عنوان فارسی مقاله:
الگوریتم زنتیک ترکیبی برای توزیع اقتصادی بار با نظر اگرفن تأثیر نقطه سوپاپ

عنوان انگلیسی مقاله:
Hybrid genetic algorithm for economic dispatch with valve-point effect
5. Hybrid genetic algorithm

5.1. Selection operator

After the evaluation of the initial population, the GA begins the creation of the new generation. The selection used in this paper depends on individual fitness. The best individuals of the present population are kept for the next population. The fitness value in this paper contains the penalty function and does not represent the true objective function.

5.2. Simplex crossover operator

The primary genetic operator is the crossover operator. The purpose of crossover operator is to produce new chromosomes that are distinctly different from their parents, yet remain some of their parents characteristics. It has important function in the capability of searching the optimal solution.

Simplex algorithm is a method which finds optima through improving inferior point by searching from inferior point towards the pivot of \( n+1 \) initial points of the Simplex for the \( n \)-dimensional problem. Simplex algorithm is similar to crossover operator of GA in utilizing information of multi-points. Based on aforementioned analysis, simplex crossover operator [19] is employed in this paper to improve convergence speed and lead the population to the global optimum because of the characteristic of improving inferior point.