Program

The topics of this conference are logic, relativity theory, and their interconnections in both directions. It is our ambition to encourage and cater to these interconnections and to help collaborations between logicians and relativity theorists. To this end, the programme includes a 2-hour introductory tutorial to these connections run by the relativity group of the Rényi Institute. We intend to provide a smooth introduction to relativity theory for logicians and, in the other direction, logic for relativity theorists.

Saturday, September 8

13:00 - 14:30 Registration

14:30 - 14:40 Opening by Péter Pál Pálfy Director of the Institute

14:40 - 15:40 Johan van Benthem: *Evidence Dynamics in Neighborhood Logics*

15:40 - 15:45 break

15:45 - 16:15 Sándor Jenei and Franco Montagna: *Classification of absorbent-continuous, sharp FLe-algebras on weakly real chains*

16:15 - 16:45 María Manzano: *Our Beloved Leon Henkin*

16:45 - 17:05 coffee break

17:05 - 17:35 Ulrich Jentschura and Benedikt Wundt: *An Infinitesimally Superluminal Neutrino is Left-Handed, Conserves Lepton Number and Solves the Autobahn Paradox*

17:35 - 18:05 Thomas Benda: *An axiomatic foundation of relativistic spacetime*

18:05 - 18:35 Petr Švarný: *Does branching explain flow of time or is it the other way around?*

Sunday, September 9

9:00 - 10:00 Gergely Székely: *Tutorial on logical analysis of relativity theories I.*

10:00 - 10:10 break

10:10 - 11:10 Gergely Székely: *Tutorial on logical analysis of relativity theories II.*

11:10 - 11:30 coffee break

11:30 - 12:00 Zalán Gyenis and Gábor Sági: *Generic automorphisms*

12:00 - 12:30 Péter Mekis: *Thought Experiments as Semantic Arguments*

12:30 - 13:00 Dorit Ben Shalom: *A completeness theorem via algebraic logic*

13:00 - 14:30 lunch break

14:30 - 15:30 Jean-Yves Beziau: *The Relativity and Universality of Logic*

15:30 - 15:35 break

15:35 - 16:35 John B. Manchak: *On the Relationship between Spacetime Singularities, Holes, and Extensions*

16:35 - 17:00 coffee break

17:00 - 17:30 Michele Friend: *The Epistemological Significance of Reducing the Relativity Theories to Zermelo-Frankel Set Theory*

17:30 - 18:00 Tomasz Placek: *Relativity and modal logic meet Hausdorff*

18:00 - 20:00 Party at the institute

Monday, September 10

9:00 - 9:30 Robin Hirsch and Mark Reynolds: *The Tense Logic of two Dimensional Minkowski Spacetime*

9:30 - 10:00 Attila Molnár: *On the Notion of Possibility in Relativity Theory*

10:00 - 10:10 break

10:10 - 10:40 Szabolcs Mikulás: *Residuated Algebras of Binary Relations and Positive Fragments of Relevance Logic*

10:40 - 11:10 Márton Gömöri and László E. Szabó: *What exactly does the special relativity principle assert?*

11:10 - 11:30 coffee break

11:30 - 12:00 László E. Szabó and Márton Gömöri: *Does the relativity principle hold for all situations in relativistic physics?*

12:00 - 12:30 Miklós Ferenczi: *A new representation theory: representing cylindric-like algebras by relativized set algebras*

12:30 - 13:00 Sándor Vályi: *On the axiomatizability of some first-order spatio-temporal theories*

13:00 - 14:30 lunch break

14:30 - 15:30 Christian Wüthrich: *A prolegomenon to a quantum-information-theoretic complement to a general-relativistic implementation of a beyond-Turing computer*

15:30 - 15:35 break

15:35 - 16:35 Philip Welch: *Gandy's Thesis in the light of relativistic computation*

16:35 - 17:00 coffee break

17:00 - 18:00 Péter Németi: *General relativistic computing - computing with wormholes*

18:00 - 18:10 break

18:10 - 19:00 *Problem session*, Chair: István Németi

Tuesday, September 11

9:00 - 9:30 Judit Madarász and Gergely Székely: *The Existence of Superluminal Particles is Independent of Relativistic Dynamics*

9:30 - 10:00 Mike Stannett: *Moving in a Lonely Universe*

10:00 - 10:10 break

10:10 - 10:40 András Benedek: *Interpretations of the Growth of Knowledge in Dynamic Learning Situations*

10:40 - 11:10 Mohamed Khaled and and Tarek Sayed Ahmed: *Strongly representable atom structures*

11:10 - 11:30 coffee break

11:30 - 12:00 María Manzano and Enrique Alonso: *Henkin on Completeness*

12:00 - 12:30 Amr Sidahmed: *A Unified Field Theory*

12:30 - 13:00 Sándor Vályi and Benedek Nagy: *The characterization of NP within interval-valued computing*

13:00 - 14:30 lunch break

14:30 - 15:30 S. Barry Cooper: *Description versus Computation, and Levels of Abstraction*

15:30 - 15:35 break

15:35 - 16:05 Alexander K. Guts: *Logic, theory of relativity and time machine*

16:35 - 17:00 coffee break

17:00 - 17:30 Koen Lefever: *A century of axiomatic systems for ordinal approaches to Special Relativity Theory*

17:30 - 18:00 Gábor Etesi: *Computability: the hidden face of gravity*

18:00 - 18:30 David Bendaniel: *Constructibility and Space-Time*

18:30 - 18:40 break

Wednesday, September 12

9:00 - 9:30 Ranjit Nair: *Logic, universal symmetry and theories of everything*

9:30 - 10:00 Bertalan Pécsi: *On preservation theorems by category theory*

10:00 - 10:10 break

10:10 - 10:40 Tarek Sayed Ahmed: *Neat embeddings as adjoint situations*

10:40 - 11:10 György Darvas: *Farewell to causality?*

11:10 - 11:30 coffee break

11:30 - 12:00 Sándor Csizmazia: *Correspondence between Description Logic and Algebraic Logic*

12:00 - 12:30 Solomon Marcus: *Starting from the Scenario Euclid - Bolyai - Einstein*

12:30 - 13:00 Balázs Gyenis: *What is physically possible?*

13:00 - 14:30 lunch break

14:30 - 15:30 Mihály Makkai: *TBA.*

15:30 - 15:35 break

15:35 - 16:05 Naveen Sundar Govindarajulu and Selmer Bringsjord: *Proof Verification and Proof Discovery for Relativity*

16:05 - 16:35 Kira Adaricheva and Robert Sloan and Balázs Szörényi and György Turán: *Horn Belief Contraction: Remainders, Envelopes and Complexity*

16:35 - 16:55 coffee break

16:55 - 17:25 Hajnal Andréka: *Reducing first-order logic to a simple propositional logic, to [S5,S5,S5]*

17:25 - 17:55 Antoine van de Ven: *A Space-Time Formalism with Negative Mass to describe Antimatter and Dark Energy*

17:55 - 18:25 Ági Kurucz: *Approximating the two-variable fragment of classical predicate logic with propositional modal logics: a survey of recent results*

18:25 - 18:30 break

18:30 - 19:20 István Németi: *Concluding remarks*

20:00 - 23:00 Conference dinner at Trófea Grill - Zugló