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ТЕОРИЯ МОДЕЛЕЙ И ЕЕ ПРИМЕНЕНИЯ

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ABSTRACT. This volume is a collection of articles on model theory and its applications by authors from Russia and Kazakhstan. It can be useful for graduate students and specialists in logic and its applications to group theory.

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Preface

The volume is a collection of translations from Russian of papers on model theory and its applications by authors from Russia and Kazakhstan.

The longest of the papers, "The model theory of unitriangular groups", is a part of Oleg Belegradek's D.Sc. Dissertation (1995), in which the author develops a general theory behind the famous Mal'tsev correspondence between rings and groups. The rest of the volume consists of papers on various aspects of model theory, centering mainly around stability theory. All of them (except Peretyat'kin's paper) were published in the collection "Model Theory and Applications" (ed. Yu. L. Ershov), Proceedings of the Institute of Mathematics, vol. 8, Siberian Branch of the USSR Academy of Sciences, "Nauka", Novosibirsk, 1988. Oleg Belegradek develops the model theory of locally free algebras, which provide natural examples of one-based theories. Andrei Voronkov considers certain aspects of model theory with a constructive meaning of truth and its connection with recursive model theory. Boris Zil'ber characterizes structures with hereditary transitive automorphism groups; such structures naturally arise in the study of stable theories, for which the algebraic and definable closure coincide. Kanat Kudaibergenov constructs a series of examples of theories with various behaviour of the number of homogeneous models in a power; this solves some problems of Keisler and Morley. Tulendy Mustafin studies stable theories of sets on which a monoid acts. Evgenii Palyutin and Sergei Starchenko characterize Horn theories with non-maximal spectrum function. Alexander Ryaskin determines possible spectrum functions for complete theories of unars. Finally, Michael Peretyat'kin's paper is a supplement to his recent book, "Finitely axiomatizable theories", Plenum, 1996.

O. Belegradek

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