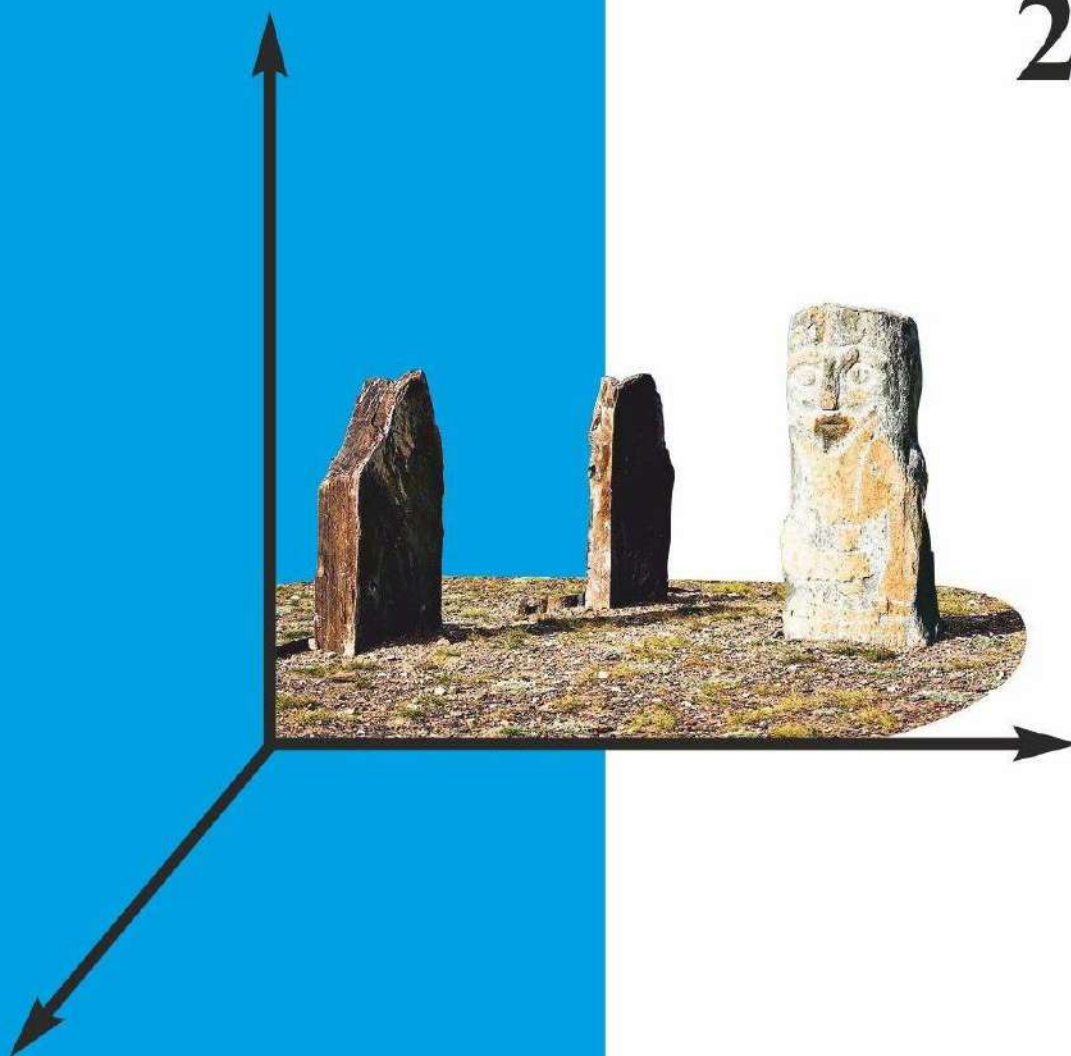




Model Theory and Algebra 2024



НОВОСИБИРСК
2024



Novosibirsk State Technical University

Model Theory
and Algebra 2024

Collection of papers

edited by M. Shahryari and S. V. Sudoplatov

Novosibirsk
2024

UDC 512
M78

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INTRODUCTION

Model Theory and Algebra 2024

The 16th International Summer School-Conference “Problems Allied to Model Theory and Universal Algebra” was held on 08–13 of July 2024 at Sobolev Institute of Mathematics and Novosibirsk State Technical University NETI. The School was organized by Algebra and Mathematical Logic Department of Novosibirsk State Technical University (NSTU NETI) and Sobolev Institute of Mathematics of Siberian Branch of Russian Academy of Sciences (IM SB RAS). The School was supported by Grant of International Mathematical Center in Akademgorodok. The school-conference included both online and in-person talks. At the school-conference, there were participants from Russia, Kazakhstan, Uzbekistan, Algeria, Canada, France, Hungary, Oman, Poland. They made 43 talks. Within the school-conference, the discussions on actual problems on Model Theory, Algebra and related subjects were held. Information about the conference is posted on the conference website <https://erlagol.ru>.

*The Organizing Committee
of the School-Conference*

**Programme
of 16th International Summer
School-Conference
“Problems Allied to Model Theory
and Universal Algebra”**

July 8, Monday

Chairperson S.V. Sudoplatov

- 8:55 – 9:00 Opening Ceremony
- 9:00 – 9:50 A.E. Mironov (Novosibirsk, Russia), BirkhoffTs algebraic conjecture on integrable billiards
- 10:00 – 10:50 M. Shahryari (Muscat, Oman), On conjugately separability of nilpotent subgroups and equational domains
- 11:00 – 11:30 G. Czédli (Szeged, Hungary), From Maltsev conditions to a duality theorem (online)
- 11:30 – 12:10 Coffee break
- 12:10 – 13:00 N.Kh. Kasymov (Tashkent, Uzbekistan), Computably separable algorithmic representations of universal algebras with finiteness conditions (online)

Chairperson B.Sh. Kulpeshov

- 15:00 – 15:50 B.P. Poizat (Lyon, France), Parameters in Algebraically Closed Fields (online)
- 15:50 – 16:30 Coffee break
- 16:30 – 17:00 A.A. Iwanow (Gliwice, Poland), Generic groups and the weak amalgamation property (online)
- 17:00 – 17:30 M.I. Bekenov (Astana, Kazakhstan), On model companions of some theories
- 17:30 – 18:00 N.D. Markhabatov (Astana, Kazakhstan), On approximations of pseudofinite theories
- 18:00 – 18:30 D.V. Solomatin (Omsk, Russia), Structure of semigroups admitting generalized outerplanar Cayley graphs (online)

July 9, Tuesday

Chairperson V.V. Verbovskiy

- 9:00 – 9:50 A.I. Stukachev (Novosibirsk, Russia), Structures on signatures of structures

10:00 – 10:50 N.L. Polyakov (Moscow, Russia), Ultrafilter extensions of infinitary functions: universal algebraic aspects

10:50 – 11:30 Coffee break

11:30 – 12:20 I.B. Kozhukhov (Moscow, Russia), Finiteness conditions in acts over semigroups

12:20 – 13:00 A.A. Stepanova, E.L. Efremov, S.G. Chekanov (Vladivostok, Russia), Pseudofinite polygons over Abelian groups

Chairperson M. Shahryari

15:00 – 15:40 E.V. Vassiliev (Corner Brook, Canada), Small closure in pairs of geometric structures

15:40 – 16:10 V.V. Verbovskiy (Almaty, Kazakhstan), On pure linear orderings of Morley o-rank 1 (joint with A. D. Yershigeshova)

16:10 – 16:30 Coffee break

16:30 – 17:00 I.A. Sakharov (Vladivostok, Russia), On possible degrees of semantic and syntactic rigidity of unars (online)

17:00 – 17:30 V.L. Usoltsev (Volgograd, Russia), Semimodularity of the class of all congruence Riesz algebras of an arbitrary fixed signature

17:30 – 18:00 A.R. Yeshkeyev, I.O. Tungushbayeva (Karaganda, Kazakhstan), Properties of the Jonsson spectrum and its class of model (online)

18:00 – 18:30 A.R. Yeshkeyev, A.K. Koshekova (Karaganda, Kazakhstan), Cosemanticity of Kaiser hulls of definable subsets of the semantic model of a fixed Jonsson theory (online)

18:30 – 19:00 A.R. Yeshkeyev, A.R. Yarullina (Karaganda, Kazakhstan), Jonsson existentially closed unars of expanded signature (online)

19:00 – 19:30 S.M. Amanbekov (Karaganda, Kazakhstan), On semantic Jonsson quasivariety of undirected graphs (online)

July 10, Wednesday

Free day

July 11, Thursday

Chairperson P.S. Kolesnikov

9:00 – 9:50 B.S. Baizhanov (Almaty, Kazakhstan), Expansion of a model of stable theory (online)

10:00 – 10:30 V.N. Zhelyabin (Novosibirsk, Russia), Simple and semisimple finite-dimensional Novikov algebras (online)

10:40 – 11:30 A.S. Zakharov, V.N. Zhelyabin (Novosibirsk, Russia), Simple finite-dimensional Novikov algebras over a field of prime characteristic
 11:30 – 12:00 Coffee break
 12:00 – 12:40 A.S. Monastyreva (Barnaul, Russia), Zero divisor graphs of a finite ring

Chairperson N.L. Polyakov

15:00 – 15:30 A.V. Kartashova (Volgograd, Russia), On lattices of topologies of commutative unary algebras
 15:30 – 16:00 N.A. Shchuchkin (Volgograd, Russia), Ternary quasigroups and their applications in cryptography
 16:00 – 16:30 Coffee break
 16:30 – 17:00 V.A. Molchanov, R.A. Farakhutdinov (Saratov, Russia), Specific characterization of partially defined graph automata (online)
 17:00 – 17:30 G.S. Suleymanova (Abakan, Russia), On centralizers of graph automorphisms of Chevalley algebras and their faithful enveloping algebras (online)
 17:30 – 18:00 K. Tahri (Tlemcen, Algeria), Existence and Uniqueness Solution for Biharmonic Kirchhoff Equation with Singular Term (online)

July 12, Friday

Chairperson I.B. Kozhukhov

9:00 – 9:50 P.S. Kolesnikov (Novosibirsk, Russia), Dendriform splitting of varieties and the Dong Lemma
 10:00 – 10:50 A.P. Pozhidaev (Novosibirsk, Russia), Pre-Lie Witt doubles
 10:50 – 11:30 Coffee break
 11:30 – 12:20 F.A. Dudkin (Novosibirsk, Russia), Universal equivalence of generalized Baumslag-Solitaire groups
 12:30 – 13:00 H. Alhussein, P.S. Kolesnikov (Novosibirsk, Russia), Hochschild cohomology of the Weyl conformal algebra

Chairperson E.V. Vassiliev

15:00 – 15:30 A.V. Chekhonadskikh (Novosibirsk, Russia), Algebraic aspects of optimization in polynomial synthesis of automatic control systems
 15:30 – 16:00 D.Yu. Emelyanov (Novosibirsk, Russia), Algebras of binary formulas for products of graphs
 16:00 – 16:30 Coffee break
 16:30 – 17:00 I.A. Emelyanenko (Novosibirsk, Russia), A diagrammatic approach to the study of countable models of complete theories

17:00 – 17:30 S.B. Malyshev (Novosibirsk, Russia), Heritability of pregeometry types by composition relative to the original structures

17:30 – 18:00 A.V. Vaseneva (Novosibirsk, Russia), On ranks of equationality

18:00 – 18:30 A.S. Savin (Novosibirsk, Russia), Some spectra of spherical orderability of finite groups

July 13, Saturday

Chairperson A.A. Stepanova

9:00 – 9:50 B.Sh. Kulpeshov (Almaty, Kazakhstan), S.V. Sudoplatov (Novosibirsk, Russia), Variations of rigidity for ordered and strongly minimal theories

10:00 – 10:30 B.Sh. Kulpeshov (Almaty, Kazakhstan), In.I. Pavlyuk, S.V. Sudoplatov (Novosibirsk, Russia), Pseudo-countably-categorical theories

10:30 – 11:00 Coffee break

11:00 – 11:50 S.V. Sudoplatov (Novosibirsk, Russia), Forty years with Model Theory

11:50 Closing Ceremony

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