3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during year

Academic Year	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	Affiliating Institute at the time of publication	publisher details	Academic Year
2022-23	Prof..Ahsan Shariff	International Conference on Computing Methodologies and Communication (ICCMC)	Extended Finite State Machine based Fault Tolerance in WSN	International Conference on Computing Methodologies and Communication (ICCMC)	7th International Conference on Computing Methodologies and Communication (ICCMC)	Aalim Muhammed Salegh College of Engineering	10.1109/ICCMC56507.2023	**2022-23**

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Extended Finite State Machine Based Fault Tolerance in WSN

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***Abstract*—Wireless Sensor Network (WSN) suffers from different malware attacks. Several traditional approaches are proposed for detecting fault nodes in WSN. It is necessary to redistribute the nodes and detect the fault nodes while modifying the WSN parameters. Faults can occur in the nodes interrupting the continuous communication process of the nodes in the WSN. The main reason for a fault is also the induction of the energy drain in a node to the maximum possible level, failure of links in communicating nodes due to bandwidth constraints, and attacks induced by the malicious nodes. To solve this problems, Extended Finite State Machine based Fault Tolerance (EFSM_FT) in the WSN is used to detect the fault sensor nodes in the WSN. In this approach, called the finite state machine (FSM), state prompted is modified while a set of situations are true. Every node can be absolutely to be faulty or not establishing on the sensor node states. Using sensor energy, drop rate, forward sensor rate, sensor obtained rate, bandwidth, and transmission delay, this method finds the node with the fault. As a result, this approach accurately detects the faulty nodes in the WSN. The simulation outcomes illustrate the proposed method has a better fault detection ratio and minimizes the false negative ratio in the WSN.**

Keywords—Finite state machine, Wireless sensor network, Fault tolerance, Fault detection ratio, False negative ratio.

following state by an FSM [2]. FSM is broadly appr several functional models. In precise, current digital usually employ FSMs to construct control routes that the information route proficiently. As the dev knowledge for semiconductors endures to scale manipulative high-function hardware with lesser siz throughput, and lesser energy utilization has deve simple task. Though, the possibility of the prese unpredicted faults unavoidably rises in combined Since, it is incredible to remove unpredicted faults ent

Through the extensive utilization of WSN, dependability and immovability are being followed In many situations, the transmission proficiency for subjective through the complex ecological situatio open features of channels, the energy restrictions of nodes, also network procedure design problems, eve leading to a great probability of failure [3]. Consequ suitable and precise fault analysis is of much importa a WSN to confirm the stable function and impleme effectiveness. To solve these issues, Extended Finit Machine based Fault Tolerance in WSN is propos EFSM_FT model is designed and incorporated in a analyze the performance for fault detection. The obje to use various present and previous states of th conditions to decide whether a node is faulty or not.