

Abstract

Swarm intelligence (SI) is widely applied for optimizing both continuous and discrete problems. Many papers have investigated them for continuous optimizations since most swarmbased algorithms are designed based on continuous movements, which are simply calculated using vector-based mathematical operations. It is quite easy to select the best SI algorithm for a given continuous problem. However, it is quite hard to pick an optimum SI algorithm for a discrete problem since the individual movement is difficult to develop. Therefore, in this paper, three SI algorithms: particle swarm optimization (PSO), firefly algorithm (FA), and bat algorithm (BA), are compared to solve some cases of discrete problem

Keywords: swarm intelligence; particle swarm optimization; firefly algorithm; bat algorithm; discrete problem