

Will Boney

Department of Mathematics

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Texas State University

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EMPLOYMENT

- **Texas State University**
Assistant Professor 2019-Present
- **Harvard University**
Benjamin Peirce Fellow (On leave 2014-2015) 2014 - 2019
- **University of Illinois at Chicago, Harvard University**
NSF Mathematical Sciences Postdoctoral Research Fellowship 2014 - 2018
 - Mentor: John Baldwin (2014-2015)
 - Mentor: Hugh Woodin (2015-2018)
- **Eberly Center for Teaching Excellence (Carnegie Mellon University)**
Graduate Teaching Fellow 2011 - 2014
- **Mathworks (Texas State University)**
Counselor and Textbook Team Member 2004-2006, 2008

EDUCATION

- **Carnegie Mellon University**
Ph.D., M.Sc in Mathematical Sciences 2014, 2010
 - Title: *Advances in Classification Theory for Abstract Elementary Classes*
 - Advisor: Rami Grossberg
- **Grinnell College**
B.A. in Mathematics, with honors 2008
- **Texas A& M University**
Research Experience for Undergraduates 2007
- **Budapest Semester in Mathematics**
Study Abroad Program 2006-2007
- **Mathworks (Texas State University)**
Honors Summer Math Camp 2001-2003

PAPERS

PUBLISHED PAPERS

1. Will Boney, *Tameness from large cardinal axioms*, The Journal of Symbolic Logic **79** (2014), no. 4, 1092-1119. <http://arxiv.org/abs/1303.0550>
2. Will Boney and Rami Grossberg, *Forking in short and tame AECs*, Annals of Pure and Applied Logic **168** (2017), no. 8, 1517–1551. <http://arxiv.org/abs/1306.6562>

3. Will Boney, *Tameness and extending frames*, Journal of Mathematical Logic **14** (2014), 27 pages.
<http://arxiv.org/abs/1308.6006>
4. Will Boney, *Computing the number of types of infinite length*, Notre Dame Journal of Formal Logic **58** (2017), 133-154.
<https://arxiv.org/abs/1309.4485>
5. Will Boney, Rami Grossberg, Alexei Kolesnikov, and Sebastien Vasey, *Canonical Forking in Abstract Elementary Classes*, Annals of Pure and Applied Logic **167** (2016), no. 7, 590-613.
<http://arxiv.org/abs/1404.1494>
6. Will Boney and Sebastien Vasey, *Tameness and frames revisited*, Journal of Symbolic Logic **82** (2017), no. 3, 995–1021.
<http://arxiv.org/abs/1406.5980>
7. Will Boney, *A presentation theorem for continuous logic and Metric Abstract Elementary Classes*, Mathematical Logic Quarterly **63** (2017), no. 5, 397–414. <http://arxiv.org/abs/1408.3624>
8. Will Boney and Sebastien Vasey, *Chains of Saturated Models in Abstract Elementary Classes*, Archive for Mathematical Logic **56** (2017), no. 3, 187–213. <http://arxiv.org/abs/1503.08781>
9. Will Boney and Spencer Unger, *Large Cardinal Axioms from Tameness in AECs*, Proceedings of the American Mathematical Society **145** (2017), no. 10, 4517–4532.
<http://arxiv.org/abs/1509.01191>
10. Will Boney, Rami Grossberg, Michael Lieberman, Jiri Rosicky, and Sebastien Vasey, *μ -Abstract Elementary Classes and other generalizations*, Journal of Pure and Applied Algebra **220** (2016), no. 9, 3048-3066.
<http://arxiv.org/abs/1509.07377>
11. John Baldwin and Will Boney, *Hanf numbers and presentation theorems in AECs*, **Beyond First Order Model Theory Volume** (Iovino ed.), Monographs and Research Notes in Mathematics, CRC Press, 2017, p. 327–352.
<http://arxiv.org/abs/1511.02935>
12. Will Boney and Sebastien Vasey, *A Survey on Tame Abstract Elementary Classes*, **Beyond First Order Model Theory Volume** (Iovino ed.), Monographs and Research Notes in Mathematics, CRC Press, 2017, p. 352–437.
<http://arxiv.org/abs/1512.00060>
13. Will Boney and Sebastien Vasey, *Good Frames in the Hart-Shelah Example*, Archive for Mathematical Logic **67**, no. 5-6, 687–712.
<http://arxiv.org/abs/1607.03885>
14. Will Boney, Rami Grossberg, Monica VanDieren, and Sebastien Vasey, *Superstability from Categoricity in Abstract Elementary Classes*, Annals of Pure and Applied Logic **168** (2017), no. 7, 1383–1395.
<https://arxiv.org/abs/1609.07101>
15. Will Boney and Sebastien Vasey, *Structural Logic and Abstract Elementary Classes with Intersections*, Bulletin of the Polish Academy of Sciences Mathematics **67** (2019), no. 1, 1–17.
<https://arxiv.org/abs/1801.01908>
16. Will Boney, *Model-Theoretic Characterizations of Large Cardinals*, Israel Journal of Mathematics, Accepted, 31 pages.
<https://arxiv.org/abs/1708.07561>

PAPERS SUBMITTED FOR PUBLICATION

17. Will Boney and Monica VanDieren, *Limit models in strictly stable Abstract Elementary Classes*, Submitted, 18 pages.
<http://arxiv.org/abs/1508.04717>
18. Will Boney, *The Γ -ultraproduct and averageable classes*, Submitted, 23 pages.
<http://arxiv.org/abs/1511.00982>

19. Will Boney, *Definable Coherent Ultrapowers and Elementary Extensions*, Submitted, 14 pages.
<https://arxiv.org/abs/1609.02970>
20. Nathanael Ackerman, Will Boney, and Sebastien Vasey, *Categoricity in Multiuniversal Classes*, Submitted, 16 pages.
<https://arxiv.org/abs/1804.09067>
21. Will Boney and Ioannis Souldatos, *A Lower Bound for the Hanf Number for Joint Embedding*, Submitted, 17 pages.
<https://arxiv.org/abs/1808.03017>
22. Will Boney, *Erdős-Rado classes*, Submitted, 23 pages.
<https://arxiv.org/abs/1810.01513>
23. Will Boney and Michael Lieberman, *Tameness, Powerful Images, and Large Cardinals*, Submitted, 10 pages.
<https://arxiv.org/abs/1902.10212>
24. Will Boney, Barbara Csimá, Nancy Day, and Matthew Harrison-Trainer *Which classes of structures are both pseudo-elementary and definable by an infinitary sentence?*, Submitted, 13 pages.

PAPERS IN PREPARATION

25. Will Boney and Sebastien Vasey, *Categoricity and Infinitary Logics*, In Preparation, 9 pages.
<https://arxiv.org/abs/1508.03316>
26. Will Boney and Pedro Zambrano, *Around the set-theoretical consistency of d -tameness of Metric Abstract Elementary Classes*, In Preparation, 9 pages.
<http://arxiv.org/abs/1508.05529>
27. Will Boney, *No maximal models from looking down*, Preprint, 7 pages.
<http://arxiv.org/abs/1511.01054>
28. Will Boney, Stamatis Dimopoulos, Victoria Gitman, and Menachem Magidor, *Model-Theoretic Characterizations of Large Cardinals Revisited*, Preprint, 13 pages.

GRANTS AND AWARDS

Undergraduate Mentoring Workshop Certificate , Harvard University	2019
AMS-Simons Travel Grant (\$4,000)	2018-2020
Postdoctoral Fellowship , National Science Foundation (\$150,000)	2014-2018
Future Faculty Program , Eberly Center for Teaching Excellence	2013
Student Travel Award , Association for Symbolic Logic (8 grants totalling \$8,933)	2010-2014
Linn Smith Prize for Excellence in Mathematics , Grinnell College	2008

TALKS

Invited Talks:

- **2019:** Logic in the Windy City (UIC)
- **2018:** Pure and Applied Model Theory (UIC); Accessible Categories and Their Connections (Leeds); University of North Texas Colloquium
- **2017:** UIC Model Theory Seminar; Rutgers Logic Seminar; Northeast Regional Model Theory Day; CUNY Logic Seminar; GWU Colloquium
- **2016:** UIC Logic Seminar; Set-theoretical Aspects of the Model Theory of Strong Logics (Centre de Recerca Matemàtica); North American Meeting of the Association of Symbolic Logic (Storrs)

- **2015:** Neostability Theory; Eduard Čech Institute Joint Meeting; Seminar Z Algebrý (Masaryk University); Miami University Department Colloquium; CMU Model Theory Seminar; Harvard Logic Colloquium; Southern Wisconsin Logic Colloquium; AMS-ASL Special Session on Beyond First Order Model Theory; Beyond First Order Model Theory Miniconference
- **2014:** CUNY Model Theory Seminar; CMU Logic Seminar; CMU Model Theory Seminar; Illinois Logic Seminar; Classification Theory Workshop (Daejeon); Maryland Model Theory Seminar; Berkeley Model Theory Seminar; Notre Dame Logic Seminar; McMaster Logic Seminar; UIC Logic Seminar

SHORT-TERM RESEARCH VISITS

Rutgers University	2014,2016-2018
University of Leeds	2018
Centre de Recerca Matemàtica (Barcelona)	2016
Masaryk University	2014
Hebrew University of Jerusalem	2013
University of Illinois at Chicago	2013

TEACHING EXPERIENCE

- **Texas State University** *2019 - Present*
Assistant Professor
 – **Instructor:**
- **Harvard University** *2014 - 2019*
Benjamin Peirce Fellow
 – **Instructor:** Multivariable Calculus; Linear Algebra and Differential Equations; Introductory Real Analysis ; Complex Function Theory; Mathematical Logic II; Model Theory; Set Theory; Supervised Reading and Research; Classification Theory for Tame Abstract Elementary Classes; Topics in Model Theory
- **Carnegie Mellon University** *2008 - 2014*
Graduate Student
 – **Instructor:** Problem Solving in Recreational Mathematics; Differential Equations; Integration, Differential Equations, and Approximation
 – **Teaching Assistant:** Differential and Integral Calculus; Differential Equations; Multivariate Approximation and Analysis; Calculus in Three Dimensions; Concepts of Mathematics; Set Theory
 – **Grader:** Measure and Integration (graduate); General Topology (graduate); Algebra I; Concepts of Mathematics; Integration, Differential Equations and Approximation

SERVICE

Logic Seminar Organizer, Harvard 2017-2019
Graduate Admissions Committee, Harvard 2015-2017; 2018-2019
Math Department Diversity Reading Group, Harvard 2015-2019
Job Search Seminar, Harvard 2016-2019
Undergraduate Intensive Advising, Harvard 2017-2018
Math Advising Dinners, Harvard 2015-2017
Navigating Graduate School: year 1 to n (moderator), UIC 2014
Math GRE Review, CMU 2013
Graduate Teaching Fellow, Eberly Center for Teaching Excellence, CMU 2011-2014
Vice President of Finance, CMU Graduate Student Assembly 2010-2011
Math Department Representative, CMU Graduate Student Assembly . . . 2009

Refereeing: Annals of Pure and Applied Logic, Boletín de Matemáticas, Israel Journal of Mathematics, Journal of the European Mathematical Society, Journal of Mathematical Logic, Journal of Symbolic Logic, Mathematical Logic Quarterly, MathReviews

Professional Memberships: Association for Symbolic Logic; American Mathematical Society; Association for Women in Mathematics