

2024 WiCyS Virtual

Live...from Everywhere

April 18, 2024



WiCyS Virtual 2024

AGENDA AT A GLANCE

10:00 AM - 10:10 AM

- **Opening Ceremony (Dr. Janell Straach)**

10:15 AM - 11:00 AM

- **Presentation:** The Little ERG That Could: Building a Women in Cybersecurity Group from Scratch *Shir Butbul & Amelia Fisher*
- **Presentation:** Flipping the Script: Unleashing the Power of Flipper Zero in Cybersecurity *Mimi Vertrees*
- **Presentation:** Ascending to the C-Suite: Achieving the Mid-Level to Executive Transition *Michelle Wagner, Barbara Mooneyhan & Zabrina McIntyre*

11:00 AM - 4:00 PM

- **Virtual Career Fair**

11:15 AM - 12:00 PM

- **Presentation:** Build a Cybersecurity Clinic: Enhance Community Cybersecurity and Train Cyber Leaders *Francesca Lockhart & Kareem Chavez-Escobedo*
- **Presentation:** The Stealthisiest Industrial Revolution *Megan Moloney*
- **Presentation:** An Interviewee's Secret Sauce *Chandler Jackson*

12:15 PM - 1:00 PM

- **Presentation:** Accelerating Incident Response Through Automation *Meghan Donohoe & Susan Paskey*
- **Presentation:** Networking for Introverts in Cybersecurity *Paula Biggs & Rebecca Granger*
- **Presentation:** Unlocking the Potential: LLM and ChatGPT Applications for Cybersecurity Careers and Beyond *Laura Malave*

1:15 PM - 2:00 PM

- **Lunch Break**

2:15 PM - 3:00 PM

- **Presentation:** Cloud Detection Engineering: Sleuthing in the Mist *Lydia Graslie*
- **Presentation:** Inclusive Leadership *Lynn Dohm & Melinda Briana Epler*
- **Presentation:** Cyber-Securing Vehicles: Advanced Intrusion Detection Systems for Automotive Cyber Defense *Linxi Zhang*

3:15 PM - 4:00 PM

- **Presentation:** Digital Footprint Unveiled: Understanding Public Data *Lily Lee*
- **Presentation:** AI Detectives: The Vanguard of Social Media Forensics *Daniela Villalobos & Renata Uribe*
- **Presentation:** Using AI to Ethically and Safely Boost Your Security Career *Caitlin Buckshaw*

4:15 PM - 5:00 PM

- **Presentation:** Awareness Alone Won't Save Us: Why Human-Centered Design is Key to Cybersecurity *Rachel Russo & Norah Maki*
- **Panel:** Navigating the New Normal: Women in Cybersecurity Adapting to Hybrid Work Environments *Jessie Jamieson, Sasmita Panda, Khensani Carter, Jennifer Cox & Muta Mashack*
- **Panel:** Cyber Sheroges: The Women Commanding AI's Evolution *May Wang, Christina Papadimitriou, Nicole Nichols & Prajakta Jagdale*

5:05 PM - 5:15PM

- **Closing Ceremony (Dr. Ambareen Siraj)**



WiCyS Virtual 2024

PRESENTATION DESCRIPTIONS

10:15 AM - 11:00 AM SESSIONS

Presentation: The Little ERG That Could: Building a Women in Cybersecurity Group from Scratch

Shir Butbul & Amelia Fisher

TRACK: Community EcoSystem & Outreach

Did you know women make up only 24% of the overall cybersecurity workforce? At smaller companies, this can be even more prevalent, leading to feelings of isolation and a general lack of belonging. Sparking change with an employee resource group (ERG) can feel like a daunting challenge, but the impact is worthwhile. This talk details one ERG's experience from ideation to realization and provides a gameplan for women and allies looking to make a difference. When Women in Cybersecurity ERG was launched, there were only three women in the 30-person company. Three months later, this number doubled. The impact was not only about numbers, it was the ability to foster a culture of allyship, belonging and empowerment. Attendees will learn: 1. How to start and maintain a women in security group regardless of industry, company size or role. 2. The importance of executive awareness and a top-down approach. 3. How to utilize the ERG to create a sense of community and build relationships. 4. How to use the ERG to give back to the cybersecurity community."

Presentation: Flipping the Script: Unleashing the Power of Flipper Zero in Cybersecurity

Mimi Vertrees

TRACK: Technical Skill Building, Research & Innovation

Join as presenters explore the realm of cybersecurity through the revolutionary Flipper Zero. This presentation is crafted for individuals at every stage of their cybersecurity journey, from students to seasoned professionals and career changers. It'll begin with an overview of the Flipper Zero, an all-in-one hacking gadget, and its diverse capabilities. While delving into its features, participants will see how this user-friendly hacking tool serves as a gateway to hardware hacking, exposing essential tools for red teaming scenarios. Delve into vulnerabilities with concrete examples that the Flipper Zero can exploit. Explore different attack vectors through real-world demonstrations. Witness a live demonstration of Flipper Zero's real-world attack capabilities. Learn the emulation process to understand the tool's potential fully. Understand the impact of security breaches on businesses and how Flipper Zero can prevent them. It's not just a tool; it's an educational companion, defending against emerging threats like RFID attacks. Whether a student taking first steps, an early-career professional navigating cybersecurity intricacies or a seasoned executive seeking fresh insights, this presentation is for everyone. Don't miss this unparalleled opportunity to unlock the future of cybersecurity with Flipper Zero. This presentation is a must-attend event, promising to reshape the cybersecurity perspective.

Presentation: Ascending to the C-Suite: Achieving the Mid-Level to Executive Transition

Michelle Wagner, Barbara Mooneyhan & Zabrina McIntyre

TRACK: Career Advancement

Successfully transitioning from mid-level to an executive role demands a strategic evolution of skills and perspectives. This distinguished panel of women, who made that transition, will delve into the transformative journey, uncovering the critical distinctions in skillsets required to ascend to an executive position. Mid-level professionals often find themselves at a pivotal juncture, aiming to bridge the gap between their current capabilities and the enhanced skillset essential for executive leadership. In this panel, they will explore the nuanced differentials that pave the way for making that leap. The discussion will spotlight distinct competencies crucial for aspiring executives, including, but not limited to, refined strategic thinking, advanced decision-making abilities, adept communication and an expanded understanding of holistic business operations. The seasoned executives on the panel will share insights based on their years of personal experiences. Participants will gain a deeper understanding of the skills that differentiate mid-level managers from their executive counterparts. The panel will not only highlight the necessary skill upgrades but also will provide actionable guidance for professionals aspiring to make this leap. Join this insightful and dynamic talk to learn effective strategies for skill development, acquire a comprehensive understanding of what it takes to successfully transition from a mid-level role to an executive position, and what participants who are currently in mid-level of their career journey can do now to set themselves up for executive consideration.



WiCyS is committed to providing a safe and welcoming space for all. We will not tolerate behavior that doesn't adhere to the WiCyS code of conduct. Email: EAC@wicys.org



Interactive chat features will be active and carefully moderated throughout the event, facilitating genuine interaction and connection among our community members.

WiCyS Virtual 2024

PRESENTATION DESCRIPTIONS

11:15 AM - 12:00 PM SESSIONS

Presentation: Build a Cybersecurity Clinic: Enhance Community Cybersecurity and Train Cyber Leaders

Francesca Lockhart & Kareem Chavez-Escobedo

TRACK: Technical Skill Building, Education & Workforce Development, Community EcoSystem & Outreach

What is a cybersecurity clinic? Why should someone build one? What is taught? How can one draw an interdisciplinary and diverse student group? Who does the clinic serve? This session is intended to answer these questions and more by providing a comprehensive how-to guide for developing and launching a cybersecurity clinic at a local school, college, community college or university. Attendees need not be employed at an educational institution to attend; clinic champions and leaders come from all sectors and fields. The audience will be exposed to the growing cybersecurity clinic movement in the U.S. and best practices for the establishment, scalability and long-term success of clinics. The presentation will be co-presented with a current cybersecurity clinic student who will tell her clinic story and explain concrete steps attendees can take to recruit new audiences of students and clients to participate in cybersecurity capacity building in the local community. Join in this mission to develop the cybersecurity workforce while simultaneously fostering cyber resilience in small organizations of all types in a growing number of U.S. states!

Presentation: The Stealthiest Industrial Revolution

Megan Moloney

TRACK: Research & Innovation

Digital technology is accelerating at an unprecedented pace. While many innovations move the needle in specific industries, only a few have driven significant technical, socio-economic and cultural change. These moments in history are marked as industrial revolutions, and they are coming faster and faster. This session will discuss the theory that society is already entering the Fifth Industrial Revolution, which will be anchored in artificial intelligence and quantum computing. Presenters will explore how this differs from the Fourth Industrial Revolution and what it may mean for the tech workforce and society as a whole.

Presentation: An Interviewee's Secret Sauce

Chandler Jackson

TRACK: Career Advancement

Even four years later, the COVID-19 pandemic significantly impacted everyday human interaction, including aspects like home life, relationships and the workplace. As people transition back to the office, there's an opportunity to enhance communication skills. For young professionals embarking on their career journey, securing internships and new roles can be a challenge. Effective communication, soft skills and understanding emotional intelligence are essential for standing out in interviews and building a successful career in cybersecurity. Join this session to explore the five components of emotional intelligence and key interpersonal communication skills to help achieve career goals.



WiCyS Virtual 2024

PRESENTATION DESCRIPTIONS

12:15 AM - 1:00 PM SESSIONS

Presentation: Accelerating Incident Response Through Automation

Meghan Donohoe & Susan Paskey

TRACK: Technical Skill Building, Research & Innovation

As the complexity of incident response continues to grow, security professionals face challenges that impede efficiency and contribute to burnout. This issue is particularly prevalent in the field of incident response, where responders are constantly juggling the need to swiftly track down elusive threats while adhering to tight time constraints. Everyone has seen colleagues run out of steam from the pressures of working one high-priority incident after another and understands why this issue is endemic to the profession; and everyone has probably wondered how to move past these issues. This is where automation enters the conversation. Through a comprehensive case study that puts the process of responding to Duo MFA fraud reports under the microscope, the audience will see the impact of automation on the incident lifecycle and the investigator's role. Unlike other presentations that focus solely on automating the detection stage, this case study includes multiple phases of incident response. Developers will learn more about flexible coding practices and the fast-paced environment of an incident response event while responders will gain insights into the advantages of automation from a hands-on perspective. Everyone will be inspired to explore and embrace automation as a means to accelerate incident response.

Presentation: Networking for Introverts in Cybersecurity

Paula Biggs & Rebecca Granger

TRACK: Career Advancement

Hate networking (with people)? While working hard from behind the keyboard, it is important to understand that face-to-face interactions and interpersonal communication skills are critical to the success of future endeavors. As an introvert, it can be difficult to navigate the complexities of today's job market, knowing where to start to gain skills and abilities. How to get a first job or a better job are not topics that can simply be researched online. It requires deliberate effort to get out of the comfort zone. In this workshop, learn from presenters who have networked their way into the cybersecurity industry, and hear words of wisdom from a proven career coach on how to overcome mental blocks and learn valuable networking skills to propel a cybersecurity career. During the presentation, attendees and presenters will work together to build a plan and develop techniques to create a network that will enhance career and personal goals. Attendees can expect to use these tools the moment they step out the door: find success by leveraging the best aspects of personality type, where to start a network, how to "people," preparing for small talk, developing elevator pitches, how to talk to strangers, and how to network at large events.

There is always more to learn, and a list of resources about effective networking will be provided to every attendee. Since this is a networking (with people) workshop, be prepared to speak up and participate!

Presentation: Unlocking the Potential: LLM and ChatGPT Applications for Cybersecurity Careers and Beyond

Laura Malave

TRACK: Technical Skill Building, Career Advancement

In the fast-paced world of cybersecurity, staying at the forefront of the field is a constant challenge. This workshop offers an immersive experience into the world of large language models (LLM), with a focus on ChatGPT, and how they can be harnessed to propel one's cybersecurity career to new heights. This workshop is designed to empower attendees with practical skills and insights to navigate the dynamic cybersecurity landscape effectively. Through a series of interactive hands-on activities, participants will learn how to leverage LLMs for various aspects of their cybersecurity careers, including job interviews, resume and cover letter optimization, company research, certification preparation and real-world applications.



WiCyS Virtual 2024

PRESENTATION DESCRIPTIONS

2:15 PM - 3:00 PM SESSIONS

Presentation: Cloud Detection Engineering: Sleuthing in the Mist

Lydia Graslie

TRACK: Technical Skill Building

Cloud platforms provide unique challenges when it comes to developing accurate and actionable detections, especially Azure and Microsoft 365. The complexity, rapid iteration and shared responsibility model of cloud platforms frequently result in extensive obfuscation of the inner workings, making it difficult for end-user detection engineers to make informed decisions about what to detect on. This presentation will walk through lessons learned on Microsoft cloud detection engineering and recommend some best practices for other users seeking to create cloud detections.

Presentation: Inclusive Leadership

Lynn Dohm & Melinda Briana Epler

TRACK: Career Advancement

The Inclusive Leadership presentation will empower leaders to strengthen their commitment to diversity, equity and inclusion while developing practical skills to foster inclusion within their teams and organizations. This session will guide leaders through the 5 Stages of Inclusion and equip them with actionable steps to lead with empathy, build trust and drive inclusion. Participants will deepen their skills to create a safe, engaging work environment where women in cybersecurity thrive.

Presentation: Cyber-Securing Vehicles: Advanced Intrusion Detection Systems for Automotive Cyber Defense

Linxi Zhang

TRACK: Technical Skill Building, Research & Innovation

The advancement of vehicle technology brings with it a pressing need for dependable cybersecurity measures. This presentation focuses on developing a sophisticated intrusion detection system (IDS) framework that applies machine learning (ML) and binarized neural networks (BNN) to safeguard against cyber threats in the automotive domain. Traditional IDS approaches, which are largely rule-based, struggle to keep pace with the sophistication of modern cyberattacks within vehicle networks. The proposed solution addresses these shortcomings by integrating responsive ML algorithms and streamlined BNN models, resulting in more accurate threat detection with fewer incorrect alerts. The innovative IDS framework combines rule-based systems' precision with the dynamic learning capability of ML, providing a dual-layer of defense that can effectively identify both established and emerging cyber threats. BNN serve as an efficient method for on-board systems constrained by limited computational capacity. The integration of such advanced technologies aims to bolster vehicular cybersecurity, preserving the integrity of automotive communication networks. Throughout this presentation, they will dissect the process of designing and implementing this novel IDS, highlighting its practical implications for real-world scenarios. They will discuss the design challenges, outline deployment methodologies, and offer practical guidance for automotive industry stakeholders and cybersecurity experts. This presentation will serve as both a technical exposition and a strategic guide for reinforcing automotive cyber defense in an era of increasingly connected vehicles.

Rules of Engagement

- All sessions are recorded and available to virtual attendees until May 18th.
- All attendees must remain muted; questions/comments should be typed in the chat.
- No sales/promotions are allowed in the chat; violators will be promptly removed from the session.
- Adherence to the WiCyS code of conduct is mandatory throughout the entire virtual conference experience (Link will be provided in chat).
- This is a live session featuring auto-generated closed captioning (CC). Please note that auto-generated CC may not always be 100% accurate.

WiCyS Virtual 2024

PRESENTATION DESCRIPTIONS

3:15 PM - 4:00 PM SESSIONS

Presentation: Digital Footprint Unveiled: Understanding Public Data

Lily Lee

TRACK: Technical Skill Building

In a world where data contains a treasure trove of information, it's crucial to unravel the mysteries of one's digital footprint. Join this session for an eye-opening journey through the complex realm of public data in an exploration that will leave attendees informed and empowered. The session will dive into the nuances that distinguish open, public and personal data; the secrets of how public data is amassed; unveil the players in the data-driven marketplace – those who share, sell and purchase information; gain insight into the hazards posed by unscrupulous actors and unethical practices that threaten the privacy and security of public data; the surveillance that often operates just beneath the surface of online activities; and confront potential risks lurking within the vast data landscape of public data. But fear not; this session will conclude with best practices for safeguarding public data and equip attendees with the knowledge and tools to defend an online presence and make informed decisions in the digital age.

Presentation: AI Detectives: The Vanguard of Social Media Forensics

Daniela Villalobos & Renata Uribe

TRACK: Research & Innovation

In the rapidly changing world of cybersecurity, artificial intelligence (AI) is becoming a key player in social media investigations. This session reveals how AI is changing digital forensic investigations. It will start with an interesting case study, backed by important statistics that show how AI is becoming more and more essential in cybersecurity. The discussion moves on to review how language models can analyze social media data, showing they are capable of finding false information, understanding people's feelings and identifying trends. Then, the focus will be directed to the practical uses of AI, such as finding cyberbullying, uncovering fake profiles and tracing where viral content comes from. Future trends and the expanding role of AI in forensics will be studied, inviting dialogue on upcoming research avenues poised to advance AI utilization in the field. Attendees will leave with actionable insights and foresight into forthcoming technological advances, ready to apply these learnings to complex cybersecurity challenges.

Presentation: Using AI to Ethically and Safely Boost Your Security Career

Caitlin Buckshaw

TRACK: Career Advancement

Product security is a vast landscape of various languages, frameworks, tools, infrastructure and other technologies. Without decades of experience, how can one succeed in this rapidly moving realm? The answer, and what this talk will cover, is with the safe and ethical assistance of artificial intelligence.



WiCyS Virtual 2024

PRESENTATION DESCRIPTIONS

4:15 PM - 5:00 PM SESSIONS

Presentation: Awareness Alone Won't Save Us: Why Human-Centered Design is Key to Cybersecurity

Rachel Russo & Norah Maki

TRACK: Education & Workforce Development

What if people could improve cybersecurity outcomes by designing systems to nudge users to make more security-conscious decisions as they interact with these systems? It's time to augment the traditional human behavior change approach with human-centered design. The importance of cybersecurity education and awareness is undeniable, but simply educating users without providing built-in behavioral incentives has not been and will not be the best cybersecurity risk-reduction method. It is possible to reduce the dangers associated with human error and make cybersecurity more effective and sustainable by using human-centered design as a first layer of defense.

Panel: Navigating the New Normal: Women in Cybersecurity Adapting to Hybrid Work Environments

Jessie Jamieson, Sasmita Panda, Khensani Carter, Jennifer Cox & Muta Mashack

TRACK: Career Advancement

In today's rapidly evolving world, the lines between personal and professional lives are blurring like never before, giving rise to the era of hybrid work. As people embrace this new normal, it is crucial to explore how it impacts various facets of everyday lives, particularly the realm of cybersecurity. In this panel discussion, the presenters will delve into the multifaceted challenges and opportunities women in the cybersecurity field face as they transition into this hybrid work paradigm. This session aims to foster an engaging dialogue among experts, practitioners and attendees, shedding light on the unique experiences of women in cybersecurity. It will examine the implications of hybrid work on gender dynamics, career progression, work-life balance and the cybersecurity landscape. The diverse panel will share their personal journeys, insights and strategies for thriving in this evolving landscape while also addressing the broader societal and industry-level implications. Some topics will include balancing remote and in-office work for career advancement; nurturing a supportive work culture that promotes diversity and inclusion in cybersecurity; leveraging technology to secure remote work environments and data; strategies for professional development and networking in a hybrid world; and adapting to evolving cyberthreats in the context of remote work.

Panel: Cyber Sheroes: The Women Commanding AI's Evolution

May Wang, Christina Papadimitriou, Nicole Nichols & Prajakta Jagdale

TRACK: Technical Skill Building, Research & Innovation, Career Advancement

“Cyber Sheroes” convene a vanguard of women whose technical expertise is revolutionizing AI in cybersecurity. This panel delves into their pioneering work, from leveraging machine learning for intrusion detection to utilizing neural networks for real-time threat analysis. Panelists will demystify AI's role in identifying and neutralizing sophisticated cyber threats, sharing insights on building resilient, self-improving systems capable of anticipating hacker maneuvers. Attendees will engage with the technical narratives behind crafting AI algorithms that safeguard critical infrastructure without infringing on privacy. Discussions will pivot around the practicalities of training AI under rigorous ethical constraints and the implementation of quantum-resistant AI models to fortify cybersecurity in the approaching quantum computing era. This compact session aims to celebrate technical innovation led by women, inspiring a diverse future for AI-driven cybersecurity solutions that are as ethical as they are advanced. “Cyber Sheroes” is not merely an acknowledgment of women's impact in AI but a forward-looking dialogue on the integral, technical contributions they continue to make in securing a digital world.



WiCyS Virtual 2024 VIRTUAL CAREER FAIR

If you are ready for your next career advancement in cybersecurity, get your resume ready! The Virtual Career Fair is April 18 from 11am-4pm CT and is available to all Virtual Conference Attendees. WiCyS conference sponsors will be ready with their chat and video features enabled for an outstanding career fair experience.



GET RECRUITED
at the **WiCyS Virtual Career Fair**
April 18, 2024 from 11am-4pm CT

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Upload Your Resume!

Don't forget to upload your resume to the registration platform and attend the **Virtual Career Fair** to connect with our amazing conference sponsors and explore new opportunities!

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Women in CyberSecurity (WiCyS) is a nonprofit organization with international reach dedicated to the recruitment, retention and advancement of women in cybersecurity. WiCyS was founded by Dr. Ambareen Siraj in 2013 through a National Science Foundation grant awarded to Tennessee Tech University. In less than 10 years, it has grown into an organization (est. in 2017) representing a leading alliance between trailblazers from academia, government, and industry. WiCyS offers opportunities, trainings, events, and resources for its members.