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## Energy-aware routing protocol for mobile sensor networks using learning automata algorithms

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**ABSTRACT**

This paper proposes an energy-aware location-based routing protocol for mobile sensor networks that consist of frequently moving sensors. Our proposed protocol uses learning automata to select best routes that maximize delivery ratio and network lifetime. The protocol uses the location and remaining energy information of sensors to assign a cost function to each sensor node. Each node in network is equipped with a learning automaton which selects least-cost paths for each packet. Simulation results show that the proposed method achieves higher delivery ratio, lower routing overhead and lower energy consumption.

**INDEX TERMS**
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Learning automata , Mobile communication , Mobile computing , Routing , Routing protocols , Wireless sensor networks

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