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RESEARCH ARTICLE

DETECTING NODE REPLICATION ATTACKS IN STATIC AND MOBILE SENSOR NETWORKS USING SPRT

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ABSTRACT

Unattended nature of wireless sensor networks leads to mobile replica node attack. An adversary can capture and compromise sensor nodes, make replicas of them, and then mount a variety of attacks with these replicas. These replica node attacks are dangerous because they allow the attacker to leverage the compromise of a few nodes to exert control over much of the network. Previous works on replica detection rely on fixed sensor locations and hence do not work in mobile sensor networks. The proposed work is a fast and effective mobile replica node detection scheme using the Sequential Probability Ratio Test.

Keywords: mobile sensor network, patrol robot system, security; node replication attack, detection

Full Text: <http://www.ijcsmc.com/docs/papers/February2014/V3I2201481.pdf>