

September 6, 2016
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Michal Doucha

EMPLOYMENTS **Institute of Mathematics**, Czech Academy of Sciences, Prague, Czech Republic

- since September 2016

Laboratoire de Mathématiques, Université de Franche-Comté, France, post-doctoral position funded by the region Franche-Comté

- September 2015-August 2015

Institute of Mathematics, Polish Academy of Sciences, Marie Curie COFUND fellowship

- January 2014-June 2015

RESEARCH INTERESTS

- topological and geometric group theory, functional analysis, metric spaces/embeddings, model theory and descriptive set theory

EDUCATION

Charles University in Prague, Faculty of Mathematics and Physics

- Doctoral degree, *2009-2013*
 - Advisor: Jindřich Zapletal
 - Field of study: Geometry, Topology, Global analysis and General structures
 - Thesis title: Forcing, descriptive set theory, analysis
 - Graduation: June 2013

Masaryk University in Brno, Faculty of Science

- Master's degree, *2004-2009*
 - Field of study: Algebra and Discrete Mathematics
 - Master's thesis: Combinatorial Set Theory
 - Advisor: Bohuslav Balcar

**PUBLICATIONS
AND
PREPRINTS**

- I. Ben Yaacov, M. Doucha, A. Nies, T. Tsankov, *Metric Scott analysis*, arXiv:1407.7102 [math.LO], 2016, submitted
- M. Doucha, *Generic norms and metrics on countable abelian groups*, arXiv:1605.06323 [math.GN], 2016, submitted
- M. Doucha, *Metric topological groups: their metric approximation and metric ultra-products*, arXiv:1601.07449 [math.GR], 2016, submitted
- M. Doucha, *An example of a non-commutative uniform Banach group*, to appear in J. Math. Anal. Appl., DOI: 10.1016/j.jmaa.2016.08.034
- M. Doucha, *Metrical universality for groups*, to appear in Forum Math., DOI: 10.1515/forum-2015-0181
- M. Cúth, M. Doucha, P. Wojtaszczyk, *On the structure of Lipschitz-free spaces*, Proc. Amer. Math. Soc. 144 (2016), 3833–3846
- M. Cúth, M. Doucha, *Lipschitz-free spaces over ultrametric spaces*, Mediterr. J. Math. 13 (2016), 1893–1906 (open access)
- M. Doucha, *Metrically universal abelian groups*, accepted to Trans. Amer. Math. Soc., arXiv:1312.7683 [math.GN], 2014
- M. Doucha, *Universal and homogeneous structures on the Urysohn and Gurarij spaces*, accepted to Israel J. Math., 2015, arXiv:1503.05204
- M. Doucha, *Non-universality of automorphism groups of uncountable ultrahomogeneous structures*, Topology Appl. 180 (2015), 209–217
- M. Doucha, *Non-abelian group structure on the Urysohn space*, Fund. Math. 228 (2015), no. 3, 251–263
- M. Doucha, *Scott rank of Polish metric spaces*, Ann. Pure Appl. Logic 165 (2014), Issue 12, 1919–1929
- B. Balcar, M. Doucha, M. Hrušák, *Base tree property*, Order 32 (2015), Issue 1, 69–81
- M. Doucha, *F_σ equivalence relations and Laver forcing*, J. Symbolic Logic 79(2014), issue 02, pp. 644–653
- M. Doucha, *Canonizing certain Borel equivalences for Silver forcing*, Topology Appl. 159 (2012), no. 13, 2973–2979

GIVEN TALKS Conferences

- Jul 27, 2016* Generic norms and metrics on countable abelian groups, Toposym, Prague, Czech Republic
- Jul 19, 2016* On some applications of Fraïssé theory in Banach space theory, Transfinite methods in Banach spaces and algebras of operators, Będlewo, Poland
- Jun 6, 2016* Metric ultraproducts of metric groups, conference Polish groups and geometry, Paris, France
- Dec 7, 2015* On universal Polish metric groups, conference Descriptive Set Theory in Paris, France
- Dec 1, 2015* Some results on the structure of Lipschitz-free spaces, Journées du GDR Analyse Fonctionnelle, Harmonique et Probabilités, CIRM Luminy, France
- Aug 26, 2015* Metrically universal groups, International Conference on Set-Theoretic Topology and its Applications, Yokohama, Japan
- Jun 23, 2015* An example of a non-commutative uniform Banach group, 30th Summer Conference on Topology and its Applications, Galway, Ireland
- Dec 20, 2014* Metrically universal groups, ARA workshop, Research Center Whiritoa, New Zealand
- Sep 16, 2014* Metrically universal Polish group, Workshop in set theory, Będlewo, Poland
- Jul 4, 2014* Group structures on the Urysohn universal space, 2014 International Conference on Topology and its Applications, Nafpaktos, Greece
- Mar 4, 2014* Scott rank of Polish metric spaces, Infty Final Conference, Bonn, Germany
- Jan 27, 2014* Universal groups and group structures on the Urysohn space, Winter School on Abstract Analysis 2014, Hejnice, Czech Republic
- Jun 13, 2013* Universal and ultrahomogeneous Polish metric structures, Young Set Theory Workshop 2013, Santuario di Oropa, Italy
- Feb 1, 2013* Universal objects on the Urysohn universal space, Winter School on Abstract Analysis 2013, Hejnice, Czech Republic
- Jul 8, 2012* Borel equivalence relations and Laver forcing, Trends in Set Theory 2012, Warsaw, Poland
- Aug 11, 2011* Canonizing Borel equivalence relations for the Silver forcing, Toposym 2011, Prague, Czech Republic
- Feb 27, 2010* Base tree property, South Eastern Logic Symposium, Gainesville, FL, USA

**ATTENDANCE
AT SELECTED
SCHOOLS**

- Feb 1-Feb 12, 2016* Winter school on Measured group theory, Erwin Schrödinger International Institute for Mathematics and Physics, Vienna, Austria
- Jun 28-Jul 3, 2015* Topological Quantum Groups - Graduate School, Będlewo, Poland
- Jan 11-Jan 16, 2015* NZMRI Summer School 2015, Algebra, Number Theory and Discrete Geometry, Nelson, South Island, NZ
- Oct 19-Oct 24, 2014* Autumn School on Nonlinear Geometry of Banach Spaces and Applications, Métabief, France

**RESEARCH
STAYS**

- University of Auckland, Auckland, New Zealand
 - November 20, 2014 - January 30, 2015
 - invited by prof. André Nies for collaboration on a common research project
- The Hausdorff Research Institute for Mathematics, Bonn, Germany
 - September 2 - December 20 2013
 - Participant of the Universality and Homogeneity trimester program
- Fields Institute for Research in Mathematical Sciences, Toronto, Canada
 - Sep 6-Oct 10 2012
 - Participant of the thematic program on forcing
- University of Florida, Gainesville, USA
 - Jan 5-Mar 3 2012
 - Visiting scholar
- University of Florida, Gainesville, USA
 - Jan 28-Apr 26 2010
 - Visiting scholar

**PROFESSIONAL
EXPERIENCE**

Journal reviewer for Topology and its Applications, Order, Fundamenta Mathematicae

Reviewer for MathSciNet