WiCyS 2024
Call for Proposals (CFP)
Supplementary Information

CALL FOR PROPOSAL (CFP) Tracks

The 2024 WiCyS annual conference will have five different tracks. CFP submissions can be anything within the five tracks that you feel would be valuable to WiCyS attendees.

- **Technical Skill Building** - (technical skill development in all areas of cybersecurity)
- **Education & Workforce Development** - (all levels of cybersecurity education and training programs)
- **Research & Innovation** - (includes research, entrepreneurship and trends in emerging technologies)
- **Career Advancement** - (includes hiring, leadership, career development/growth, internships and apprenticeships)
- **Community EcoSystem & Outreach** - (includes collaborations/ partnerships and diversity, equality, inclusion & accessibility (DEIA) efforts

CFP Timeline

Submissions Open: September 11, 2023

Submission Deadline: November 6, 2023
(Student research posters are open until January 1, 2024)

Notification of Status: December 18, 2023
(Student research posters will be sent January 15, 2024)

CFP Categories

- **Workshops** (120 minutes)
- **Birds of a Feather (BoaF)** (45 minutes)
- **Presentations** (45 minutes)
- **Lightning Talks** (5 minutes)
- **Panels** (45 minutes)
- **Student Research Poster Session**

WiCyS 2023 Program At A Glance

- **Total number of submissions:** 652
- **Overall acceptance rate:** 14.4%
- **Acceptance rate in each category (accepted/submissions):**
  - Technical Presentation: 5.6%
  - BoaF: 11.9%
  - Panel: 7.4%
  - Lightning Talk: 23.9%
  - Workshop: 20.0%
  - Posters: 42.1%

Proposal Content

Abstract (Required):

- Overview that describes the offering
- Published in conference program
- Limited to 250 words

Outline (Required):

- Additional relevant information
- Articulates plan/outline of presentation
- NOT to be published
- Limited to 500 words

Author Information (Blind):

- Author experience/qualification related to the topic
- CANNOT mention name or company/affiliation of author(s)

General Tips for Proposal Submissions

Relevant and Specific

- To topics in cybersecurity and privacy
- Matched to one or more tracks and tailored to the category
- To career development/advancement of cyber professionals
- Not everything needs to apply to females in cybersecurity
- No “vendor” pitch

To the point (Not lengthy)

- Describe specifically what the presentation will address
- Try to be within 250 words for overview/abstract (to be published in the conference program)
- May provide additional information about presentation outline
- Absolutely NO information about author(s)/presenter(s) identity (name or affiliation/association of institution/company) in the body of proposal (may talk about experience/qualifications)

Written in Third-person

- Example:
  - Don’t say: I will talk about it
  - Do say: This talk will present/discuss

Tips for Competitive Proposals

- Timely
- Innovative
- Unique perspective
- Clear, specific and concise description of presentation
- No author bio/information

Workshops

20% accepted in 2023

WORKSHOPS

Workshops are free hands-on sessions (technical / professional development) on any topic related to cybersecurity. Hands-on workshops in any cybersecurity area are welcome. Workshops are 2 hours long.

Your 1st Time at WiCyS? Join Us For Insiders' Tips for Navigating WiCyS!

TRACK: BEST PRACTICES

Elizabeth K Hawthorne, *Rider University;* Kim Huynh, *Microsoft;* Felicia Jackson, *Raytheon;* Marena Soulet, *Tennessee Technological University;* Laura Sturgeon, *Smoothstack/Bloomberg;* Comfort Uduebholo, *Amazon Web Services*

Attending a WiCyS conference for the first time can be both exciting and daunting. There is just so much to navigate through in little time! Join us in this session, if this is your 1st time at the WiCyS conference. As panelists from various backgrounds and interests, we will share our experiences of what we found useful, what matters, and most importantly how you can get the most out of this experience as a first-time WiCyS attendee.

SEED Labs: Hands-on Labs for Cybersecurity Education

Wenliang (Kevin) Du, *Syracuse University*

TRACK: TODAY'S TECHNOLOGY AND CHALLENGES CPE

CREDITS: 2

To improve students' hands-on skills in cybersecurity, over the last 20 years this presenter has developed roughly 40 labs called SEED labs. Today, over 1,000 institutes worldwide are using them in their cybersecurity curricula. Many companies also are using the labs for their internal training and interviews. In this workshop, the presenter will give an overview and demonstrate several labs before guiding participants through some. Participants need to download the provided SEED VM beforehand, as all labs will be conducted inside the VM. Educators, students, professionals and researchers are welcome to attend this workshop.

Tips for Workshop Sessions

- 16 slots available
- 5 concurrent sessions
- 2 hours long
- Maximum 4 presenters
- Assume that audience will bring their own laptops
  - Any additional hardware needs to be provided at the venue
  - Any additional software needs to be provided before the conference
- Assumptions about participants must be articulated
  - Pre-reg knowledge/skill
  - Certain groups

The first listed presenter receives complimentary registration and two nights of complimentary lodging.

The second listed presenter receives complimentary registration and does not receive complimentary lodging.

Other listed presenters do not receive complimentary registration or lodging; they receive early registration.

Only presenters in attendance will be listed for the session.

Birds of a Feather (BoaF)

11.9% accepted in 2023

BIRDS OF A FEATHER (BoaF)

Birds of a Feather are informal discussion sessions on just about any topic related to cybersecurity, that elicit participant discussions. These sessions can be a great way to share ideas and be introduced to current issues or trends. BoaF sessions are 45 minutes long.

Cultivating Women as Leaders - The Role of Allyship
Kip Bates, *University of California, Santa Barbara;* Reema Moussa, *University of Southern California, Gould School of Law*

TRACK: BEST PRACTICES

Everyone has heard the stats -- with only 25% representation, there simply aren't enough women in cybersecurity. Another dominant problem often overlooked is women's retention and leadership in cyber, which contributes significantly to the disparity between the prevalence of women and men in the cybersecurity field. Join Reema Moussa and Kip Bates for this roundtable discussion on the importance of male allyship in fostering women's leadership in the cybersecurity sphere. In this Birds-of-a-Feather session, participants will be encouraged to discuss their experiences and perspectives on how to instill in their organizations the mission of promoting women in cybersecurity and how it isn't solely a women's issue but a priority for everyone in the cybersecurity field.

Cybersecurity Academic Integration Through Outreach
Joan Labay-Marquez, *University of the Incarnate Word*

TRACK: BEST PRACTICES

This Birds-of-a-Feather session will discuss how to integrate cybersecurity awareness through outreach programs that include additional degree programs within the institution to support a department's CAE-CD application for designation as a National Center of Academic Excellence in Cybersecurity. Presenters will discuss CAE-CDE program eligibility requirements and demonstrate how to incorporate a cybersecurity awareness community outreach program with a service-learning focus to support the submission of an application for the Program of Study validation component, part one of a two-part process for designation. The CAE-CDE Program is open to current regionally accredited four-year colleges and graduate-level universities; its goal is to promote and support quality academic programs of higher learning that help produce the nation's cyber workforce.

Tips for BoaF Sessions

- 5 slots available
- 5 concurrent sessions
- 45 minutes long
- Maximum 2 presenters
- Must be interactive
- Must assume audience interaction throughout the whole session

The first listed presenter received complimentary registration and does not receive complimentary lodging.

Other listed presenters do not receive complimentary registration or lodging.

Only presenters in attendance will be listed for the session.

Presentations

5.6% accepted in 2023

PRESENTATIONS

Presentations highlight innovations, research & development projects, internships/ co-ops experiences, service learning and outreach projects, or other experience related to cybersecurity. Presentations are 45 minutes long, including time for Q&A.

Protecting America's Defense Industrial Base with Cybersecurity Services
Kristina Walter, *National Security Agency*

TRACKS: LOOKING AHEAD, BEST PRACTICES
CPE CREDITS: 1

For the better half of a century, the National Security Agency/ Central Security Service (NSA/CSS) has led the U.S. government in cryptology and signals intelligence (SIGINT) missions. In partnership with the Department of Defense (DoD) Chief Information Officer (CIO), NSA is actively engaged in lending its technical expertise to identify, mitigate and eradicate threats to the U.S. Defense Industrial Base (DIB). The DIB represents a large and diverse target set for America's key global adversaries who thrive on the theft of intellectual proprietary, defense information and program insights. This presentation will present the compelling story behind NSA's burgeoning DIB cybersecurity mission, one that involves actively collaborating and sharing cyber threat information to disrupt adversaries' attempts to steal critical information and protect industry partners. It also will explain how a new model of provisioning cybersecurity services to DIB companies at scale dramatically expands DoD's security umbrella and the near-term strategy plans for NSA's newest mission focus.

Diversity is a Result of Inclusive Cultures
Deidre Diamond, *CyberSN and Secure Diversity*

TRACKS: TODAY'S TECHNOLOGY AND CHALLENGES, BEST PRACTICES, SMART ABOUT "SMART" THINGS
CPE CREDITS: 1

An advanced society requires complex human interactions. Teamwork skills are needed at a greater scale than ever before. This means emotional intelligence or "EQ skills" need strengthening. Developing EQ starts with the desire to learn combined with the right tools to do so! This talk centers on a nine- piece framework, the Standards of Inclusive Behavior, to help participants create inclusive cultures that will result in diverse workplaces. The presenter will explore how each of the nine standards for interactions impact professional environments and how to use this framework to create equality and diversity of thought. Security, privacy, economic well-being and mental health depend on the ability to engage others positively, yet this is a skill that employers rarely teach. When establishing a baseline of standards for human interactions that are framed through the window of cybersecurity, teams and organizations can excel because expectations are clear and fair.

Tips for Presentation Sessions

- 16 slots available
- 5 concurrent sessions
- 45 minutes long
- Maximum 2 presenters
- Audience interaction is limited to 10 min Q&A

The first listed presenter will receive complimentary registration with two nights of lodging.

The Second listed presenter receives complimentary registration and does not receive complimentary lodging.

Only presenters in attendance will be listed for the session.

Lightning Talks

23.9% accepted in 2023

LIGHTNING TALKS

Lightning talks highlight fresh ideas, unique perspectives, valuable experiences, and emerging trends in cybersecurity. Lightning Talks are 5-minute presentations that aim to jump-start discussions and collaborations while soliciting feedback from the community.

Economics and Ethics Behind Successful Free and Open Source Security Projects
Olivia Gallucci, *Rochester Institute of Technology*

Many organizations use Free and Open Source Software (FOSS) to build products and implement procedures. Yet, there is a lack of understanding, acknowledgment and support of the FOSS community in the cybersecurity industry, creating gaps in security knowledge. This presentation by Olivia Gallucci and professor Stephen Jacobs explores the relationship between FOSS and closed-source vulnerabilities, FOSS lifecycles, and FOSS security trends in projects including and excluding Freedom 3 (i.e., the ability to redistribute modified programs). It also examines the social workings and economic development behind successful FOSS projects and communities. The goal of this research was to document the history of FOSS projects, illustrate how organizations use FOSS projects, and determine effective security practices. The research highlights the importance of FOSS in cybersecurity, including things like documentation, collaboration and human rights. Research methods include an extensive reading of published research, journal articles, statistics, CVEs, and press articles on security threats and mitigations.

Ditch the Dichotomy: Embrace the Rainbow
Kaitlyn Bestenheider, *RSM US, LLP*

While new to the field, novice cyber professionals are constantly taught in dichotomies: Red Team vs. Blue Team. Black Hat vs. White Hat. These dichotomies divide people and are not truly reflective of the various roles and mindsets it takes to address the robust cybersecurity landscape. Using basic color theory and the NIST NICE Framework, Kaitlyn will present a better model to show the full spectrum of career options within the cybersecurity rainbow.

Tips for Lightning Talk Sessions

- 16 slots available
- 2 sessions of 8
- Must be within 5 minutes
- Maximum 1 presenter
- Great for new speakers
- Can be about work-in-progress
- Concurrent with other sessions

The first listed presenter receives complimentary registration and does not receive complimentary lodging.

Only presenters in attendance will be listed for the session.

Panels

7.4% accepted in 2023

PANELS

Panels provide opportunities to discuss a current relevant topic in cybersecurity. Panel organizers are responsible for selecting appropriate panelists to participate. In addition to the moderator, there can be up to 4 panelists, and each panel is 45 minutes long.

The Power of Six: Creating Cyber Experiences and Building a Talent Workforce Pathway for Women and Underrepresented Students

Laura Freeman, *Virginia Tech National Security Institute;* Sharon Hamilton and Lauren Provost, *Norwich University;* Linda Riedel, *The Citadel*

TRACK: BEST PRACTICES

In 2017, six universities joined together (Power of Six) to establish a pilot program to demonstrate their ability to develop cybersecurity talent pathways for women and underrepresented students for civilian and military positions in the Department of Defense (DoD). Norwich University, University of North Georgia, The Citadel, Texas A&M, Virginia Tech and Virginia Military Institute share a common identity as senior military colleges but had never previously teamed up to create and fund academic, experiential and research opportunities for cybersecurity students. In 2018, the Power of Six built bipartisan federal support of senators and congresspersons to insert language in the 2019 National Defense Authorization Act to establish DoD Cyber Institutes.

The Skills Gap Wish List: Students, Industry and Academia

Dr Brandy Harris, Pam Rowland, Niya Patterson, and Irene Vallalabos *Grand Canyon University;* Tamyria Williams, *TWC CORE Consulting, LLC*

TRACK: BEST PRACTICES

I wish you knew....” This conversation started at the 2021 WiCyS conference with industry partners sharing the gaps they have experienced when hiring students as interns or new hires. Students also have been asking, “What can I do to prepare myself for a career that will set me apart?” Academia is eager to help fill the skills gap and educate students to be prepared professionals. This panel will discuss specific needs, strategies and opportunities for student success. INDUSTRY - this is the time to share with academia and students the key skills and knowledge needed to fill the gaps seen in new hires and interns. ACADEMIA - this is the time to hear from students and industry on how to better prepare students for success. STUDENTS - share what to do and learn how to set themselves apart and become better prepared for a career in this exciting field. Together, key takeaways will be produced that can be shared with the entire community. Students will walk away with creative ideas on how to position themselves for success. Industry will provide specific ways that students can prepare for the field and make connections with some of the brightest and most engaged students. Academia will take away strategies as the conduit between students and industry.

Tips for Panels

- 5 slots available
- 5 Concurrent sessions
- 45 minutes long
- Maximum 4 panelists and 1 moderator
- Panelists with different backgrounds and viewpoints on the topic
- Clear takeaways from the panel discussion

Moderator receives complimentary registration and does not receive complimentary lodging.

Up to three panelists receive reduced rate conference registration ($250) and do not receive complimentary lodging.

Only presenters in attendance will be listed for the session.

Student Research Posters

42.1% accepted in 2023

POSTERS

Student posters will be judged in two categories: Undergraduate and Graduate. Winners in each category will be awarded a student travel grant for a future security conference and Runners Up will be awarded a tech prize.

At What Age Should a Child Start Learning About Cybersecurity?
Georgia Tyner, *SUNY Empire State College*

A, B, Cybersecurity...How early can a child start learning about cybersecurity? From the first time a child uses a cellphone, tablet or computer, they should be protected from cyberthreats. If their device is protected, that child is encountering cybersecurity. What should they know, when should they know it, and can they learn about cybersecurity at an early age? What is the best way for them to learn? In this paper, I will research what age children begin to learn about cybersecurity. I will research what type of cybersecurity education currently exists, online, in-person, through books, e-books, comic books or games, for children in pre-K to high school. I will look at the types of cybersecurity education and the success rate of the path of a cybersecurity career, if it has been around long enough to claim influence. There are many reasons we would want our children to know about cybersecurity. It could be a fruitful career, and the knowledge can protect them from predators, malware and malicious ads, to name a few. If parents don't understand cybersecurity basics, how can they teach their children? What help is out there? In this research, I will use systematic literature review as a research method as well as review existing programs and their effectiveness.

Exploring Side Channel Data for Detecting Malicious Software
Rebecca Clark and J Todd McDonald, *University of South Alabama;* Lee Hively, *Oak Ridge Nat'l Lab (Retired)*

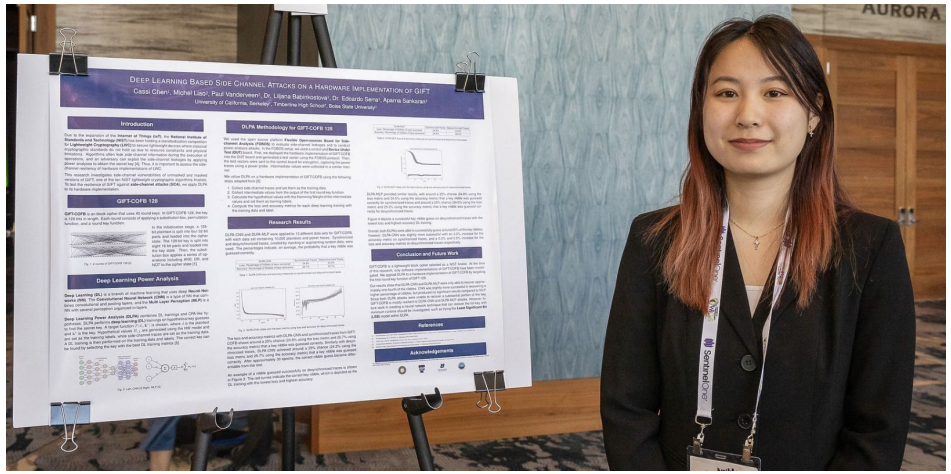
Rootkits are pernicious types of malware with administrative-level privileges that obtain access or control of a computer system. They often hide themselves effectively against detection mechanisms because they have the ability to alter system data and essentially lie to an end user. Side channel data such as CPU power and temperature, however, are outside the scope of a rootkit to alter. In this research, we use CPU power analyzed by a nonlinear phase space algorithm to detect rootkit execution. We collect CPU power measurements with a Data Acquisition System (DAQ) while test computers are in various states of activity (normal, stressed and manually controlled) and in either infected or uninfected states. We also compare results of our novel nonlinear phase space approach to common machine learning algorithms used in similar research. We train our algorithm using various phase space graph features that identify optimal threshold levels for graph dissimilarity and the optimal successive occurrences above threshold that produce the best detection accuracy. Our initial results demonstrate that certain rootkits can be detected through our phase space algorithm using low-frequency power signatures.

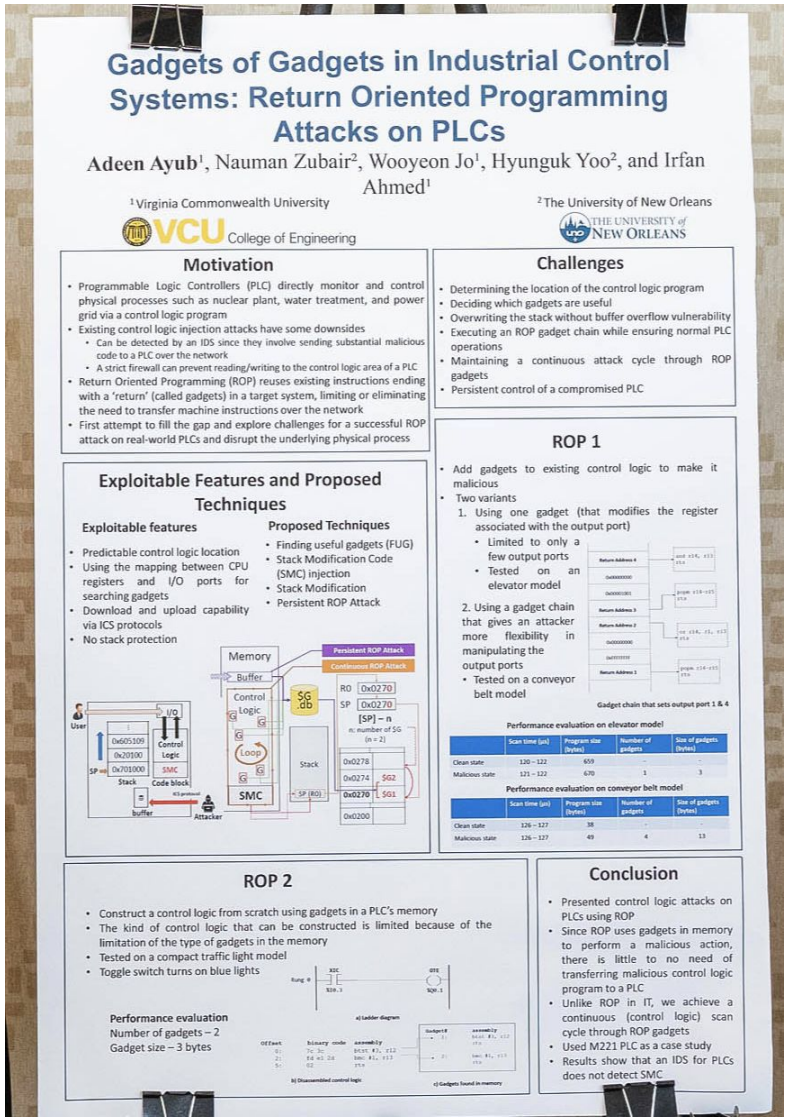
Student Research Poster Competition

Only WiCyS Student Member submissions are considered.

- Highlight major points of your research/work
  - Why is your work important?
  - What is your work about?
  - What approach do you use?
  - What is the outcome?
- Two categories
  - Undergraduate and Graduate
- Inclusions
  - The first listed student of accepted posters will receive an automatic scholarship.

Past Poster Presenters





Selection Process

- Submission scored by at least two reviewers.
- Authors can submit multiple proposals in different categories and tracks.
- Submissions will be peer reviewed with speaker name, email and affiliation blinded.
- Reviewers selected from WiCyS members who volunteered.
- Reviewers submit reviews using our CFP system.
- Sub-committee on each of the categories meets to discuss submissions with co-lead and select recommendations for program committee leadership.
- Program committee leadership meets to discuss all recommendations and finalize selections.
- Authors are notified and asked to register.

Rubric

Fulfills general guidelines

- **Content**
  - Is compelling/timely
  - Is technically sound
  - Is relevant to the tracks
- **Title**
  - Provides good indication of content of session
- **Description**
  - Is well articulated and written
  - Provides good view of session content, activities and outcomes

Submit by November 6, 2023

https://www.globauxsourceevents.com/WICYS2024/CallForProposals