

## **Annotation**

This diploma project considers the implementation and design of digital BIH filters in the form of laboratory work in the Matlab software environment.

In this paper, the BIH filter procedure is synthesized using the bilinear Z-transform method. The types of recursive (BIH) filters are considered and they are implemented using Matlab software.

Also, the diploma project provides calculations on safety on the topic of artificial lighting and ventilation of laboratory premises.

The costs of this diploma project are calculated on a technical and economic basis.