

## 一种可分负载WSN的能耗均衡负载调度算法

作者: 刘端阳, 暴占兵, 程珍

单位: 浙江工业大学

基金项目: 基于生物计算的密码分析关键理论与方法研究

摘要:

无线传感器网络的节点电源能量有限, 其能耗均衡问题已经成为研究热点。针对可分负载星型无线传感器网络的负载调度过程, 在同时感知、顺序返回信息的工作模型下提出了一种以能耗均衡为目标的负载调度算法(DLEBS)。该算法以降低网络能耗标准差为优化目标, 在保证网络总体传输时间及传输顺序的情况下, 可以得到相应的负载调度策略。仿真实验表明, 算法得到的负载调度可以有效降低网络的能耗标准差。并且随给定时间的增加, 算法得到的负载调度使得能耗标准差相应地减小。

关键词: 可分负载; 无线传感器网络; 能耗均衡; 星型网络; 负载调度

## A Load Schedule Algorithm for Energy Balance in Divisible Load WSN

**Author's Name:**

**Institution:**

**Abstract:**

Due to the power limitation of wireless sensor nodes in wireless sensor network (WSN), the energy balance research has become a hotspot. A load schedule algorithm is designed for energy balance purpose in star topology WSN, which have divisible load and the work model using is simultaneous measurement start but sequential reporting. The load schedule strategy deduced from the algorithm has the property of reducing the standard deviation of the network energy consumption under some constrictions. Simulation results show that the load schedule strategy can reduce the standard deviation of the network energy consumption effectively. What's more, with the increase of the time given, the standard deviation of the network energy consumption can be reduced accordingly by the schedule algorithm.

**Keywords:** divisible load; wireless sensor network; energy balance; star topology; load schedule

投稿时间: 2013-07-02

[查看pdf文件](#)