

Curriculum Vitae

Bart Kastermans

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Personal

- Citizenship: Netherlands.

Education

- 1999: Master Class in Mathematical Logic, at the Mathematical Research Institute in the Netherlands (with Honors). This was a year long special program on logic taking place at Utrecht University and Radboud University Nijmegen in which I participated.
- 2000: M.Sc. in mathematics from the Free University in Amsterdam (with Honors).
- 2006: Ph.D. in mathematics from the University of Michigan, advisors Andreas Blass and Yi Zhang.

Employment

- August 2000–December 2004, January 2006–May 2006: Graduate Student Instructor at the University of Michigan, Ann Arbor.
- February 2005–December 2005: Visiting scholar at Sun Yat-Sen University, Guangzhou, China.
- August 2006–May 2009: Van Vleck Assistant Professor at the University of Wisconsin, Madison.
- June 2009: Assistant Professor at the University of Colorado, Boulder.

Research Papers

All the below articles are available as pdf files from <http://www.bartk.nl/files.php>

- Bart Kastermans, *Cofinitary Groups and Other Almost Disjoint Families of Reals*, PhD dissertation completed under the direction of Andreas Blass and Yi Zhang in May 2006.

- Bart Kastermans, Yi Zhang, *Cardinal Invariants Related to Permutation Groups*, *Annals of Pure and Applied Logic*, Volume **143** (2006), pp. 139–146.
- Bart Kastermans, *Very Mad Families*, *Contemporary Mathematics* **425**, *Advances in Logic*, edited by Su Gao, Steve Jackson, and Yi Zhang, (2007) pp. 105–112.
- Bart Kastermans, Juris Steprāns, Yi Zhang, *Analytic and Coanalytic Families of Almost Disjoint Functions*, *J. Symbolic Logic*, Volume 73 (2008), no. 4, 1158–1172.
- Bart Kastermans, *The Complexity of Maximal Cofinitary Groups*, *Proc. Amer. Math. Soc.*, Vol. 137 (2009), no. 1, 307–316.
- Bart Kastermans, *Isomorphism Types of Maximal Cofinitary Groups*. *Bulletin of Symbolic Logic*, September 2009, Volume 15, pp. 300-319.
- Bart Kastermans, *An Example of a Cofinitary Group in Isabelle/HOL*. In: G. Klein, T. Nipkow, and L. Paulson (ed), *The Archive of Formal Proofs*, August 2009.
- Rodney G. Downey, Bart Kastermans, and Steffen Lempp, *On Computable Self-Embeddings of Computable Linear Orderings*. *Journal of Symbolic Logic*, Volume 74, Issue 4 (2009), pp. 1352–1366.
- Carl G. Jockusch, Jr., Bart Kastermans, Steffen Lempp, Manuel Lerman, and Reed Solomon, *Stability and Posets*, *J. Symbolic Logic* 74 (2009), no. 2, 693–711.
- Bart Kastermans, Steffen Lempp, *Comparing Notions of Randomness*, accepted for publication in *Theoretical Computer Science*.
- Bart Kastermans, *Questions on Cofinitary Groups*, submitted.

Conference Talks

- October 2004: *Maximal Cofinitary Groups and Their Orbits*, North Texas Logic Conference, Denton, Texas.
- November 2004: *The Constructible Universe and Π_1^1 Families of Reals*, at the New York Graduate Student Logic Conference, New York, New York.
- July 2005: *Cofinitary Permutation Groups and Related Cardinal Invariants*, at the Methods of Logic in Mathematics Conference, St. Petersburg, Russia.
- December 2005: *Maximal Cofinitary Groups*, at the Conférence Franco-Chinoise en Mathématique.
- April 2006: *Orthogonal Very Mad Families*, at the Annual Graduate Student Conference in Logic, Madison, Wisconsin.

- May 2006: *Maximal Cofinitary Groups*, Annual Meeting of the ASL, Montreal, Canada.
- June 2006: *A Coanalytic Maximal Cofinitary Group*, at the Methods of Logic in Mathematics Conference, St. Petersburg, Russia.
- March 2007: *Orthogonal MAD Families*, at the AMS Special Session at Miami University, Oxford, Ohio.
- June 2007: *Separating Notions of Randomness*, at the conference Leonhard Euler and Modern Combinatorics, applications to logic, representation theory, mathematical physics, in St. Petersburg, Russia.
- July 2007: *A Locally Finite Maximal Cofinitary Group*, at the First European Set Theory Meeting, in Bedlewo, Poland.
- September 2007: *Separating Notions of Randomness*, at the Effective Randomness Workshop at the University of Chicago in Chicago, Illinois.
- October 2007: *A Locally Finite Maximal Cofinitary Group*, at the AMS Special Session at Rutgers, New Brunswick, New Jersey.
- November 2007: *Cofinitary Groups and Generating Sets*, at the Conference in Honor of Andreas Blass birthday at the Fields Institute, Toronto, Canada.
- March 2008: *There is no K_σ Maximal Cofinitary Group*, at the Spring Topology and Dynamics Conference in Milwaukee, Wisconsin.
- March 2008: *Cofinitary Groups and Generating Sets*, Boise Extravaganza in Set Theory at Boise State University in Boise, Id.
- June 2008: *Stability and Posets*, Methods of Logic in Mathematics V, in St. Petersburg, Russia.
- August 2009: *A formalization of a Simple Example of a Cofinitary Group*, BLAST 2009, New Mexico State University, New Mexico.
- February 2010: *Formalizing Set Theory*, Young Set Theorists Workshop, Vienna, Austria.
- February 2010: *Formalizing Set Theory*, SEALS, University of Florida, Gainesville, Florida.

Colloquium and Seminar Talks

- January 2005: *A Weak Form of Diamond and Cardinal Characteristics Related to the Symmetric Group of the Natural Numbers*, at the Colloquium on Mathematical Logic, Utrecht, Netherlands.
- April 2005: *Cofinitary Permutation Groups*, in the Mathematics Department Colloquium of the Sun Yat-Sen University, Guangzhou, China.
- September 2005: *The Question of Concreteness of Cofinitary Subgroups of the Infinite Symmetric Group*, was the Millican Lecture at the University of Northern Texas, Denton, Texas.
- September 2005: *A Π_1^1 Maximal Cofinitary Group*, at the logic seminar at the University of Northern Texas, Denton, Texas.
- December 2005: I gave an invited lecture for the logic students on Models of Peano Arithmetic at the South China Normal University, Guangzhou, China. .
- May 2006: *A Coanalytic Maximal Cofinitary Group*, at the Southern Wisconsin Logic Colloquium, Madison, Wisconsin.
- February 2007: *Concreteness of Cofinitary Subgroups of the Infinite Symmetric Group*, in the Department Colloquium of the University of Wisconsin.
- August 2007: *Constructing Maximal Cofinitary Groups*, in the Fields Institute logic seminar, Toronto, Canada.
- October 2007: *On Cofinitary Groups*, department colloquium of the Mathematics, Statistics and Computer Science at Marquette University, Milwaukee, Wisconsin.
- February 2008: *Separating Notions of Randomness*, in the logic seminar of Penn State University, State College, Pennsylvania.
- February 2008: *Generating Sets of Cofinitary Groups*, in the Center for Geometry and Dynamics seminar of Penn State University, State College, Pennsylvania.
- March 2008: *Maximal Cofinitary Groups*, in the department colloquium of the Mathematics Department at Boise State University, Boise, Idaho.
- June 2008: *Separating Notions of Randomness*, in the topology seminar at the Free University, Amsterdam, Netherlands.
- June 2008: *Stability and Posets*, in the logic colloquium at the University of Amsterdam, Amsterdam, Netherlands.
- July 2008: *Cofinitary Groups and their Isomorphism Types*, in the seminar of the Oxford Mathematical Logic Group, at the University of Oxford, Oxford, United Kingdom.

- December 2008: *Separating Notions of Randomness*, in the logic seminar of the University of Notre Dame, Notre Dame, Indiana.
- January 2009: *Maximal Cofinitary Groups*, a department talk at the University of Colorado, Boulder, Colorado.
- January 2009: *Separating Notions of Randomness*, in the logic seminar of the University of Colorado, Boulder, Colorado.
- February 2009: *Generating Sets of Cofinitary Groups* in the Midwest Computability Theory Seminar at the University of Chicago, Chicago.
- October 2009: *Stability and Posets*, in MIG 1 at the University of Colorado, Boulder, Colorado.
- December 2009: *Have you ever really proved anything?*, a History and Philosophy of Science Coffee Talk at the University of Colorado, Boulder, Colorado.
- February 2010: *Set VS Classes: why you care*, a talk in the Stacks and Groupoids seminar at the University of Colorado, Boulder, Colorado.

Teaching

- August 2000–December 2004, January 2006–April 2006, Graduate Student Instructor at the University of Michigan, teaching Precalculus (once), Calculus I (several times), Calculus II (several times), and Calculus III (once). For Calculus III I was the computer lab instructor, for the other courses the main instructor.
- March 2005–June 2005, A course on Basic Set Theory for Master's and Ph.D. students at Sun Yat-Sen University, Guangzhou, China.
- September 2005–December 2005, about half of the Set Theory course for Master's and Ph.D. students at Sun Yat-Sen University, Guangzhou, China.
- August 2006–December 2006, the transition to proofs version of Linear Algebra (Math 341) and the graduate course Advanced Foundations of Mathematics (Math 873) at the University of Wisconsin, Madison.
- January 2007–May 2007, a basic concepts of mathematics course/introduction to proofs (Math 371) and the graduate set theory course (Math 771) at the University of Wisconsin, Madison.
- September 2007–December 2007, a large lecture of Calculus and Analytic Geometry 2 (Math 222) and the graduate introduction to logic course (Math 770) at the University of Wisconsin, Madison.

- January 2008–May 2008, Algebra (Math 112) and a basic concepts of mathematics/introduction to proofs course (Math 371) at the University of Wisconsin, Madison.
- September 2008–December 2008, the transition to proofs version of Linear Algebra (Math 341) and the graduate course on Computability Theory (Math 773).
- January 2009–May 2009, a basic concepts of mathematics course/introduction to proofs (Math 371) and a graduate student course on Descriptive Set Theory (Math 873).
- In January 2009 I was nominated for a University of Wisconsin teaching award.
- August 2009–December 2009: Foundations of Mathematics for the graduate students (MATH 5000) and undergraduate students (MATH 4000).
- January 2010–May 2010: undergraduate set theory (MATH 4730).

Professional Service Activities.

- Organizer of the Logic and Set Theory Graduate Student Seminar, academic years 2001-2002 and 2002-2003.
- Member of the organizing committee for the conference Logic in Algebra and Geometry held at the University of Michigan in April 2003.
- During the spring semester of 2007 I mentored an undergraduate student (Joe Nelson) in research relating to Proof Theory. He plans to apply for graduate school in the fall of 2008.
- During the spring semester of 2008 I mentored an undergraduate student (Nathan Michael Bice) in reading on set theory and related logic. He will be applying for graduate school in the fall of 2008.
- I was co-promotor (joint with Kenneth Kunen) for a PhD student (Dilip Raghavan) on his research in mad-type families. He is currently in a post-doctoral position at the University of Toronto in August 2008, and received a 2008 Sacks prize for most outstanding doctoral dissertation in mathematical logic.
- I was on the Masters' committee for Paige Cudworth.
- I am one of the organizers of the MIG logic meetings in the area around Boulder, Colorado (these are meetings between the logicians in the area, happening twice a semester).
- I am one of the organizers of BLAST 2010.