

# 带有隐私保护的无线传感网能量有效数据融合机制

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**摘 要:** 传感数据的节能传输与隐私保护对深化无线传感网的应用具有重要的意义.提出带有隐私保护的无线传感网能量有效数据融合机制,以解决当前无线传感网数据融合机制效率较低且缺乏隐私安全保护的问题.设计了传感数据隐私保护方法,通过在传感节点对传感数据进行加密,保障传感数据的隐私安全.研究了能量有效的数据融合机制,基于深度学习理论,设计了有效的数据融合模型,提高传感数据融合的效率.仿真结果表明,所提机制可有效保障传感数据的隐私安全,提高数据融合的效率,并降低节点能量消耗.

**关键词:** 无线传感网; 能量有效; 数据融合; 隐私保护

## Energy-efficient wireless sensor network data fusion mechanism

### with privacy protection method

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**Abstract:** The energy-saving transmission and privacy protection of sensor data is of great significance for deepening the applications of wireless sensor network. An energy-efficient wireless sensor network data fusion mechanism with privacy protection method is proposed to solve the problem that the current data fusion mechanism is less efficient and lacks privacy protection method. The sensor data privacy protection method is designed to protect the privacy of the sensor data by encrypting the sensor data at the sensor node. The energy-efficient data fusion mechanism is studied. Based on the deep learning theory, an efficient data fusion model is presented to improve the efficiency of sensor data fusion process. Simulation results show that the proposed mechanism can effectively guarantee the privacy of sensor data, improve the efficiency of data fusion, and reduce the energy consumptions of nodes.

**Key words:** wireless sensor network; energy-efficient; data fusion; privacy protection

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