Mobile Ad-hoc Networks (MANETs) are the collection of mobile devices which communicate through the wireless medium and do not have the central infrastructure. In unsecured MANETs, malicious nodes can form a private tunnel. Source sends packets to the destination and these packets follow the path through this tunnel, so the packets are captured by malicious nodes and do not reach the destination node. This is known as wormhole attack which is one of the well known security threat. The emphasis of my work is to detect wormhole attack, when there is more number of malicious nodes than non malicious nodes and develop a technique to prevent network from this wormhole attack. In this work, malicious nodes are detected on the basis of Packet Delivery Ratio (PDR). Packet Delivery Ratio is the ratio of number of packets sent to the number of packets received by the destination node. For performing the simulation of the various scenarios and analyzing the results we have used Ns-2 simulator.


**Index Terms**

Computer Science  
Algorithms

**Keywords**

Wormhole Detection, Ad-hoc Networks