Miguel Fernando Moreno Wandurraga

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Curriculum Vitae

Education

1-2014/2-2018	University of Helsinki, Ph.D. in Mathematics Thesis: Finding the Main Gap in the Borel-Reducibility Hierarchy (Pass with distinction) Advisor: Dr. Tapani Hyttinen
10-2010/6-2013	Bonn University, Master of Science, Mathematics
9-2006/9-2010	National University of Colombia, Mathematician

Research Interests

Model theory:	Classification theory, stability theory.
Set theory:	Generalized descriptive set theory, tower forcing, generic absoluteness, forcing axioms and large cardinals.

Teaching Experience

Spring 2018	University of Helsinki, Combinatorics (undergraduate course)
8-9 2017	Intensive course at National University of Colombia, Introduction to generalized descriptive set theory (advance course)
Spring 2017	Teaching assistant at University of Helsinki, Elements of set theory (undergraduate course)
Spring 2016	Teaching assistant at University of Helsinki, Computability theory (undergraduate course)
Spring 2015	Teaching assistant at University of Helsinki, Logic I (undergraduate course)
Spring 2014	Teaching assistant at University of Helsinki, Elements of set theory (undergraduate course)

| 2007-2010 | Colombian Mathematics Olympiad, Basic Number theory and Euclidean Geometry (courses for high school students) |

Research Experience

1-5 2018	Lecturer substitute at the Department of Mathematics and Statistics, University of Helsinki. Reasearch on the Borel reducibility
2014-2017	Doctoral researcher at the Department of Mathematics and Statistics, University of Helsinki. Reasearch on the Borel reducibility
8-9 2017	Visiting researcher at the National University of Colombia. Research on descriptive set theory

Referee

Proceedings of the American Mathematical Society

Publications

T. Hyttinen, V. Kulikov, M. Moreno, A generalized Borel-reducibility counterpart of Shelah's main gap theorem. Archive for Mathematical Logic. (2017) 56: 175--185

T. Hyttinen, M. Moreno, On the reducibility of isomorphism relations.
Mathematical Logic Quarterly. (2017) 63: 175--192.

D. Asperó, T. Hyttinen, V. Kulikov, M. Moreno, Reducibility of equivalence relations arising from non-stationary ideals under large cardinal assumptions. (arXiv:1708.02814) submitted.

M. Moreno, The isomorphism relation of theories with S-DOP in generalized Baire spaces. (arXiv:1803.08070) submitted.

T. Hyttinen, V. Kulikov, M. Moreno, Σ_1^1-complete quasi-orders in the generalized descriptive set theory. Preprint.

Conference Presentations

| 04.07.2017 | D. Asperó, T. Hyttinen, V. Kulikov, M. Moreno, Reflection principles and the generalized Baire spaces. 6th European Set Theory conference, (contributed talk). |
| 30.01.2017 | D. Asperó, T. Hyttinen, V. Kulikov, M. Moreno, The equivalence modulo non-stationary ideals. Arctic Set Theory Workshop III, Kilpisjärvi, (invited talk). |

27.09.2016	M. Moreno, Strong DOP and the Borel hierarchy. Workshop on Set-theoretical aspects of the model theory of strong logics, Barcelona, (invited talk).
21.09.2016	T. Hyttinen, V. Kulikov, M. Moreno The Equivalence Modulo Non-stationary Ideals and Shelah's Main Gap Theorem. Bonn Set Theory Workshop 2016: Generalized Baire spaces, Bonn, (contributed talk).
19.03.2016	T. Hyttinen, V. Kulikov, M. Moreno, Shelah's Main Gap Theorem in the Borel-reducibility hierarchy. 27th Nordic Congress of Mathematicians, Stockholm, (invited talk).
07.01.2016	T. Hyttinen, V. Kulikov, M. Moreno, Borel reducibility and the isomorphism relation. Finnish Mathematical Days 2016, Turku, (invited talk).
15.02.2015	T. Hyttinen, M. Moreno, On the reducibility of the isomorphism relation. Arctic Set Theory Workshop II, Kilpisjärvi, (invited talk).

Activities

2015, 2017	Arctic Set Theory, Invited participant. Kilpisjarvi Biological Research Station
2015	Logic Colloquium 2015 - Organizing committee. Helsinki
2015	SLS Summer School in Logic 2015 - Organizing committee. Helsinki
2007 - 2010	Colombian Mathematics Olympiad - Organizing committee and trainer
2010	Colombian Deputy Leader, XII Olimpiada Matemática de Centroamérica y el Caribe. Mayagüez, Puerto Rico
2009	Coordinator, XI Olimpiada Matemática de Centroamérica y el Caribe. Girardot, Colombia
2008, 2009	Jury, Olimpíada Matemática Rioplatense. Buenos Aires, Argentina

Popular Science

Article:	M. Moreno, Is it possible that you really don't have choice? June 2017, Skolar.fi
Talk:	M. Moreno, Representable matroids. Students Seminar Universidad Nacional de Colombia, 2010
Propoused:	First and fourth problem, level 3; fifth problem, level 2; first problem, level A, XVII Olimpíada Matemática Rioplatense, 2009

Proposed: Fifth and third problem, nivel superior XXVIII Olimpíada Colombiana de Matemáticas, 2009

Proposed: Fifth problem, XIII Olimpíada Iberoamericana de Matemáticas, 2008

Proposed: Second problem, primer nivel XXVII Olimpíada Colombiana de Matemáticas, 2008

Proposed: Second problem, XII Olimpíada Iberoamericana de Matemáticas, 2007

Proposed: Second problem, IX Olimpíada de Matemáticas de Centroamérica y el Caribe, 2007

Scholarships and Grants

2017   Travel grant, to attend 6th European Set Theory conference, Budapest. By Domast Helsinki University

2017   Travel grant, to attend Arctic Set Theory Workshop III, Kilpisjärvi. By Domast Helsinki University

2016   Travel grant, to attend Workshop on Set-theoretical aspects of the model theory of strong logics, Barcelona. By Domast Helsinki University

2016   Travel grant, partial grant to attend Bonn Set Theory Workshop 2016: Generalized Baire spaces, Bonn. By Domast Helsinki University

2016   Travel grant, to attend 27th Nordic Congress of Mathematicians, Stockholm. By Domast Helsinki University

2016   Travel grant, to attend Finnish Mathematical Days 2016, Turku. By Domast Helsinki University

2015   Travel grant, to attend Arctic Set Theory Workshop II, Kilpisjärvi. By Domast Helsinki University

2014 - 2017   Funded PhD position, Doctoral Programme in Mathematics and Statistics, University of Helsinki

2006 - 2009   Payment exemption of registration rights granted by the Board of the Faculty of Science of National University of Colombia for the periods 2010-I, 2009-I, 2008-I, 2007-I

2006   Payment exemption rights, best admission exam of National University of Colombia 2006-I

Honors and Awards

2008, 2009   Honorable mention, South América/North-Programming Contest

2009	Bronze, I Competencia Iberoamericana Interuniversitaria de Matemáticas
2008	Fifth, XII Olimpíada Colombiana Universitaria de Matemáticas
2008	Bronze, XI Olimpíada Iberoamericana Universitaria
2008	Contestant, II South Eastern European Mathematical Olympiad for University Students
2006	Honorary Registration Fee granted by the Board of the Faculty of Science of National University of Colombia for the period 2007-I
2006	Honorable mention, IX Olimpíada Iberoamericana Universitaria
2005	Contestant, XVII Asian Pacific Mathematics Olympiad
2005	Contestant, XLVI International Mathematical Olympiad

Professional Memberships

2016 - present   European Set Theory Society

Languages

Spanish	Native language
English	Fluent
German	B2.2 (B1 certificate)
Finnish	Basic knowledge (Suomi 1/6 certificate)

Computer literacy

Word, Excel, Powerpoint, C++, Linux, Latex, LibreOffice

Hobbies

History, Soccer, Crossfit, Chess

References available upon request