

Accepted Manuscript

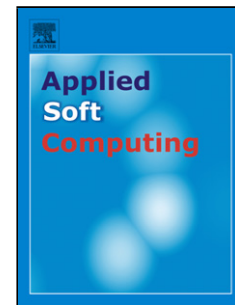
Title: Orthogonal learning competitive swarm optimizer for economic dispatch problems

Authors: Guojiang Xiong, Dongyuan Shi

PII: S1568-4946(18)30078-4
DOI: <https://doi.org/10.1016/j.asoc.2018.02.019>
Reference: ASOC 4711

To appear in: *Applied Soft Computing*

Received date: 15-9-2017
Revised date: 20-1-2018
Accepted date: 13-2-2018



Please cite this article as: Guojiang Xiong, Dongyuan Shi, Orthogonal learning competitive swarm optimizer for economic dispatch problems, Applied Soft Computing Journal <https://doi.org/10.1016/j.asoc.2018.02.019>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Orthogonal learning competitive swarm optimizer for economic dispatch problems

Guojiang Xiong ^{1,*}, Dongyuan Shi ²

¹ College of Electrical Engineering, Guizhou University, Guiyang, 550025, China

² State Key Laboratory of Advanced Electromagnetic Engineering and Technology, Huazhong University of Science and Technology, Wuhan, 430074, China

* Corresponding author. E-mail address: gjxiongee@foxmail.com (Guojiang Xiong)

Highlights

- An orthogonal learning competitive swarm optimizer (OLCSO) is proposed for economic dispatch (ED) problems.
- An orthogonal learning strategy is developed to provide a systematic searching engine for OLCSO.
- 24 numerical benchmark functions are first employed to verify OLCSO.
- OLCSO is then applied to three convex and non-convex ED cases with diverse characteristics.
- OLCSO is highly competitive with some state-of-the-art algorithms.

Abstract

Power system economic dispatch (ED), mathematically, is a typical complex nonlinear multivariable strongly coupled optimization problem with equality and inequality constraints, especially considering the valve-point effects. In this paper, a novel variant of competitive swarm optimizer (CSO) referred to as OLCSO is proposed to solve both

Download English Version:

<https://daneshyari.com/en/article/6903906>

Download Persian Version:

<https://daneshyari.com/article/6903906>

[Daneshyari.com](https://daneshyari.com)