

ABSTRACT

Masters' thesis: 52 p., 1 appendix, 25 sources.

The theme: “quntisation of group of motions of three-dimensional vector space by using double bicrossed product construction”.

The construction of quantum group by using double bicrossed product construction is conducted. The group of motions of three-dimensional vector space is used as a basis. The cohomology groups of selected group are calculated and subsequently, 3-cocycles, necceary for the double bicrossed product construction, are calculated.

The goal of the work is to construct the quantum group by using bicrossed product construction. The object of the work is the quantum group, the subject is the problem of construction of quantum group by using double bicrossed product construction.

DOUBLE BICROSSED PRODUCT, QUANTUM GROUPS GROUP OF MOTIONS OF THREE-DIMENSIONAL VECTOR SPACE, COCYCLES, OPERATOR ALGEBRAS .