

ANGELA OREBAUGH

Assistant Professor

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2023 Highlights

- 2023 ACM@UVA Professor of the Year Award for teaching
- Awarded Option year funding for Virginia Cyber Navigator Internship Program (VA-CNIP) - **\$1M**. National Security Agency (NSA) National Centers of Academic Excellence in Cybersecurity (NCAE-C), NCAE-C-001-2021 Contract Number H98230-21-1-026
- 2023 Publications and Presentations:
 - Orebaugh, A. et al., Virginia Cyber Navigator Internship Program (VA-CNIP): Service Learning in Local Election Security, Journal of The Colloquium for Information Systems Security Education, Volume 10, No. 1, 2023.
 - Orebaugh, A., The Results are In: Assessing the Virginia Cyber Navigator Internship Program (VA-CNIP), Virginia Cybersecurity Education Conference, 2023.
 - Orebaugh, A., What do Hackers Look Like?, Keynote for Society of Women Engineers (SWE) High School Visitation, 2023.
- New Editorial Board Member for Journal of Smart Cities and Society (JoSCaS)
- Editorial Board Member, International Journal of Internet of Things and Cyber-Assurance, 2016-Present
- Executive Committee Member, Virginia Cyber Range, 2021-Present
- Program Committee, 2023 Journal of The Colloquium for Information Systems Security Education
- Program Committee, 27th CISSE (Colloquium for Information Systems Security Education)
- Reviewer and Program Committee, 2023 Virginia Cybersecurity Education Conference
- Reviewer, 2023 Innovation and Technology in Computer Science Education (ITiCSE) Conference
- Reviewer, 2023 SIGCSE Technical Symposium
- Reviewer, 2023 CCI Experiential Learning
- Search committee member for 22/23 and 23/24 Computer Science Tenured/Tenure-track search
- UVA Public Interest Technology University Network (PIT-UN) steering committee, 2021-Present
- UVA Women in Cybersecurity (WiCys) faculty advisor, 2021-Present

Professional Appointments and Employment

- **Assistant Professor**

Aug 2020 – Present

University of Virginia, Charlottesville, VA

- Teach courses and advise students in the Department of Computer Science.
- Co-lead the Virginia Cyber Navigator Internship Program (VA-CNIP).
- Utilize a variety of Learning Management Systems (LMS) and tools including Canvas, Collab, and Blackboard, and Zoom. Courses taught include:
 - CS 3710 Introduction to Cybersecurity (Undergraduate)
 - CS/ECE 4457 Computer Networks (Undergraduate)
 - CS4501 Cybersecurity and Elections (Undergraduate)**
 - SEC 3010 Securing the Cyber World (Undergraduate)
 - SEC 4030 Ethical Hacking (Undergraduate)
 - ISSS 3401 Smart Cities Enabling Sustainability (Undergraduate)
 - ISHU 4850 Principles of Sustainability (Undergraduate)
 - LASE 2559-007 Creating a Sustainable World Through Positive Change (Undergraduate)
 - LASE 2559-105 Ethical Hacking for Public Good (Undergraduate)
 - BUS 5020 Security Policy Development and Assessment (Graduate)
 - BUS 5030 Designing Dynamic Security Architecture (Graduate)*
 - BUS 5120 Securing the Internet of Things (Graduate)

* Featured in the National CyberWatch Center's 2019 Innovations in Cybersecurity Education.

** Featured in the National CyberWatch Center's 2022 Innovations in Cybersecurity Education as Best Submission.

- **Director of Cybersecurity and IT Programs**
Assistant Professor

Jan 2016 – May 2020

University of Virginia, Charlottesville, VA

- Provided oversight and direction of three certificate programs (25 courses): Cybersecurity Management (graduate), Cybersecurity Analysis (undergraduate), Information Technology (undergraduate).
- Developed and implemented the Cybersecurity Analysis and Information Technology concentrations for the Bachelor of Interdisciplinary Studies degree. Provide student advising, teaching, and subject matter expertise for these new concentrations.
- Developed and implemented the Cybersecurity Analysis certificate program. Provide student advising, teaching, and subject matter expertise for the new certificate.
- Served as an academic leader and subject matter expert to advance the cybersecurity and information technology curricula to support the school's mission and goals.
- Provided curricular leadership by overseeing the development and timely approvals of new professional education programs.
- Managed and mentored 14 wage faculty in the Cybersecurity and IT certificate programs. Recruit and hire new faculty as needed. Evaluate faculty annually.
- Taught undergraduate and graduate courses, advised students, and served as subject matter expert for cybersecurity, IT, and sustainability.
- Utilized a variety of Learning Management Systems (LMS) and tools including Canvas, Collab, and Blackboard, and Zoom.
- Bachelor of Interdisciplinary Studies capstone advisor
- Member of the Committee on Sustainability and the Sustainability Teaching and Research subcommittee.

- **Fellow and Chief Scientist**

Jan 2006 – Dec 2015

Booz Allen Hamilton, McLean, VA

- Booz Allen Fellow leading firm-wide technology and strategic innovation.
- Cybersecurity R&D lead for several technology initiatives for the National Institute of Standards and Technology (NIST). Technical lead for the NIST National Vulnerability Database (NVD) and Security Content Automation Protocol (SCAP) programs, leading vulnerability analysis efforts in coordination with DHS, NSA, Mitre, and commercial organizations. Primary author for various NIST 800 series technical security special publications. Security subject matter expert for the NIST electronic voting security task and development of voting security standards.
- Cybersecurity Functional Community Program Manager. Develop and implement strategic and tactical plans to meet the needs of staff and the overall goals of the Functional Community Program Management Office.
- Green Tech column author for the Booz Allen Sustainability E-News. Authored 48 articles.
- Director of Research and Academic Integration for the Information Assurance Technical Analysis Center (IATAC). Developed and maintained an evolving taxonomy of the key research areas in cybersecurity and surveyed universities to identify emerging research, innovation, technologies, and experts in these areas. Grew and maintained relationships with key administrators and faculty by participation in colloquiums, conferences, and forums. Maintained leadership roles as an advisor, reviewer, or committee member on several security-focused academic journals and conferences and assisted with the formulation and development of academic security educational programs and curriculum.

- **Adjunct Faculty** May 2014 – Dec 2015
University of Virginia, Charlottesville, VA

- Developed and taught "Securing the Internet of Things" course for the Cybersecurity Management program in the School of Continuing and Professional Studies. Teach in an online learning environment using Blackboard. Provide strategic advising on information technology and security curriculum and technology growth.

- **Faculty** Aug 2006 – May 2010
The Institute for Applied Network Security, Boston, MA

- Taught Intrusion Detection and Prevention to class sizes averaging 25 students.

- **Adjunct Faculty** Aug 2005 – May 2008
George Mason University, Fairfax, VA

- Developed and taught Intrusion Detection and Forensics for the Computer Forensics program in the Department of Electrical and Computer Engineering (ECE).
- Taught in a classroom environment with class size of 30 students.
- Participated in development of M.S. in Computer Forensics SCHEV proposal and curriculum development.
- Published peer-reviewed publications in intrusion detection and prevention, data mining, attacker profiling, behavioral biometrics, cyber psychology, and network forensics.

- **Instructor** Sept 2002 – Dec 2007
SANS Institute, Bethesda, MD

- Taught Security Essentials and Intrusion Detection In-Depth to class sizes of 10-300 students via conferences, the Local Mentor Program, and SANS@Home.
- Assisted in the creation and launch of the SANS@Home online course delivery program.
- Developed and revised curriculum course material for various information security topics.
- Provided mentorship and guidance to new and junior instructors.

- **Senior Scientist** Sept 2004 – Jan 2006

Lockheed Martin Information Technology/Sytex, Inc., Information Research Center, Vienna, VA

- Conducted leading edge research in the focus area of intrusion detection and prevention.
- Assisted in developing the company's intellectual property base by creating patents, journal papers, books, magazine articles, training programs, and whitepapers.
- Promoted the company's capabilities by speaking at conferences.
- Patent Application: 20070118274, Telematics application protocol along with devices, systems and methods employing the same.

- **Associate**

May 2001 – Sept 2004

Booz Allen Hamilton, McLean, VA

- Created and led the Perimeter Defense and Network Security functional team, a group of highly technical security engineers that provide support to various information and network security projects throughout the firm.
- Supported various DoD, civil, and commercial clients on a wide range of security topics.
- Performed extensive research and developed various white papers for expanding the firm's capabilities.
- Participated as technical author on winning proposal efforts.
- Projects included firewall, VPN, and IDS architecture design and testing, vulnerability assessments, penetration testing, application security testing, and leading edge research.

- **Chief Security Architect**

Feb 2000 – May 2001

Inflow, Product Engineering, Denver, CO

- Architected, designed, tested, and implemented security product solutions for the product development team.
- Successfully led the design and implementation of the firewall and VPN security offering, utilizing Nokia Check Point Firewall-1/VPN-1 and Provider-1.
- Participated in the design of the core network access and network monitoring products.
- Regularly participated in company-wide network vulnerability assessments.

- **Network Engineer**

Apr 1996 – Feb 2000

James Madison University, Network Services, Harrisonburg, VA

- Assisted in the planning, design, and implementation of future network needs as well as troubleshooting and maintaining current LAN and WAN connectivity consisting of Cisco core devices and HP and Cisco edge devices.
- Actively monitored network status and utilization using HP Openview and utilized UNIX and Perl scripting as needed for SNMP device management and security.
- Led the support efforts in a total campus Novell NDS migration and maintained Internet and Intranet connectivity in Novell Netware, Windows, and Macintosh environments.

- **Database Programmer**

Sept 1994 – Apr 1996

Hi-Tech Data Systems, Broadway, VA

- Responsible for the maintenance and enhancement of FuelNet, a fuel management system for the state of Maryland.
- Designed and implemented additional features such as the Payroll Processing agent.
- Programmed in *Progress*, a 4GL RDMS, in a UNIX environment.

Education and Training

- **Doctor of Philosophy in Information Technology**, Concentration: Information Security, George Mason University, 2014
Dissertation Title – “Analyzing Instant Messaging Writeprints as a Behavioral Biometric Element of Cybercrime Investigations.”
Dissertation Advisors – Dr. Jeremy Allnutt, Dr. Jason Kinser
- **Master of Liberal Arts, Sustainability**, Harvard University, 2019
Capstone – Higher Education Sustainability Curriculum
- **Master of Science in Computer Science**, James Madison University, 1999
- **Bachelor of Business Administration**, James Madison University, 1994
Concentration: Computer Information Systems
- **IBM Data Science Professional Certificate**, 2020
- **Certificate in Sustainable Business**, McIntire Business Institute, University of Virginia, 2018
- **Certificate in Green Buildings and Sustainable Communities**, Harvard University Extension School, 2016
- Innovations in Pedagogy Summit, Center for Teaching Excellence, 2019
- Course Design Institute, Center for Teaching Excellence, 2019

Honors and Awards

- 2023 ACM@UVA Professor of the Year Award for teaching
- 2022 ACM@UVA Rising Star Faculty Award for teaching
- 2020 Adelle F. Robertson Award for Excellence in Teaching
- 2019 Women Know Cyber, 100 Fascinating Females Fighting Cybercrime
- 2013 Information Security Magazine Security 7 Winner
- Booz Allen Hamilton’s first Cybersecurity Fellow, 2012
- Finalist for 2012 Women in Technology (WIT) Leadership Awards
- 2011 Femmonomics Top 50 Women in Tech to Watch

Publications and Scholarly Contributions

Archival Peer Reviewed Journal Articles

- **Orebaugh, A.**, Davidson, J., Johnson, D., and Graham, D., Virginia Cyber Navigator Internship Program (VA-CNIP): Service Learning in Local Election Security, *Journal of The Colloquium for Information Systems Security Education*, Volume 10, No. 1, Winter 2023.
- **Orebaugh, A.**, Davidson, J., Johnson, D., Graham, D., and Martin, W., *Protecting Election Infrastructure: The Virginia Cyber Navigator Internship Program (VA-CNIP)*, 2022
Innovations in Cybersecurity Education, National Cyberwatch Center, 2022. **Best Submission
- Jackson, C., **Orebaugh, A.**, *A Study of Security and Privacy Issues Associated with the Amazon Echo*. *International Journal of the Internet of Things and Cyber-Assurance*. 2017.
- **Orebaugh, A.**, Allnutt, J., Kinser, J. *Cyber Profiling: Using Instant Messaging Author Writeprints for Cybercrime Investigations*, *Journal of Cyber Security & Information Systems*, Volume 2, Number 2, 2014, p.13-18.
- **Orebaugh, A.**, Allnutt, J. *Classification of Instant Messaging Communications for Forensics Analysis*, *International Journal of Forensic Computer Science (IJoFCS)*, IJoFCS 2009, 1, 22-28.
- **Orebaugh, A.**, *Proactive Forensics*, *Journal of Digital Forensic Practice*, Volume 1, Issue 1, March 2006.

Archival Peer Reviewed Conference Proceedings

– **Orebaugh, A.**, The Results are In: Assessing the Virginia Cyber Navigator Internship Program (VA-CNIP), Virginia Cybersecurity Education Conference, 2023.

– **Orebaugh, A.**, The Virginia Cyber Navigator Internship Program: An academic-government partnership for experiential learning in election security, COVA CCI CybER Con, 2022.

– **Orebaugh, A.**, Virginia Cyber Navigator Internship Program, Virginia Cybersecurity Education Conference, 2022.

– **Orebaugh, A.**, Allnutt, J., Kinser, J. *Visualizing Instant Messaging Author Writprints for Forensic Analysis*, Conference on Digital Forensics, Security, and Law (CDFSL), 2014.

– **Orebaugh, A.**, *An Instant Messaging Intrusion Detection System Framework: Using Character Frequency Analysis for Authorship Identification and Validation*. IEEE International Carnahan Conference on Security Technology (ICCST). 2006.

- **Books**

– **Orebaugh, A.**, Pinkard, B., Nmap in the Enterprise, Syngress Publishing, ISBN: 1597492418, Feb. 2008.

– **Orebaugh, A.**, Ramirez, G., Burke, J., Morris, G., Pesce, L., and Wright, J., Wireshark & Ethereal Network Protocol Analyzer Toolkit, Syngress Publishing, ISBN: 1597490733, 2006.

– **Orebaugh, A.**, Biles, S., and Babbin, J., Snort Cookbook, O'Reilly Publishing, ISBN: 0596007914, 2005.

– **Orebaugh, A.**, Ethereal Packet Sniffing, Syngress Publishing, Boston, MA., ISBN: 1932266828, 2004.

- **Book Chapters**

– Greene, C., **Orebaugh, A.**, et.al. "Environmental Justice and Smart Cities", *Environmental Justice and Resilience in an Age of Uncertainty*, Routledge, ISBN 9781032024493, June 2022.

– **Orebaugh, A.**, *Data Mining Instant Messaging Communications to Perform Author Identification for Cybercrime Investigations*, Lecture Notes of the Institute for Computer Science, Social Informatics, and Telecommunications Engineering. Digital Forensics and Cyber Crime. Vol. 31, 2010 p. 99-110.

– Alder, R., Burke, J., Keefer, C., **Orebaugh, A.**, Pesce, L., and Seagren, E., *How to Cheat at Configuring Open Source Security Tools*. Syngress Publishing, ISBN: 1597491705, 2007.

– Rash, M., **Orebaugh, A.**, Clark, G., Pinkard, B., and Babbin, J., *Intrusion Prevention and Active Response: Deploying Network and Host IPS*, Syngress Publishing, ISBN: 193226647X, 2005.

- **Magazine and Other Articles**

– **Orebaugh, A.**, Downey, K., *May Your Holiday Be Merry and Secure*, UVA Lifetime Learning, 2019.

– Downey, K., **Orebaugh, A.**, Belford, J., *International Privacy Day Provides an Opportunity to Secure your Data (Parts I and II)*, University of Virginia Thoughts from the Lawn, 2019.

– Kelly, M., **Orebaugh, A.**, *Cybersecurity Expert Offers 5 Ways to Protect Yourself in the Digital World*, UVAToday, 2018.

– **Orebaugh, A.**, *Addressing the Cybersecurity Workforce Shortage: Educational Pathways and Stackable Credentials*, Education Technology Insights, 2018.

– **Orebaugh, A.**, *The Equifax Breach: Protecting your Information*, University of Virginia Thoughts from the Lawn, 2017.

- **Orebaugh, A.**, *Cybersecurity: Initiative Aims to Expand Cyber Security Workforce*, Columns Magazine, University of Virginia, 2016.
- **Orebaugh, A.**, *Consumers Have the Power in IoT Security*, University of Virginia Thoughts from the Lawn, 2016.
- **Orebaugh, A.**, *The New Frontier of Cyber Security*, University of Virginia Thoughts from the Lawn, 2016.
- **Orebaugh, A.**, *2016: The Year of Epic Cybersecurity Workforce Shortages*, TomorrowToday, 2016.
- **Orebaugh, A.**, *Future of IoT: Five Questions with Technology Futurist Angela Orebaugh*, IoT@Intel, 2015.
- **Orebaugh, A.**, *Securing the IoT Convergence: Start Planning Now*, IoT World/Booz Allen Hamilton, 2015.
- **Orebaugh, A.**, *What Do We Need to Make IoT Security a Reality?*, Information Security Magazine, Vol. 16, Number 8, 2014.
- **Orebaugh, A.**, and Ed Covert, *Ethical Challenges of the Internet of Things*, SC Magazine, 2014.
- **Orebaugh, A.**, *Secure all the (Internet of) Things*, Information Security Magazine, Vol. 15, Number 10, 2013.
- **Orebaugh, A.**, *Social Media Malware*. IANewsletter. Information Assurance Technology Analysis Center. Volume 15, Number 2. 2012.
- **Orebaugh, A.**, and Dillon Friedman. *Social Networking and Privacy*. IANewsletter. Information Assurance Technology Analysis Center. Volume 15, Number 1. 2012.
- **Orebaugh, A.**, *Securing the Mobile Device...and its User*. IANewsletter. Information Assurance Technology Analysis Center. Volume 15, Number 1. 2012.
- **Orebaugh, A.** and Adam Halbardier, *SCAPVal: Validating Specification Conformance*. IANewsletter. Information Assurance Technology Analysis Center. Volume 14, Number 4. 2011.
- **Orebaugh, A.**, *Identifying and Characterizing Instant Messaging Authors for Cyber Forensics*, IATAC Magazine, Information Assurance Technology Analysis Center, Volume 12, Number 3, 2009.
- **Orebaugh, A.**, *Extreme Makeover: Desktop Security Edition*. ISSA Journal. 2008.
- **Orebaugh, A.**, *Electronic Voting Security*. IANewsletter. Information Assurance Technology Analysis Center. Volume 11, Number 2. 2008.
- **Orebaugh, A.**, *NIST NVD & SCAP: Modernizing Security Management*. IANewsletter. Information Assurance Technology Analysis Center. Volume 11, Number 1. 2008.
- **Orebaugh, A.**, *NIST Publications: Guidance to Improve Information Security*. IANewsletter. Information Assurance Technology Analysis Center. Volume 11, Number 1. 2008.
- **Orebaugh, A.**, et al., *Intrusion Prevention and Active Response: Implementing an Open Source Defense*. SysAdmin Magazine. 2005.
- **Orebaugh, A.**, *Special Report: Cognitive Computing and Machine Learning*. IANewsletter. Information Assurance Technology Analysis Center. Volume 6, Number 4. 2004.

- **Industry Standards and Regulatory Papers**

- Dempsey, K., Chawla, N., Johnson, A., Johnson, R., Jones, A., **Orebaugh, A.**, Scholl, M., and Stine, K., *NIST Information Security Continuous Monitoring (ISCM) for Federal Information Systems and Organizations*. Draft Special Publication 800-137, 2011.

- Waltermire, D., Quinn, S., Scarfone, K., *NIST Technical Specification for the Security Content Automation Protocol (SCAP): SCAP Version 1.1*. Draft Special Publication 800-126, 2011. (Technical Reviewer)
- Scarfone, K., Souppaya, M., Cody, A., and **Orebaugh, A.**, *NIST Technical Guide to Information Security Testing and Assessment*, Special Publication 800-115, 2008.
- Frankel, S., Hoffman, P., **Orebaugh, A.**, and Park R., *NIST Guide to SSL VPNs*, Special Publication 800-113, 2008.
- Mell, P., and Kent, K., *NIST Guide to Intrusion Detection and Prevention Systems*. Special Publication 800-94, 2007. (Technical Reviewer)
- Kent, K., and Souppaya, M., *NIST Guide to Computer Security Log Management*. Special Publication 800-92, 2006. (Technical Reviewer)
- Frankel, S., Kent, K., Lewkowski, R., **Orebaugh, A.**, Ritchey, R., and Sharma, S., *NIST Guide to IPSEC VPNs*. Special Publication 800-77, 2005.

H-index and Citation Count

H-index: 15

Citation Count: 3769

Undergraduate Researchers

Catherine Jackson, Graduated 2017, CAS

Neha Krishnakumar, Expected graduation 2024, BSCS

External Grants

"Virginia Cyber Navigator Internship Program (VA-CNIP)", PI: Jack Davidson, Co-PIs: **Angela Orebaugh**, Daniel Graham, \$2,878,984, 2021-2025, National Security Agency (NSA) National Centers of Academic Excellence in Cybersecurity (NCAE-C), NCAE-C-001-2021 Contract Number H98230-21-1-026.

Presentations

- **Orebaugh, A.**, *What do Hackers Look Like?*, **Keynote** for Society of Women Engineers (SWE) High School Visitation, 2023.
- **Orebaugh, A.**, *Cybersecurity: Securing the Election Process*, UVA Lifetime Learning, 2022.
- **Orebaugh, A.**, *Being a Women in Cybersecurity*, **Keynote** for Capital Region Women in Computing Celebration Conference (CAPWIC), 2022.
- **Orebaugh, A.**, *From Industry to Academia*, UVA Women's Maker Program Tech & Culture Speaker Series, 2022.
- **Orebaugh, A.**, *Crafting Satisfying and Successful Careers in STEM*, UVA Parents Fund, 2021.
- **Orebaugh, A.**, *Hacking the Human: How to Protect Yourself from Today's Cyber Scams*, UVA Lifetime Learning, 2020.
- **Orebaugh, A.**, *WPVC 94.7 Wake Up Call*, 2019.
- **Orebaugh, A.**, *Voting System Security Panel*, Decipher Brewing, 2019.
- **Orebaugh, A.**, *Cybersecurity and Fraud Prevention*, Wells Fargo, University of Virginia, 2019.

- **Orebaugh, A.**, Green, C., Huang, G., Learmonth, G., *Big Data in the Service of Sustainability*, Sustainability Leadership Summit, University of Virginia, 2018.
- **Orebaugh, A.**, *Cybersecurity Education and Careers*, PVCC Cybersecurity Days, 2018.
- **Orebaugh, A.**, *Teaching Resilience in Higher Education*, Resilient Virginia Conference, 2017.
- **Orebaugh, A.**, *Smart Cities and Technology*, STAB Hackathon, 2017.
- **Orebaugh, A.**, Belford, J., Wright, R., *Paranoia and Trust in the Cyber World*, UVA Reunion Weekend, University of Virginia, 2017.
- **Orebaugh, A.**, *Securing the Cyber World*, Southwest Higher Education Center, 2017.
- **Orebaugh, A.**, *The CybHER Imperative*, ISC2 4th Annual CyberSecureGov, 2016.
- **Orebaugh, A.**, *Securing the Internet of Things*, UVA Newport News Center, 2016.
- **Orebaugh, A.**, *UVA Professor Warns of Valentine’s Day Scams*, NBC29, Charlottesville, VA, 2016.
- **Orebaugh, A.**, *Beyond Architecture and Technology: Other Elements Necessary for Success*, National Institute for Standards and Technology Cybersecurity for Smart Cities Workshop, 2015.
- **Orebaugh, A.**, *Internet of Things Threats*, roundtable presentation at the 5th Annual Billington Cybersecurity Summit, 2014.
- **Orebaugh, A.**, *Continuous Monitoring – the Tools and the Savings*, panel presentation at FOSE, 2012.
- **Orebaugh, A.**, *Technologies for Enabling Information Security Continuous Monitoring (ISCM)*, Department of Commerce Continuous Monitoring Workshop, 2012.
- **Orebaugh, A.**, *Cyber Security on a Budget*, Federal Information Systems Security Educator’s Association (FISSEA) panel, 2012.
- **Orebaugh, A.**, *Psychology, Human Factors, and Information Security*, **Keynote** address, University of Virginia Local Support Partners Conference, 2008.
- **Orebaugh, A.**, *Identifying Authors of Instant Messaging Conversations*, The Mid-Atlantic Institute for Applied Network Security Forum, 2008.
- **Orebaugh, A.**, *Testing Intrusion Detection Systems*, ISSA NOVA, 2007.
- **Orebaugh, A.**, *Deep Packet Inspection*, SANS, 2004.
- **Orebaugh, A.**, *The Importance of Information Security Certifications*, FISSEA, 2004.
- **Orebaugh, A.**, *Wireless: Ready or Not*, NEXPO 2004.

Internal Service and Leadership

- Computer Science Tenured/Tenure-track Search Committee, 2021- Present
- UVA Public Interest Technology University Network (PIT-UN) steering committee, 2021- Present
- UVA Women in Cybersecurity (WiCys) faculty advisor, 2021-Present
- Panelist for UVA Women’s Maker Program Final Showcase, 2022
- University of Virginia’s Committee on Sustainability, 2016-2021
- SCPS Academic and Program Services Committee, 2016-2019
- SCPS Faculty Search Committee Member, 2016-2019
- SCPS Rewards and Recognition Committee, 2017-2019
- SCPS Open House Committee, 2017-2018

- SCPS Faculty Search Committee Lead, 2017-2018

Professional Service and Leadership

- **Editorial Board Member**, Journal of Smart Cities and Society (JoSCaS), 2023-Present
- **Program Committee**, Virginia Cybersecurity Education Conference, 2021-Present
- **Editorial Board Member**, International Journal of Internet of Things and Cyber-Assurance, 2016-Present
- **Executive Committee Member**, Virginia Cyber Range, 2021-Present
- **Reviewer**, Innovation and Technology in Computer Science Education (ITiCSE) Conference, 2022-2023
- **Reviewer**, SIGCSE Technical Symposium, 2022-2023
- **Reviewer**, CCI Experiential Learning Program
- **Reviewer**, COVA CCI CyBER Con, 2022
- **Reviewer**, CCI Fall Research Program, "Securing the Interactions Between Humans and Machines", 2022
- **Board of Directors**, Resilient Virginia, 2020-2022
- **Advisory Board Member**, Charlottesville Center for Civic Innovation, 2019-2020
- **Board Member**, SmartCville, 2015-2019
- **Executive** Advisory Board, James Madison University Computer Science, 2015-2018
- **Reviewer**, Journal of Digital Forensic Practice, 2013
- **Reviewer**, IEEE Computer Magazine, 2013
- **Reviewer**, IEEE Transactions on Vehicular Technology, 2013
- **Board Member**, Charlottesville Earth Week, 2011-2013
- **Advisory Board Member**, CyberWATCH Center, 2007-2012
- **Program Committee Member**, ADFSL Conference on Digital Forensics, Security, and Law, 2011
- **Program Committee Chair**, National Institute of Standards and Technology IT Security Automation Conference (ITSAC), 2008-2010
- **Cybercrime Investigations Track Chair**, International Conference on Digital Forensics & Cyber Crime (ICDF2C), 2009
- **Case Studies Committee Member**, Annual Computer Security Applications Conference (ACSAC), 2008
- **Advisory Board Member**, ISC² Women in Security, 2007