

Particle Swarm Optimized Distributed Energy Efficient Clustering Protocol for WSN

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Abstract – Wireless sensor networks are an emerging technology for monitoring physical world. The energy constraint of Wireless sensor networks makes energy saving and Prolonging the network lifetime become the most important goals of various routing protocols.

Different energy efficient clustering protocols for heterogeneous wireless sensor networks and compares these protocols on various points like, location awareness, clustering method, heterogeneity level and clustering Attributes. Energy efficient clustering protocols should be designed for the characteristic of heterogeneous wireless sensor networks. Many issues in WSNs are formulated as multidimensional optimization problems, and approached through bio-inspired techniques. Particle swarm optimization (PSO) is a simple, effective and computationally efficient optimization algorithm. It has been applied to address WSN issues such as optimal deployment, node localization, clustering and data-aggregation.

Keywords – wireless sensor network, clustering protocol, energy efficient, heterogeneous network, and particle swarm optimization.