings.org/victoriagitman/research**)

1. V. Gitman, T. Johnstone, and J. D. Hamkins, *Kelley-Morse set theory and choice principles for classes*, in preparation.
2. V. Gitman and T. Johnstone, *Indestructibility for Ramsey and Ramsey-like cardinals*, in preparation.
3.
4. V. Gitman, J.D. Hamkins, and A. Karagila, *Fodor's Lemma in second-order set theory*.
5. S. D. Friedman, V. Gitman, and S. Müller. *Structural Properties of the Stable Core*.
6. W. Boney, S. Dimopolous, V. Gitman, and M. Magidor. *Model Theoretic Characterizations of Large Cardinals Revisited*.

Curriculum Vitae

Invited Research Positions

- Visiting researcher, Kurt Gödel Research Center, Vienna, Austria, Spring 2018.
- Visiting researcher, Kurt Gödel Research Center, Vienna, Austria, Spring 2017.
- Visiting researcher, National University of Singapore, Singapore, Fall 2016.
- Participant, **Workshop on High and Low Forcing**, American Institute of Mathematics, San Jose, US, Winter 2016.
- Visiting Fellow, **Mathematical, Foundational and Computational Aspects of the Higher Infinite** (**HIF**) program, Isaac Newton Institute, Cambridge, UK, Fall 2015.
- Visiting researcher, Bristol University, Bristol, UK, Summer 2008.

Invited (non-CUNY) Talks

(Some slides/lecture notes available at: **http://boolesrings.org/victoriagitman/talks**)

- **VCU Analysis, Logic, and Physics Seminar**, Virginia Commonwealth University, Richmond, Spring 2019.
- **Bristol Logic Seminar**, Bristol University, United Kingdom, Spring 2019.
- **ASL 2019 North American Annual Meeting**, special session: Set Theory, CUNY Graduate Center, Spring 2019.
- *The stable core*, **Reflections on set-theoretic reflection conference**, University of Barcelona, Spain, 2018.
- *Virtual Vopěnka's Principle,* **Accessible categories and their connections: set theory, model theory, and homotopy theory conference**, University of Leeds, Leeds, United Kingdom, 2018.
- *The stable core,* **Forcing: conceptual change in the foundation of mathematics conference**, University of Konstanz, Konstanz, Germany, Fall 2018.
- *Virtual large cardinal principles*, **KGRC Research Seminar**, Kurt Gödel Research Center, Vienna, Austria, 2018.
- *The emerging zoo of second-order set theories*, **Forcing and Philosophy Workshop**, University of Konstanz, Konstanz, Germany, 2018.
- *Virtual large cardinal principles*, **Harvard Logic Seminar**, Harvard University, Cambridge, 2017.
- *A model of second-order arithmetic with the choice scheme in which Π^1_2-dependent choice fails,* **KGRC Research Seminar**, Kurt Gödel Research Center, Vienna, Austria, 2017.
- *Computable processes which produce any desired output in the right nonstandar model***, 2017 AMS Eastern Sectional Meeting**, special session: Computability Theory: Pushing the Boundaries, Hunter College of CUNY, New York, 2017.
- *A set-theoretic approach to Scott's Problem*, **NSU Logic Seminar**, National University of Singapore, Singapore, 2016.
- *Generic Vopěnka's Principle*, **Rutgers Logic Seminar**, Rutgers University, New Brunswick, 2016.
- *Generic Vopěnka's Principle*, **Young Set Theory Conference**, University of Copenhagen, Copenhagen, Denmark, 2016.

- ❏ *Ehrenfeucht principles in set theory*, **British Logic Colloquium**, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, 2015.
- ❏ *Indestructible remarkable* cardinals, **5th European Set Theory Conference**, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK, 2015.
- ❏ *Introduction to nonstandard models of arithmetic,* **VCU Analysis, Logic, and Physics Seminar**, Virginia Commonwealth University, Richmond, 2015.
- ❏ *Nonstandard models of arithmetic,* **Blackboard Day 10**, Columbia University, New York, 2015.
- ❏ *Kelley-Morse set theory and choice principles for classes*, **Symposia on the Foundations of Mathematics II**, University of London, London, UK, 2015.
- ❏ *Choice schemes for Kelley-Morse set theory*, **Colloquium Logicum**, Universität der Bundeswehr München, Neubiberg, Germany, 2014.
- ❏ *Incomparable ω_1-like models of set theory*, **Connecticut Logic Seminar**, University of Connecticut, Storrs, 2014.
- ❏ *Indestructibility for Ramsey cardinals,* **Rutgers Logic Seminar**, Rutgers University, New Brunswick, 2012.
- ❏ *A natural model of the multiverse axioms*, **MIT Logic Seminar**, Massachusetts Institute of Technology, Boston, 2010.
- ❏ *Gödel's Proof,* **Mathematics Research Seminar**, US Military Academy, West Point, 2010.
- ❏ *Ramsey-like cardinals,* **ESI workshop on large cardinals and descriptive set theory**, Vienna, Austria, 2009.
- ❏ *Ramsey-like cardinals,* **Bristol Logic Seminar**, Bristol University, Bristol, UK, 2008.
- ❏ *Scott's problem for proper Scott sets,* **Rutgers Logic Seminar**, Rutgers University, New Brunswick, 2007.
- ❏ *Scott's problem for proper Scott sets,* **Association for Symbolic Logic (ASL) Logic Colloquium**, Wroclaw, Poland, 2007.
- ❏ *Scott's Problem for proper Scott sets,* **Notre Dame Logic Seminar**, Notre Dame University, Notre Dame, 2007.

CUNY Talks

(Some slides/lecture notes available at: **http://boolesrings.org/victoriagitman/talks**)

- ❏ *The stable core*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2018.
- ❏ *Boolean-valued class forcing*, **CUNY Logic Workshop**, CUNY Graduate Center, New York, 2018.
- ❏ *Filter games and Ramsey-like cardinals*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2017.
- ❏ *A countable ordinal definable set of reals without ordinal definable elements*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2017.
- ❏ *Computable processes can produce arbitrary outputs in nonstandard models*, **MOPA Seminar**, CUNY Graduate Center, New York, 2016.
- ❏ *Virtual large cardinals*, **Set Theory Day (celebrating Joel Hamkins' 50th birthday)**, CUNY Graduate Center, New York, 2016.

- ❏ *Ehrenfeucht principles in set theory*, **CUNY Logic Workshop**, CUNY Graduate Center, New York, 2015.
- ❏ *Remarkable Laver functions*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2014.
- ❏ *Choice schemes for Kelley-Morse set theory*, **CUNY Logic Workshop**, CUNY Graduate Center, New York, 2014.
- ❏ *Introduction to remarkable cardinals*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2014.
- ❏ *Ramsey cardinals and the continuum funciton*, **CUNY Logic Workshop**, CUNY Graduate Center, New York, 2014.
- ❏ *A Jónsson ω_1-like model of set theory*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2013.
- ❏ *Embeddings between ω_1-like models of set theory*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2013.
- ❏ *Indestructibility for Ramsey Cardinals*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2013.
- ❏ *Models of ZFC− that are not definable in their set forcing extensions*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2012.
- ❏ *Forcing and gaps in 2^{ω}*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2011.
- ❏ *A natural model of the multiverse axioms,* **CUNY Logic Workshop**, CUNY Graduate Center, New York, 2010.
- ❏ *Alpha-iterable cardinals,* **CUNY Logic Workshop**, CUNY Graduate Center, New York, 2009.
- ❏ *On the Gitik-Shelah indestructibility for strong cardinals*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2009.
- ❏ *Standard systems of nonstandard models of Peano Arithmetic,* **Bronx Community College Mathematics Seminar**, CUNY Bronx Community College, 2008.
- ❏ *Ramsey and virtually Ramsey cardinals*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2008.
- ❏ *Weakly compact cardinals are not downward absolute to L*, **CUNY Set Theory Seminar**, CUNY Graduate Center, New York, 2008.
- ❏ *Ramsey-like embeddings,* **CUNY Logic Workshop**, CUNY Graduate Center, New York, 2007.

Conferences and Seminars organized

- ❏ Co-organizer of **MAMLS Logic Friday** (with Arthur Apter and Kameryn Williams), 2017.
- ❏ Co-organizer of **Set Theory Day** (**http://nylogic.org/set-theory-day**) (with Miha Habič and Roman Kossak), 2016.
- ❏ Co-organizer of the **CUNY Set Theory Seminar** (with Thomas Johnstone), 2014-15.
- ❏ Co-organizer of the **CUNY Set Theory Seminar** (with Miha Habič) 2015-17.
- ❏ Co-organizer of the **CUNY Set Theory Seminar** (with Kameryn William) 2017-present.

Additional professional activities

- Member of the editorial board for *Mathematical Logic Quarterly*.
- Referee for journals including *American Mathematical Monthly*, *Topology and its Applications*, *Annals of Pure and Applied Logic, Archive for Mathematical Logic*, *Journal of Symbolic Logic*, *Fundamenta Mathematicae, Journal of Mathematical Logic*.
- Member of oral exam committees at the CUNY Graduate Center:
  - Brent Cody (2009)
  - Erin Carmody (2012)
  - Kameryn Williams (2014)
- Blogger (**http://boolesrings.org/victoriagitman**).
- Co-founder (with Roman Kossak) of *Peano's Parlour*, a Wikipedia-style database of current knowledge in models of Peano Arithmetic and related fields (**http://modelsofpa.info**).
- Co-founder (with Joel David Hamkins) of *Cantor's Attic*, a Wikipedia-style database of current knowledge in large cardinal theory (**http://cantorsattic.info**).
- Webmaster for CUNY Logic Seminars website (**https://nylogic.github.io**)