



# Secure Neighbor Discovery in Wireless Networks by Detecting Various Attacks

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## Abstract

Neighbor discovery is an essential part of many protocols for wireless networks which includes routing, leader election within a cluster and group management. If the detection of neighbor fails, communication and performance of the protocol decreases. Wireless networks as the name indicates uses the Radio Frequency (RF) as communication medium and are extensively being used in various military and commercial applications. Wireless networks, due to their nature of deployment are vulnerable to various attacks. Wormhole or Relay attack, Selective dropper attack, Cloning attack, Denial of Service (DoS) attack and Modifier attack etc. In this paper we present the Mobile agent based method which offers a measure of security against various attacks by allowing participating nodes to determine whether they are the neighbors.

**Keywords:** Mobile agent; Wormhole attack; DoS attack; Cloning attack; Wireless networks

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