

Evaluating premature convergence for metaheuristic.

ABSTRACT

Premature convergence is a common problem to population based metaheuristic. The evaluation of premature convergence rate is difficult to obtain because the stochastic nature of metaheuristic. This paper presents a statistical effort to evaluate and predict the premature rate and performance of metaheuristic. The Fitness Distance Correlation technique was used to determine the premature rate and the memetic algorithm is tested on five selected timetabling datasets. The results shows that using relatively less effort, we can gain meaningful values of premature problems.

Keyword: Premature convergence; Metaheuristic; Fitness distance correlation.