Abstract

Wireless sensor networks (WSNs) created by number of sensor nodes in order to sense and sending data from its enclosing atmosphere. The sensor nodes have limited computation ability, partial power and little memory size. In these networks, sensor nodes are needy on short power batteries to give their energy. As energy is a difficult problem in these networks. In this paper, first introduce secure and efficient bioinspired Cost-Aware Secure Routing (CASER) protocol by selecting cluster head and using genetic algorithm for transferring the data in sensor network and also provide a calculable security analysis on the proposed routing protocol. In this introduced bioinspired CASER protocol which provides good deal between routing efficiency
and energy balance, and much increases the lifetime of the sensor networks in all sides. For the random energy delivery, this analysis shows how can increase the lifetime and the total numbers of messages that can be send many times under the same assumption. In introduced bioinspired CASER protocol, group research show that it can produce a high message delivery

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**Index Terms**

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**Keywords**

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