## Accepted Manuscript

Title: A Switched Parameter Differential Evolution with Optional Blending Crossover for Scalable Numerical Optimization

Authors: Arka Ghosh, Swagatam Das, Sankha Subhra

Mullick, Rammohan Mallipeddi, Asit K. Das

PII: S1568-4946(17)30125-4

DOI: http://dx.doi.org/doi:10.1016/j.asoc.2017.03.003

Reference: ASOC 4086

To appear in: Applied Soft Computing

Received date: 21-6-2016 Revised date: 27-2-2017 Accepted date: 2-3-2017

Please cite this article as: Arka Ghosh, Swagatam Das, Sankha Subhra Mullick, Rammohan Mallipeddi, Asit K.Das, A Switched Parameter Differential Evolution with Optional Blending Crossover for Scalable Numerical Optimization, Applied Soft Computing Journalhttp://dx.doi.org/10.1016/j.asoc.2017.03.003

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.

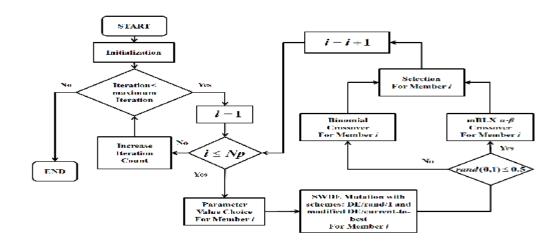


## A Switched Parameter Differential Evolution with Optional Blending Crossover for Scalable Numerical Optimization

Arka Ghosh<sup>1,3</sup>, Swagatam Das<sup>1</sup>, Sankha Subhra Mullick<sup>1</sup>, Rammohan Mallipeddi<sup>2</sup>, and Asit K. Das<sup>3</sup>

E-mails: arka\_t@isical.ac.in, swagatam.das@isical.ac.in, sankha\_r@isical.ac.in, mallipeddi.ram@gmail.com, <u>akdas@cs.iiests.ac.in</u>.

#### **Graphical Abstract**



#### **Research Highlights:**

- A simple yet very efficient variant of DE for scale-free optimization.
- Novel switching based adaptation of F and Cr parameters.
- A unit memory success-based mutation scheme used.
- A modified BLX-alpha-beta crossover scheme is integrated with DE.
- Extensive simulation results on CEC 2013 and CEC 2010 benchmark sets.

<sup>&</sup>lt;sup>1</sup> Indian Statistical Institute, 203 B. T. Road, Kolkata -700 108, India.

<sup>&</sup>lt;sup>2</sup>College of IT Engineering, Kyungpook National University, Daegu -702 701, Republic of Korea.

<sup>&</sup>lt;sup>3</sup>Dept. of Computer Science & Technology, IIEST, Shibpur, Howrah -711 103, India.

### Download English Version:

# https://daneshyari.com/en/article/4963362

Download Persian Version:

https://daneshyari.com/article/4963362

<u>Daneshyari.com</u>