Название публикации:

The performance of a system by using an algebraic system of factors determining the system. P-properties of a system

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Аннотация:

In Serdyukova (Algebra & Logic 30:432–456, 1991, [1]), on the basis of a study Yu. L. Ershov's works about profinite groups, a method has been proposed for isolating and studying purities or pure embeddings in a special class of algebraic systems that is the class of groups, which allowed to generalize the known results of the theory of purities of abelian groups to the case of arbitrary non-abelian groups (purities by predicates). In Serdyukova (Optimization of tax system of Russia, parts I and II, 2002, [3]), Serdyukova and Serdyukov (The new scheme of a formalization of an expert system in teaching, 2014, [4]), Serdyukova et al. on the basis of system approach. Springer, Berlin, pp 371–380, 2015 [5]) and Serdyukova and Serdyukov (Modeling, simulations and optimization based on algebraic formalization of the system, pp 576–582, 2015, [6]) a method for modeling the final states of the system and determining the number of final states using the technique of group theory has been developed. An important question when studying the properties of a system and the process of its functioning, and in particular when studying the properties of a smart system and its functioning, is the question of how to determine that a system or a smart system ceases to satisfy some property P or some complex of properties Π. To answer this question, we introduce the notion of a partial probability measure on the set of unary predicates defined on the class of groups and closed with respect to taking subgroups and factor-groups.

Ключевые слова:

Algebraic system of factors determining a system, P-property, Predicate, Algebra, Expert systems, Abelian group, Algebraic system, Non-abelian groups, Partial probability, Predicate, Smart System, Special class, System approach, Group theory