

# ANALYZING ROUTING PROTOCOL BASED ON BAT ALGORITHM FOR SPARELY AND DENSELY DEPLOYMENT OF SENSORS IN WIRELESS SENSOR NETWORK

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## ABSTRACT

*Wireless Sensor Network (WSN) is the network of energy constrained sensor nodes deployed within an area for monitoring physical and environmental conditions. WSN has been used for various applications such as Health Care, Home Intelligence, Environmental Monitoring and etc. Sensor Nodes after sensing the data forwards to the Base Station from where, it is analyzed. Increasing the lifetime of a sensor network is one of the most important research works for the researchers in this field. One of the way in which we can increase the lifetime of sensor network is by optimizing the Cluster Head selection. This paper focuses on using Bat Algorithm as an optimization algorithm for Cluster Head selection and then compares with ModLeach and finally analyzes it in sparely and densely deployment of sensors by varying BS location and initial energy of sensor nodes. Simulation has been done in MATLAB.*

**KEYWORD:** *Wireless Sensor Network, Network Lifetime, BS, CH Etc*

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