

CAROLINE TERRY

Department of Mathematics
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Employment:

2020-present Assistant Professor, The Ohio State University.
2018-2020 L. E. Dickson Instructor, University of Chicago.
2016-2018 Brin Postdoctoral Fellow, University of Maryland.

Short-term Positions:

Spring 2017 Research Fellow, Simons Institute for the Theory of Computing.
Spring 2014 Program Associate, Mathematical Sciences Research Institute.

Education:

2012-2016 Ph.D. in Pure Mathematics, University of Illinois Chicago.
advisors: David Marker and Dhruv Mubayi
2010 - 2012 MS in Pure Mathematics, University of Illinois Chicago.
2006 - 2010 BS in Mathematics, University of Chicago.

Grants and Academic Honors:

2019-2022 NSF Research Grant DMS 1855711 (PI).
Model Theoretic Classification Theory and Finite Combinatorics.
2018-2019 AMS-Simons Travel Award
2018 AWM Mentoring Travel Grant, *Mentor: Julia Wolf.*
2015 Louise Hay Award, *Awarded to a math graduate student for academic excellence.*

Research Interests:

Model theory, extremal combinatorics, graph theory, additive combinatorics.

Publications:

1. *Quantitative structure of stable sets in finite abelian groups*, with J. Wolf, Trans. Amer. Math. Soc. 373 (2020), 3885-3903.
2. *Uniformly bounded arrays and mutually algebraic structures*, with M. C. Laskowski, Notre Dame J. Form. Log. 61, no. 2 (2020), 265-282.
3. *A group version of stable regularity*, with G. Conant and A. Pillay, Math. Proc. Cambridge Philos. Soc., Volume 168, Issue 2 (2020), 405-413.
4. *Stable arithmetic regularity in the finite-field model*, with J. Wolf, Bull. London Math. Soc. 51 (2019), no. 1, 70-88.

5. *An extremal graph problem with a transcendental solution*, with D. Mubayi, *Comb. Probab. Comput.* 28 (2019), no. 2, 303-324.
6. *VC_ℓ -dimension and the jump to the fastest speed of a hereditary property*, *Proc. Amer. Math. Soc.* 146 (2018), no. 7, 3111-3126.
7. *Structure and enumeration theorems for hereditary properties in finite relational languages*, *Ann. Pure Appl. Logic* 169 (2018), no. 5, 413-449.
8. *On unavoidable induced subgraphs in large prime graphs*, with M. Malliaris, *J. Graph Theory* 88 (2018), no.2, 255-270.
9. *Discrete metric spaces: structure, enumeration, and 0-1 laws*, (2016), with D. Mubayi, *J. Symb. Logic*, 84, Issue 4 (2019), 1293-1325.
10. *Model theoretic properties of the Urysohn sphere*, with G. Conant, *Ann. Pure Appl. Logic* 167 (2016), no. 1, 49-72.

Preprints:

11. *Structure and regularity for subsets of groups with finite VC-dimension*, with G. Conant and A. Pillay, accepted, *J. Eur. Math. Soc.*
12. *Extremal theory of locally sparse multigraphs*, with D. Mubayi, accepted, *SIDMA*.
13. *Jumps in speeds of hereditary properties in finite relational languages*, with M. C. Laskowski, arXiv:1803.10575, submitted.

Selected Talks:

- 2020 Logic Seminar, University of Oxford, Oxford, UK.
- 2020 Logic Seminar, University of Leeds, Leeds, UK.
- 2019 Logic Seminar, University of Illinois at Urbana-Champaign, Urbana, IL.
- 2019 Recent Applications of Model Theory, Fields Institute, Toronto, ON.
- 2019 Logic in the Windy City Conference, University of Illinois at Chicago, Chicago, IL.
- 2019 Combinatorics Seminar, University of Cambridge, Cambridge, UK.
- 2019 Logic Seminar, University of Wisconsin, Madison, WI.
- 2018 Combinatorics Seminar, Carnegie Mellon University, Pittsburgh, PA.
- 2018 Logic Seminar, University of Notre Dame, Notre Dame, IN.
- 2018 Pure and Applied Model Theory Conference, UIC, Chicago, IL.
- 2018 Model Theory and Combinatorics Workshop, IHP, Paris, France.
- 2017 Midwest Model Theory Day, University of Illinois at Chicago, Chicago, IL.
- 2017 Recent Advances in Extremal Combinatorics Workshop, TSIMF, Sanya, China.
- 2017 Logic Colloquium, University of California, Berkeley, CA.
- 2017 ASL North American Annual Meeting, plenary speaker, Boise, ID.
- 2016 Combinatorics Seminar, University of Delaware, Newark, DE.
- 2016 Logic Seminar, University of Pennsylvania, Philadelphia, PA
- 2016 Logic Colloquium 2016, Leeds, UK.
- 2015 Logic Seminar, The Ohio State University, Columbus, OH.
- 2015 Homogeneous Structures Workshop, Banff International Research Station, Banff, AB.
- 2015 AMS Central Fall Sectional Meeting 2015, Loyola University, Chicago, IL.
- 2015 Lake Michigan Combinatorics Workshop, Notre Dame University, Notre Dame, IN.
- 2015 Logic Seminar, Harvard University, Cambridge, MA.
- 2014 Logic Seminar, University of California, Berkeley, Berkeley, CA.

Teaching Experience (some courses taught more than once):

- At University of Chicago:
 - Math 161-162-163: Honors Calculus
 - Graduate topics course: model theory and combinatorics
- At University of Maryland:
 - Math 445: Introduction to Mathematical Logic
 - Math 446: Axiomatic Set Theory
- At University of Illinois at Chicago:
 - As primary instructor:
 1. Math 090: Intermediate Algebra
 2. Math 210: Calculus III
 - As graduate course assistant:
 1. Math 180-181: Calculus I and II
 2. Math 165: Calculus for Business
 3. Math 417: Complex analysis
 4. Math 075: Basic Algebra

Recent Professional Experience:

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| 2019 | Coorganizer, Conference for Chris Laskowski's 60th birthday, College Park, MD. |
| 2019 | Coorganizer, Special Session in Model Theory, AMS Sectional Meeting, CUNY, NY. |
| 2016-2018 | Coorganizer, Model Theory Seminar, UMD, College Park, MD. |
| 2012-2016 | Coorganizer, UIC Chapter of Association for Women in Mathematics, Chicago, IL. |
| 2013-2016 | Coorganizer of the Louise Hay Logic Seminar, UIC, Chicago, IL. |