Genetic Algorithm Approach for the Prediction of Business Risks' Dynamics of Enterprise

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The presented work deals with the problem of identification and modeling of Discrete Fuzzy Dynamic System (DFDS) with possibility uncertainty, using the technologies of Genetic Algorithms (GA). The fuzzy recurrent process, the source of which is expert knowledge reflections on the states of the evolutionary complex system, is constructed. The dynamics of DFDS is described and the constructed model is converted to the finite model. The DFDS transition operator is restored by means of expert data with possibility uncertainty. Obtained results are illustrated by the example for prediction and stopping problems for evaluations of the increasing business risks of the enterprise.

Keywords: DFDS, identification of DFDS, genetic algorithm, business risks