

GREY WOLF INDICATES BETTER PERFORMANCE THAN TRADITIONAL PARTICLE SWARM OPTIMIZATION AGAINST BENCHMARK FUNCTION ANALYSIS ALGORITHM

Srikanth Kavirayani¹ and V. Deepesh²

¹Department of Electrical and Electronics Engineering
Gayatri Vidya Parishad College of Engg, AP, India 530048

²Department of Electrical and Electronics Engineering
Gayatri Vidya Parishad College of Engg, AP, India 530048
Corresponding author email: kavirayanisrikanth@gvpce.ac.in

Abstract: In recent days metaheuristic algorithms are becoming more demand among researchers due to their simplicity and flexibility. These metaheuristic algorithms are inspired by the behavior of the birds and animals. Particularly these algorithms are analyzed by their key features like diversity, exploration and exploitation. The objective of the study is to comparison between metaheuristic algorithms with the help of benchmark functions. The algorithms which selected particle swarm optimization (PSO) and grey wolf optimization (GWO). PSO was able to solve the benchmark functions. But, when compared with GWO, The GWO is able to solve effectively.

Keywords. Particle Swarm Optimization (PSO), Grey Wolf Optimization (GWO), benchmark functions, populations, iterations

1 Introduction

Nowadays the metaheuristic techniques are making to solve the solutions much effectively. The metaheuristic techniques are like Genetic algorithm (GA), Particle Swarm Optimization (PSO), Grey Wolf Optimization (GWO), Artificial Bee colony (ABC), Bat optimization (BO) and cuckoo search optimization (CSO). And there are more new metaheuristic techniques were implementing day by day by modifying the existing problems in the algorithms. [2] Benchmark functions were used to check the performance of best optimal values of the metaheuristic techniques and obtain the optimized results for each function and also compares the difference between the metaheuristic techniques. By this the modification in the metaheuristic technique can be improved.[3]