

## ABSTRACT

The thesis is presented in 50 pages. It contains 2 appendixes and bibliography of 8 references. 27 figures and 3 tables are given in the thesis.

The purpose of this work is to improve the quality of digital images denoising. The paper considers methods for solving the problem of digital images denoising: median filtering, linear averaging of adjacent pixels, mathematical morphology, principal component method.

To implement such a system, you need to perform the following tasks:

- a) review existing methods for solving this problem and compare them;
- б) to select and adapt to a given problem the mathematical method;
- в) to develop software for solving this problem based on the chosen mathematical method;
- г) conduct the testing and testing of the developed system.

During the implementation of the thesis, a system has been developed that is an effective means for clearing digital images from noise. A test of a designed software product has been performed.

Keywords: digital image, noise, wavelet transform, denoising, filtration, digital signal processing.