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# Improving Network Lifetime in Wireless Sensor Network Using Fuzzy Logic Based Clustering Combined With Mobile Sink

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**Astract** The issues related to energy consumption and prolonging the lifetime of wireless sensor networks (WSNs) have been studied. The deployment of a transceiver station in a WSN is a major concern. Supposing the base stations are static (fixed), however they are capable of moving in some situations to collect data from sensor nodes. In order to achieve higher energy efficiency results, the mobility of the base station to increase the lifetime of the WSN is considered in this article. We propose a strategy that combines moving sinks by fixed-path sink with fuzzy clustering algorithm that results the proposed algorithm has better performance in terms of network life, stability and packet delivery compared to Leach, Cluster Head Election mechanism using Fuzzy logic (CHEF) in performance evaluation through simulation software MATLAB.

**Keyword**— Mobile Sink, Clustering, Leach, Energy-efficient Clustering, Cluster Head Election mechanism using Fuzzy logic



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