Document details

Back to results | 1 of 1

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A Noble Approach of ACO Algorithm for WSN (Conference Paper)

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Abstract

View references (14)

In energy compelled wireless sensor networks (WSNs), the means by which to perform effectual routing is among the main focuses. A noble approach of ant colony optimization (ACO) algorithm for discovering the optimum route in the WSNs for data transmission is proposed here for enhancement and optimization considering the issue of path selection to reach the nodes. Using the proposed ACO algorithm and considering both the node mobility and the existing energy of the nodes, an optimum route and best cost from the originating node to the target node can be detected. The proposed algorithm has been simulated and verified utilizing MATLAB and the simulation results demonstrate that new ant colony optimization based algorithm can achieve better performance and faster convergence to determine the best cost route. © 2018 IEEE.

SciVal Topic Prominence

Topic: Routing protocols | Routing algorithms | Wireless sensor networks

Prominence percentile: 82.341

Author keywords

ABC. | ACO Algorithm | IoT | Network | PSO | Routing | WSN

Indexed keywords

Engineering controlled terms: Artificial intelligence | MATLAB | Network routing | Networks (circuits) | Particle swarm optimization (PSO) | Sensor nodes

Engineering uncontrolled terms: ACO algorithms | Ant Colony Optimization algorithms | Existing energies | Faster convergence | Optimum route | Path selection | Routing | Wireless sensor network (WSNs)

Engineering main heading: Ant colony optimization

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Back to results | 1 of 1

Top of page