OPTIMAL FAULT–TOLERANT EVENT DETECTION IN WIRELESS SENSOR NETWORKS (ThuAmOR2)

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✱ Abstract :

n this paper, we propose an optimal fault–tolerant algorithm for distributed event detection in wireless sensor networks. Two important problems are addressed: 1. How to handle both the noise–related measurement error and sensor fault simultaneously in fault–tolerant detection? 2. How to choose a proper neighborhood size n for a sensor node in fault correction such that the maximum energy could be conserved? Both theoretical analysis and experimental results confirm the effectiveness and efficiency of the proposed algorithm.

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