

ABSTRACT

Thesis: 86p., 10 tables, 31 figures. 2 items, 6 sources.

NEURON, NEURAL NETWORK, FUZZY LOGIC, FUZZY NEURAL NETWORK, FUZZY EXIT, FORECAST.

The object of the study is the course of shares of the industrial index of the Dow Jones, time series.

The purpose of the work is to realize a cascade neo-fuzzy neural network for the forecast of time series. Investigate the influence of the values of the model parameters on the accuracy of the model. Compare the results of the method forecast with other forecast methods.

Research methods – to realize a cascade neo-fuzzy neural network and to investigate its work.

A cascade neo-fuzzy neural network is implemented. Received results of the forecast of time series. The best values for the Dow Jones industrial index stock price outlook are found.

The influence of the complexity of the model (number of inputs, rules and cascades) on the mean error value was studied.

A comparison of the method of the method with the least squares method and the group method of data handling (GMDH) for the same time series is made.