DIMA SINAPOVA
CV
Department of Mathematics, Statistics, and Computer Science
University of Illinois at Chicago
E-mail: sinapova@uic.edu

Education:

- 2008 Ph.D. in Mathematics: University of California Los Angeles, Advisor: Itay Neeman

- 2004 M.A. in Mathematics, University of California Los Angeles

- 2003 B.A. in Mathematics and Philosophy (Summa Cum Laude in Mathematics), University of Colorado at Boulder, Boulder, CO

Primary Research Interests:
Set Theory and Mathematical Logic.

Employment:

- 2021 - : Professor, University of Illinois at Chicago.

- 2016 - 2021: Associate Professor, University of Illinois at Chicago.

- 2012 -2016: Assistant Professor, University of Illinois at Chicago.

- 2008- 2012: Visiting Assistant Professor/Postdoctoral Scholar, University of California Irvine.

- 2003-2008: Research Assistant / Teaching Assistant, UCLA.

Grants and Awards:

NSF Research Grant, PI on DMS - 1954117, 2020-2023
NSF CAREER Grant, Id: 1454945, 2015-2020
NSF Research Grant, PI on DMS - 1362485, 2014-2017
AWM Travel Grant, 2011
NSF-VIGRE Fellowship, UCLA, 2006-2007
NSF-VIGRE Fellowship, UCLA, 2003-2004

Publications:

1. *Sigma Prikry Forcing III: Down to $\aleph_\omega$*, Alejandro Poveda, Assaf Rinot and Dima Sinapova, 72 pages, 2021, submitted.

2. *Sigma Prikry Forcing II: Iteration Scheme*, Alejandro Poveda, Assaf Rinot and Dima Sinapova, 56 pages, submitted, 2021.

3. *Sigma Prikry Forcing I: The Axioms*, Alejandro Poveda, Assaf Rinot and Dima Sinapova, Canadian Journal of Mathematics, pages 1-34, doi:10.4153/S0008414X20000425, 2020.

4. *Squares and Uncountably Singularized Cardinals*, Maxwell Levine and Dima Sinapova, Fundamenta Mathematicae 253: 277-296, 2021 (accepted 2020).

5. *The ineffable tree property and failure of the Singular Cardinals Hypothesis*, James Cummings, Yair Hayut, Menachem Magidor, Itay Neeman, Dima Sinapova, and Spencer Unger, Trans. Amer. Math. Soc. 373: 5937-5955, 2020.

6. *The tree property at the two immediate successors of a singular cardinal*, James Cummings, Yair Hayut, Menachem Magidor, Itay Neeman, Dima Sinapova, and Spencer Unger, Journal of Symbolic Logic, pages 1-9, doi:10.1017/jsl.2020.11, 2020.

7. *Kurepa trees and spectra of $\mathcal{L}_{\omega_1,\omega}$-sentences*, Dima Sinapova and Ioannis Souldatos, Archive for Mathematical Logic 59: 939-956, 2020.

8. *The super tree property at the successor of a singular*, Sherwood Hachtman and Dima Sinapova, Israel Journal of Math., 236(1): 473-500, 2020.

9. *ITP, ISP and SCH*, Sherwood Hachtman and Dima Sinapova, Journal of Symbolic Logic, 84(2): 713-725, 2019.

10. *Singularizing cardinals* (survey), Dima Sinapova, "Trends in Set Theory", AMS Contemporary Mathematics, 752: 165-173, 2020.

11. *The tree property at $\aleph_{\omega^2+1}$ and $\aleph_{\omega^2+2}$*, Dima Sinapova and Spencer Unger, Journal of Symbolic Logic, 83(2): 669-682, 2018.

12. *The eightfold way*, James Cummings, Sy Friedman, Menachem Magidor, Assaf Rinot, Dima Sinapova, Journal of Symbolic Logic, 83(1): 349-371, 2018.

13. *Ordinal definable subsets of singular cardinals*, James Cummings, Sy Friedman, Menachem Magidor, Assaf Rinot, Dima Sinapova, Israel Journal of Math., 226(2): 781-804, 2018.

14. *Singular cardinals and square properties*, Menachem Magidor and Dima Sinapova, Proc. Amer. Math. Soc. 145: 4971-4980, 2017.

15. *The tree property at the first and double successors of a singular*, Dima Sinapova, Israel Journal of Math. 216 (2): 799-810, 2016.

16. *Modified extender based forcing*, Dima Sinapova and Spencer Unger, Journal of Symbolic Logic, 81(04): 1432-1443, 2016.

17. *Hybrid Prikry forcing*, Dima Sinapova, Fundamenta Mathematicae, 228: 139-152, 2015.

18. *Scales at $\aleph_\omega$*, Dima Sinapova and Spencer Unger, Israel Journal of Math., 209: 463-486, 2015.

19. *Combinatorics at $\aleph_\omega$*, Dima Sinapova and Spencer Unger, Annals of Pure and Applied Logic 165: 996-1007, 2014.

20. *The Tree property and the failure of the Singular Cardinal Hypothesis at $\aleph_{\omega^2}$*, Dima Sinapova, Journal of Symbolic Logic, 77(3): 934-946, 2012.

21. *The Tree property at $\aleph_{\omega+1}$*, Dima Sinapova, Journal of Symbolic Logic, 77(1):279-290, 2012.

22. *The Tree property and the failure of SCH at uncountable cofinality*, Dima Sinapova, Archive for Mathematical Logic, 51(5-6):553-562, 2012.

23. *A model for a very good scale and a bad scale*, Dima Sinapova, Journal of Symbolic Logic, 73(4):1361-1372, 2008.

24. *A cardinal preserving extension making the set of points of countable V cofinality nonstationary*, Moti Gitik, Itay Neeman, and Dima Sinapova, Archive for Mathematical Logic, 46(5-6):451-456, 2007.

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Reviews:

1. *Itay Neeman: Forcing with sequences of models with two types*, Bulletin of Symbolic Logic, volume 21 (3): 339-341, 2015.

Invited Lectures at Meetings:

Tutorials:

1. Upcoming: Arctic Set Theory 5, Kilpisjärvi, Finland, February 2022.

2. Young Set Theory workshop, Lausanne, Switzerland, June 2018.

3. BLAST meeting, Nashville, TN, August 2017.

4. 5th European Set Theory Conference, Isaac Newton Institute, Cambridge, England, August 2015.

Talks:

1. 15th International Workshop in Set Theory, CIRM, Luminy, France, September 2019

2. AMS sectional meeting, special session, Madison, WI, September 2019

3. 7th European Set Theory Conference, Vienna, July 2019.

4. 12th Panhellenic Logic Symposium, Anogeia, Crete, June, 2019

5. Arctic Set Theory workshop 4, Kilpisjärvi, Finland, January 2019.

6. AMS sectional meeting, special session, Ann Arbor, MI, October 2018.

7. Generalised Baire Spaces, Amsterdam, The Netherlands, August 2018.

8. ASL North American Annual Meeting, Macomb, IL, May 2018, plenary talk.

9. 14th International Workshop in Set Theory, CIRM, Luminy, Marseille, France, October 2017.

10. MAMLS Conference, Virginia Commonwealth University, VA, April 2017.

11. Set Theory Workshop, Oberwolfach, Germany, February 2017

12. Very Informal Gathering of Logicians (VIG), UCLA, Los Angeles, February 2017.

13. Arctic Set Theory workshop 3, Kilpisjärvi, Finland, January 2017.

14. Applications of strong logics in other areas of mathematics, Barcelona, November 2016

15. ASL European Summer Meeting (Logic Colloquium '16), plenary talk, Leeds, England, August 2016.

16. ASL North American Annual Meeting, Set theory special session, Storrs, CT, May 2016.

17. 4-th Midwest Women in Mathematics Symposium (WIMS), UIUC, Urbana, IL, April, 2016

18. Conference for Menachem Magidor's 70th birthday, Jerusalem, Israel, February 2016.

19. MAMLS meeting, Carnegie Mellon University, Pittsburgh, PA, May 2015.

20. AMS Spring Sectional Meeting, Special Session on Set Theory, Las Vegas, NV, April 2015.

21. "Sets and computations" meeting, NUS, Singapore, April 2015.

22. Retrospective workshop on forcing and its applications, Fields Institute, Toronto, Canada, March 2015.

23. Arctic Set Theory workshop 2, Kilpisjärvi, Finland, February 2015.

24. Rutgers Logic Conference, New Brunswick, NJ, October 2014.

25. 13th International Workshop in Set Theory, CIRM, Luminy, Marseille, France, September 2014.

26. Boise Extravaganza in Set Theory (BEST), UC Riverside, June 2014.

27. Conference for Bill Mitchell's 70th birthday, Berkeley, June 2014.

28. ASL North American Annual Meeting, Set theory special session, Boulder, CO, May 2014.

29. 2nd Annual Midwest Women in Mathematics Symposium, Notre Dame, April, 2014.

30. Set Theory Workshop, Oberwolfach, Germany, January 2014.

31. AMS sectional meeting, special session, Louisville, KY, September 2013.

32. Workshop on Large Cardinals and Forcing, ESI, Vienna, September 2013.

33. BLAST Meeting, Orange County, CA, August 2013, plenary talk.

34. ASL North American Annual Meeting, Waterloo, Canada, May 2013, plenary talk.

35. Workshop on Iterated Forcing and Large Cardinals, Fields Institute, Toronto, Canada, November 2012.

36. MAMLS Conference, Rutgers University, NJ, October 2012.

37. 12th International Workshop in Set Theory, CIRM, Luminy, Marseille, France, September 2012.

38. ASL Winter Meeting (with Joint Mathematics Meeting), Boston, MA, January 2012, plenary talk.

39. Logic in Southern California, UC Irvine, December, 2011.

40. Canadian Mathematical Society Meeting, Toronto, Canada, December, 2011: Set Theory Mini-course on "Large cardinals and Prikry type forcing"

41. Special Session in Set Theory, Canadian Mathematical Society Meeting, Toronto, Canada, December, 2011:

42. Third European Set Theory Conference, Edinburgh, Scotland, July 2011.

43. AMS Spring Western Sectional Meeting, Special Session on Set Theory, Las Vegas, NV, May 2011.

44. ASL North American Annual Meeting, Set theory special session, Berkeley, CA, March 2011.

45. Set Theory Workshop, Oberwolfach, Germany, January 2011.

46. AMS Sectional Meeting, Special Session on Large Cardinals and the Continuum, Los Angeles, CA, October 2010.

47. Logic Colloquium 2009, Sofia, Bulgaria, August 2009.

48. ESI Workshop on large cardinals and descriptive set theory, Vienna, Austria, June 2009.

49. ASL North American Annual Meeting, Set theory special session, Notre Dame, IN, May 2009.

50. Young Set Theory Workshop, Bellaterra, Spain, April 2009.

Invited Talks at Seminars/Colloquia:

1. UC Irvine Logic seminar, via zoom, March 2021.

2. Berkeley Logic Colloquium, via zoom, February 2021.

3. Paris-Lyon Logic Seminar, via zoom, October 2020.

4. CMU Logic seminar, via zoom, October 2020.

5. University of Toronto Logic seminar, via zoom, May 2020.

6. University of Madison Logic seminar, Madison, Wisconsin, October 2019.

7. Muenster University Set theory seminar, Muenster, Germany, May 2019.

8. Colloquium, Miami University, Oxford, OH, April, 2019.

9. Colloquium, Rutgers, New Brunswick, NJ, April, 2019.

10. Rutgers Logic Seminar, New Brunswick, NJ, April, 2018.

11. Harvard Logic Colloquium, Harvard, Cambridge, MA, March, 2018.

12. University of Torino Logic Seminar, Turin, Italy, June 2017.

13. Rutgers Logic Seminar, New Brunswick, NJ, April, 2017.

14. UIUC Logic seminar, Urbana-Champaign, IL, March 2017.

15. UC Irvine Logic Seminar, Irvine, CA, May 2016.

16. Virginia Commonwealth University Logic seminar, Richmond, VA, April 2016.

17. UCLA Logic seminar, Los Angeles, CA, January 2016.

18. UCLA Logic Colloquium, January 2014.

19. Hebrew University Set theory seminar, Jerusalem, Israel, November, 2013.

20. Rutgers Logic Seminar, New Brunswick, NJ, October, 2013.

21. University of Notre Dame, Logic seminar, Notre Dame, IN, September 2013.

22. University of Madison Wisconsin, Logic seminar, Madison, WI, April 2013.

23. University of Waterloo, Pure Math Colloquium, Waterloo, Canada, November 2012.

24. Ohio State University, Logic seminar, Columbus, OH, November 2012.

25. UIUC Logic seminar, Urbana-Champaign, IL, October 2012.

26. Fields Institute Set theory seminar, Toronto, CA, August 2012.

27. UIC Math Department Colloquium, January 2012.

28. UCLA Logic seminar, Los Angeles, CA, April 2011.

29. UC Irvine Logic Seminar, Irvine, CA, November 2007

30. UCLA Logic Seminar, January 2007.

31. Carnegie Mellon University, Logic seminar, November 2006;

Grants awarded for research programs:

- The tree property, SQuaREs Program, American Institute of Mathematics (with J. Cummings, Y. Hayut, M. Magidor, I. Neeman, S. Unger), San Jose, CA, May 2018, February 2019, March 2020.

- Research in pairs (RiP) with Spencer Unger, Oberwolfach, Germany, July 2016.

- Singular Cardinals Combiniatorics, SQuaREs Program, American Institute of Mathematics (with J. Cummings, S. Friedman, M. Magidor, A. Rinot), Palo Alto, CA, May 2013, October 2014, and January 2016.

PhD students:

- Maxwell Levine, Ph.D. 2017, Postdoc at University of Freiburg, Germany.

- Jin Du, Ph.D. 2018, Postdoc at the Chinese University of Hong Kong.

- Carl Dean, Ph.D. 2021, Assistant Professor at Culver-Stockton College, MO.

- Noah Schoem, Ph.D. 2021, went to the industry.

- Current: Will Adkisson (2019-).

Undergraduate students mentoring:

- Alberto Takase, Northwestern Summer Research Opportunity Program (SROP) at Northwestern University, Summer 2015, Summer 2014.

- Santiago Guisasola, Student Undergraduate Research Fellowship Program at UC Irvine (SURF), Summer 2011.

Organization:

- Co-organizer with I. Farah, R. Schindler, and H.W. Woodin: Set Theory workshop, Oberwolfach, January 2022.

- Co-organizer of Graduate Research Opportunities of Women (GROW), UIC October 2021.

- Organizer, Logic in the Loop, UIC, Chicago, IL, November, 2019.

- Organizer, Logic Fest in the Windy City, UIC, Chicago, IL, May, 2019.

- Special Session organizer, ASL North American Annual Meeting 2018, Macomb, IL.

- Co-organizer, The First Mexico-USA Logic Fest, Mexico City, Mexico January 2018.

- Organizer, Set theory workshop, UIC, Chicago, IL, October, 2016.

- Co-organizer with Itay Neeman: "High and low forcing" workshop at the American Institute of Mathematics (AIM), San Jose, CA, January 2016. (Applied and obtained funding from AIM.)

- Local organizer: Appalachian Set theory workshop, UIC, November 2014.

Committee Service:

- Association of Symbolic Logic (ASL) Council, 2021-

- Association of Symbolic Logic (ASL) Executive Committee, 2021-

- ASL Committee on Logic in North America, 2021-

- Program committee member, ASL North American Annual Meeting, Notre Dame, IN, June 2021.

- Program committee member, ASL European Meeting (Logic Colloquium), Udine, Italy, July 2018.

- Program committee member, ASL North American Annual Meeting, UIUC, IL, 2015.

Editorial:

- Journal of Mathematical Logic, Associate Editor, 2018-

- Mathematical Logic Quarterly, Editorial Board, 2020-

Other Service in the Mathematical Community:

- Served on NSF Panels.

- External Examiner, Ph.D. thesis of Sittinon Jirattikansakul, Carnegie Mellon University, June 2021.

- External Examiner, Ph.D. thesis of Jing Zhang, Carnegie Mellon University, April 2019.

- External reviewer, Ph.D. thesis of Yair Hayut, Hebrew University, Jerusalem, Israel, August 2017.

- External Examiner, Ph.D. thesis of Chris Lambie-Hanson, Carnegie Mellon University, April 2014.

- Referee service for journals including *Annals of Mathematics*, *Journal of Mathematical Logic*, *Israel Journal of Mathematics*, *Annals of Pure and Applied Logic*, *Journal of Symbolic Logic*, *Fundamenta Mathematicae*, *Notre Dame Journal of Formal Logic*, *Archive for Mathematical Logic*.

Service at UIC:

- UIC Senate, 2016-2022.

- Tenure-track search committee, UIC Mathematics Department, 2016-2017, 2017-2018, 2019-2020.

- Graduate Studies Committee, 2019-2020, 2020-2022.

- Visitors committee, UIC Mathematics Department, 2015-2016, 2018-2019 (chair).

- Graduate Admissions and Fellowships Committee, UIC Mathematics Department, 2013, 2014, 2015, 2016, 2017, 2018, 2020, 2021.

- RAP (postdoc) search committee, UIC Mathematics Department, 2013-2014, 2014-2015, 2021-2022.

- Co-organizer of the UIC Logic Seminar, 2014-

Teaching Experience:

- At the University of Illinois at Chicago

    - Math 512: Advanced Topics in Logic, Spring 2013, Fall 2014, Spring 2017, Spring 2019.
    - Math 511: Descriptive Set Theory, Spring 2018
    - Math 504: Set Theory I, Fall 2012, Spring 2016, Fall 2018, Spring 2021.
    - Math 502: Mathematical Logic, Fall 2017, Fall 2019.
    - Math 430: Formal Logic I, Spring 2014, Spring 2015.
    - Math 320: Linear Algebra, Spring 2015, Fall 2016, Spring 2020.

- Math 215: Intro to Abstract Math, Spring 2016, Spring 2019, Fall 2019.
- Math 210: Calculus III, Fall 2016, Fall 2017.
- Math 180: Calculus I, Fall 2015

- As a Visiting Assistant Professor at University of California Irvine:

  - Math 2A: Calculus, Spring 2009, Spring 2012
  - Math 2B: Calculus, Fall 2011, Winter 2012
  - Math 3A, 6G: Linear Algebra, Winter 2009, Fall 2009, Winter 2011
  - Math 121A: Linear Algebra I (upper division), Winter 2011
  - Math 121B: Linear Algebra II (upper division), Spring 2011
  - Math 150: Mathematical Logic, Fall 2008, Fall 2009
  - Math 120A: Group Theory, Winter 2010
  - Math 120B: Rings and Fields, Winter 2009, Winter 2010, Spring 2010, Spring 2011
  - Math 141: Intro to Topology, Spring 2009

- As a teaching assistant at UCLA:

  - Math 31A: Differential Calculus, Fall 2004
  - Math 31B: Integration and Infinite Series, Winter 2005
  - Math 61: Discrete Structures, Spring 2006
  - Math 115A: Linear Algebra, Fall 2004, Winter 2005, Spring 2005, Fall 2005
  - Math 131B: Analysis, Spring 2006
  - Math 170B: Probability Theory, Spring 2005