Abstract

This piece of research presents the Particle Swarm Optimization (PSO) as a biologically inspired computational paradigm searches for problem optimization technique. Specifically, PSO consists of a swarm of particles, where particle represent a potential solution. More precisely it is a population-based, stochastic algorithm modeled on the social behaviors observed in flocking birds. Over the past quarter century, Global Optimization techniques like Genetic and PSO algorithms has attracted many researchers attention at engineering and industry. In December 2016, a new field titled “Artificial Human Optimization” was introduced in literature. Referring to that innovative field it is clear that the agents in Artificial Human Optimization are Artificial Humans. Recently, a new algorithm titled Multiple Strategy Human Optimization (MSHO) is designed based on Artificial Humans. This paper adopted an interesting novel experimental idea which incorporated Hybridization of perspective concepts of Artificial Human Optimization into some experimental illustrations of PSO algorithms. Additionally, Human Inspired Differential Evolution (HIDE) is recently proposed method which is based on Differential Evolution and MSHO. For particular parameters settings HIDE performed
Hybridization Concepts of Artificial Human Optimization Field Algorithms Incorporated into Particle Swarm Optimization

approximately as good as Differential Evolution. In the experiment in this paper, a new algorithm titled “Hassan Satish Particle Swarm Optimization (HSPSO)” is proposed. HSPSO is tested by applying it on a complex benchmark function. Interesting Hybridization results have been obtained. Results obtained by HSPSO are compared with Particle Swarm Optimization.

References


Index Terms

Computer Science Artificial Intelligence

Keywords