

**ASSOCIATION FOR SYMBOLIC LOGIC**  
**2009 NORTH AMERICAN ANNUAL MEETING**

University of Notre Dame  
Notre Dame, Indiana

May 20-23, 2009

**REVISED PROGRAM**

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Program Committee: R. Heck, C.W. Henson, J. Knight, R. Moosa, A. Urquhart (Chair), M. Zeman.

Local Organizing Committee: T. Bays, P. Blanchette, S. Buechler, P. Cholak, M. Detlefsen (co-chair), C. Franks, J. Knight, S. Starchenko (co-chair).

Please see [www.math.nd.edu/conferences/as109](http://www.math.nd.edu/conferences/as109) for additional information.

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All lectures will be held in DeBartolo Hall (Building 1144 on the campus map) on the campus of the University of Notre Dame. The registration desk, coffee breaks and welcoming reception are in the atrium in McKenna Hall (Building 1079 on the campus map). The book exhibit is in Rooms 100-104, McKenna Hall.

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WEDNESDAY, MAY 20

Morning, DeBartolo Hall 102

8:15 – 8:45 Coffee and Snacks  
8:45 – 9:00 Opening Remarks  
9:00 – 10:00 Invited Lecture: **John R. Steel** (U. of California, Berkeley) *More mice*.  
10:15 – 11:15 Invited Lecture: **Kit Fine** (New York University) *The logic of vagueness*.

Afternoon, DeBartolo Hall 126,129,131

2:00 – 3:40 Special sessions: Computability Theory, Model Theory, Set Theory. *See pages 3, 4 and 5.*  
4:00 – 5:30 Contributed talks: Sessions A,B,C. *See page 6.*  
5:30 – 7:00 Welcoming Reception, McKenna Hall

THURSDAY, MAY 21

Morning, DeBartolo Hall 102

- 8:30 – 9:00 Coffee and Snacks  
9:00 – 10:00 Invited Lecture: **Patricia Blanchette** (University of Notre Dame) *Logical entailment and conceptual analysis in Frege.*  
10:30 – 11:30 Invited Lecture: **Heike Mildenberger** (University of Vienna) *Filters and scales.*

Afternoon, DeBartolo Hall 126,129,131,136

- 2:00 – 3:40 Special sessions: Computability Theory, Model Theory, Set Theory, Complexity of Propositional Proofs. *See pages 3, 4, and 5.*  
4:00 – 5:30 Contributed talks: Sessions D,E. *See page 6.*

FRIDAY, MAY 22

Morning, DeBartolo Hall 102

- 8:30 – 9:00 Coffee and Snacks  
9:00 – 10:00 Invited Lecture: **André Nies** (University of Auckland) *Lowness properties and cost functions.*  
10:15 – 11:15 Invited Lecture: **Alexandra Shlapentokh** (East Carolina University) *Minimizing the universal or Hilbert's tenth problem over subrings of  $\mathbb{Q}$ .*  
11:30 – 12:30 Retiring ASL Presidential Address: **Alexander S. Kechris** (California Institute of Technology) *The complexity of classification problems in ergodic theory.*

Afternoon, DeBartolo Hall 126,129,131,136

- 2:00 – 3:40 Special sessions: Computability Theory, Model Theory, Set Theory, Structural View of Mathematical Objects. *See pages 3, 4, and 5.*  
4:00 – 5:00 Invited Lecture (DeBartolo Hall 102): **Alexander Razborov** (University of Chicago) *Flag algebras.*

SATURDAY, MAY 23

Morning, DeBartolo Hall 102

- 8:30 – 9:00 Coffee and Snacks  
9:00 – 10:00 Invited Lecture: **Boris Zilber** (University of Oxford) *Model theory, non-commutative geometry and physics.*  
10:15 – 11:15 Invited Lecture: **Anand Pillay** (University of Leeds) *Theories without the independence property.*

## Special Sessions on Computability Theory

Session A, WEDNESDAY, MAY 20  
DeBartolo Hall 126

- 2:00 – 2:30 **Carl G. Jockusch, Jr.\***, **Bart Kastermans**, **Steffen Lempp**, **Manuel Lerman**, **Reed Solomon** (University of Illinois) *Stability and posets.*
- 2:35 – 3:05 **Joseph S. Miller** (University of Wisconsin-Madison) *Embeddings of computable linear orders.*
- 3:10 – 3:40 **Julia Knight**, **Karen Lange\*** (University of Notre Dame) *Structures associated with real closed fields.*

Session B, THURSDAY, MAY 21  
DeBartolo Hall 126

- 2:00 – 2:30 **Alberto Marcone**, **Antonio Montalbán\*** (University of Chicago) *On the ordinal Veblen functions for computability theories.*
- 2:35 – 3:05 **Johanna N.Y. Franklin** (National University of Singapore) *Subclasses of the Kurtz random reals.*
- 3:10 – 3:40 **Chitat Chong**, **Steffen Lempp\***, **Yue Yang** (University of Wisconsin-Madison) *On a question of Hirschfeldt and Shore.*

Session C, FRIDAY, MAY 22  
DeBartolo Hall 126

- 2:00 – 2:30 **Mia Minnes** (Massachusetts Institute of Technology) *Automatic model theory of linear orders.*
- 2:35 – 3:05 **Russell Miller\***, **Hans Schoutens** (Queens College - CUNY) *Computably categorical fields via Fermat's Last Theorem.*
- 3:10 – 3:40 **Jan Reimann** (University of California at Berkeley) *The structure of NCR inside  $\Delta_2^0$ .*

## Special Sessions on Model Theory

Session A, WEDNESDAY, MAY 20

DeBartolo Hall 129

- 2:00 – 2:30 **Sylvia Carlisle** (University of Illinois) *Model theory of real trees.*  
2:35 – 3:05 **Isaac Goldbring** (University of Illinois) *Thorn-forking and rosiness in continuous logic.*  
3:10 – 3:40 **Gareth Boxall** (University of Leeds) *Lovely pairs of fields.*

Session B, THURSDAY, MAY 21

DeBartolo Hall 129

- 2:00 – 2:30 **M.E. Malliaris** (University of California, Berkeley) *Persistence and regularity in the characteristic sequence.*  
2:35 – 3:05 **Laurel G. Miller-Sims** (McMaster University) *Residually valued fields.*  
3:10 – 3:40 **Jonathan Kirby** (University of Oxford) *Exponential algebraic closure.*

Session C, FRIDAY, MAY 22

DeBartolo Hall 129

- 2:00 – 2:30 **Janak Ramakrishnan** (Université Lyon I) *Types in  $o$ -minimal theories.*  
2:35 – 3:05 **G.O. Jones** (University of Manchester) *Model completeness results for certain  $o$ -minimal expansions of the real field.*  
3:10 – 3:40 **Guillaume Valette** (Fields Institute) *Metric geometry in  $o$ -minimal structures.*

## Special Session: Complexity of Propositional Proofs

THURSDAY MAY 21

De Bartolo Hall 136

- 2:00 – 2:30 **Eli Ben-Sasson** (Technion – Israel Institute of Technology) *Size-space tradeoffs in propositional proof complexity.*  
2:35 – 3:05 **Sam Buss** (University of California, San Diego) *Higher polynomial local search for fragments of bounded arithmetic.*  
3:10 – 3:40 **Jan Johannsen** (Ludwig-Maximilians-Universität München) *Exponential lower bounds for width-restricted clause learning.*

## Special Session: The Structural View of Mathematical Objects

FRIDAY MAY 22  
De Bartolo Hall 136

- 2:00 – 2:30 **Charles Parsons** (Harvard University) *Some objections to structuralism.*  
2:35 – 3:05 **Steve Awodey** (Carnegie Mellon University) *From sets to types to categories to sets.*  
3:10 – 3:40 **Colin McLarty** (Case Western Reserve University) *Identity and existence in categorical foundations.*

## Special Sessions on Set Theory

Session A, WEDNESDAY, MAY 20  
DeBartolo Hall 131

- 2:00 – 2:30 **Grigor Sargsyan** (University of California, Berkeley) *The core model induction.*  
2:35 – 3:05 **Philip Welch** (University of Bristol) *Strengthenings of Chang's Conjecture.*  
3:10 – 3:40 **Itay Neeman** (University of California at Los Angeles) *Aronszajn trees and failure of the singular cardinal hypothesis.*

Session B, THURSDAY, MAY 21  
DeBartolo Hall 131

- 2:00 – 2:30 **Paul Larson** (Miami University) *There may be just continuum many universally measurable sets.*  
2:35 – 3:05 **Dima Sinapova** (University of California, Irvine) *Exploring singular cardinal combinatorics.*  
3:10 – 3:40 **James Cummings** (Carnegie Mellon University) *Results in rainbow Ramsey theory.*

Session C, FRIDAY, MAY 22  
DeBartolo Hall 131

- 2:00 – 2:30 **Su Gao** (University of North Texas) *On the classification of separable Banach spaces up to local equivalence.*  
2:35 – 3:05 **John Clemens** (Pennsylvania State University) *Isomorphism of homogeneous structures.*  
3:10 – 3:40 **Ślawomir Solecki** (University of Illinois at Urbana-Champaign) *Spatial models of Boolean actions and groups of isometries.*

## CONTRIBUTED TALKS

Session A, WEDNESDAY, MAY 20  
DeBartolo Hall 126

- 4:00 – 4:25 **Cameron Freer**, *Computable exchangeable sequences have computable de Finetti measures.*  
4:30 – 4:55 **Hunter Johnson**, *Compression schemes, o-minimal structures, and uniform finite type definability.*  
5:00 – 5:25 **Thomas F. Kent**, *s-degrees within e-degrees.*

Session B, WEDNESDAY, MAY 20  
DeBartolo Hall 129

- 4:00 – 4:25 **Benjamin Ellison**, *Boolean valued models and model companions.*  
4:30 – 4:55 **Prerna Juhlin**, *Dependence in superstable theories of finite rank.*  
5:00 – 5:25 **Cyrus F. Nourani**, *Model, fields, and factorization.*

Session C, WEDNESDAY, MAY 20  
DeBartolo Hall 131

- 4:00 – 4:25 **Jared Corduan**, *Ramsey partial orderings and reverse mathematics.*  
4:30 – 4:55 **Sean Cox**, *Strong ideal properties which yield extenders in the core model.*  
5:00 – 5:25 **Marcia J. Groszek**, *Consistency strength of the binary tree pigeonhole principle.*

Session D, THURSDAY, MAY 21  
DeBartolo Hall 126

- 4:00 – 4:25 **Katalin Bimbó**, *Disjunction property in the relevance logic  $B_+^{otT}$ .*  
4:30 – 4:55 **Dolph Ulrich**, *A single axiom for implicative  $\mathbf{R}$ .*  
5:00 – 5:25 **Dan E. Willard**, *On self justification and axiomatic stability.*

Session E, THURSDAY, MAY 21  
DeBartolo Hall 129

- 4:00 – 4:25 **Benjamin Ellison, Jonathan Fleischmann, Dan McGinn, and Wim Ruitenburg\***, *Eliminating quantifiers in intuitionistic JRS theories.*  
4:30 – 4:55 **Wim Ruitenburg**, *When are classical Kripke models intuitionistically isomorphic?*  
5:00 – 5:25 **Dennis F. Cudia**, *Inductive logic of risk factors.*