**Paper Selection**

1. **Security of IoT in 5G Cellular Networks: A Review**

This paper provides a comprehensive review of the Internet of Things (IoT) in the context of 5G cellular networks. It highlights the advantages of 5G networks, such as high bandwidth, faster communication, and wide coverage, making them ideal for IoT deployment. However, it also identifies various security and privacy challenges associated with IoT devices in a 5G environment, such as authentication and resource constraints. The paper reviews existing schemes and protocols to address these issues, offering insights into future research directions for enhancing IoT security in 5G networks.

2. **Security and Privacy for Low Power IoT Devices on 5G and Beyond Networks: Challenges and Future Directions**

The paper discusses the security and privacy challenges faced by low-power IoT devices in the context of 5G and beyond. It explores the increase in personal data collection via IoT devices, which have led to new security threats. The study identifies key challenges, such as the lack of security standards and the limited processing power of IoT devices, and highlights the importance of securing data in the face of these vulnerabilities. The authors suggest using emerging technologies like blockchain, AI, and machine learning to enhance privacy and security.

3. **Toward a Secure 5G-Enabled Internet of Things: A Survey on Requirements, Privacy, Security, Challenges, and Opportunities**

This paper surveys the requirements and challenges of securing IoT in 5G environments. It identifies the enhancements provided by 5G networks, such as higher speed, lower latency, and better connectivity, and addresses the privacy and security concerns associated with these advancements. The study emphasizes the need for new security models that consider the wide range of devices and applications in 5G IoT networks. It also explores strategies like standardization and cross-device compatibility to improve IoT security.

4. **5G-IoT: A Survey**

This paper provides an overview of 5G-enabled IoT (5G-IoT) and its impact on various sectors such as healthcare, transportation, and smart cities. It explores the advantages of 5G, including higher bandwidth, reduced latency, and better scalability, which are essential for supporting a

vast number of IoT devices. However, it also addresses security challenges like data privacy, system reliability, and integration with existing networks. The study suggests potential solutions for improving 5G-IoT security, including new architectures and techniques.

5. **Prediction and Detection of FDIA and DDoS Attacks in 5G Enabled IoT**

This paper addresses the security concerns related to 5G-enabled IoT networks, specifically focusing on False Data Injection Attacks (FDIA) and Distributed Denial of Service (DDoS) attacks. It proposes a hierarchical architecture for securing these networks, incorporating a prediction and detection model based on a Markov stochastic process. The model is designed to predict and detect security attacks by observing network behavior. The study demonstrates the effectiveness of the proposed solution in healthcare IoT applications, highlighting its potential to enhance network security in 5G environments.

6. **Design Optimization for High-Performance Computing Using FPGA**

This paper focuses on the optimization of FPGA-based designs for high-performance computing, specifically in the context of accelerating AI inference tasks. It discusses the performance improvements achieved through design optimization techniques, including the use of Xilinx Ultra RAM and advanced compiler strategies. The authors demonstrate that FPGA-based accelerators can achieve high throughput with low power consumption, making them suitable for real-time, resource-constrained applications. The paper provides experimental results showing the effectiveness of FPGA in accelerating AI applications like ResNet20 on the CIFAR dataset.

I have selected "Design Optimization for High-Performance Computing Using FPGA" because it directly relates to high-performance computing (HPC). This paper presents an optimization approach for FPGA-based computing, which is crucial for accelerating computational tasks in HPC environments. It discusses practical techniques for improving performance, energy efficiency, and throughput in AI filed using FPGA which are key concerns in HPC.