Abstract

Coverage area in wireless sensor network (WSN) is very important for network’s performance. It has several critical and challenges that are to be occupied when designing the techniques and algorithms to increase the Network lifetime. Therefore WSN poses problem involve exchange data between multiple conflicting optimization objectives such as coverage preservation. The proposed paper applies new approach to optimize the coverage performance of WSN. The algorithm strategy new multi-objective optimization bat swarm algorithm with adaptive neighborhood processes and turnoff redundant sensor nodes. Any position of mobile sensor nodes represented by bat which is used in hybrid bat algorithm. The algorithm is presented an adaptive neighborhood which can successfully avoid possibility the turnoff redundant sensor. Simulation results show that experimental results can able to improve coverage of WSN, increase the time life of network and low energy consumption.


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Index Terms

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Keywords

Wireless Sensor Network, Bat algorithm, Multi-objective Optimization, Coverage, Neighborhood disturbance, redundant node