

Set covering problem solved by new binary firefly algorithm [Problema de Cobertura de Conjunto Resuelto por el Nuevo Algoritmo Luciérnaga Binario]

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In this paper, we propose a Modified Binary Firefly Algorithm to solve different instances of the Set Covering Problem (SCP). The Set Covering Problem is considered a classic combinatorial optimization problem, belonging to the class NP-hard problem [8] and have many practical applications. In this paper we consider applying Modified Binary Firefly Algorithm supported in eight Transfer Functions and five Discretization Methods that allow us to express the solution of the problem in the binary domain. The different results presented in this paper show that our algorithm is a good alternative at a low cost to solve the SCP. © 2015 AISTI.

Discretization Methods

Modified Binary Firefly Algorithm

NP-hard

Set Covering Problem

Transfer Functions

Bins

Bioluminescence

Combinatorial optimization

Computational complexity

Discrete event simulation

Information systems

Optimization

Transfer functions

Volume measurement

Combinatorial optimization problems

Discretization method

Firefly algorithms

Low costs

NP-hard

Set covering problem

Algorithms