Morteza Shoushtari

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Professional Summary

A Ph.D. graduate in Electrical and Computer Engineering, specializing in the PHY layer of wireless communication, with over 5 years of hands-on experience in implementing, configuring, and managing diverse network technologies. Possesses an in-depth understanding of LAN, WLAN, and WWAN technologies and standards. Expertise in process automation, log analysis, and a strong analytical and troubleshooting skillset.

Skills

Wired/Wireless Network Architecture, Infrastructure, and Protocols | Cellular Networks Technologies (LTE/5G) | Protocol Stack (PHY, MAC, RLC, PDCP, RRC, SDAP) | TCP/IP and OSI | 802.3 (Ethernet), 802.11 (WiFi), 802.15 (Bluetooth, Zigbee) | IP Networking | IPv4 and IPv6 | FLSM and VLSM | L2 Switching (VLAN, STP, LACP) | L3 Routing (EIGRP, OSPF, BGP, MPLS) | Server Operating System (Windows, Linux) | Virtualization Technologies | Network Troubleshooting Analysis (Wireshark) | Cloud Computing (AWS) | Software Defined Networking (SDN) | Process Automation | Infrastructure Cabling | Data Center Infrastructure | Network Security (NAT, ACL, SSL, TLS) | Cryptographic Algorithms (AES, DES, RSA) | Post-Quantum Cryptosystems | Error-Correction Coding (LDPC, Polar, Turbo, Viterbi) | Physical Layer Security

Programming Languages: C++, MATLAB

Certificates: CCNA, HCNA, MCITP, Network+, A+

Work Experience

Brigham Young University — Utah, USA
Graduate Research Assistant — *Jan 2019 – July 2023*

- Discovered new properties of secrecy coding from the perspectives of information and coding theory.
- Developed a high-speed algorithm to construct the optimal code in Nested Linear Secrecy Codes, enhancing code identification and selection efficiency.
- Conducted a detailed assessment and visualized secrecy problems such as eavesdropping in aeronautical mobile telemetry communication and suggested the use of secrecy coding and a specialized version of post-quantum cryptosystems for this type of communication system.

HUAWEI — Tehran, Iran
Network Engineer — *Aug 2016 – Aug 2017*

- Designed and implemented wired/wireless networks, and performed network maintenance and system upgrades.
- Maximized network performance and increased network availability by 99.99% by implementing a redundant network architecture.
- Performed installations and configurations, and support of various network devices such as switches, wireless access points, cameras, and video conferencing systems.

JYAN — Tehran, Iran
Network Engineer — *Jan 2016 – Aug 2016*

- Managed wired communication networks, and performed network maintenance and system upgrades.
- Monitor performance and ensure system availability and reliability.
- Performed installations and configurations of various network devices such as switches, wireless AP, cameras, and video conferencing systems.

Persia Cloud — Tehran, Iran
Network Engineer — *Jun 2015 – Jan 2016*

- Performed installations and configurations of Windows servers, virtual machines (VMs), and switches.
- Administered SaaS and PaaS layers of the company's cloud platforms (Citrix, IIRAS).
- Managed and configured Microsoft application servers CRM, SharePoint, and Lync.

Education

Brigham Young University — UT, USA
Ph.D. in Electrical and Computer Engineering; ***GPA: 3.78/4.00*** — *Jan 2019 – July 2023*

Shiraz University — Fars, Iran
M.Sc. in Information Technology; — *2011 – 2013*

Selected Publication

- "Optimizing Finite Blocklength Nested Linear Codes: Using the Worst Code to Find the Best Code", Entropy Journal, MDPI, 2023.
- "Towards Practical Physical-Layer Security: Channel Measurements and Pedestrian Traffic", under review IEEE Transactions on Information Theory, 2023.
- "Classification of Coset Codes for Wiretap Channels", under review IEEE Transactions on Information Theory, 2023.
- "From Privacy Protection to Analyzing Users' Behavior: The Crucial Role of Information Theory in the Metaverse", IEEE Inter-mountain Engineering, Technology, and Computing Conference, 2023.
- "Secrecy Coding for the Binary Symmetric Wiretap Channel via Linear Programming", under review IEEE Transactions on Information Forensics and Security, 2023.
- "A Comparative Study of Waveforms Across Mobile Cellular Generations: From 0G to 5G and Beyond", under review IEEE Access, 2023.
- "Post-Quantum Cryptography Based on Codes: A Game Changer for Secrecy in Aeronautical Mobile Telemetry", in Proc. of the International Telemetry Conference (ITC), Las Vegas, NV, US, Oct. 2022.
- "Secrecy coding in the Integrated Network Enhanced Telemetry (iNET)", in Proc. of the International Telemetry Conference (ITC), Las Vegas, NV, US, Oct. 2021.
- "New Dual Relationships for Error-Correcting Wiretap Codes", in Proc. of IEEE Inform-ation Theory Workshop (ITW), Kanazawa, Japan, Oct. 2021.
- "On Caching with Finite Blocklength Coding for Secrecy over the Binary Erasure Wiretap Channel", in Proc. of IEEE Wireless Telecommunications Symposium (WTS), San Francisco, US, Apr. 2021.

Awards & Achievements

- Third place award, IEEE Intermountain Engineering, Technology, and Computing Conference (IEEE i-ETC), 2023.
- Best paper award, International Telemetry Conference, 2022.
- Second best graduate student paper award, International Telemetry Conference, 2021.
- Outstanding IT engineer in Huawei Technologies Company, 2017.

References

Available upon request.