

Curriculum Vitae

Born: January 16, 1973.

Citizenship: Dual, Colombia and the Netherlands.

Mailing address: Departamento de Matematicas, Universidad Nacional,
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PhD: 2002, University of Notre Dame.

PhD advisor: Steven Buechler.

2002-2005 J.L. Doob Research Assistant Professor, University of Illinois at Urbana-Champaign.

2005- June Visiting Professor, University of Turin.

2005 Assistant Professor, Universidad Nacional de Colombia.

Publications of Alexander Berenstein

Published or accepted for publication.

[B1] Simple stable homogeneous groups, *J. Symbolic Logic* 68 (2003), no. 4, 1145–1162.

[B2] Simple stable homogeneous expansions of Hilbert spaces (with Steven Buechler), *Ann. Pure Appl. Logic* 128 (2004), no. 1-3, 75–101.

[B3] Imaginaries in Hilbert spaces. (with Itay Ben-Yaacov), *Arch. Math. Logic* 43 (2004), no. 4, 459–466.

[B4] Dividing in the algebra of Compact Operators, *J. Symbolic Logic* 69 (2004), no. 3, 817–829.

[B5] Definable Groups in measure algebras, *Math. Log. Quar.* vol 54 (2006), no 4, 367-374.

[B6] Invariant version of cardinality quantifiers in stable theories. (with Ziv Shami.), *Notre Dame J. Formal Logic* vol 47, no. 3 (2006), pp 343-351.

[B7] Hilbert spaces with generic groups of automorphisms, to be published in *Arch. Math. Logic*.

[B8] Model theoretic independence in the Banach lattices $L^p(\mu)$. (with Itay Ben-Yaacov and C. Ward Henson.), accepted for publication in *Israel Journal of Mathematics*.

Submitted.

[B9] Model theory of probability spaces with an automorphism, (with C. Ward Henson).

[B10] Thorn independence in the field of real numbers with a small multiplicative subgroup. (with Clifton Ealy and Ayhan Günaydin).

[B11] Model Theory for Metric Structures (with Itai Ben Yaacov, C. Ward Henson and Alexander Usvyatsov).

Articles in preparation and Research notes

[B12] Model theory of probability spaces with an amenable group of automorphisms (with C. Ward Henson.)

[B13] L^1 Banach lattices with a convolution are not stable.

[B14] Hilbert spaces with generic predicates (with Andrés Villaveces).

List of Associates of Alexander Berenstein

PhD advisor: Steven Buechler.

Co-authors and collaborators: Itay Ben-Yaacov, Steven Buechler, Clifton Ealy, Ayhan Günaydin, C. Ward Henson, Ziv Shami, Andrés Villaveces.

Invited talks given by Alexander Berenstein

[1] Hilbert spaces and the C^* -algebra of compact operators, Bogota Meeting in Model Theory, Bogota, Colombia, December 2001.

[2] Non dividing in the Banach lattices $L^p(X, V, \mu)$, special session on model theory, 2003 ASL Annual Meeting, University of Illinois at Chicago, Chicago, United States, June 2003.

[3] Probability spaces with a generic automorphism, special session on model theory, Logic Colloquium 2004, Turin, Italy, July 2004.

[4] Generic automorphisms of probability spaces and Hilbert spaces, Invited Address, 2004-2005 ASL Winter Meeting, Atlanta, United States, January 2005.

[5] Model Theory for metric structures, tutorial in the workshop “An introduction to Recent applications of Model Theory”, Newton Institute, Cambridge, U.K, April 2005.

[6] Minicourse on Model Theory for metric structures, University of Torino, Italy, May, 2005.

[7] Minicourse on Model Theory for metric structures, Congreso Nacional de Matemáticas, Bogotá, Colombia, August 2005.

[8] Hilbert spaces with generic groups of automorphisms, AMS Annual Meeting, San Antonio, Texas, United States, January 2006.

[9] Rosiness and the Mann property, XIII simposio latinoamericano de lógica matemática, Oaxaca, Mexico, August 2006.

[10] Model theory of Hilbert spaces, *Model Theory of metric structures*, American Institute of Mathematics, Palo Alto, California, United States, September 2006.

Contributed talks and invited talks at seminars

- [1] The group configuration in homogeneous structures, Workshop on Simple Theories, Fields Institute, Toronto, Canada, October 2000.
- [2] The group configuration in simple stable homogeneous structures, Second Graduate Student Conference in Logic, University of Illinois at Urbana-Champaign, February 2001.
- [3] The group configuration in simple stable homogeneous models, ASL 2001 Annual Meeting, University of Pennsylvania, Philadelphia, PA, March 2001.
- [4] 1-based homogeneous groups, Premier congrès Franco Américain de Mathématiques, Lyon, France, July 2001.
- [5] Homogeneous expansions of Hilbert spaces, University of Illinois at Chicago logic seminar, Chicago, November 2001.
- [6] Hilbert spaces and the C^* algebra of compact operators, University of Wisconsin-Madison logic seminar, Madison, December 2001.
- [7] Dividing in the algebra of compact operators over a Hilbert space, Simpleton 2002, CIRM, Marseilles, July 2002.
- [8] The Banach lattice $L^p(X, U, \mu)$, University of Notre Dame logic seminar, South Bend, March 2003.
- [9] Model theory of probability spaces expanded by a generic countable amenable group, Ohio State University logic seminar, Columbus, October 2004.
- [10] Representations of groups as generic automorphisms of Hilbert spaces, University of Illinois at Chicago logic seminar, Chicago, February 2005.
- [11] Expansions of probability measure algebras by a generic automorphism, University of Notre Dame logic seminar, South Bend, February 2005.
- [12] Representations of Groups as generic automorphisms of Hilbert spaces. University of Pisa logic seminar, Pisa, Italy, May 2005.
- [13] Representations of Groups as generic automorphisms of Hilbert spaces. University of Lyon model theory seminar, Lyon, France, May 2005.

Prizes and Awards obtained by Alexander Berenstein

- Beca 40 años (a five year scholarship to study Science), Jan 1991-Dec 1995, Universidad de los Andes, Colombia.
- Honors degree (Cum Laude) in Mathematics, Universidad de los Andes, 1996.
- Honors degree (Cum Laude) in Physics, Universidad de los Andes, 1997.
- Outstanding Graduate Student Teaching Award for excellence in teaching, University of Notre Dame, 2002.
- Part of the list of teachers ranked as excellent by their students, University of Illinois, (Top 30 % across campus), Fall 2004 and Spring 2005.

Supervision of bachelor's and master's theses.

Roberto Benavides (bachelor's thesis, Spring 2006).

Luis Carlos Romero (bachelor's thesis, Fall 2006).

Camilo Argoty (master's thesis, Fall 2006).

Teaching experience

University of Notre Dame

Summer 1999 Calculus II for science and engineering.

2000-I Calculus II for biology.

2000-II Calculus I for science and engineering.

2001-I Calculus II for science and engineering.

University of Illinois at Urbana-Champaign

2002-II Advanced vector calculus.

2003-I Linear algebra.

2003-II Calculus I for biology with Mathematica.

2004-I Differential equations.

2004-II Advanced vector calculus.

2005-I Model Theory.

Universidad Nacional de Colombia

2005-II Model Theory, Set Theory.

2006-I Topics in Logic (Stability Theory), Mathematical Logic.

2006-II Model Theory, Set Theory.

Administrative experience

Fall of 2006: Faculty of Science English exam committee (Universidad Nacional de Colombia).