GLRM：An Improved Grid-based Load-balanced Routing Method for WSN with Single Controlled Mobile Sink

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***Abstract*—Different from the previous cluster-based structure, in this paper, we present a grid-based load-balanced routing method (GLRM) that aims to use a controlled sink to achieve load-balance in a non-uniform distributed network. Cell-header election of each cell is based on three parameters, i.e. the number of data packets that nodes need to relay, the Euclidean distance to the mid-point of cells and residual energy of each node, respectively. The GLRM also considers other factors that waste battery power, such as packet collision. Simulation results demonstrate that our routing method has better performance than previous routing protocols, such as LEACH.**

***Keyword*—wireless sensor network, sink mobility, GLRM, load-balanced, packet collision**

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