Abstracts

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on two types of DAGs, sparse and non-sparse. The results demonstrate the high efficiency of the proposed MOGA in solving real-world task scheduling problems.

Keywords: Task Scheduling, Heterogeneous Multiprocessor System, Directed Acyclic Task Graph (DAG), MOGA, Greedy Algorithms.

Centralized Fuzzy Kalman Filtering for Uncertain Stochastic System Over Sensor Network

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Abstract: In this paper we investigate the problem of centralized fuzzy Kalman filters for sensor network observing an uncertain physical process with parametric uncertainties. A sensor network is a multi agent system which agents are sensors with limited computational capabilities. In our sensor network we consider three sensors and a central base station. Any of these sensors have limited computational capabilities and also may be affected by different noises. We derive the information in the form of fuzzy states from the fuzzy Kalman filters, the estimated fuzzy states would be transmitted to the base station by any sensor for the aggregation. In the base station we fuse the fuzzy estimates to generate the global state estimate which is highly reliable.

Keywords: centralized fuzzy Kalman filtering, fuzzy Kalman filter, possibility, sensor network.

An Optimal Energy-Efficient Clustering Method in Wireless Sensor Networks using Genetic Algorithm

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Abstract: In this study, an optimal method for clustering homogenous wireless sensor nodes using genetic algorithm is presented. The goal of the genetic algorithm is to minimize the total energy consumed by the sensor nodes during transmission of data to the data sink. A random deployed model is used to show the efficiency of our algorithm. A comparison is made between the proposed algorithm and 2-tiered clustering methods whereby the nodes in each cluster send their data directly to the head of the cluster which indicates the proposed algorithm is more energy-efficient

Keywords: Clustering, wireless sensor network,energy-efficient algorithm, genetic algorithm.