Monday 19.02 FICS'24

18:00-20:00 Welcome Event!

Tuesday 20.02

08:30-09:00 CSL'24 Registration

09:00-09:30 CSL'24 Opening

09:30-10:30 Invited talk (co-located with FICS'24) by Barbara König: Approximating fixpoints of approximated functions

10:30-11:00 Coffee break

11:00-13:05 Session 1 (Complexity Theory, Rewriting, and Monoidal Categories):

- 11:00-11:25 Salvador Lucas on *Confluence of Conditional Rewriting Modulo*
- 11:25-11:50 Matt Earnshaw, James Hefford and Mario Román on *The Produoidal Algebra of Process Decomposition*
- 11:50-12:15 Yannick Forster, Dominik Kirst and Niklas Mück on *The Kleene-Post and Post's Theorem in the Calculus of Inductive Constructions*
- 12:15-12:40 Alexandre Clément, Noé Delorme, Simon Perdrix and Renaud Vilmart on *Quantum Circuit Completeness: Extensions and Simplifications*
- 12:40-13:05 Manon Blanc and Olivier Bournez on *Quantifiying the robustness of dynamical systems. Relating time and space to length and precision*

13:05-14:30 Lunch

14:30-15:30 Invited talk by Georg Gottlob: AI & AI - Artificial Intelligence and Artificial Ignorance

15:30-16:00 Coffee break

16:00-18:05 Session 2 (Team Logic and Neural Network):

- 16:00-16:25 Fausto Barbero and Jonni Virtema on *Expressivity Landscape for Logics with Probabilistic Interventionist Counterfactuals*
- 16:25-16:50 Geoffrey Cruttwell and Jean-Simon Lemay on *Reverse tangent categories*
- 16:50-17:15 Veeti Ahvonen, Damian Heiman and Antti Kuusisto on *Descriptive complexity for neural networks via Boolean networks*
- 17:15-17:40 Marius Tritschler on *Guarded Hybrid Team Logics*
- 17:40-18:05 Quentin Aristote on *Active learning of deterministic transducers with outputs in arbitrary monoids*

18:15-21:15 Additional Event (to be confirmed)

09:00-10:00 Invited talk by Marta Kwiatkowska: Strategy Synthesis for Partially Observable Stochastic Games with Neural Perception Mechanisms

10:00-10:30 Coffee break

10:30-12:35 Session 3 (Games):

- 10:30-10:55 Alexander Kozachinskiy on *Energy Games over Totally Ordered Groups*
- 10:55-11:20 Tom van Dijk, Georg Loho and Matthew Maat on *The worst-case complexity of symmetric strategy improvement*
- 11:20-11:45 Julian Gutierrez, Anthony Widjaja Lin, Muhammad Najib, Thomas Steeples and Michael Wooldridge on *Characterising and Verifying the Core in Concurrent Multi-Player Mean-Payoff Games*
- 11:45-12:10 Daniel Stan, Muhammad Najib, Anthony Widjaja Lin and Parosh Aziz Abdulla on *Concurrent Stochastic Lossy Channel Games*
- 12:10-12:35 Benjamin Bordais, Patricia Bouyer and Stephane Le Roux on *From Local to Global Optimality in Concurrent Parity Games*

12:35-13:50 Lunch

13:50-15:30 Session 4 (Logic):

- 13:50-14:15 Philippe Balbiani, Han Gao, Çigdem Gencer and Nicola Olivetti on *A Natural Intuitionistic Modal Logic: Axiomatization and Bi-nested Calculus*
- 14:15-14:40 Stefano Berardi, Peter Schuster and Gabriele Buriola on *A general constructive form for Higman's lemma*
- 14:40-15:05 Satoshi Nakata on *Local operators in topos theory and separation of semi-classical axioms in intuitionistic arithmetic*
- 15:05-15:30 Anupam Das, Iris van der Giessen and Sonia Marin on *Intuitionistic Gödel-Löb logic à la Simpson: labelled systems and birelational semantics*

15:30-15:55 Coffee Break

15:55-18:00 Session 5 (Type Theory and Model Theory):

- 15:55-16:20 Rasmus Ejlers Møgelberg and Maaike Zwart on *What monads can and cannot do with a bit of extra time*
- 16:20-16:45 Moritz Lichter, Benedikt Pago and Tim Seppelt on *Limitations of Game Comonads via Homomorphism Indistinguishability*
- 16:45-17:10 Jonathan Sterling, Daniel Gratzer and Lars Birkedal on *Free theorems from univalent reference types: the impact of univalence on denotational semantics*
- 17:10-17:35 Daniël Otten and Benno van den Berg on *Conservativity of Type Theory over Higher-order Arithmetic*

- 17:35-18:00 Anuj Dawar and Lauri Hella on *Quantifiers Closed Under Partial Polymorphisms*

Thursday 22.02

09:00-10:00 Invited talk by Balder ten Cate: Craig Interpolation for Decidable Fragments of First-Order Logic

10:00-10:30 Coffee break

10:30-12:35 Session 6 (First Order Logic):

- 10:30-10:55 Thomas Place and Marc Zeitoun on *A generic characterization of generalized unary temporal logic and two-variable first-order logic*
- 10:55-11:20 Assia Mahboubi and Matthieu Piquerez on *A First Order Theory of Diagram Chasing*
- 11:20-11:45 Eva Fluck, Tim Seppelt and Gian Luca Spitzer on *Going Deep and Going Wide: Counting Logic and Homomorphism Indistinguishability over Graphs of Bounded Treedepth and Treewidth*
- 11:45-12:10 Sophie Brinke, Erich Grädel and Lovro Mrkonjić on *Ehrenfeucht-Fraïssé Games in Semiring Semantics*
- 12:10-12:35 Antoine Mottet on *Promise and Infinite-Domain Constraint Satisfaction*

12:35-13:45 Lunch

13:45-14:15 Rasiowa award (tba)

14:15-15:00 Ackermann award (tba)

15:00-15:15 Tea break

15:15-16:30 Business meeting

16:30-22:30 Excursion + CSL banquet at [Monastero di Santa Chiara]([Antico Refettorio])

Friday 23.02 (in parallel with LMW'24 and the Industrial Table)

9:00-10:00 Invited talk by Moshe Y. Vardi: Logical Algorithmics

10:00-10:30 Coffee break

10:30-12:35 Session 7 (Monadic Logic and Automata):

- 10:30-10:55 Eldar Fischer and Johann Makowsky on *Extensions and Limits of the Specker-Blatter Theorem*

- 10:55-11:20 Anita Badyl and Paweł Parys on *Extending the WMSO+U Logic With Quantification Over Tuples*
- 11:20-11:45 Mario Grobler, Leif Sabellek and Sebastian Siebertz on *Remarks on Parikh-recognizable omega-languages*
- 11:45-12:10 Luisa Herrmann, Vincent Peth and Sebastian Rudolph on *Decidable (Ac)counting with Parikh and Muller: Adding Presburger Arithmetic to Monadic Second-Order Logic over Tree-Interpretable Structures*
- 12:10-12:35 Francois Laroussinie, Loriane Leclercq and Arnaud Sangnier on *QLTL Model-Checking*

12:35-14:00 Lunch

14:00-15:15 Session 8 (Lambda calculus):

- 14:00-14:25 Vincent Moreau and Lê Thành Dũng Nguyễn on *Syntactically and semantically regular languages of lambda-terms coincide through logical relations*
- 14:25-14:50 Beniamino Accattoli on *Semantic Bounds from Multi Types, Revisited*
- 14:50-15:15 Davide Barbarossa and Paolo Pistone on *Tropical Mathematics and the Lambda-Calculus I: Metric and Differential Analysis of Effectful Programs*

15:15-15:45 Coffee break

15:45-17:50 Session 9 (Logic and Arithmetic):

- 15:45-16:10 Éric Goubault, Roman Kniazev and Jérémy Ledent on *A many-sorted epistemic logic for chromatic hypergraphs*
- 16:10-16:35 Laura Fontanella, Guillaume Geoffroy and Richard Matthews on *Realisability models for large cardinals*
- 16:35-17:00 Federico Olimpieri on *Coherence by Normalization for Linear Multicategorical Structures*
- 17:00-17:25 Melissa Antonelli, Ugo Dal Lago, Davide Davoli, Isabel Oitavem and Paolo Pistone on *Enumerating Error Bounded Polytime Algorithms Through Arithmetical Theories*
- 17:25-17:50 Matteo Acclavio, Gianluca Curzi and Giulio Guerrieri on *Infinitary cut elimination via finite approximations*

17:50-18:00 Farewell