Abstract

Energy saving is an essential issue in the design of a wireless sensor network because the sensor nodes are generally energy-limited. Thus, minimizing and balancing the energy consumption for nodes are becoming important in terms of extending the network lifetime. In this paper, a novel energy-efficient cooperative MIMO transmission mechanism based on V-BLAST technique is proposed. Compared with previous presented structures, in proposed scheme the clustering is done based on Genetic Algorithm then V-BLAST technique based cooperative MIMO transmission are used. An energy consumption is developed to investigate the energy saving performance. The performance of suggested protocol is compared with the LEACH and previous work. Simulation results demonstrate that proposed scheme can achieve better network lifetime and decrease the energy consumption of the network.

References

- C. Shuguang, A. Goldsmith; "Energy-efficiency of MIMO and cooperative
An Optimized Cooperative Transmission based on V-BLAST Technique and GA clustering for Wireless Sensor Networks


- J. Xu, W. Su, M. Zhou, "Likelihood function-based modulation classification in


Index Terms

Computer Science  
Wireless

Keywords

Wireless sensor network  Algorithm genetic  Cooperative MIMO  V-BLAST  

Network lifetime