Abstract

The nodes in wireless sensor networks (WSN) need to be deployed optimally to cover whole geographic area and the communication link between them should be optimal. During deployment the proper strategy is required to optimally deploy the sensor nodes in the area. The sensor nodes can be compared with swarms which are homogenous agents. Swarm intelligence methods have been applied over the clustering of nodes in WSN and some of the approached have shown significant improvements in comparison with the non-swarm intelligence based algorithms. In this paper, we have tried to review latest techniques to create clusters using nature inspired methods. Proper classification with discussion of merits and demerits has been done. Scope of work in this area has been searched and inferred as conclusion. After the optimal deployment the next phase of needed is the energy efficient multi-hop routing among the nodes for communication of the packets to the base station. This multi-hop routing requires the optimal cluster head selection and maximum time of death of complete circuit achievable to get an optimally clustered network.
Classification of Swarm Intelligence based Clustering Methods

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Index Terms

Computer Science
Artificial Intelligence
Keywords

Wireless sensor networks (WSN)  Swarm Intelligence  Clustering  Bacterial Foraging Optimization (BFO) Algorithms

and Enhanced BFO.