Abstract

Wireless Sensor Networks (WSN) is the bunch of thousands sensor nodes because a single sensor node has very limited competence in sensing and isn’t sufficient for extracting and transmit useful data. So this process should be competent by using a number of sensor nodes. Wireless sensor network is easily deployed in compare to any other networks because they don’t need any particular framework. In wireless sensor network, nodes receive signal from limited area. When this signal is sensed and transmit the information to base station, nodes consume energy. Wireless sensor network contain distinct parameters like energy, processing power and storage. But the energy of nodes is the most important consideration among them. LEACH is one of the prominent proactive sensor network protocols and in this cluster head is selected on the basis of probability of each round, whereas in our proposed method cluster head is selected on the premises of three fuzzy parameters: residual energy, neighbor and centrality. Simulation results for a probability of cluster head on the basis of fuzzy rules using the status of membership function are presented in paper. All the simulation work done in MATLAB.
Parameter based Cluster Head Election in Wireless Sensor Network: A Fuzzy Approach


Index Terms

Computer Science
Fuzzy Systems
Keywords
Fuzzy logic  LEACH  Wireless sensor network  Fuzzy rules