

This study focuses on the global optimization of functions of real variables using methods inspired by nature. It contains a description of selected global optimization techniques (Differential Evolution, Self-Organizing Migrating Algorithm, Steady-State Evolutionary Algorithm, Particle Swarm Optimization, Gregarious Particle Swarm Optimizer a Hybrid Particle Swarm with Differential Evolution Operator). I have found four improvements of these techniques, discovered their suitable parameter configurations and compared them on chosen trial functions. Experimental results proved that described improvements can increase performance of the optimization techniques inspired by nature.