Abstract

In real world most of the optimization problems are multi-objective in nature. These problems take large amount of time to congregate to the true Pareto front. So the basic algorithm like non parallel NSGA II may not able to solve such problem in \( \varepsilon \)-tolerable amount of time. This paper proposes a new hybrid parallel multi-objective genetic algorithm and solve one of the real life problem i.e., 0/1 knapsack problem. The proposed model is designed by combining the characteristics of Island model, Jakobovic model and Cone Separation model. It is experimented over a multi-core system and gives promising result over all the existing basic models in terms of converging to the true Pareto front.

References

- J. Branke, T. Kaubler, and H. Schmeck. Guidance in evolutionary multiobjective
A Hybrid Parallel Multi-Objective Genetic Algorithm: HybJacIsCone Model


**Index Terms**

Computer Science

Algorithms

**Keywords**

Parallel Multi-Objective Genetic Algorithm Trigger Model NSGA-II Cone Separation Model
Island Model

0/1 Knapsack Problem

HybJacIsCone Model