Program Committee: S. Awodey, I. Farah (Chair), A. Kanamori, R. Moosa, J. Reimann, P. Scott.
Local Organizing Committee: S. Ben-David, B. Csima (Chair), D. DeVidi, R. Moosa, and R. Willard.
Please see http://www.math.uwaterloo.ca/~asl2013/ for additional information.

All activities for the meeting will take place on the campus of the University of Waterloo. The plenary lectures will be in the lecture hall QNC 1102/1103 of the Quantum–Nano building (QNC) and special sessions will be in Math & Computer Building (MC) and QNC. Registration, book exhibits, and morning coffee and refreshments will be in the QNC 1501. The welcome reception will be held on Wednesday May 8 at 6:30pm in the QNC atrium. There will be a banquet on Friday May 10, with cash bar at 6pm and dinner at 7pm, at the University Club. Tickets for the banquet cost $35 and are available for purchase during Wednesday’s registration.

WEDNESDAY, MAY 8

Morning, QNC

9:30 – 10:10 Registration, coffee and snacks (QNC 1501).
10:20 – 11:10 Invited Lecture: Vladimir Voevodsky (IAS), Univalent foundations and set theory.
11:20 – 12:10 Invited Lecture: Dima Sinapova (UIC), Collapsing singular cardinals.

Afternoon

2:00 – 3:30 Special Sessions: Univalent Foundations, session A (page 7); Computable Structure/Model Theory, session A (page 4); Set Theory, session A (page 3); Model Theory, session A (page 5).
3:30 – 4:00 Coffee, MC 5158.
4:00 – 5:30 Special Sessions: Set Theory, session B (page 3); Model Theory, session B (page 5); Computable Structure/Model Theory, session B (page 4); Differential Categories and Differential Lambda Calculi, session A (page 7).

5:40 – 6:25 Contributed Talks: sessions A, B, and C (page 8).
6:30 – 8:00 Welcome Reception in the QNC atrium.

THURSDAY, MAY 9
Morning, QNC

8:30 – 9:00 Coffee and Snacks, QNC 1501.
9:00 – 9:50 Invited Lecture: Rick Blute (University of Ottawa), *The syntax and semantics of differentiation: differential linear logic and lambda-calculus.*
10:20 – 11:10 Invited Lecture: Frank Wagner (Université de Lyon), *Reducts and reducibility.*

Afternoon

2:00 – 3:30 Special Sessions: Univalent Foundations, session B (page 8); Set Theory, session C (page 4); Computable Structure/Model Theory, session C (page 5); Applications of Logic to Operator Algebras, session A (page 6).
3:30 – 4:00 Coffee, MC 5158.
4:00 – 5:30 Special Sessions: Applications of Logic to Operator Algebras, session B (page 6; Differential Categories and Differential Lambda Calculi, session B (page 7); Computable Structure/Model Theory, session D (page 5).
5:40 – 6:25 Special session Applications of Logic to Operator Algebras, session C (page 6); Contributed Talks: sessions D, E, and F (page 8).

FRIDAY, MAY 10
Morning, QNC

8:30 – 9:00 Coffee and Snacks, QNC 1501.
9:00 – 9:50 Invited Lecture: Uri Andrews (UW–Madison), *Spectra of theories and structures.*
11:20 – 12:10 Invited Lecture: Matthias Aschenbrenner (UCLA), *Definable extension theorems in o-minimal structures.*
Afternoon

2:00 – 3:30 Special Sessions: Univalent Foundations, session C (page 8); Computable Structure/Model Theory, session E (page 5); Model Theory, session C (page 6).

3:30 – 4:00 Coffee, QNC 1501.

4:00 – 4:50 Invited Lecture: Matteo Viale (University of Torino), Generic absoluteness for models of strong forcing axioms.

5:00 – 5:45 Contributed Talks: sessions G, H, I and J (page 9).

6:00 – Banquet at University Club. Tickets must be purchased at Wednesday registration. Cash bar at 6pm, dinner at 7pm.

SATURDAY, MAY 11

Morning, QNC

8:30 – 9:00 Coffee and Snacks, QNC 1501.

9:00 – 9:50 Invited Lecture: Colin McLarty (Case Western Reserve), Proving Fermat’s Last Theorem in PA: situation and prospects.

9:50 – 11:20 Special Sessions: Model Theory, session D (page 6); Set Theory, session D (page 4); Differential Categories and Differential Lambda Calculi, session C (page 7).


Special Session on Set Theory
(Organized by James Cummings and Menachem Magidor)

Session A, WEDNESDAY, MAY 8
Room MC 1056

2:00 – 2:40 Anush Tserunyan (UCLA), Generic finite generators.

2:50 – 3:30 Marcin Sabok (Polish Academy of Sciences), Ergodicity and canonization.

Session B, WEDNESDAY, MAY 8
Room MC 2065

4:00 – 4:40 Laura Fontanella (KGRC), Strong combinatorial properties at small cardinals.
4:50 – 5:30 Sean Cox (Virginia Commonwealth University), Some consistency results about saturated ideals.

Session C, THURSDAY, MAY 9
Room MC 2017

2:00 – 2:40 Natasha Dobrinen (University of Denver), Initial structures in the Tukey types of non-p-points.
2:50 – 3:30 Dilip Raghavan (NUS), Combinatorial dichotomies and cardinal invariants.

Session D, SATURDAY, MAY 11
Room QNC 1506

9:50 – 10:30 Miguel Angel Mota (University of Toronto), On a question of Abraham and Cummings.
10:40 – 11:20 John Krueger (UNT), Forcing with adequate sets of models as side conditions.

Special Session on Computable Structure/Model Theory
(Organized by Julia Knight and Antonio Montalban)

Session A, WEDNESDAY, MAY 8
Room MC 4040

2:00 – 2:40 Richard Shore (Cornell), Theories, structures and morphisms: leveling the playing field.
2:50 – 3:30 Denis Hirschfeldt (University of Chicago), Leftmost-path approximable isomorphisms.

Session B, WEDNESDAY, MAY 8
Room MC 2066

4:00 – 4:40 Alexander Melnikov (Victoria University, Wellington), Applications of computable model theory to computable analysis.
4:50 – 5:30 Dan Turetsky (KGRC), Uncountable linear orders and Watnik’s theorem.
Session C, THURSDAY, MAY 9
Room MC 4059

2:00 – 2:40 Alexandra Shlapentokh (East Carolina University), Some questions of definability and decidability over infinite algebraic extensions of $\mathbb{Q}$.

2:50 – 3:30 Karen Lange (Wellesley College), An algebraic characterization of recursively saturated real closed fields.

Session D, THURSDAY, MAY 9
Room MC 4059

4:00 – 4:40 Russell Miller*, Alexey Ovchinnikov, and Dmitry Trushkin (CUNY), Constraint sets in differential fields.

4:50 – 5:30 Iskander Kalimullin (Kazan Federal University), Degree spectra and ideals of degrees.

Session E, FRIDAY, MAY 10
Room QNC 1507

2:00 – 2:40 Sy-David Friedman (KGRC), The completeness of isomorphism.

2:50 – 3:30 Steffen Lempp* and Uri Andrews (UW Madison), Spectra of computable models of disintegrated strongly minimal theories in a computable binary language.

Special Session on Model Theory
(Organized by Rahim Moosa and Dave Marker)

Session A, WEDNESDAY, MAY 8
Room MC 4042

2:00 – 2:40 James Freitag (UC Berkeley), Connected superstable groups.

2:50 – 3:30 Joel Nagloo (University of Leeds), More on geometric triviality of the second Painlevé equation.

Session B, WEDNESDAY, MAY 8
Room MC 4042

4:00 – 4:40 Omar Leon Sanchez (Waterloo), The model-companion of partial differential fields with an automorphism.

4:50 – 5:30 William O. Simmons (UIC), Model theory and completeness of differential varieties.
Session C, FRIDAY, MAY 10  
Room MC 1056

2:00 – 2:40 Philipp Hieronymi, (UIUC), Coincidence of dimensions in expansions of the real field.

2:50 – 3:30 Maryanthe Malliaris (University of Chicago), Ultrapowers of graphs: theorems, examples, questions.

Session D, SATURDAY, MAY 11  
Room QNC 1502

9:50 – 10:30 Alex Rennet* and Clifton Ealy (University of Toronto), The first-order $\mathcal{L}$-theory of o-minimality.

10:40 – 11:20 Jana Maříková (Western Illinois University), Model completeness of o-minimal fields with convex valuations.

Special Session on Applications Of Logic To Operator Algebras  
(Organized by Bradd Hart and Asger Törnquist)

Session A, THURSDAY, MAY 9  
Room MC 4045

2:00 – 2:40 David Sherman (University of Virginia), Some model-theoretic results about operator algebras.

2:50 – 3:30 Isaac Goldbring (UIC), Recent developments in the model theory of tracial von Neumann algebras.

Session B, THURSDAY, MAY 9  
Room MC 4045

4:00 – 4:40 An Speelman (KU Leuven), The classification of Cartan subalgebras up to automorphisms can be complete analytic.

4:50 – 5:30 Martino Lupini (York University), Unitary equivalence of automorphisms of $C^*$-algebras.

Session C, THURSDAY, MAY 9  
Room MC 4045

5:40 – 6:20 Tristan Bice (York University), Traces and ultrapowers.
Special Session on Differential Categories and Differential Lambda Calculi
(Organized by Phillip Scott and Robert Seely)

Session A, WEDNESDAY, MAY 8
Room MC 2054
4:00 – 4:40 Lionel Vaux (IML, Luminy), Web based models of differential linear logic: an introduction.
4:50 – 5:30 Laurent Regnier (IML, Luminy), Higher order differentiation and Taylor expansion.

Session B, THURSDAY, MAY 9
Room MC 4060
4:00 – 4:40 Geoffrey Cruttwell (Mt. Allison), Differential categories and differential algebra.
4:50 – 5:30 Giulio Manzonetto (LIPN, Université Paris-Nord), Weighted relational differential categories.

Session C, SATURDAY, MAY 11
Room QNC 1507
10:40 – 11:20 Robin Cockett (Calgary), The road from Cartesian to tensor differential categories.

Special Session on Univalent Foundations
(Organized by Steve Awodey and Thierry Coquand)

Session A, WEDNESDAY, MAY 8
Room QNC 1102/1103
2:00 – 2:40 Steve Awodey (IAS and CMU), Univalent foundations and homotopy type theory.
2:50 – 3:30 Guillaume Brunerie (IAS), A type-theoretic definition of weak ∞-groupoids.
Session B, THURSDAY, MAY 9  
Room QNC 2501  

2:00 – 2:40  **Peter LeFanu Lumsdaine** (IAS), *Higher inductive types.*  
2:50 – 3:30  **Daniel Licata** (IAS), *Computer-checked proofs in the logic of homotopy theory.*  

Session C, FRIDAY, MAY 10  
Room QNC 1102/1103  

2:00 – 2:40  **André Joyal** (IAS and UQAM), *What is categorical type theory?*  
2:50 – 3:30  **Michael Warren** (IAS), *Linear type theory.*  

**CONTRIBUTED TALKS**  

Session A, WEDNESDAY, MAY 8  
Room MC 4058  

5:40 – 6:00  **Kohei Kishida**, *Autonomy of substructures and the converse Barcan formula.*  
6:05 – 6:25  **Spencer Breiner**, *Scheme representation for logical theories.*  

Session B, WEDNESDAY, MAY 8  
Room MC 4060  

5:40 – 6:00  **Achilles A. Beros**, *Anomalous vacillatory learning.*  

Session C, WEDNESDAY, MAY 8  
Room MC 4063  

5:40 – 6:00  **Katalin Bimbó* and J. Michael Dunn**, *Inhabitants of $T^{1}_{\omega}$-theorems.*  

Session D, THURSDAY, MAY 9  
Room MC 4021  

5:40 – 6:00  **Brian Rice**, *The thin set theorem for pairs implies DNR.*
6:05 – 6:25  **David Belanger**, *Reverse mathematics and theories with finitely many models.*

Session E, THURSDAY, MAY 9  
Room MC 4059

5:40 – 6:00 **Christopher Eagle**, *Omitting types in infinitary \([0,1]\)-valued logic.*
6:30 – 6:55 **Jizhan Hong**, *Immediate expansions by valuation over fields.*

Session F, THURSDAY, MAY 9  
Room MC 4061

5:40 – 6:00 **Polina Vinogradova**, *Formalizing abstract computability: Turing categories in Coq.*

Session G, FRIDAY, MAY 10  
Room MC 4021

5:00 – 5:20 **Timothy O. Trujillo**, *A new Ramsey classification theorem with an application to the Tukey theory of ultrafilters.*
5:25 – 5:45 **Roger Villemaire**, *Characterising homogeneous structures for which Forth suffices.*

Session H, FRIDAY, MAY 10  
Room MC 4045

5:40 – 6:00 **Will Boney**, *Tameness from large cardinal axioms.*
6:05 – 6:25 **Konstantinos A. Beros**, *Universal subgroups of Polish groups.*

Session I, FRIDAY, MAY 10  
Room MC 4059

5:00 – 5:20 **Joseph W. Norman**, *Probabilistic Syllogistics: A methodical model for Aristotle.*
5:25 – 5:45 **Clayton Peterson* and Jean-Pierre Marquis**, *Non Kripkean semantics for deontic logic.*
5:00 – 5:20  **Stanley Burris* and H. P. Sankappanavar**, *Boole’s foundation principle.\(^1\)

5:25 – 5:45  **Carrie Knoll**, *Complexity of classes of structures.*