

## عنوان مقاله:

Solving Non-Convex Economic Load Dispatch using a New Modified BFA Algorithm

## محل انتشار:

بیستمین کنفرانس توزیع برق (سال: 1394)

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## خلاصه مقاله:

Economic Load dispatch (ELD) generally formulated as non-smooth problem using optimization methods by approximating generator input/output characteristic curves of monotonically increasing nature results. Several traditional approaches, like lambda-iteration and gradient method are utilized to find out the optimal solution of non-linear problem. More recently, the soft computing methods have received more attention and were used in a number of successful and practical applications. This paper presents a newly developed optimization approach involving Modified Bacterial Foraging Algorithm (MBFA) applied for the solution of the ELD problem. For practical generator operation, many nonlinear constraints of the generator, such as ramp rate limits, prohibited operating zone, generation limits, transmission line loss and non-smooth cost functions are all considered using the proposed method. Here, an attempt has been made to find out the minimum cost by using MBFA using the data of six, fifteen and fourteen generating units. The results analysis confirms that the proposed method has an excellent capability to determine optimal solution of the ELD problems over the other existing methods and enhances efficiently the solutions .quality of the power systems

## کلمات کلیدی:

Modified Bacterial Foraging Algorithm; non-smooth ELD; Valve Point Effects; Heuristic Optimization

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/381657>

