

## 基于改进果蝇算法的无线传感网络布局研究

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**摘要：**提出一种改进的果蝇算法，并将其应用于 WSN 问题。果蝇算法具有参数少、结构简单、全局搜索能力强、收敛速度快等特点，将改进的果蝇算法用于 WSN 节点优化部署，可以快速得到解集，并且具有很高的覆盖率。通过仿真实验，可以看出改进的果蝇算法相比于原始果蝇算法及其他智能算法具有更快的收敛速度和更高的收敛精度，结果更接近理论值。

**关键词：**WSN；果蝇算法；传感器；收敛；覆盖率

## Research on Wireless Sensor Network Layout Based on

### Improved Fruit Fly Optimization Algorithm

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**Abstract:** This paper presents an improved algorithm for FOA, and apply it to WSN problem. The FOA has the characteristics of less parameters, simple structure, strong global search ability and fast convergence speed, the improved algorithm is used to optimize the WSN nodes deployment, which can quickly get the solution set, and has a high coverage rate. Through simulation experiments, we can see that the improved algorithm has faster convergence speed and higher convergence precision compared to the original FOA and other intelligent algorithms, and the results are more close to the theoretical value.

**Key words:** WSN; FOA; sensor; convergence; coverage rate

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