

## Enhanced Distributed Energy Efficient Clustering (E-DEEC) based on Genetic Algorithm

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**Abstract** –Heterogeneous wireless sensor network (WSN) consists of sensor nodes with different ability, such as different computing power and sensing range. Compared with homogeneous WSN, deployment and topology control are more complex in heterogeneous WSN. Many routing protocols have been proposed in this regard achieving energy efficiency in heterogeneous scenarios. However, every protocol is not suitable for heterogeneous WSNs. In this paper, we test Distributed Energy-Efficient Clustering (DEEC), Developed DEEC (DDEEC) and Enhanced DEEC (EDEEC) with Genetic Algorithm (GA) under several different scenarios containing high level heterogeneity to low level heterogeneity. In order to conclude the behaviour of this heterogeneous protocols.

**Keywords** –EDEEC, DEEC, DDEEC, GA, WSN.