

LOGIC COLLOQUIUM 2013  
ÉVORA, PORTUGAL  
JULY 22-27



Schedule

## Schedule

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	<b>22-07 Monday</b>	<b>23-07 Tuesday</b>	<b>24-07 Wednesday</b>	<b>25-07 Thursday</b>	<b>26-07 Friday</b>	<b>27-07 Saturday</b>
09:00-09:30	Registration	Ong (Tutorial I)	Abramsky (B2) Kahle (D2)	Houcine (Tutorial II)	Houcine (Tutorial II)	Houcine (Tutorial II)
09:30-10:00	Coffee					
10:00-10:25	Opening	Coffee Break	Sernadas (B2)	Coffee Break	Coffee Break	Coffee Break
10:25-10:30	Ong (Tutorial I)	Tornquist	Berg (D2)	Bojanczyk	Brendle	van Benthem
10:30-11:00			Coffee Break			
11:00-11:25			Morgan (E2)			
11:25-11:30	Break	Break	Servi (C2)	Break	Break	Break
11:30-12:30	Iemhoff	Malliaris	Usuba (E2) Thomas (C2)	Rolin	Lempp	Morozov
12:30-14:30	Lunch Break	Lunch Break	Lunch Break	Excursions	Lunch Break	
14:30-15:30	Goldbring (A1) Shafer (B1)	Aspero (E1) Chernikov (C1)	Ong (Tutorial I)		Contributed session 4	
15:30-16:00	Dinis (A1) Soskova (B1)	Miller (E1) Kaplan (C1)	Coffee Break		Coffee Break	
16:00-16:30	Coffee Break	Coffee Break	Loeser		Contributed session 5	
16:30-17:00	Contributed session 1	Lindstroem(A2) Leitsch (D1)				
17:00-17:05			Break		Break	
17:05-17:30			Voevodsky		Contributed session 6	
17:30-17:35	Break	Diener (A2) Kreuzer (D1)				
17:35-18:00	Contributed session 2	Break				
18:00-18:05						
18:05-18:35		Contributed session 3				
18:35-18:45						
18:45-19:45	Cocktail					
19:45-20:00						
20:00-20:30				Dinner		
20:30-23:00			ASL Council Business Meeting			

**Special sessions topics:**

- A: Logic and Analysis
- B: Computability
- C: Model Theory
- D: Logical Analysis of Mathematical Proofs
- E: Set Theory

**Lecture rooms:**

- Tutorials and Plenary lectures take place at the Grande Auditório
- Special sessions (A1), (C1), (D1), (B2) and (E2) take place in room 272
- Special sessions (B1), (E1), (A2), (D2) and (C2) take place in room 124
- Contributed sessions take place in rooms 103, 106, 110, 119, 122.

**Duration of talks:**

- Tutorials and Plenary lectures: 50 + 5 minutes
- Special sessions talks: 40 + 5 minutes
- Contributed sessions talks: 15 + 5 minutes.

### Daily schedule

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#### Monday, July 22:

09:00-09:30: Registration (Annex to Grande Auditório)  
 09:30-10:00: Coffee (Sala do bar do Grande Auditório)  
 10:00-10:25: Opening (Grande Auditório)  
 10:25-11:25: Tutorial I: Ong, *Higher-Order Model Checking* (Grande Auditório)  
 11:25-11:30: Break  
 11:30-12:30: Plenary lecture: Iemhoff, *On rules* (Grande Auditório)

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14:30-16:00: Special sessions:

14:30-15:15:		
Goldbring (A1)	<i>Nonstandard hulls of locally uniform groups</i>	(Room 272)
Shafer (B1)	<i>Comparing the strength of DNR(<math>k</math>) functions and DNR(2) functions</i>	(Room 124)
15:15-16:00:		
Dinis (A1)	<i>Algebraic structures with individualized neutral elements</i>	(Room 272)
Soskova (B1)	<i>The automorphism group of the enumeration degrees</i>	(Room 124)

16:00-16:30: Coffee Break (Sala do bar do Grande Auditório)  
 16:30-17:30: Contributed session 1 (Rooms 103, 106, 110, 119, 122)  
 17:30-17:35: Break  
 17:35-18:35: Contributed session 2 (Rooms 103, 106, 110, 119, 122)

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18:45-19:45: Cocktail (Sala do bar do Grande Auditório)

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**Tuesday, July 23:**

09:00-10:00: Tutorial I: Ong, *Higher-Order Model Checking* (Grande Auditório)  
 10:00-10:25: Coffee Break (Sala do bar do Grande Auditório)  
 10:25-11:25: Plenary lecture: Tornsquist, *A descriptive set-theoretic view of classification problems in operator algebras* (Grande Auditório)  
 11:25-11:30: Break  
 11:30-12:30: Plenary lecture: Malliaris, *Cofinality spectrum problems* (Grande Auditório)

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14:30-16:00: Special sessions:

14:30-15:15:		
Aspero (E1)	<i>Long reals</i>	(Room 124)
Chernikov (C1)	<i>On the number of Dedekind cuts</i>	(Room 272)
15:15-16:00:		
Miller (E1)	<i>Projective rigidity and definable cardinality</i>	(Room 124)
Kaplan (C1)	<i>The Borel cardinality of bounded invariant equivalence relations</i>	(Room 272)

16:00-16:30: Coffee Break (Sala do bar do Grande Auditório)

16:30-18:00: Special sessions:

16:30-17:15:		
Lindstroem (A2)	<i>Nonstandard analysis and iterative fixed point methods</i>	(Room 124)
Leitsch (D1)	<i>Proof analysis by CERES</i>	(Room 272)
17:15-18:00:		
Diener (A2)	<i>Continuity is overrated ( . . . sometimes)</i>	(Room 124)
Kreuzer (D1)	<i>Program extraction and ultrafilters</i>	(Room 272)

18:00-18:05: Break

18:05-18:45: Contributed session 3 (Rooms 103, 106, 110, 119, 122)

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**Wednesday, July 24:**

09:00-10:30: Special sessions:

09:00-09:45:		
Abramsky (B2)	<i>From Quantum Mechanics to Logic, Databases, Constraints, and Complexity</i>	(Room 272)
Kahle (D2)	<i>Classifying proofs</i>	(Room 124)

09:45-10:30:		
Sernadas (B2)	<i>Extending classical logic for reasoning about quantum systems</i>	(Room 272)
Berg (D2)	<i>A functional interpretation for nonstandard arithmetic</i>	(Room 124)

10:30-11:00: Coffee Break (Sala do bar do Grande Auditório)

11:00-12:30: Special sessions:

11:00-11:45:		
Morgan (E2)	<i>Combinatorics at singular cardinals of any cofinality and their successors</i>	(Room 272)
Servi (C2)	<i>Quantifier elimination and preparation theorem for generalised quasi-analytic algebras</i>	(Room 124)

11:45-12:30:		
Usuba (E2)	<i>Saturation of definable ideals</i>	(Room 272)
Thomas (C2)	<i>Algebraic points and Weierstrass zeta functions</i>	(Room 124)

14:30-15:30: Tutorial I: Ong, *Higher-Order Model Checking* (Grande Auditório)

15:30-16:00: Coffee Break (Sala do bar do Grande Auditório)

16:00-17:00: Plenary lecture: Loeser, *From universal dendrites to stably dominated types: the topology of non-archimedean spaces* (Grande Auditório)

17:00-17:05: Break

17:05-18:05: Plenary lecture: Voevodsky, *Univalent Foundations of Mathematics* (Grande Auditório)

**Thursday, July 25:**

09:00-10:00: Tutorial II: Houcine, *Introduction to elementary properties of free groups* (Grande Auditório)

10:00-10:25: Coffee Break (Sala do bar do Grande Auditório)

10:25-11:25: Plenary lecture: Bojanczyk, *Computation in Sets With Atoms* (Grande Auditório)

11:25-11:30: Break

11:30-12:30: Plenary lecture: Rolin, *Weierstrass preparation in quasianalytic local rings* (Grande Auditório)

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20:00-\_\_ \_\_: Social dinner (Restaurante Jardim do Paço)

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**Friday, July 26:**

09:00-10:00: Tutorial II: Houcine, *Introduction to elementary properties of free groups*  
(Grande Auditório)

10:00-10:25: Coffee Break (Sala do bar do Grande Auditório)

10:25-11:25: Plenary lecture: Brendle, *Forcing theory and the size of the continuum*  
(Grande Auditório)

11:25-11:30: Break

11:30-12:30: Plenary lecture: Lempp, *A strong minimal pair of computably enumerable Turing degrees* (Grande Auditório)

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14:30-15:30: Contributed session 4 (Rooms 103, 106, 110, 119, 122)

15:30-16:00: Coffee Break (Sala do bar do Grande Auditório)

16:00-17:00: Contributed session 5 (Rooms 103, 106, 110, 119, 122)

17:00-17:05: Break

17:05-18:05: Contributed session 6 (Rooms 103, 106, 110, 119, 122)

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**Saturday, July 27:**

09:00-10:00: Tutorial II: Houcine, *Introduction to elementary properties of free groups* (Grande Auditório)

10:00-10:25: Coffee Break (Sala do bar do Grande Auditório)

10:25-11:25: Plenary lecture: van Benthem, *Logical foundations of games and interaction* (Grande Auditório)

11:25-11:30: Break

11:30-12:30: Plenary lecture: Morozov, *Computable model theory over the reals: an approach based on admissible sets* (Grande Auditório)

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### Contributed talks schedule

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#### Contributed talks (session 1):

- Room 103
  - Cezary Cieslinski: *Yablo's paradox in axiomatic theories of truth*
  - Taishi Kurahashi: *Rosser-type formalizations of Yablo's paradox*
- Room 106
  - Gemma Robles: *A Routley-Meyer semantics for truth-preserving and well-determined Lukasiewicz 3-valued logics*
  - Marija Boricic: *On entropy of a propositional logic*
  - M.A. Nait Abdallah: *On the logical formalization of interaction-free measurements in quantum mechanics*
- Room 110
  - S. Mojtaba Mojtahedi: *The  $\Sigma_1$ -provability logic of HA*
  - Daniyar Shamkanov: *Circular proofs for provability logic*
  - Joost Joosten: *The omega-rule interpretation of transfinite provability logic*
- Room 119
  - Florian Steinberg: *Complexity of Laplace's and Poisson's Equation compared to ordinary integration*
  - Isabel Oitavem: *A recursion-theoretic approach to NP*
  - Sebastian Eberhard: *Characterising polytime and exptime using truth-induction*
- Room 122
  - Philip Ehrlich: *Surreal ordered exponential fields*
  - Pablo Cubides Kovacsics: *Definable types in C-minimal structures*
  - Jamalbek Tussupov: *Categoricity of the Algebraic Structures*

**Contributed talks (session 2):**

- Room 103
  - Carolina Blasio: *On B-entailment*
  - Anahit Chubaryan: *Some propositional proofs systems for various logics*
  - Joachim Mueller-Theys: *Metalogical Extensions - Part I: Propositional Logic*
- Room 106
  - Matthias Baaz: *Characterization of decidable monadic Gdel logics: validity and satisfiability (joint work with Felix Bou and Norbert Preining)*
  - Vladislav Nenchev: *Decidability of modal logics for dynamic contact relations*
  - Branislav Boricic: *Multiple von Wright's preference logic and social choice theory*
- Room 110
  - Fedor Pakhomov: *Elementary Theories of Some Ordinal Notation Systems.*
  - Sergei Tupailo: *Abstract constructive ordinals and ordinal notations*
  - Bahareh Afshari: *On closure ordinals for the modal mu-calculus*
- Room 119
  - Nikolay Bazhenov: *On computable enumerations of Boolean algebras with distinguished endomorphisms*
  - Marina Dorzhieva: *Elimination of metarecursion in Owing's theorem*
  - Kiyoyuki Tchizawa: *On the two methods for finding 4-dimensional duck solutions*
- Room 122
  - Beibut Kulpeshov: *Some remarks on weakly circularly minimal groups*
  - Jan Dobrowolski: *Locally finite profinite rings*

**Contributed talks (session 3):**

- Room 103
  - Ryszard Mirek: *Logic of Piero della Francesca*
  - Pierluigi Graziani: *A Sequent Calculus for Euclid's Plane Geometry*
- Room 110
  - Sergio Marcelino: *Conservativeness and decidability of fibred logics.*
  - Jaime Ramos: *Classical and intuitionistic propositional logic*
- Room 119
  - Gilda Ferreira: *Atomic polymorphism: an elementary proof of strong normalization*
  - William Gunther: *Lambda-delta-definability and Henkins theorem*
- Room 122
  - Adi Jarden: *Primeness triples in non-forking frames*
  - Will Boney: *Forking in Abstract Elementary Classes*

**Contributed talks (session 4):**

- Room 103
  - Max Weiss: *Logic in the Tractatus*
  - Olga Antonova: *On Dedekinds extensional logicism*
  - Luca San Mauro: *Aspects of naturalness in mathematics.*
- Room 106
  - Mitko Yanchev: *Integer and rational grading interaction in Description Logics*
  - Johannes Werner: *Censoring knowledge in Boolean description logic*
  - Alexandre Madeira: *Hybridised logics for specifications*
- Room 110
  - Emil Jebek: *Open induction in a  $TC^0$  arithmetic*
  - Emanuele Frittaion: *Initial intervals of partial orders and reverse mathematics*
  - Ludovic Patey: *Reverse mathematics: Classifying principles by the no randomized algorithm property*
- Room 119
  - Andrea Sorbi: *Downwards density and incomparability in initial segments of the enumeration degrees*
  - Assylbek Issakhov: *Computable numberings of the families of total functions in the arithmetical hierarchy*
  - Sergey Ospichev: *Rogers semilattices of finite families in Ershov hierarchy*
- Room 122
  - Ziv Shami: *A dichotomy for  $D$ -rank 1 types in simple theories.*
  - Sergey Sudoplatov: *Algebras of distributions of binary semi-isolating formulas for families of isolated types, for countably categorical and strongly minimal theories*
  - Alireza Mofidi: *Some results on NIP theories*

**Contributed talks (session 5):**

- Room 103
  - Hadi Farahani: *Substructural view of Glivenko theorems and negative translations*
  - José M. Méndez: *Routes to triviality and depth relevance*
  - Michéle Friend: *Using a Paraconsistent Formal Theory of Logic Metaphorically*
- Room 106
  - Christian Retore: *A natural framework for natural language semantics: many sorted logic and Hilbert operators in type theory*
  - Kristina Liefke: *A single-type logic for the PTQ-fragment*
  - Manuel A. Martins: *Equational hybrid logic: reducing logical symbols to equality and abstraction.*
- Room 110
  - Larisa Maksimova: *Interpolation and recognition*
  - Zofia Kostrzycka: *On linear Brouwerian logics. The structure of lattice of subframe logics.*
  - Piotr Wojtylak: *Consequence extensions of  $S4.3$ ; an application of projective unification in modal logic*
- Room 119
  - Christopher Porter: *Algorithmic randomness and semimeasures*
  - Rutger Kuyper: *Factors of the Muchnik lattice characterising intuitionistic logic*
  - Francesco Ciraulo: *Boolean locales: a constructive analog*
- Room 122
  - Emanuele Bottazzi: *Elementary numerosities and measures*
  - Jose Roquette: *Calculus with Indiscernibility*
  - Micha Tomasz Godziszewski: *Yablo sequences - existence, consistency, truth theories*

**Contributed talks (session 6):**

- Room 103
  - Zhenhao Li: *Degrees of non-determinacy of infinite games without the axiom of choice*
  - Gonçalo Gutierrez: *Weak first countable spaces in ZF*
  - Jaime Gaspar: *"Refuting" Cantor*
- Room 106
  - João Rasga: *Completeness and interpolation of almost-everywhere quantification over finitely additive measures*
  - Alexey Vladimirov: *Some partial conservativity properties for Intuitionistic Set Theory with principle DCS and principles ECT, and M.*
  - Makoto Fujiwara: *Classical non-uniformity and intuitionistic unprovability related to WKL in higher-order arithmetic*
- Room 110
  - Stefan Hetzl: *Proofs and grammars*
  - Graham Leigh: *Conservativity and cut-elimination for compositional truth*
  - Lavinia Picollo: *Reference and self-reference in first-order Peano arithmetic*
- Room 122
  - Sam Sanders: *Nonstandard Analysis: Why physics is computable*
  - Lorenzo Luperi Baglini: *Ultrafunctions: basic properties and a model problem*
  - Júlia Justino: *Nonstandard linear algebra with error analysis*