

Energy Efficient Clustering Algorithm in Wireless Sensor Networks using Genetic Algorithm

Pawan Panditrao Jagdale
Pavan.jagdale501@gmail.com

Sarang Dagajirao Patil
saarangpatil@gmail.com

Abstract – Sensor nodes in a heterogeneous Wireless Sensor Network (WSN) have different capabilities, such as computational power and sensing range. When compared to homogeneous WSN, heterogeneous WSN layout and topology control are more confusing. Distinctive energy-efficient clustering methods for wireless sensor networks systems are considered, with clustering method, location awareness, heterogeneity level, and clustering features all being considered. However, each protocol is incompatible with heterogeneous WSNs. In this research, we put the Low-Energy Adaptive Clustering Hierarchy (LEACH) and the Genetic Algorithm (GA) optimized-LEACH to the test in a few different scenarios where high level heterogeneity is held to a minimum. To bring the conduct of these disparate protocols to a stop.

Keywords– Genetic Algorithm, Low-Energy Adaptive Clustering Hierarchy, Wireless Sensor Network.