

206. IMPLEMENTATION OF HYBRID COMPRESSIVE SENSING FOR DISTRIBUTED CLUSTERING METHOD IN WSN

S.AROCKIA MARY¹, D.SUJATHA²

¹M.E (P.G Scholar), ²Assistant Professor, Department of Computer Science and Engineering
St. Peter's College of Engineering and Technology, India

In many sensor network applications sensor nodes need to collect data periodically and transmit them to the data sink through multihops. According to field experiments, data communication contributes majority of energy consumption of sensor node. It has become an important issue to reduce the amount of data transmissions in sensor networks. Compressive sensing is emerging technology which is used for substantially reduce the amount of data transmission and traffic load throughout the network. Previous work uses the compressive sensing method on routing trees. Here the hybrid compressive sensing was proposed on the cluster structure for wireless sensor networks. Here we first propose the centralized clustering method. In that Sink divide the entire network into the cluster. Sensor nodes are organized into the clusters. In Each cluster sensor node transfer the data to cluster Head without using compressive sensing. Cluster Head perform the compressive sensing and forwards to sink. Then we propose decentralized clustering method using hybrid Compressive Sensing concept. Finally we re-elect the CH efficiently. At last we enhance the multiclustering and master slave communication in effective manner. Extensive simulations confirm that our method can reduce the number of transmissions significantly.

Keywords: WSN, CS, Clustering, CH.

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