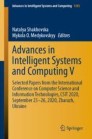
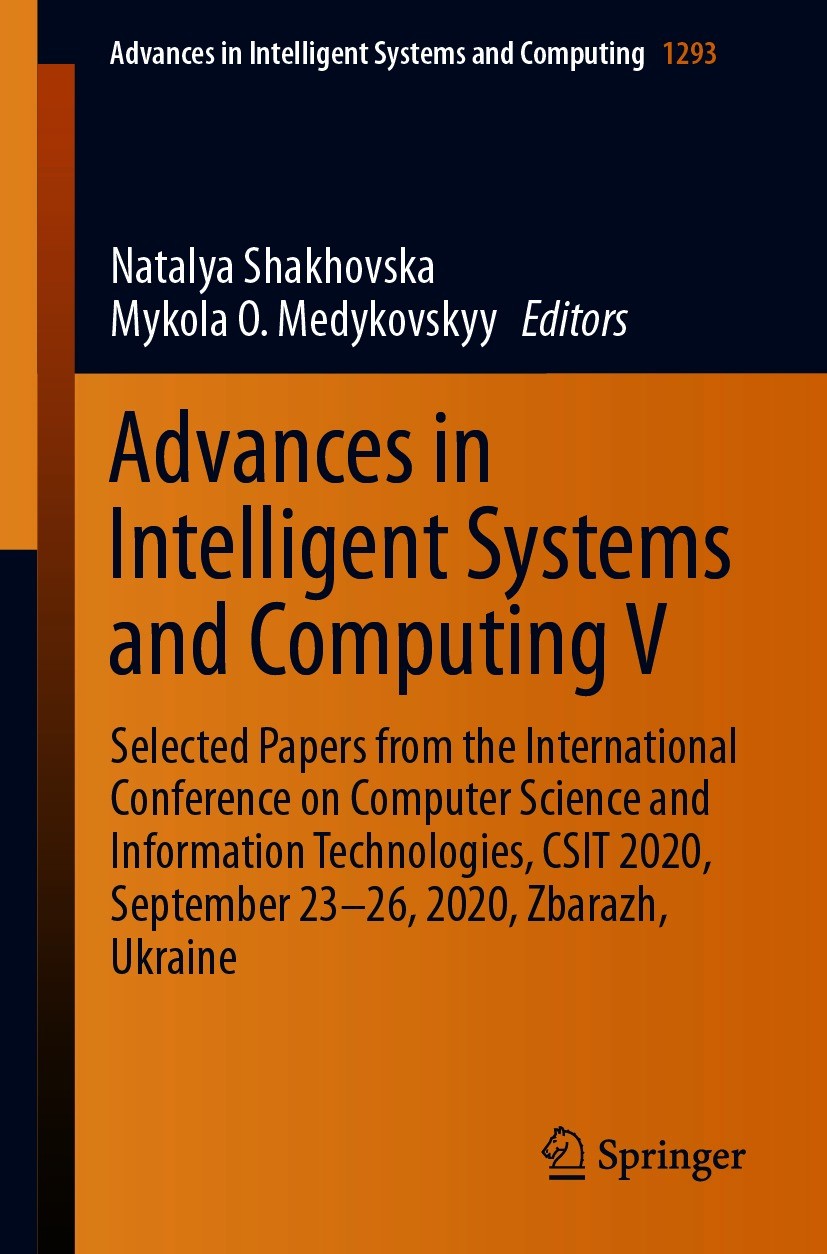
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Application of Neural Networks in Intrusion Monitoring Systems for Wireless Sensor Networks

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Abstract

This article has shown the current state of the intrusion detection area and the main areas of research. Network attack detection is currently one of the most significant network technology issues. In addition to active means of repelling attacks, they use network-based intrusion detection systems that scan all network traffic and signal this if any deviations are detected in it. The main problem of network intrusion detection systems is the low detection efficiency of fundamentally new types of intrusions that have not yet been studied and entered into the signature database. To solve the problem of false positives in intrusion detection systems, the authors propose using Bayesian inference algorithms to make decisions about intrusions. In the study, the authors proposed an intrusion detection system model to increase the reliability of intrusion detection using the dynamic Bayesian network model and increase the battery life of the system. The experiments showed a greater efficiency of the proposed system compared to the Snort system for the investigated types of attacks in terms of the ability to detect new intrusions and reduce errors of the first and second kinds.

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