RESUME

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Areas of specialization

Mathematical logic, set theory

Education

DSc. in Mathematics, Czech Academy of Sciences 2007Ph. D. in Mathematics, The Pennsylvania State Univ. 1995, supervisor T. JechM. A. in Mathematics, Charles University, Prague 1994B. A. in Mathematics, Charles University, Prague 1990

Employment

2009-present professor, University of Florida

2009-2012 Purkyně Fellow, Academy of Sciences, Czech Republic

2005-2009 associate professor, University of Florida

2000-2005 assistant professor, University of Florida

1998-2000 John Wesley Young instructor, Dartmouth College

1996-1998 Bateman research instructor, California Institute of Technology

1995-1996 postdoctoral fellow, Math. Sciences Research Institute Berkeley

1990-1995 teaching assistant, The Pennsylvania State University

Publications

Sequential topologies and Dedekind finite sets. MLQ Math. Log. Q. 68 (2022), no. 1, 107109

Set Theory and Foundations of Mathematics: An Introduction to Mathematical Logic, Volume II: Foundations. With Douglas Cenzer, Christopher Porter, and Jean Larson, World Scientific. (2022), 239 pages, ISBN: 978-981-124-384-4; 978-981-124-385-1; 978-981-124-386-8

Structure and Randomness in Computability and Set Theory (edited with Douglas Cenzer and Chris Porter), World Scientific Press (2020), 366 pages, ISBN-10: 9813228229

Ideals and their generic ultrafilters, with David Chodounský, Notre Dame J. Formal Logic 61, Number 3 (2020), 403-408

Preservation theorems for Namba forcing, with Osvaldo Guzmán and Michael Hrušák, Annals of Pure and Applied Logic 172, Issue 2, February 2021, 102869 Geometric set theory, with Paul Larson, 320 pp. AMS Surveys and Monographs 248, 2020, ISBN 978-1-4704-6018-1

Set Theory and Foundations of Mathematics: An Introduction to Mathematical Logic, Volume I: Set Theory. With Douglas Cenzer, Christopher Porter, and Jean Larson, World Scientific 2020, ISBN 978-981-120-192-9

Hypergraphs and proper forcing, J. Math. Log. 19 (2019), no. 2, 1950007, 64 pp.

Discontinuous homomorphisms, selectors, and automorphisms of the complex field, with Paul Larson, Proc. Amer. Math. Soc. 147 (2019), no. 4, 1731–1737 Separating equivalence classes. Comment. Math. Univ. Carolin. 59 (2018), no. 4, 531540

Bounded Namba Axiom may fail, Math. Logic Quarterly 64 (2018), no. 3, 170–172

Cardinal invariants of closed graphs, with Francis Adams, Israel J. Math. 227 (2018), no. 2, 861-888

Canonical models for fragments of the axiom of choice, with Paul Larson, J. Symb. Log. 82 (2017), no. 2, 489-509

Strong measure zero sets in Polish groups, with Michael Hrušák, Illinois J. Math. 60 (2016), no. 3-4, 751760

Ramsey ultrafilters and countable-to-one uniformization, with Paul Larson and Richard Ketchersid, Topology Appl. 213 (2016), 190198

Interpreter for topologists, J. Log. Anal. 7 (2015), Paper 6, 61 pp.

Why Y-c.c., with David Chodounský, Annals of Pure and Applied Logic 166 (2015) 1123-1149

Dimension theory and forcing. Topology Appl. 167 (2014), 3135

Cofinalities of Borel ideals, with Michael Hrusak and Diego Rojas Rebolledo, Math. Log. Q. 60 (2014), no. 1-2, 3139

Analytic equivalence relations and the forcing method. Bull. Symbolic Logic 19 (2013), no. 4, 47349

Canonical Ramsey theory on Polish spaces, with Vladimir Kanovei and Marcin Sabok, Cambridge Tracts in Mathematics, 202. Cambridge University Press, Cambridge, 2013

Separation problems and forcing. J. Math. Log. 13 (2013), no. 1350002, 23 pp. On the Steinhaus and Bergman properties for infinite products of finite groups, with Simon Thomas, Confluentes Math. 4 (2012)1250002, 26 pp.

Pinned equivalence relations, Mathematical Research Letters 18 (2011) 559-564 More ideals with the Komjath-Laczkovich property, Topology and Its Applications 158 (2011) 1149-1156

Forcing properties of ideals of closed sets, with Marcin Sabok, J. Symbolic Logic 76 (2011) 1075–1095

Ramsey theorem for product of finite sets with submeasures, with Saharon Shelah, Combinatorica 31 (2011) 225-244

On the existence of a sigma-closed dense subset, Comment.Math.Univ.Carolin. 51,3 (2010) 513-517

Applications of the ergodic iteration theorem. Math. Log. Q. 56 (2010), no. 2, 116-125

Regular embeddings of the stationary tower and Woodin's Sigma Two Two maximality theorem, with Richard Ketchersid and Paul Larson, J. Symbolic Logic 75 (2010), no. 2, 711-727

Preserving $P\mbox{-}{\rm points}$ in definable forcing. Fund. Math. 204 (2009), no. 2, 145-154

Increasing δ_2^1 by a Namba-style forcing, with Richard Ketchersid and Paul Larson, J. Symbolic Logic 72 (2007), 1372–1378

On the structure of stationary sets, with Qi Feng and Thomas Jech, Sci. China Ser. A 50 (2007) 615-627

Forcing with quotients, with Michael Hrušák, Archive Math. Logic 47 (2008), 719-739

Forcing idealized, Cambridge Tracts in Mathematics, Cambridge University Press 2008, ISBN 9780521874267

Proper forcing and rectangular Ramsey theorems, Israel J. Math. 152 (2006), 29–47

Between Maharam's and von Neumann's problem, with Ilijas Farah, Math. Research Letters 11 (2004), 673--684

Four and more, Ann. Pure Appl. Logic, with Ilijas Farah, Ann. Pure Appl. Logic 140 (2006), 3–39

Descriptive set theory and definable forcing, Memoirs Amer. Math. Soc. 793 (2004)

Games with creatures, with S. Shelah, Comm. Math. Univ. Carolinae 44 $(2003),\,9{-}23$

Duality and the PCF theory, with S. Shelah, Math. Research Letters 9 (2002), $585{-}595$

Forcing with ideals of closed sets, Comm. Math. Univ. Carolinae 43,1 (2002), $181{-}188$

Isolating cardinal invariants, J. Math. Logic, 2003, 143-162

Terminal notions in set theory, Ann. Pure Appl. Logic 109 (2001), 89–116

Transfinite open games, Topology and Its Applications 111 (2001), 289–297

Killing ideals and adding reals, J. Symbolic Logic 65 (2000), 747–755

The nonstationary ideal and the other sigma ideals on omega one, Trans. Amer. Math. Soc. 352 (2000), 3981–3993

Terminal notions, Bull. Symbolic Logic 5 (1999), 470–484

On the Alaoglu-Birkhoff equivalence of posets, with S. Todorcevic, Illinois J. Math. 43 (1999), 281–292

Canonical models for aleph one combinatorics, with S. Shelah, Ann. Pure Appl. Logic 98 (1999), 217–259

Proper forcing and absoluteness in L(R), with I. Neeman, Comm. Math. Univ. Carolinae 39 (1998), 281–301

A dichotomy for forcing notions, Math. Res. Lett. 5 (1998) 213-226

Preserving sigma-ideals, J. Symbolic Logic 63 (1998), 1437–1441

Keeping additivity of the null ideal small, Proc. Amer. Math. Soc. 125 (1997), 2443–2451

Embeddings of Cohen algebras, with S. Shelah, Adv. Math. 126 (1997), 93-119

Semi-Cohen boolean algebras, with B. Balcar and T. Jech, Ann. Pure Appl. Logic 87 (1997), 187–208

Strongly almost disjoint functions, Israel J. Math. 97 (1997), 101–111

Small forcings and Cohen reals, J. Symbolic Logic 62 (1997), 280–284

Splitting number at uncountable cardinals, J. Symbolic Logic 62 (1997), 35–42 A classification of definable partial orders on omega one, Fund. Math. 153 (1997), 141-144

Characterization of the club forcing, in Papers on General Topology and Applications, S. Andima, R. Flagg, G. Itzkowitz, Y. Kong, R. Kopperman and P. Misra, eds., Annals of the New York Academy of Sciences 806 (1996), 476–484 A new proof of Kunen inconsistency, Proc. Amer. Math. Soc. 124 (1996), 2203-2205

More on the cut and choose game, Ann. Pure Appl. Logic 76 (1995), 291–301

Grants

 $2020\mathchar`-2022$ NSF grant DMS 1945890 to organize annual weekend logic conference at UF, \$45000

2014-2018 NSF grant DMS-1362273 to organize annual weekend logic conference at UF, 45000

2012-2016 NSF grant DMS 1161078

2010/2011 AIP project MEB051006, cooperation between Academy of Sciences, Czech Republic, and University of Wroclaw, CZK132000

2009/2010 AIP project MEB060909, cooperation between Academy of Sciences, Czech Republic, and Kurt Goedel Center in Vienna, CZK126000

2009-2012 Purkyně fellowship, Czech Academy of Sciences

2009-present grant IAA100190902 of Grant Agency of the Academy of Sciences of the Czech Republic

2008-2012 NSF grant DMS 0801114, \$110000

 $2006\text{-}2007\;\mathrm{NSF}$ grant DMS 0532644 (PI) to organize special year in logic at UF, \$138000

2003-2006 grant GA ČR 201-03-0933 of the Grant Agency of Czech Republic 2003-2006 NSF grant DMS 0335481 to organize an annual logic conference at UF, \$15000

2003-2006 NSF grant DMS 0300201 103827

2000-2003 NSF grant DMS 0071437, 61431

2000-2003 grant GA ČR 201-00-1466 of the Grant Agency of Czech Republic 1997-2000 grant GA ČR 201-97-0216 of the Grant Agency of Czech Republic

Selected lectures

Two Graph Games. An invited lecture at "Advances in Set Theory" meeting, Hebrew University, Jerusalem, July 2022

Algebra and Axiom of Choice. An invited lecture at "Set Theory Workshop", Erwin Schroedinger Institute, Vienna, July 2022

Hypergraphs and Proper Forcing. An invited lecture at Ideals and exceptional sets in Polish spaces conference at Bernoulli Center, Lausanne, Switzerland, June 5-8, 2018 Geometric Set Theory. An invited lecture at Set theory today conference at Kurt Goedel Research Center, Vienna, Austria, September 10-14, 2018 Logic colloquium, UCLA December 2017 January 2016 ASL Winter Meeting, plenary lecture May 2015, Rutgers University, four lecture tutorial April 2015 Fields Institute forcing meeting October 2014, Luminy set theory meeting May 2014, Bedlewo Young Set Theory meeting, a three lecture tutorial January 2011 Oberwolfach set theory meeting January 2008 Oberwolfach set theory meeting October 2007 Special session, AMS regional meeting, Rutgers July 2007 First European Set Theory Meeting, Bedlewo, Poland October 2006 Luminy set theory meeting August 2005 Logic Colloquium, Athens, plenary lecture March 2004 Midrasha Mathematicae, Jerusalem, a three lecture tutorial

University Governance and Departmental Service

2015-22 Graduate Committee

2007-8 Colloquium committee, Visitors and conferences committee

2006-7 Postdoc search committee (chair), Visitors and conferences committee

2005-6 Postdoc search commitee (chair), Visitors and conferences committee

 $2004\mathchar`-5$ Group proposals committee, Visitors and conferences committee

 $2002\mathchar`-3$ Visitors and conferences committee

2001-2 Visitors and conferences committee

Honors

2009 Purkyně Fellowship, Academy of Sciences, Czech Republic 2001 CLAS research award of University of Florida 1995 Pritchard dissertation fellowship, The Pennsylvania State University

Conferences Organized

North American Annual meeting of Association for Symbolic Logic 2022, Chair of the program committee.

AMS Special Session on Cech-Stone Compactification of Semigroups: Algebra, Topology, Dynamics, and Combinatorics, Southeastern Sectional Meeting of AMS, Gainesville, November 2019. With Dana Bartosova

AMS-ASL Special session on Choiceless Set Thoey and Related Areas, Joint Mathematics Meetings, Denver, January 2020. With Paul Larson

Winter school in theory 2011 and 2012, Hejnice, Czech Republic, program committee

events of the Special year in Logic 2006-7 at UF, including 6 major meetings and hundreds of guests

South Eastern Logic Symposium, University of Florida, March 2001-2022 except for 2002, 2007, 2019

Extended Visits

February-July 2022, Institute of Mathematics, Czech Academy of Sciences, Prague

August-December 2012 Fields Institute, Toronto

June 2004 Universidad Nacional Autonoma de Mexico, Morelia, Mexico

November-December 2003 York University, Toronto

September-November 2003 CRM, Universita Autonoma Barcelona

July 2003 National University of Singapore

June 2003 Kobe University, Kobe, Japan

May 2003 California Institute of Technology

July-August 2002 Academia Sinica, Beijing

June 2002 Universite Paris VII, and IHES

April-May 2002 International Graduate School, Friedrich-Wilhelms Universität Bonn

February-March 2002 Hebrew University, Jerusalem

Other professional activities

Referee: Advances in Mathematics, Annals of Pure and Applied Logic, Journal of Symbolic Logic, Fundamenta Mathematica, Order, Proceedings of American Mathematical Society, University Lecture Series of AMS

Reviewer: DMS NSF, 1999, Israel Science Foundation 2004, United States-Israel Binational Science Foundation 2006, Wissenschaftfonds (Austrian scientific foundation), 2008

Panelist: DMS NSF, intermittently