

[Home](#) / [Archives](#) /[Vol. 8 No. 2 \(2021\): Journal of Mobile Computing, Communications & Mobile Networks](#) / [Articles](#)

Fuzzy Based Clustering Algorithm Rebroadcast with Ant Colony Based Cluster Head Selection for Minimizing the Routing Overhead in Mobile Ad-Hoc Networks

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Abstract

Mobile Ad-hoc Networks (MANET) are built with no sort of management, rendering the quality of service despite the routing overhead. With MANET, mobile hosts cannot interact with other hosts in a single hop. In the case of multi-hop, packets transmitted by the source host get relayed with the help of multiple intermediate hosts prior to its arrival at the destination host. Owing to the node movement in MANETs, path outages and route discoveries happen often. Therefore, broadcasting of Route Request (RREQ) packets need to be done for discovering the routes. This results in exceeding amount of RREQ packets getting retransmitted redundantly. This mechanism leads to routing overhead in MANET. In this work, a robust routing technique is introduced forgetting the Quality of Service (QoS) in MANET. Fuzzy based clustering algorithm and a reliable routing technique are introduced for achieving the QoS in MANET. The