

SECURITY CHALLENGES AND SOLUTIONS IN WIRELESS SENSOR NETWORKS

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ABSTRACT

In this report, the security issues and opportunities in Wireless Sensor Networks (WSNs) are looked at with regard to security threats including Data control, and Denial of services attacks. They know good encryptions, authentications and IDS as some of the important defense mechanisms. This study is a review that employs qualitative secondary data from Google Scholar, journals, and census data drawn from scholarly sources. The study re-emphasizes the need to adopt security solutions that are considerate with the resources available in WSNs. In the Discussion chapter, these insights are then discussed and suggestions made on how to establish effective and strong efficient securities. In general, the report can help in improving the understanding of WSN security issues and vulnerability and provide suggestions on how to protect networks and data in various applications.

Keywords: *Wireless Sensor Networks, Security Challenges, Data Tampering, Denial of Service Attacks, Encryption, Authentication, Intrusion Detection Systems, Qualitative Data, Energy-Efficient Security, Network Resilience*

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