A Novel Routing Technique for Congestion Avoidance in WSN using Bat Algorithm

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 180
Number 32

Year of Publication: 2018

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10.5120/ijca2018916847

Abstract

Nature inspired optimization algorithms are useful for solving different kind of engineering problems, combinatorial problems and many more. Bat Algorithm is one of the nature inspired techniques which fulfill the criteria of finding the optimized and better result, in solving most of the problems. Routing is one of the combinatorial optimization problems, which can be solved using Bat Algorithm. Many researchers have contributed in this field by proposing and developing one or the other techniques to solve the problem of routing. In this paper, Bat Algorithm is used to solve the same and the problem of congestion over optimal path is avoided by the proposed algorithm in wireless sensor network. Experimental results show that the hybridization of bat algorithm and congestion avoidance strategy proved to be efficient than queue based congestion avoidance strategy while solving problem at hand on the basis of mean, minimum, maximum and median values.

References


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Index Terms

Computer Science Wireless

Keywords

Bat Algorithm; Collision; Routing; WSN