



Second St.Petersburg Days
of Logic and Computability
devoted to the centennial of
ANDREY ANDREEVICH MARKOV

PROGRAM

SUNDAY, AUGUST 24

- 9:00– 9:55 *Registration*
9:55–10:00 *Opening*
10:00–10:45 **Sergei Adian** The Burnside problem on periodic groups and related topics
10:45–11:00 *Coffee break*
11:00–11:45 **Andrej Muchnik, Alexei Semenov** Natural Examples of Simple and Hypersimple Sets
11:45–12:00 *Coffee break*
12:00–12:45 **Nikolai A. Shanin** On Finitary Interpretations of Theorems of the Theory of Algorithms and Recursively Enumerable Sets
13:00–15:00 *Lunch*
- SECTION 1
- 15:00–15:25 **Sergei Artemov** From proof polynomials to reflexive combinators
- 15:25–15:50 **Alexander Lyaletski** On Efficient Quantifiers Manipulation in Gentzen’s Calculi LK and LJ
- 15:50–16:05 *Coffee break*
- 16:05–16:30 **Grigori Mints** An Epsilon Substitution Method for a Theory of Non-iterated Inductive Definitions
- 16:30–16:55 **Edward A. Hirsch, Arist Kojevnikov** Several Notes on the Power of Gomory-Chvatal Cuts
- SECTION 2
- 15:00–15:25 **S  verine Fratani, G  raud S  nizergues** Iterated Pushdown Automata and Sequences of Rational Numbers
- 15:25–15:50 **Leonid P. Lisovik** Macrotransducers, Continuity and Computability
- 16:05–16:30 **Anatoly Beltiukov** A Nonasymptotic Lower Time Bound for a Strictly Bounded Second Order Arithmetic
- 16:30–16:55 **Alexandre P. Francisco** Circuits of Finite Memory Retrospective Operators

MONDAY, AUGUST 25

- 9:00– 9:45 **Alexey V. Chernavsky, V. P. Lexin** Decision Problems for Manifolds
9:45–10:00 *Coffee break*
10:00–10:45 **Victor Makarov** Predicate Logic with Definitions and the General Concept of Algorithm
10:45–11:00 *Coffee break*
11:00–11:45 **Svyatoslav Lavrov** In which Form do Mathematics Foundations Exist?
12:00–16:30 *Lunch and excursion*
16:30–19:00 **Special session dedicated to A.A.Markov**
19:00–22:00 *Meeting’s party*

TUESDAY, AUGUST 26

SECTION 1

9:00– 9:25 **Elena Bunina, Valeri Zakharov** Universal Sets, Tarski Sets, and Inaccessible von Neumann Sets

9:25– 9:50 **Andreas Schumann** Quasi-solvability of ω -order Predicate Calculus

9:50–10:05

Coffee break

10:05–10:30 **P. V. Andreev, E. I. Bunina, A. V. Mikhalev, V. K. Zakharov** MacLane’s Problem on Foundations of Category Theory and Local Theory of Sets

10:30–10:55 **Sergei Tupailo** On the Intuitionistic Strength of Monotone Inductive Definitions

10:55–11:10

Coffee break

11:10–11:35 **Olivier Hermant** A Model Based Cut Elimination Proof

11:35–12:00 **Alexandre Lyaletsky (Jr.)** On the Notion of Efficiency of Formal Systems from the Point of View of Inference Search Problems

12:00–14:00

Lunch

14:00–15:25 **David Chemouil, Sergei Soloviev** Extensional Isomorphisms of Inductive Types in Simply-Typed Lambda-Calculus

14:25–15:50 **Dan E. Willard** A Generalization of the Second Incompleteness Theorem and Some Exceptions to It

14:50–15:05

Coffee break

15:05–15:30 **Lew Gordeev, Andreas Krebs** Elementary Interpretations of $P < NP$

SECTION 2

Alexander L. Chistov Application of Monodromy to Constructing Linear Sections in General Position of an Algebraic Variety

Dmitri Grigoriev, Sergei Vakulenko Complexity of Patterns Generated by Genetic Circuits and Pfaffian Functions

Daniele Beauquier Decidable Properties for Monadic Abstract State Machines

S. Baranov, J. Kapitonova, V. Kotlyarov, A. Letichevsky Message Sequence Charts as a Model of Computation

Masahide Kashiwagi, Shinya Miyajima On the Application of the Best Multiplication to Division in Affine Arithmetic

Nikolaj S. Nikitchenko, Stepan S. Shkilniak Compositional Logics and Abstract Computability over Nominative Data

Su Gao, Yi Zhang Definable Sets of Generators in Maximal Cofinitary Groups

Michael Dekhtyar, Alexander Dikovskiy, Mars Valiev Complexity of Asynchronous Behavior of Multi-Agent Systems

Nikolai Kossovski, Tatiana Kossovskaya About Complexity of Constant Modulo Arithmetic