KIM L. WITHERS, PH.D.

SEASONED CYBER SECURITY PROFESSIONAL

EXPERT MEMBER OF TECHNICAL STAFF – CYBER SECURITY

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EDUCATION & CERTIFICATIONS

- Doctor of Philosophy (Ph.D.) - Computer Information Systems/Information Security, Nova Southeastern University
- Master of Business Administration (MBA), Information Security, Jones International University
- Master of Science (MS), Computer Information Systems Management, Webster University
- Graduate Coursework, Computer Science, University of Arkansas at Little Rock (program suspension-lack of faculty)
- Graduate Coursework, Mathematics, University of Arkansas at Pine Bluff
- Bachelor of Science (BS), Computer Science and Mathematics (dual), University of Arkansas at Pine Bluff
- Cisco Certified Network Professional **(CCNP)**
- Cisco Certified Design Professional **(CCDP)**
- Cisco Certified Security Professional **(CCSP)**
- Certified Novell Administrator **(CNA)**
- Certified Ethical Hacker **(CEH)**
- National Security Agency INFOSEC Methodology **(NSA-IAM)**
- INFOSEC Certified Professional **(CNSS/NSA 4011 Standard)**
- Splunk System Administration
- Azure Fundamentals
- Certified Kubernetes Administrator
- Hashicorp Terraform Associate

PROFESSIONAL EXPERIENCE

January 2022 - Present

Texas A&M University San Antonio
Assistant Professor of Cybersecurity & Computer Science (Part-Time)

- Undergraduate-level hands-on instruction in penetration testing, digital/computer forensics, exploits, and security operation practicum.
- Promote Capture the Flag (CTF) red-teaming approaches to cyber-attacks.
- Promote student knowledge in connecting cybersecurity, research, and technological principles to everyday life.
- Planned individual programs of study to develop student interests and abilities.

January 2021   **Kennesaw State University– Kennesaw, GA**
- Present   <u>**Assistant Professor of Information Security & Assurance (Part-Time)**</u>

- Graduate-level instruction in disaster recovery and contingency planning of cyber-attacks.
- Instructed students in incident response planning and reporting.
- Promote capture the flag red-teaming approaches to cyber-attacks.
- Promote student knowledge in connecting cybersecurity, research, and technological principles to everyday life.
- Planned individual programs of study to develop student interests and abilities.
- Lead graduate-level instruction in malware and threat research.
- Enforced the art of writing and research at a graduate level.

Oct. 2008   **AT&T Chief Security Organization (CSO) - San Antonio, TX**
- Present   <u>**Expert Network Security Architect – Storm Development Team**</u>

- Lead for the design, support and development of a complex and diverse Threat Management System (TMS) Platform which serves the entire AT&T corporation and cybersecurity ecosystem.
- Experienced in IP network architecture, engineering and design within AWS, Azure, and Google cloud services.
- Experienced in large scale systems and Kubernetes integration to orchestrate the deployment, scaling and management of Docker Containers.
- Analyze the data by performing Sqrrl/SQL queries and Chipmunk scripts for known user behavioral analysis.
- Passionate about machine data and operational intelligence.
- Experienced in building private, public and community clouds for Splunk Enterprise applications.
- Experience in architecting and securing the infrastructure of AWS Cloud platform and its features which includes EC2, VPC, EBS, RDS, EBS, Cloud Watch, Cloud Trail, Cloud Formation AWS Config, Autoscaling, Cloud Front, IAM, S3, R53.
- Experience in architecting and security Azure IaaS - Virtual Networks, Virtual Machines, Cloud Services, Resource Groups, Express Route, Traffic Manager, VPN, Load Balancing, Application Gateways, Auto-Scaling.
- Proficient in Python and APIs for building manageable scripts for data parsing and management.
- Developed firewall and load balancer strategy for Google private cloud/virtualization migration and implementation of best security practices.
- Ensuring systems conform to security best practices and ASPR (AT&T Security Procedures and Requirements).
- Involved in building security model, VPC, Elastic IP for virtual machines and NAT Gateways on AWS Cloud platform.
- Detect security incidents and perform recovery and response and perform threat hunting for malicious activity across digital assets when necessary.

August 2000 - Oct. 2008

SBC DataComm/AT&T Unified Messaging - San Antonio, TX
Sr. Network Security Engineer LAN/WAN - VoIP

- Managing network connectivity of Unified Messaging Voice Mail platform to ensure Mass Market and Enterprise customers have 100% integration.
- Configuration and Implementation of AS5400 Gateways, Gatekeepers, Dial-peers, Voice protocols H.323, SIP, MGCP.
- Configuring DS3, T1/PRIs, and NFAS for voicemail gateways for customer TUI.
- Managing and installing OC3, OC12, and OC128 backhaul circuits for deployed remote gateway sites.
- Responsible for installing Frame Relay, 4-wire Leased Line/SMDI, UADB, and FRAD units for Message Waiting Indication for Unified Messaging.
- Work with AT&T Corporate Security for Firewall Definitions, Routes, and SSL Certificates.
- Worked closely with AT&T DNS hosting for new name branding of AT&T Corporation and website changes for seamless migration for customers.
- Advanced Knowledge and experience of Standard, Extended and Named ACL's.
- LAN/WAN Design, OSPF, EIGRP, ISDN, PRI, T1, Frame Relay, Multicasting, Attack Guards, MLS, HSRP, VRRP, STP, Inter-VLAN Routing, VACLS, Port Channeling.
- Advanced knowledge and experience of Spanning Tree Protocol (STP), network segmentation, transparent bridging, LAN switching, virtual LANs, private addressing and NAT, and extensive routing/switching.
- Working experience with the Network Security elements such as ASA/PIX, IPS, ASA SSM, PIX 5xx Series, Cisco Nexus switches, TACACS Server, FWSM, Firewall Object Grouping, RSA Token Authentication, Diffie-Hellman, AES, AH, ESP, Site-Site & Remote IPSEC VPN, SSL VPN, Context Firewalls, CSM, CSA, VPN Concentrator, VPN Client, ASDM, NAC, CS-MARS.
- Knowledge of Gatekeepers and Call agents for the H323 and SIP architecture.
- Advanced knowledge of gateway inter-operations within converged networks, Digital and Analog line protocols, QSIG, and Multiplexing.
- Knowledge of multiple switch types such as DMSxxx series, Siemens, 4ESS and 5ESS.

August 1995 –August 2000

Computer Sciences Corporation - San Antonio, TX
Air Force Information Warfare Center-Security Hill
Sr. Information Security (INFOSEC) Engineer

- Conducted security assessments (onsite and remote) of Air Force military bases around the world. IT Security, including penetration testing, vulnerability analysis, creation proof of concept exploits, reverse and social engineering.
- Team Lead for penetration testing of Air Force networks using a variety of commercial and non-commercial tools and creating vulnerability assessment reports. Assigned lead for perimeter security team and Tiger Team engagements.
- Responsible for system compliance auditing, security plan development,

performing self-inspections and developing and implementing information system security education and awareness.

- Required interaction with government agencies to obtain rulings, interpretations, and acceptable deviations for compliance with regulations. Prepare documentation, including Information Security Plans, outlining regulations and establishing information system security policy.
- Security architecture, functional design, functional/user testing, Information technology assessment, research, quality management, teamwork/collaboration, technical design, security operations specialist, security specialization.
- Lead for designing and constructing security assessment lab, which consisted of Cisco and Cabletron routers, hubs, and switches, multiple Solaris, Linux/Unix, BSD, Windows platforms.

AREA OF RESEARCH

Publications

AMCIS Conference 2017 – *Withers, K. L., Parrish, J. L., Terrell, S., & Ellis, T. J. (2017). The Relationship between the "Dark Triad" Personality Traits and Deviant Behavior on Social Networking Sites.* *https://aisel.aisnet.org/amcis2017/SocialComputing/Presentations/14/*

Collaborating Authors: Dr. Kim L. Withers, Dr. James L. Parrish, Dr. Steven Terrell, Dr. Timothy J. Ellis

HICSS-53 Conference 2020 - *Withers, K., Parrish, J., Ellis, T., & Smith, J. (2020, January). Vice or Virtue? Exploring the Dichotomy of an Offensive Security Engineer and Government "Hack Back" Policies. In Proceedings of the 53rd Hawaii International Conference on System Sciences.* *https://scholarspace.manoa.hawaii.edu/bitstream/10125/63963/0180.pdf*

Collaborating Authors: Dr. Kim L. Withers, Dr. James L. Parrish, Dr. Timothy J. Ellis, Dr. James N. Smith

US Patent - Withers, K., & Harten, J. (2019). Temporary Bluetooth Pairing. *U.S. Patent Application No. 16/166,479.* *https://patentimages.storage.googleapis.com/53/6f/e6/dfb6c25dbc80b0/US10645738.pdf*

US Patent – Withers, K, & Harten, J. (2024) – Pending Patent Number.

HONORS AND AWARDS

- Award for Network Security Design – AT&T Unified Messaging
- AT&T Technology Innovation Award – AT&T Unified Messaging
- Award for MACD Network Database – AT&T Unified Messaging
- AT&T Above & Beyond Award – AT&T Unified Messaging
- AT&T Chief Security Office Spotlight SVP Award
- AT&T Chief Security Office President's Team Award
- HICSS-50 Doctoral Fellow

PROFESSIONAL ORGANIZATIONS

- Women of AT&T
- AT&T Women of Technology
- AT&T Pioneers
- AT&T Community NETwork
- AT&T Oasis
- Association for Information Systems (AIS)

VOLUNTEERISM

- AT&T Aspire Mentoring
- Delta Sigma Theta Sorority Inc. (Public Service Organization)
- Air Force Affiliate Cyber Patriot Camp
- CyberTexas Cyber Patriot Mentor (Brandeis High School)
- Texas Cyber Summit (TCS)
- San Antonio Fiesta Commission
- Reviewer for IEEE SoutheastCon 2015 – Nova Southeastern University
- Reviewer for IEEE 2016 - 2018
- Reviewer for HICSS 2017 – 2021
- PhD Student Mentor 2017-2019 - Nova Southeastern University
- InspireIT Mentor
- Nepris Student Mentor