



WiCyS 2022
CFP
Supplementary
Information

WiCyS 2022



March 17-19

Huntington Convention Center, Cleveland, OH

1800 Capacity

CALL FOR PARTICIPATION (CFP)

Theme and Tracks

Theme:

Being Smart about Security and Privacy of
All "Smart" Things

PROGRAM PARTICIPATION TRACKS AND SESSIONS

CURRENT TECHNOLOGY AND CHALLENGES TRACK

Current issues and challenges, advances in research and development (R&D), experimental findings.

LOOKING AHEAD TRACK

Important technology / R&D trends, challenges on the horizon, upcoming solutions, tomorrow's vision.

BEST PRACTICES TRACK

Institutional / operational / academic best practices, tools, techniques, and approaches.

CAREER DEVELOPMENT TRACK

Leadership, advancement, and transition.

CALL FOR PARTICIPATION (CFP)

Timeline

Open: September 15, 2021

Deadline: October 18, 2021

Notification: November 21, 2021

CFP Categories

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

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 cover/address
- ✓ Try to be within 300 words for actual content (to be published in conference program)
- ✓ **No author bio information**

✓ **Written in Third-person**

- ~~✓ I will talk about it~~
- ✓ 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



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.

Understanding USA Jobs and Navigating the Federal Hiring Process

Nikkia Henderson, *WiCyS MidAtlantic Affiliate*

TRACK: CAREER DEVELOPMENT

The WiCyS Mid-Atlantic Affiliate will present an in-depth workshop on the federal hiring process. It will begin with an overview of the USA jobs platform followed by a live online demonstration. Participants will learn how to navigate the USA jobs platform and build their federal resume within the USA jobs resume builder. Attendees will gain detailed insights into the federal hiring process, tools to identify federal cybersecurity job opportunities, and knowledge on deciphering federal job vacancies. They also will (via a live demonstration) participate in a step-by-step session to build a federal resume.

Let's Hack-a-Thing

Remi Cohen, Sara Boddy, and Malcolm Heath, *F5 Labs*

TRACK: CURRENT TECHNOLOGY AND CHALLENGES

In "Harry Potter and the Chamber of Secrets," Mr. Weasley says, "Never trust anything that can think for itself if you can't see where it keeps its brain." This advice holds true when it comes to Internet of Things (IoT) computers. Building IoT Botnets (Thingbots) is so popular, threat actors everywhere are doing it. We'll start the workshop by talking about the IoT, how it's not just home assistants and smartwatches but also things like vulnerable home routers and IP cameras. We will explain how IoT hacking is different on these lightweight devices, and why IoT botnet building is so powerful. After the discussion, we will hack a thing. We will demonstrate a step-by-step walkthrough on how to compromise an IP camera and see its video feed as well as how to compromise a vulnerable router and gain root privileges.

23%
accepted
in 2021

Tips for Workshop Sessions

- ✓ 16 slots available
- ✓ Maximum three presenters (only two presenters will receive complimentary registrations with one lodging)
- ✓ Must be interactive
- ✓ Two hours long
- ✓ 5 concurrent sessions
- ✓ 75% are technical and offered as either pre-conference OR post-conference in the afternoons
- ✓ 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 workshop participants must be articulated
 - ✓ Pre-req knowledge/skill
 - ✓ Certain groups

Birds of a Feather (BoaF)



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.

Underrepresented Women in Cybersecurity

Laura Malave, *St. Petersburg College*

TRACK: BEST PRACTICES

This Birds-of-a-Feather session will discuss the status of underrepresented women in cybersecurity: Those self-identifying as black/African American, Hispanic/Latina, Native American, Native Hawaiian, Pacific Islander and Asian. They face many challenges in the workplace, including lack of representation in management roles, salary gap and conscious and unconscious discrimination. We will brainstorm and discuss how to increase, recruit, promote and nurture the number of underrepresented women pursuing academic degrees and cybersecurity careers. We also will discuss best practices and challenges in retaining underrepresented women in academic degree programs and careers as well as available resources for supporting underrepresented women in cybersecurity.

Rising Leadership: A Group Discussion on How to Make a Difference and Have a Positive Impact from the Start of Your Career

Kaitlyn Bestenheider and Jeana Cosenza, *Tevora / National Cyber League*, **John McGill and Sophia Anderson**, *National Cyber League*

TRACK: CAREER DEVELOPMENT

When you first start out in any new career path, it's hard to imagine having a meaningful impact especially in an industry as vast and ever-changing as information security. At the 2019 WiCyS, Kaitlyn Bestenheider received the Rising Leadership Award. After a year of reflection, Kaitlyn and her team of NCL Player Ambassadors realized it does not take an innate talent or gift to make a difference. There are specific, actionable goals every individual can implement at any point in their career regardless of experience level or power within an organization. This will be an open dialogue led by the NCL Player Ambassadors, who will share insights they have discovered and gather the insight of others with a focus on helping entry-level individuals find their voice and positively impact the industry. Topics include: What makes a good leader; what characteristics make you look up to someone; what are the biggest obstacles you find in having your voice heard; how do you want to have a lasting impact on the industry.

11%
accepted
in 2021

Tips for BoaF Sessions

- ✓ **5 slots available**
- ✓ **Maximum one presenter**
- ✓ **Must be interactive**
- ✓ **Must assume audience interaction through-out the whole session**
- ✓ **5 concurrent sessions**

Presentations



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.

Securing Machine Learning Systems

Charlotte Fraser, Microsoft

TRACK: LOOKING AHEAD

Machine learning and AI technologies are rapidly becoming part of our daily lives with amazing potential to transform how we live and work. They also open up a different world of new types of security and privacy vulnerabilities, exploits and mitigations. In this presentation, we'll explore this new world from the point of view of the Microsoft Security Response Center, the central security operations team at Microsoft. We'll explore some of the major classes of machine learning vulnerabilities, how attackers may seek to exploit them, and how Microsoft works to defend against them to keep our customers safe. We'll also talk about how we work with the security researcher community to help protect the ecosystem. Whether you are doing security research into machine learning, or seeking to secure it, we hope to see you there!

A CISO's Guide to Cybersecurity Careers

Lora Vaughn, Simmons Bank

TRACK: CAREER DEVELOPMENT

Transitioning from a cybersecurity student to a cybersecurity professional sounds daunting, but it doesn't have to be. In her current role as Chief Information Security Officer and previous roles in cybersecurity management, Lora Vaughn McIntosh helped several recent graduates and career changers successfully make that transition. Unfortunately, it's not always easy to understand what types of cybersecurity careers exist, let alone how to land one. In this talk, she'll share her career journey, some tips on how to learn more about specific cybersecurity roles, and address common questions about cybersecurity careers in the corporate world, including: How do I get my foot in the door; what are some areas of specialization I can pursue in cybersecurity; what's the difference between a cybersecurity analyst, engineer and architect; what can I do to make myself a marketable cybersecurity professional; and how do I prepare for interviews?

7%
accepted
in 2021

Tips for Presentation Sessions

- ✓ **15 slots available**
- ✓ **5 concurrent sessions**
- ✓ **Maximum two presenters (only first listed author will receive complimentary registration with one lodging)**
- ✓ **Audience interaction is limited to 10 min Q&A**

Lightning Talks



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.

30%
accepted
in 2021

Making Our Work Matter - Cybersecurity for Nonprofits, Results from the Field

Kelley Misata, *Sightline Security*

TRACK: CURRENT TECHNOLOGY AND CHALLENGES

In 2018, Americans gave \$427.71 billion to nonprofit organizations. You, like many WiCyS attendees, may have given time, energy or money to your favorite nonprofit, never giving a second thought to their security preparedness. Our best intentions of bringing cybersecurity superpowers to nonprofits are often met with open arms. However, the reality is that many nonprofits have no idea what they need, and we, as the experts, jump in with solutions we think they need. Join this talk to hear about Dr. Kelley Misata and her new nonprofit start-up, Sightline Security. Missioned to help nonprofits navigate comprehensive cybersecurity with confidence, Dr. Misata will present results from a recent pilot in which her team worked side-by-side with nonprofit organizations. She will illustrate how bringing a business-centric approach using everyday language to nonprofits drives them to improve cybersecurity through improved awareness AND also gives them a seat at the table to own their own security efforts. Attendees will walk away with an understanding of how to use their security capabilities to provide beneficial and measurable progress to their favorite nonprofits.

My First CTF Changed My Life - How CTFs Can Make You a Better Software Developer

Melodie Moorefield-Wilson, *Pendo.io*

TRACK: CAREER DEVELOPMENT

As a software developer, Melodie Moorefield-Wilson was familiar with writing good code, or so she thought. She repeatedly heard about security vulnerabilities that occurred because of issues with a developer's code base. But how did security researchers manage to find these vulnerabilities? In her talk, Melodie will discuss how she started to learn about Capture the Flag (CTF) competitions, how reluctant she was to get involved and how she overcame that reluctance. She also will discuss how her first CTF completely changed her perspective on software development, and how anyone can get involved in making software more secure and safe. She will provide step-by-step guidelines for beginners to get started and give resources for individuals who want to get started in these competitions. It can be intimidating at first, but anyone can learn if they have the desire. Let's explore CTFs together!

Tips for Lightning Talk Sessions

- ✓ **15 slots available**
- ✓ **Maximum one presenter**
- ✓ **Must be within FIVE minutes**
- ✓ **Great for new speakers**
- ✓ **Can be about work-in-progress**
- ✓ **Concurrent with other sessions**

17%
accepted
in 2021

Panels



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.

Best Practices for Companies to Engage with Law Enforcement and Counsel in Response to a Cybersecurity Incident

Kristy Greenberg, *U.S. Attorney's Office for the Southern District of New York*, **Erin Joe**, *The Office of the Director of National Intelligence*, **Amy Mushahwar** and **Kimberly Peretti**, *Alston and Bird LLP*

TRACK: BEST PRACTICES

Information security professionals may be responsible for incident prevention, detection and escalation on a day-to-day basis. But when a significant cybersecurity incident occurs, other stakeholders need to get involved, fast. This panel will explore effective strategies for engaging with federal law enforcement and counsel in responding to a cybersecurity incident. They will explore the changing nature of the cyber national security threat to the private sector as well as how and when to engage with law enforcement and counsel. Panelists will address the common misconceptions that company insiders may have when dealing with law enforcement and prosecutors in cybercrime investigations. They also will review the role of counsel in managing privilege and evidence preservation, as well as the company's communication with law enforcement, regulators, investors and customers. The panelists and moderator are four women who have significant cyber experience and bring different perspectives to working with information security personnel in a cyber-crisis.

Women Securing the Future with TIPPSS for IoT

Florence Hudson, *FDHint, LLC and NSF CAE at Indiana University*, **Edna Conway**, *Cisco*, and **Cynthia Mares**, *District Court Judge, Aurora, Colorado*

TRACK: CURRENT TECHNOLOGY AND CHALLENGES

Our increasingly connected world creates great opportunities for increased collaboration and data sharing, leveraging the Internet of Things (IoT) to enable connected systems to improve the human experience and business outcomes. From supply chain efficiency to connected healthcare and smart connected communities, the opportunities are endless. So are the risks. We all use IoT devices, but are they safe? Engineers and computer scientists are designing, developing and manufacturing IoT systems. How do we enable Trust, Identity, Privacy, Protection, Safety, Security (TIPPSS) for IoT systems? What are the implications of the IoT related to privacy, security and each individual's civil rights? This panel of women engineers, scientists, lawyers and a judge representing industry, government, research and academia will share their perspectives and debate how ready we are to deliver TIPPSS for the IoT, the opportunities and risks, and how we all can be part of the solution. They will share the privacy, policy, technology and standards implications and efforts underway regarding TIPPSS for IoT. The panel participants are coauthors of the book "Women Securing the Future with TIPPSS for IoT."

Tips for Panels

- ✓ 5 slots available
- ✓ 5 Concurrent sessions
- ✓ Maximum FOUR panelists and ONE moderator (Only first four listed authors will receive complimentary registrations)
- ✓ Panelists with different backgrounds and viewpoints on the topic
- ✓ Clear take-way from panel discussion

Posters



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.

4. Intrusion in Wireless Networks Detection Using Machine Learning

Shilpa Bhandari, *Youngstown State University*

As our lives get more and more digital with increasing reliance on wireless networks, intrusion detection systems need to be more powerful to spot unauthorized access. With the current data sets we have, we can train machine-learning models to detect intrusions in wireless networks. These models are built on a set of training data and can identify any future anomalies in the network. Detecting intrusion using machine learning is a difficult problem to solve because the amount of data on intrusions is much smaller relative to normal network transfers. We test which machine learning model can best detect these intrusions. In this project, XGboost, Catboost, LightGBM and Random Forest machine learning models are trained based on the Aegean Wi-Fi Intrusion Dataset (AWID), publicly available data with records of wireless network features during intrusion and normal processing. By passing test data to these learning models, we test them for accuracy, precision, recall and time of execution. Using SHapley Additive exPlanations, we explore which features of AWID best contribute to detect intrusions in a wireless network.

10. Rogue Device Threats and Response

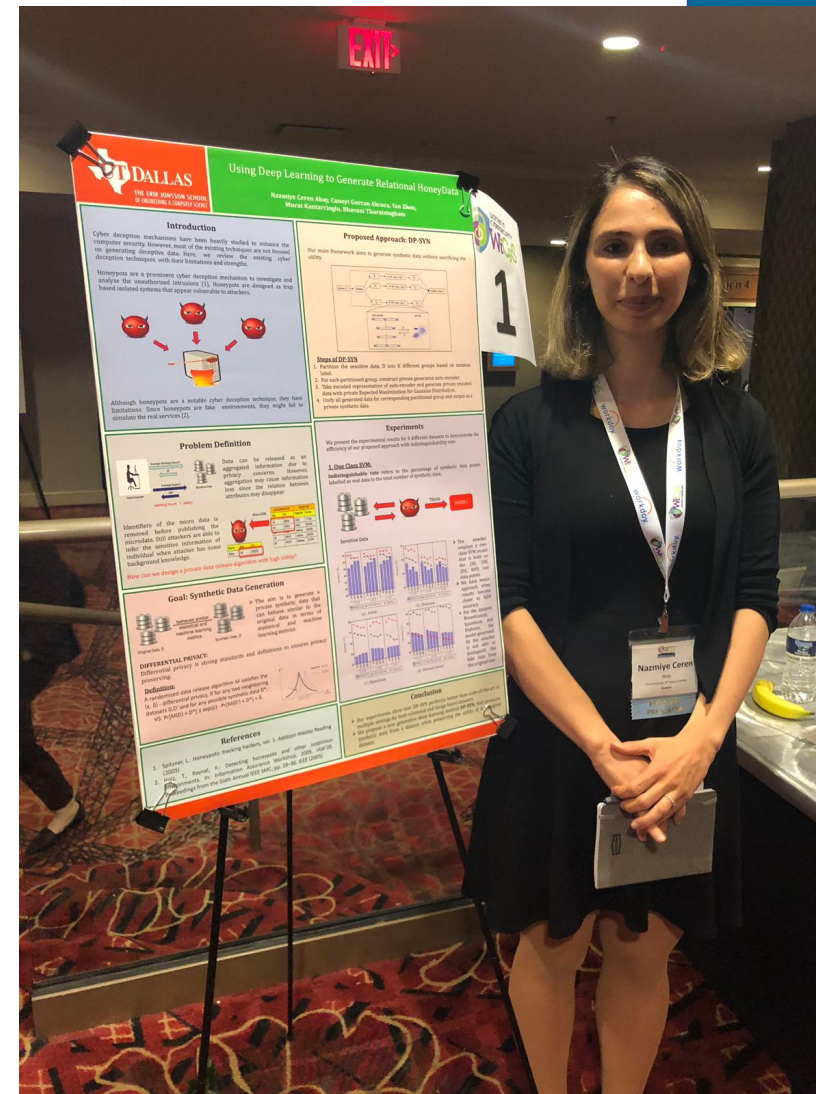
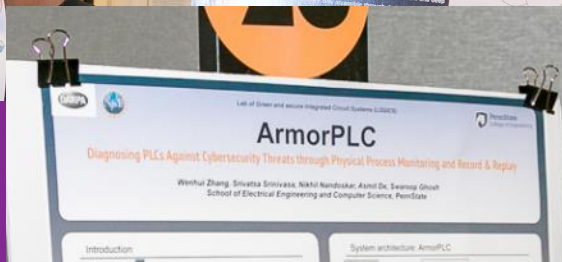
Katrina Herweg, *California State University, East Bay*

Rogue Device Threats and Response is a poster that describes our work for identifying rogue wireless devices in an enterprise network. We discuss the variety of threats posed and provide guidelines for necessary components for a team to locate and contain rogue devices based on our experiments. We'll show detection strategies through our Wireless Intrusion Detection System, appropriate tools for locating devices and mitigation techniques while still acknowledging the balance between security and usability. With our results, the Security Operation Center is now able to utilize the mapping tools for visual location as well as alerts for physical response. Continuous monitoring efforts allows greater visibility into the wireless network and is seen as a valuable tool to those responding to rogue devices. Automatically generated tickets with rogue device information for quicker response and less labor is our next obstacle since the effort to collect device data is tedious. By implementing these strategies, both technical and policy-based, a wireless team can protect a campus against wireless threats.

Student Poster Competition

- ✓ December submission date
- ✓ Two categories
 - Undergraduate and Graduate
- ✓ Prizes
 - Two Winners (1st authors) each receive a travel grant to future cybersecurity conference
 - Two Runner-Ups each receive prize

Some Past Poster Presenters



Tips for Poster Session

- ✓ 1st author and presenter must be a female student
- ✓ 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?

Selection Process

- ✓ Submission scored by at least two reviewers
- ✓ Reviewers selected from members who volunteered
- ✓ Reviewers submit reviews using EasyChair system
- ✓ Sub-committee on each of the categories meets to discuss submissions with co-chair and recommends top selections to PC leadership
- ✓ PC leadership meets to discuss all recommendations and finalize selections
- ✓ Authors are notified and asked to register

Selection Best Practices

- ✓ Relevant to the theme and/or tracks
- ✓ Try not to repeat content from recent conferences
- ✓ Try to provide opportunities to more authors from diverse organizations

Rubric

- ✓ **Fulfills general guidelines**
- ✓ **Content is**
 - ✓ **compelling/timely**
 - ✓ **technically sound**
 - ✓ **relevant to the theme and/or tracks**
- ✓ **Title**
 - ✓ **provides good indication of content of session**
- ✓ **Description**
 - ✓ **is well articulated and written**
 - ✓ **provides good view of session content, activities and outcomes**

Additional Notes

- ✓ **Submission through EasyChair system**
<https://easychair.org/cfp/WiCyS2022>
- ✓ **Anyone can submit**
- ✓ **Review feedback provided**
- ✓ **At least one author must fill out the confirmation form by the deadline to accept speaking invitation.**
- ✓ **All speakers must fill out the confirmation form and register for the conference by December 10th to be included in the conference program**

Perks

- **Workshop session**
 - Two complimentary registrations with one lodging
- **Presentation session Session**
 - One complimentary registration with one lodging
- **Panel**
 - Four complimentary registrations
- **Lightening session**
 - One complimentary registration
- **Birds of a Feather session**
 - One complimentary registration

Join Our Team TODAY!

- Please let us know if YOU want to join the WiCyS 2022 Program Committee
 - Must be WiCyS organization member
- Receive complimentary registration with lodging for your service



Get Heard in Cleveland in March!

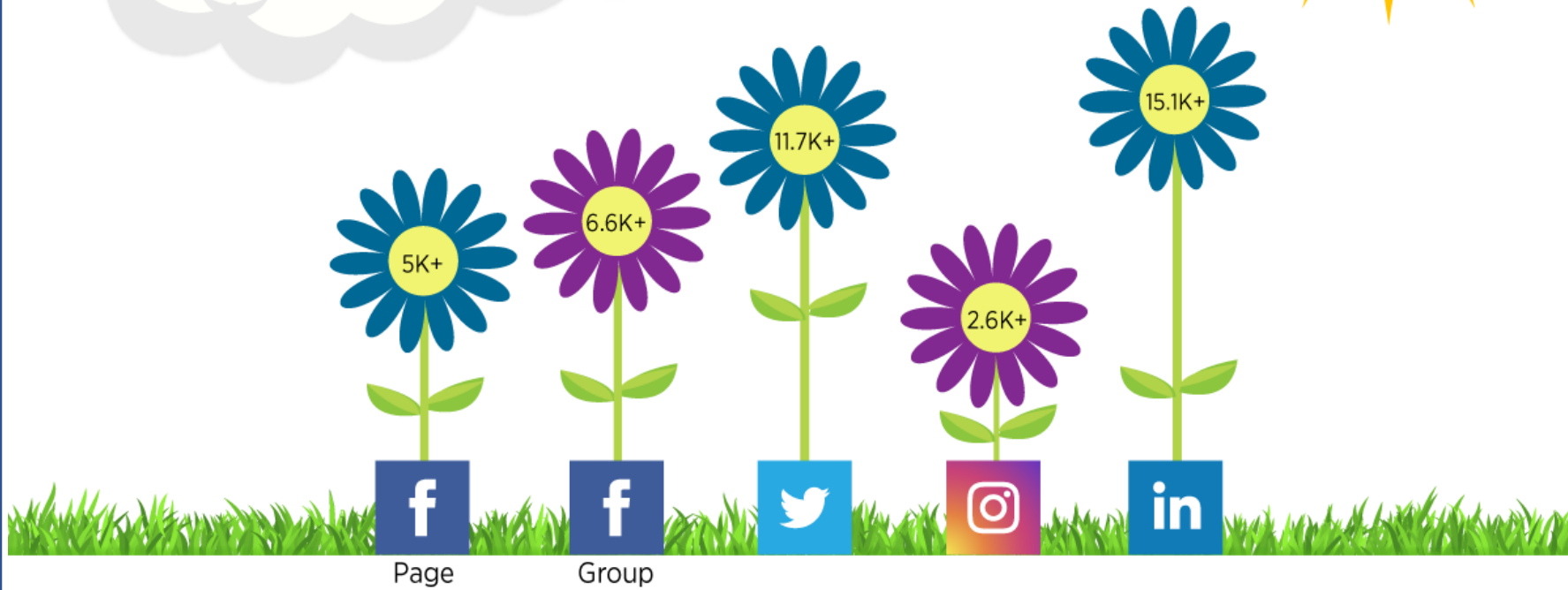
Take Action TODAY & Mark Your Calendar!

Open: September 15, 2021

Deadline: October 18, 2021

Notification: November 21, 2021

Together. We Grow.





Thank You!

For more information, contact:
conference@wicys.org