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## Fuzzy Logic Based Trust Model

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**Abstract** - Literature reported that malicious nodes and selfish nodes present in mobile and Ad hoc network (MANET) affect the performance to large extent. Hence, providing security in routing protocols is a critical issue in the design of MANETs. To improve the security of MANETS, in this paper two levels of security namely, data level security and routing level security is reposed. In the data level security, data will be encrypted using a secret key to withstand the attacks. A fuzzy logic based trust model is designed to adapt to the dynamic conditions of mobile nodes to identify malicious nodes. The integrated form of data level security and routing level security is introduced in Dynamic Source Routing (DSR) protocol to select a secure path and to provide a secure communication. The performance is evaluated by using NS-2 network simulator.