Publication List

Common Vulnerabilities and Exposures (CVEs)

CVE1. CVE-2018-8956 for a vulnerability disclosed by me in NTP protocol. More details at https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2018-8956

International Journals

J10. Munmun Swain, Nikhil Tripathi, and Kamalakanta Sethi. *Identifying communication sequence anomalies to detect DoS attacks against MQTT.* Computers & Security, Voulme 157, 2025, pp. 104526 (Elsevier).

J9. Matta Krishna Kumari, Nikhil Tripathi, and Piyush Joshi, "ProxaDyn: A Proximity-Aware Dynamic Caching Approach for Named Data Networks," in IEEE Transactions on Network Science and Engineering, vol. 12, no. 3, pp. 2360-2372, May-June 2025 (IEEE).

J8. Matta Krishna Kumari, Nikhil Tripathi. *Detecting Interest Flooding Attacks in NDN: A Probability-based Event-driven approach*, Computers & Security, Volume 148, 2025, pp. 104124 (Elsevier).

J7. Nikhil Tripathi, *Delays Have Dangerous Ends: Slow HTTP/2 DoS Attacks Into the Wild and Their Real-Time Detection Using Event Sequence Analysis*, IEEE Transactions on Dependable and Secure Computing, Volume 21(3), 2024, pp. 1244-1256 (IEEE).

J6. Nikhil Tripathi, Neminath Hubballi, *Application Layer Denial of Service Attacks and Defense Mechanisms: A Survey*, ACM Computing Surveys, Volume 54(4), 2021, pp: 1-33 (ACM).

J5. Nikhil Tripathi, Neminath Hubballi. *Preventing time synchronization in NTP broadcast mode*, Computers & Security, Volume 102, 2021, pp. 102-135 (Elsevier).

J4. Nikhil Tripathi, Neminath Hubballi. *Slow Rate Denial of Service Attacks against HTTP/2 and Detection*, Computers & Security, Volume 72, 2018, pp. 255-272 (Elsevier).

J3. Nikhil Tripathi, Neminath Hubballi. *Detecting Stealth DHCP Starvation Attack using Machine Learning Approach*, Journal of Computer Virology and Hacking Techniques, Volume 14, 2018, pp. 233-244 (Springer).

J2. Neminath Hubballi, Nikhil Tripathi. *An Event Based Technique for Detecting Spoofed IP Packets*, Journal of Information Security and Applications, Volume 35, 2017, pp. 32-43 (Elsevier).

J1. Neminath Hubballi, Nikhil Tripathi. *A Closer Look into DHCP Starvation Attack in Wireless Networks*, Computers & Security, Volume 65, 2017, pp. 387-404 (Elsevier).

International Conferences

C15. P. K. Sandanamudi, N Agrawal, N. Tripathi, Pavan Kumar BN, *Securing UAV Communications: A Comparative Performance Analysis of Post-Quantum Cryptographic Techniques*, Accepted at Workshop on Quantum Technologies of 17th International Conference on COMmunication Systems & NETworkS (COMSNETS) 2025 (IEEE) (Accepted).

C14. Chirag Dhiwar, Matta Krishna Kumari, Nikhil Tripathi, Piyush Joshi, *A Statistical Anomaly Detection Approach to Detect Induced Interest Flooding Attacks in NDN*, Accepted at Cyber Security and Privacy Workshop of 17th International Conference on COMmunication Systems & NETworkS (COMSNETS) 2025 (IEEE) (Accepted).

C13. M. Swain, C. L. Nishitha, M. Magant, S. Pendem, K. Sethi, and N. Tripathi, *Leveraging Benford's Law for Effective Intrusion Detection in MQTT-IoT Networks*, 17th International Conference on COMmunication Systems & NETworkS (COMSNETS) 2025 (IEEE) (Accepted).

C12. S. Gupta, S. Patnala, Warish, N. Agrawal, N. Tripathi, P. Kumar, B. Raman, *GPS Spoof and Detect in Ardupilot Simulating UAVs*, 21st OITS International Conference on Information Technology (OCIT), Raipur, India, 2023, pp. 817-822 (IEEE).

C11. Matta Krishna Kumari, Nikhil Tripathi, *An Efficient Content Retrieval and Content Placement Approach for Named Data Networks*, 38th International Conference on Information Networking (ICOIN), Ho Chi Minh, Vietnam, 2024, pp. 603-608 (IEEE).

C10. Nikhil Tripathi, Abhijith Kalayil Shaji, *Defer No Time, Delays have Dangerous Ends: Slow HTTP/2 DoS Attacks into the Wild*, 14th International Conference on COMmunication Systems & NETworkS (COMSNETS), Bangalore, India, 2022, pp. 194-198 (IEEE).

C9. Neminath Hubballi, Amey Kiran Patel, Amit Kumar Meena, Nikhil Tripathi, *Cloud Security Service Level Agreements: Representation and Measurement*, 38th IEEE International Conference on Computer Communications Workshops (INFOCOM WKSHPS), Paris, 2019, pp. 145-150 (IEEE).

C8. Nikhil Tripathi, Neminath Hubballi, Yogendra Singh. *How Secure are Web Servers? An Empirical Study of Slow HTTP DoS Attacks and Detection.* 11th International Conference on Availability, Reliability and Security (ARES'16), Salzburg, Austria, 2016, pp. 454-463 (IEEE).

C7. Nikhil Tripathi, Mayank Swarnkar, Neminath Hubballi. *DNS Spoofing in Local Networks Made Easy.* 11th International Conference on Advanced Networks and Telecommunications Systems (ANTS'17), CVRCE Bhubaneswar, 2017, pp. 1-6 (IEEE).

C6. Anuja Tayal, Neminath Hubballi, Nikhil Tripathi. *Communication Recurrence and Similarity Detection in Network Flows.* 11th International Conference on Advanced Networks and Telecommunications Systems (ANTS'17), CVRCE Bhubaneswar, 2017, pp. 1-6 (IEEE).

C5. Mayank Swarnkar, Neminath Hubballi, Nikhil Tripathi, Mauro Conti. *AppHunter: Mobile Application Traffic Classification*, 12th International Conference on Advanced Networks and Telecommunications Systems (ANTS'18), Indore, 2018, pp. 1-6 (IEEE)

C4. Nikhil Tripathi, Neminath Hubballi. *A Probabilistic Anomaly Detection Scheme to Detect DHCP Starvation Attacks*. 10th International Conference on Advanced Networks and Telecommunications Systems (ANTS'16), IISc Bangalore, 2016, pp. 1-6 (IEEE).

C3. Nikhil Tripathi, Neminath Hubballi. *Exploiting DHCP Server-side IP Address Conflict Detection: A DHCP Starvation Attack*. 9th International Conference on Advanced Networks and Telecommunications Systems (ANTS'15), ISI Kolkata, 2015, pp. 1-3 (IEEE).

C2. Nikhil Tripathi, B M Mehtre. *Analysis of Various ARP Poisoning Mitigation Techniques: A Comparison*. 1st International Conference on Control, Instrumentation, Communication and Computational Technologies (ICCICCT'14), Kanykaumari, 2014, pp. 125-132 (IEEE).

C1. Nikhil Tripathi, B M Mehtre. *An ICMP based Secondary Cache Approach for the Detection and Prevention of ARP Poisoning*. 4th International Conference on Computational Intelligence and Computing Research (ICCIC'13), Madurai, 2013, pp. 1-6 (IEEE).

Book Chapter(s)

BC1. Swami, R., Dave, M., Ranga, V., Tripathi, N., Shaji, A. K., & Sharma, A. (2021). Towards Utilizing Blockchain for Countering Distributed Denial-of-Service (DDoS). In Revolutionary Applications of Blockchain-Enabled Privacy and Access Control (pp. 35-58). IGI Global.