Abstract

Traditional mathematical algorithms are incapable of solving real-time engineering design problems because of its rigid procedure mainly due to discrete or random data and multi-objective functions in a problem. An optimization algorithm is a procedure which is executed iteratively by comparing various solutions till the optimum or a satisfactory solution is found. There are two population-based Swarm inspired methods in computational intelligence areas: Ant colony optimization (ACO) and Particle swarm optimization (PSO). This paper made an attempt to evaluate their performance of these two swarm intelligence techniques. A real engineering application of bevel gear design optimization is considered and results are analyzed with respect to the context.
Evaluation of the Performance of Ant Colony Optimization over Particle Swarm Optimization

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Index Terms

Computer Science

Algorithms

Keywords

Ant Colony Optimization  Bevel Gear design  Multi Objective Optimization  Particle Swarm Optimization.

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