Comparative Study between the (BA) Algorithm and (PSO) Algorithm to Train (RBF) Network at Data Classification

Abstract

The Swarm Intelligence Algorithms are (Meta-Heuristic) development Algorithms, which attracted much attention and appeared its ability in the last ten years within many applications such as data mining, scheduling, improve the performance of artificial neural networks (ANN) and classification. In this research was the work of a comparative study between Bat Algorithm (BA) and Particle Swarm Optimization Algorithm (PSO) to train Radial Basis function network (RBF) to classify types of benchmarking data. Results showed that Bat Algorithm (BA) is overcome on (PSO) Algorithm in terms of improving the weights of (RBF) network and accelerate the training time and good convergence of optimal solutions, which led to increase network efficiency and reduce falling mistakes and non-occurrence.

References

- Dr. laheeb M. Ibrahim, Hanan H. Ali; "Using of Neocognitron Artificial Neural Network To Recognize handwritten Arabic numbers". The first scientific conference for information technology - Iraq - Mosul University 22 to 23 December 2008.
- Nazri Mohd. Nawi, Abdullah Khan, and Mohammad Zubair Rehman; "A New Back-Propagation Neural Network Optimized with Cuckoo Search Algorithm". Faculty of Computer Science and Information Technology, Universiti Tun Hussein Onn Malaysia (UTHM).
Comparative Study between the (BA) Algorithm and (PSO) Algorithm to Train (RBF) Network at Data Classification


- Ferat, Sahin, 1997, "A Radial Basis function Approach To a color Image Classification Problem in a Real Time Industrial Application", formerly the scholarly communications projects, Electrical engineering.

Index Terms
Keywords
RBF  BA  PSO  ANN  Meta-Heuristic.