

{tag}

{/tag}

IJCA Proceedings on International Conference
on Innovations in Computing Techniques (ICICT 2015)

© 2015 by IJCA Journal

ICICT 2015 - Number 3

Year of Publication: 2015

Authors:

S. Sarathambekai

K. Umamaheswari

G. Tharanipriya

{bibtex}icict1499.bib{/bibtex}

Abstract

The general problem of multiprocessor scheduling is stated as scheduling tasks on a multiprocessor system so that a set of performance criteria can be optimized. Shuffled Frog Leaping (SFL) algorithm is a recently developed population based search algorithm, which is inspired by the interactive behavior and global exchange of information of frogs searching for food. It is combination of meme-based genetic algorithm or Memetic Algorithm (MA) and

Particle Swarm Optimization (PSO). This algorithm is used in this paper to solve a task scheduling problem in distributed systems which aims at minimizing the tri-objectives such as makespan, flow time and reliability cost.

Refer

ences

- S. W. Choi, and Y. D. Kim, 2008 "Minimizing makespan on an m-machine re-entrant flow shop", Computers & Operations Research, Vol. 35, No. 5, pp. 1684–1696.
- DhodhiM K,Ahmad I,Yatama A,Ahmadl, 2002 "An integrated technique for task matching and scheduling onto distributed heterogeneous computing systems. " Journal of Parallel and Distributed Computing, vol 62, pp 1338–61.
- Braun, T. , Siegal, H. , Beck, N, 2001," A comparison of Eleven Static Heuristics for Mapping a Class of Independent Tasks onto Heterogeneous Distributed Computing Systems", Journal of Parallel and Distributed Computing, vol. 61, pp 810-837.
- Muzaffar M, Eusuffand Kevin E, Lansey, 2003, "Optimization of Water Distribution Network Design Using the Shuffled Frog Leaping Algorithm", Journal of Water Resources Planning and Management, Vol. 129, No. 3, pp. 210-225.
- S. Sarathambekai, K. Umamaheswari, 2014, "Task Scheduling in Distributed Systems using Discrete Particle Swarm Optimization", International Journal of Advanced Research in Computer Science and Software Engineering, Vol 4, pp 510-522.
- R. Lindeke, 2005, "Scheduling of Jobs", IE 3265 – POM, Spring:www. d. umn. edu/~rlindek1/. . . / Scheduling %20 of % 20Jobs_ Sset11. ppt,.
- Xiao Qin and Hong Jiang, 2001, "Dynamic, Reliability-driven Scheduling of Parallel Real-time Jobs in Heterogeneous Systems", IEEE International conference on Parallel Processing, pp 113-122.
- I. Y. Kim and O. L. de Weck, 2006," Adaptive weighted sum method for multi-objective optimization: a new method for Pareto front generation", Springer-Structural and Multidisciplinary Optimization, Vol 31, pp 105-116.

Index Terms

Computer Science

Distributed Systems

Keywords

Distributed System Pso Algorithm Sfl Scheduling

