

SUMMARIES

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**PREDICTION OF THE PRICE FLUCTUATIONS IN THE STOCK MARKET
USING ARTIFICIAL INTELLIGENCE SYSTEMS**

Today the algorithmic trading information systems are widely used for the automatic controlling of the investment portfolios in real time of the stock exchange activity. Now, according to the various resources, more than 70 % of transactions on the stock exchanges executed via algorithmic trading systems. Such systems are widely used as large investment companies, as by individuals, who are investing their money for creating portfolios of financial instruments.

On the other hand, thanks to the development of computer technology, associated with the increasing power of computing devices and optimizing computational algorithms, it is possible to move from legacy systems, that use classical analytical tools, to systems based on artificial intelligence, which, although they require more computing resources, but also have the ability to adapt quickly to market changes.

The autoregressive model for forecasting stock prices, developed using tools and algorithm of wavelet filters and neural networks, was proposed by authors. In the course of the experiment was determined, that the best results can be obtained in the case, when the number of data points in the past don't exceed 5. It was proved, that the softwear R-language 3.0.2 and packages wtmsa and neuralnet are the qualitative and convenient tool for solving the problems of forecasting time series and can be used to build more complex simulation models for analyzing economic indicators.