Abstract

Economic load dispatch problem is an optimization problem where objective function is highly non linear, non-convex, non differentiable and may have multiple local minima. Therefore, classical optimization methods may not converge or get trapped to any local minima. This paper presents a comparative study of three different evolutionary algorithms i.e. differential evolution, artificial bee colony algorithm and particle swarm optimization for solving the economic load dispatch problem. All the methods are tested on 3-units and 6-units test system. Simulation results are presented to show the comparative performance of these methods.
Application of Soft Computing Methods for Economic Load Dispatch Problems

smooth and non-smooth fuel cost functions including line losses using genetic algorithm.

Index Terms

Computer Science

Algorithms

Keywords

Economic Load Dispatch  Differential Evolution  Artificial Bee Colony  Particle Swarm Optimization