

## Firefly algorithm technique for solving economic dispatch problem

### Abstract

This paper presents the implementation of Firefly Algorithm (FA) in solving the Economic Dispatch (ED) problem by minimizing the fuel cost and considering the generator limits and transmission losses. ED is one of the most challenging problems of power system since it is difficult to determine the optimum generation scheduling to meet the particular load demand with the minimum fuel cost and transmission loss. Until now, there are a lot of researches that have been done to seek for closest optimum result in determining the power generation of each generator especially in large scale power system. FA is a meta-heuristic algorithm which is inspired by the flashing behavior of fireflies. The primary purpose of firefly's flash is to act as a signal system to attract other fireflies. In this paper, 26-bus system is utilized to show the effectiveness of the FA in solving the ED problem. Comparison with Continuous Genetic Algorithm (CGA) and conventional method are also given.