

عنوان مقاله:

Clustering Algorithms in Virtual MIMO based WSNs: A Survey and Comparison

محل انتشار:

چهارمین کنفرانس ملی دستاوردهای نوین در برق و کامپیوتر و صنایع (سال: 1397)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

Due to the strict energy limitation in the sensor networks, applying energy saving is necessary for this kind of networks. The MIMO energy-efficiency transmission schemes are proven to be efficient methods for increasing the channel capacity, satisfying bit-error-rate (BER) requirement and supporting higher data rate under a constant power budget. In order to obtain spatial diversity, WSNs may use cooperative communications schemes. In this case, multiple nodes may collaborate to form a virtual antenna array. Methods used for performance improvement of virtual MIMO based WSNs can be classified as follows: clustering algorithms, cooperative nodes selection schemes, modulation effects, routing algorithms, cross layer designs, channel selection techniques and coding methods. In this paper, we have presented an exhaustive survey on clustering protocols in WSNs. We tried to compare the main characteristics of the most significant different clustering schemes such as cluster count, cluster head selection, cluster head mobility, cluster formation, etc.

کلمات کلیدی:

.Wireless Sensor Networks, Virtual MIMO, Clustering, Routing

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