

Master's thesis: 67p., 1 appendix, 16 sources.

The object of this research is S-algebra Lie that is a generalization of classic Lie algebras.

The aim of this research is to define properties of Lie S-algebras.

Method of conducting this research is analysis of symbolically calculated solutions of Yang-Baxter equation.

Obtained results:

— Found interchange Yang-Baxter are satisfied generalized Jacobi condition, built on the basis of their S-Lie algebra;

— For the constructed algebra analyzed their structure.

The novelty lies in the construction of new examples of S-algebra Lee and analysis of their properties.

Explanatory note consists of two sections. The first section provides basic theory of the topic. The second section presents the results of a study show examples of structures found S-algebra Lee.

LIE ALGEBRA, LIE S-ALGEBRA, YANG-BAXTER EQUATION, JACOBI CONDITION, INVOLUTIVE OPERATORS, TENSOR PRODUCT, OUTER PRODUCT, TENSOR