Solving pre-processed set covering problems via cuckoo search and lévy flights [Resolviendo Problemas Pre-Procesados de Cobertura de Conjuntos vía Cuckoo Search y Lévy Flight]

Soto R.

Crawford B.

Barraza J.

Johnson F.

Paredes F.

Cuckoo search is a modern bio-inspired metaheuristic that has successfully been used to solve different real world optimization problems. In particular, it has exhibited rapid convergence reaching considerable good results. In this paper, we employ this technique to solve the set covering problem, which is a well-known optimization benchmark. We illustrate interesting experimental results where the proposed algorithm is able to obtain several global optimums for different set covering instances from the OR-Library. © 2015 AISTI.

Artificial Intelligence

Bio-Inspired Models

Set Covering Problem

Artificial intelligence

Factory automation

Information systems

Bio-inspired Models

Cuckoo searches

Global optimum

Metaheuristic

Rapid convergence

Real-world optimization

Set covering problem

Set coverings

Optimization