

## Multiple Query Optimization in Wireless Sensor Networks Using Data Correlation

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**Abstract :** Data sensing in wireless sensor networks is done by query deceleration the network by the users. In many applications of the wireless sensor networks, many users send queries to the network simultaneously. If the queries are processed separately, the network's energy consumption will increase significantly. Therefore, it is very important to aggregate the queries before sending them to the network. In this paper, we propose a multiple query optimization framework based on sensors physical and temporal correlation. In the proposed method, queries are merged and sent to network by considering correlation among the sensors in order to reduce the communication cost between the sensors and the base station.

**Keywords :** wireless sensor networks, multiple query optimization, data correlation, reducing energy consumption

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