

## ABSTRACT

This thesis is completed on 53 sheets. It contains 2 attachments and a list of references to used sources of 26 items. The paper presents 14 pictures.

The purpose of this thesis is to create mathematical and software tools for evaluation of informatics channels of a hyperspectral image

In the framework of this task, methods of evaluation of informatics channels of a hyperspectral image were considered. As part of the work, we propose to use the diagonal metric of Bhakthaarias, the Dumbbell-Leibler divergence, and the equivalent-spatial resolution.

To solve the problem in the work, a probabilistic frequency method for assessing the informativeness of the channels of the hyperspectral image was chosen. The software that implements the chosen method was developed, the selection of the most informative set of channels of the hyperspectral image and the comparison of this sample with the initial set of channels was performed.

On the basis of the thesis papers, theses of reports were written and published at the XI International scientific and technical conference "TELECOMMUNICATIONS PROBLEMS 2017".

Key words: geopspectral images, remote sensing, estimation of information, equivalent-spatial resolution.