

ABSTRACT

The thesis is presented in 50 pages. It contains 2 appendixes and bibliography of 14 references. Twenty-three figures are given in the thesis.

The goal of the thesis is to improve the quality of evaluation of bilingual mathematical tests by developing mathematical models and software of the automated systems that will use linguistic grades for tests, and on the base of communication between atomic tasks and competencies, will give a final grade.

The mathematical methods for evaluation of verbal information such as intervals, type-1 fuzzy sets, type-2 fuzzy sets are discussed. According to the formulated criteria, perceptual computing is chosen for solving the task.

The system developed in the thesis is a complementary tool in evaluating tests of students studying in a bilingual system. The developed system was tested.

Keywords: bilingual system, perceptual computer, type-1 fuzzy sets, type-2 fuzzy sets, competence.