middleware's role," Technical Report, no: 646, UCAM ¡CL¡TR¡646, [Available from the World Wide Web http://www.cl.cam.ac.uk/TechReports/UCAM¡CL¡TR¡646.pdf]

[2] Iyer, R. and L. Kleinrock,"QoS Control for Sensor Networks," presented at the IEEE International Communications Conference (ICC' 03), Anchorage, AK, May 11-15. 2003.

[3] Nandini S PAtil, P. (2010). Data Aggregation in Wireless Sensor Networks. IEEE Internationa Conference on Computational Intelligence and Computing Research.

[4] Heinzelman, w. R. (2000). Energy-efficient communication protocol for wireless microsensor networks. Proceeding of 33rd annual hawaii international conference on system sciences.

[5] Manjeshwar, a. A. (2001). Teen: arouting protocol for enhanced efficiency in wireless sensor networks. In ipdps, vol. 1, p. 189.

[6] Lindsey, S. C. (2002). Data gathering algorithms in sensor networks using energy metrics. Parallel and Distributed Systems, IEEE Transactions on 13, no. 9, 924-935.

[7] Manjeshwar, A. a. (2002). APTEEN: A Hybrid Protocol for Efficient Routing and Comprehensive Information Retrieval in Wireless Sensor Networks. In ipdps, vol. 2 , p. 48.

[8] YounisOssama, a. S. (2004). HEED : a hybrid energy-efficient distributed clustering approach for ad hoc sensor networks. IEEE Transactions on Mobile Computing ,pp 366-379.

[9] Chan, H. a. (2004). ACE: An emergent algorithm for highly uniform cluster formation. Wireless Sensor Networks. Springer Berlin Heidelberg, , 154-171.

[10] Ding Ping, J. H. (2005). Distributed energy-efficient hierarchical clustering for wireless sensor networks. Distributed Computing in sensor Systems, Springer Berlin Heidelberg , 322-339.

[11] Loscri, V. G. (2005). A two-level hierarchi for low-energy adaptive clustering hierarchy (TL-LEACH). IEEE Vehicular Technology Conference Vol. 62. No.3 .

[12] SoroStanislava, a. W. (2005). Prolonging the lifetime of wireless sensor networks via unequal clustering. Parallel and Distributed Processing Symposium, 2005. Proceedings. 19th IEEE International .

[13] Ye, M. C. (2005). EECS: an energy efficient clustering scheme in wireless sensor networks. In Performance, Computing, and Communications Conference, 2005. IPCCC 2005. 24th IEEE International , pp. 535-540.

[14] Li, C. M. (2005). An energy-efficient unequal clustering mechanism for wireless sensor networks. In Mobile Adhoc and Sensor Systems Conference, 2005. IEEE International Conference on , pp. 8-pp.

[15] L. Qing, Q. Zhu, M. Wang, "Design of a distributed energy-efficient clustering algorithm for heterogeneous wireless sensor network", ELSEVIER, Computer Communications 29, 2006, pp 2230- 2237.

[16] Elbhiri, B., Saadane, R., El Fkihi, S., Aboutajdine, D. "Developed Distributed Energy-Efficient Clustering (DDEEC) for heterogeneous wireless sensor networks", in: 5th International Symposium on I/V Communications and Mobile Network (ISVC), 2010.