



Hybrid modifications of Bacterial Foraging Optimization: A Survey

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Other than using traditional methods, Meta-heuristics are very popular in solving complex and intricate problems. Among the meta-heuristics, Bacterial Foraging Optimization is a newly introduced nature inspired algorithm which has been successfully used in solving complex problems since its inception in 2002 by Kevin M. Passino. BFO algorithm is successfully applied in the fields of Computer Science, Engineering, Medical science, and Mathematics. Original optimization heuristics have problems in accuracy, optimum solutions in large scale problems, delay in convergence and premature convergence. Several hybridizations of BFO and Particle Swarm Optimization have been applied in different engineering problems. It has been successfully coupled with meta-heuristics such as Tabu Search, Differential Evolution and Genetic Algorithm as well. This study is based on the improvements of BFO in hybrid modifications and the applications compared with other optimization algorithms. The study shows that the hybrid modifications converging faster and solve the problem of premature convergence in the original BFO.

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