

# Multisensor Data Fusion using Fuzzy Logic for Wireless Sensor Networks

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## Abstract

Wireless sensor network (WSN) consists of a large number of sensor nodes which are limited in battery power and communication range. One of the most important applications of WSN is environment monitoring. In this paper, we propose a novel method to analyze the problem of improving reliability and accuracy of the event detection, using fuzzy logic. In our proposed method each sensor node is equipped with diverse sensors (temperature, humidity light, and Carbon Monoxide). The use of more than one sensor provides additional information on the environmental condition. The processing and fusion of these diverse sensor signals are carried out using proposed fuzzy rule based system. The multiple data fusion process improves the accuracy of the sensed information and thereby minimizes the false alarm rate. Finally our results show that the proposed method is effective in improving the event detection.

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