

## **ABSTRACT**

A Mobile Ad-Hoc Network (MANET) is a collection of wireless mobile nodes forming a Temporary network without using any centralized access point, infrastructure, or centralized administration. To establish a data transmission between two nodes, typically multiple hops are required due to the limited transmission range. Mobility of the different nodes and limitation of battery power and bandwidth makes the situation even more complicated. Multiple routing protocols especially for these conditions have been developed during the last years.

The scope of this thesis is to test routing performance of Location Aided Routing (LAR) protocol, Ad hoc On Demand Distance Vector (AODV) protocol, and Dynamic Source Routing (DSR) protocol and establish a mathematical equation. This equation will help in studying the sensitivity analysis for the previously mentioned protocols. GloMoSIM Simulator from Scalable Networks is used to conduct the required simulations to evaluate the proposed protocols. This thesis introduces the different routing protocols, the simulator and the experiment setup and finally presents the sensitivity analysis on the data obtained from the simulation to study the effect of changing the simulation parameters on the performance metrics discussed.