

Evolutionary algorithms belongs among the youngest and the most progressive methods of solving difficult optimization tasks. They received huge popularity mainly due to good experimental results in optimization, a simplicity of the implementation and a high modularity, which is an ability to be modified for different problems. Among the most frequently used Evolutionary algorithms belongs Genetic Algorithm, Differential Evolution and Evolutionary Strategy. It is able to apply these algorithms and theirs variants to both continuous, discrete and mixed optimization tasks. A subject of this theses is to compare three main types of algorithms on the catalyst optimization task with mixed variables, linear constraints and experimentally evaluated fitness function.