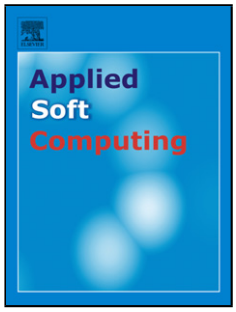
Accepted Manuscript



Title: Multi-objective Colonial Competitive Algorithm for Hybrid Flowshop problem

Author: N. Karimi H. Davoudpour

PII: S1568-4946(16)30314-3
DOI: http://dx.doi.org/doi:10.1016/j.asoc.2016.06.034
Reference: ASOC 3671

To appear in: *Applied Soft Computing*

Received date: 16-2-2014
Revised date: 28-5-2016
Accepted date: 24-6-2016

Please cite this article as: N.Karimi, H.Davoudpour, Multi-objective Colonial Competitive Algorithm for Hybrid Flowshop problem, Applied Soft Computing Journal http://dx.doi.org/10.1016/j.asoc.2016.06.034

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.

ACCEPTED MANUSCRIPT

Multi-objective Colonial Competitive Algorithm for Hybrid Flowshop problem

N. Karimi, H. Davoudpour

Department of Industrial Engineering and Management Systems, Amirkabir University of Technology, 424 Hafez Avenue, Tehran 15916-34311, Iran.

Graphical abstract
Multi-objective colonial competitive algorithm

- Generating initial empires
    - Non-dominated sorting approach
    - Probabilistic criterion
    - Empires constitution
- Evaluation
- Evolution

Design a set of neighborhood structures N_k, $k=1,...,K_{\max}$
Select an initial solution x' at random;
for $t=1$ to $t_{\max}$ do
  set $k=1$ and $x=x'$;
  while $k<k_{\max}$ do
    Execute shake procedure: generate a random solution from the k *th* neighborhood of x' ($x''\in N_k(x')$)
    Execute local search: some local search method on $N_k(x'')$ to find new solution x^*
    if fitness (x^*)<fitness (x) then
      $x'=x^*$
      set $k=1$
      else
      $k=k+1$
    end if
  end while
  $t=t+1$
end for

Fig. 1. Basic VNS algorithm

- Exchange position of imperialist and a colony
- Imperialistic competitions
- Eliminating the powerless empires
- Convergence

Download English Version:

https://daneshyari.com/en/article/4963595

Download Persian Version:

https://daneshyari.com/article/4963595

Daneshyari.com