Abstract

Bacterial foraging optimization algorithm (BFOA) has been widely accepted as a global optimization algorithm of current interest for distributed optimization and control. BFOA is inspired by the social foraging behavior of Escherichia coli. BFOA has already drawn the attention of researchers because of its efficiency in solving real world optimization problems arising in several application domains. The underlying biology behind the foraging strategy of E. coli is emulated in an extraordinary manner and used as a simple optimization algorithm. This paper proposes a genetic algorithm (GA) based bacterial foraging (BF) algorithms for function optimization. The proposed method using test functions and the performance of the
algorithm is studied with an emphasis on mutation, crossover, variation of step sizes, chemotactic steps, and the lifetime of the bacteria.

References


Index Terms

Computer Science  Emerging Trends in Technology

Keywords

Genetic Algorithm  Bacterial Foraging Technique  Optimization