National Cyber Gauntlet Challenge

NCGC

Charlton Trezevant

Natalie Larkin

Leadership Experience

- Founder and President, NCGC
- Former President and Vice President, Hack@UCF
- Cybersecurity evangelist and guerilla lecturer
- Volunteer workshop lead and mentor, KnightHacks
- Tireless advocate for cybersecurity education

- Vice President and Project Lead, NCGC
- Security Staff at DEF CON
- Founder and Executive Director of the HackState Hackathon
- Competition Assistant and Award Presenter at CyberPatriot
- Captain of CyberPatriot teams

Competition Experience

- National Collegiate Penetration Testing Competition
- National Collegiate Cyber Defense Competition
- SE Regional CCDC, NE Regional CPTC
- Duel Factor CTF
- ISTS @ Rochester Institute of Technology
- Symantec Higher Ed Cyber Challenge CTF

- Collegiate Penetration Testing Competition
- Trace Labs Missing Persons Capture the Flag
- Palo Alto Networks Capture the Flag
- PayPal Capture the Flag
- Hack Education Capture the Flag
- Wicked6 Cyber Games

The Current Competition Landscape

(and why NCGC is better)


THANK YOU TO
OUR SPONSORS!
cyberwire
ITSP
OODA


GREEN
TEAM

NCGC

SPONSORS

Our competition would not be possible without the following ongoing corporate sponsors who provide financial, infrastructure, and volunteer support.

IBM

Premier Sponsor

Google Cloud

Gold Sponsor

EATON

Silver Sponsor

FireEye

Broze Sponsor

Bronze Sponsor

Crowe

IP Level Sponsor

UBER

Hurricane Labs

nccgroup

2019 NATIONAL COLLEGIATE CYBER DEFENSE COMPETITION

Presented By

Raytheon

PLATINUM

AIR FORCE RESERVE

Uber

InfoSec

CENTRAL INTELLIGENCE AGENCY

RELIAQUEST

PROGRAM

paloalto NETWORKS

NSA WHERE INTELLIGENCE ODES TO WORK IntelligenceCareers.gov/NSA

Naval Information Warfare Center ATLANTIC

780th MI BDG

FIREEYE

GOLD

Southwest

information security

BOEING

splunk>

SILVER

FORCEPOINT

SAIC

PROFITAP Become a 2020 Sponsor

THANK YOU TO OUR 2019 Sponsors & Partners

Microsoft

Uber

kaspersky

CYBERTECH global

dark3

IT ISAC

Jazz Networks

TREND MICRO

NormShield

SPECTEROPS

cyberguild

CODA

cyberwire

ITSP MAGAZINE

CRITERION

NOT SO SECURE

KATZCY

Special Thanks to our Sponsors

Raytheon

GOLD

KENNESAW STATE UNIVERSITY INSTITUTE FOR CYBERSECURITY WORKFORCE DEVELOPMENT

IBM

paloalto ACADEMY

Huntington Ingalls Industries

Diamond

facebook

paloalto CYBERSECURITY ACADEMY

Platinum

Carrier #BUILDING POSSIBLE

IOMAXIS INGRESSIVE

CRA Charles River Associates

Gold

datto

SRA

EATON Powering Business Worldwide

MITRE

expel

indeed

Educational

Red Bull

caetra.io Simplifying Compliance, Reducing Risk

Problems With Current Competitions

Inflexible Formats

Many of the **leading competitions** focus on a **specific, limited subset** of information security skills.

Competitors face **restrictive rules** that **limit their creativity** and distort the applicability of in-game experiences to real-world scenarios.

Low Research Engagement

Engagement with the research space generally occurs **after the fact**, rather than as a first-class consideration in the design phase.

Lost Educational Value

Existing formats encourage a **culture of secrecy**, where repeat winners achieve success by **gaming the system** and hoarding proprietary information.

After competitions, **few (if any) useful artefacts are publicly released** that would otherwise assist educators and prospective competitors.

There's a better way!

The NCGC Concept

NCGC is a **student-led collegiate cybersecurity competition** hosted in Orlando, whose vision is to bring together the **most elite and high-performing** collegiate cybersecurity talent from across the nation.

NCGC has a **novel design** that supports the **next generation of cybersecurity research** and accelerates the development of **new education and training initiatives.**

NCGC: Three Key Innovations

Flexibility

Competitors have **total creative freedom** to showcase their skills. **Realistic approaches** reflective of industry trends are both encouraged and rewarded.

Multi-domain architecture encompasses construction, attack, and defense of **modern computer networks**.

Greenfield Research Opportunities

Built from the ground up to serve specific research interests, NCGC provides analysts with **360-degree visibility** into the latest advancements in **defensive and offensive cyber operations** across **multiple domains**.

Researchers get **detailed data** about **team collaboration** and **modern cybersecurity practices**, tools, and techniques.

High Educational Impact

NCGC publications will **provide critical input** into necessary competencies to support the **training and education** of the 21st century cyber workforce.

Point incentives for **collaboration** and a **randomized chain of custody** ensure that **teams win through raw skill and adaptability**- not knowledge silos!

BUILD

Teams are scored on their ability to **construct a secure network environment** matching a general specification.

Teams submit their finished environments for scoring along with **detailed documentation** of their **unique design**.

ATTACK

Build stage environments are **randomly reassigned to another team.**

To succeed in this round, teams use **offensive security skills** to penetrate the environment, disable security protections, and establish a foothold.

Teams submit a write-up of their findings and offensive activities for scoring.

DEFEND

Once again, environments are **randomly reassigned** to another team.

Competitors race against the clock to **hunt for threats and other indicators of compromise** left from the attack stage.

BATTLE

In the battle stage, teams receive the network environment that they must maintain for the remainder of the competition.

After a phased deactivation of competition firewalls, the network transforms into a **free-for-all battle royale**.

In real time, teams must **defend** their systems, **exploit** those of other teams, and complete **special challenges**.

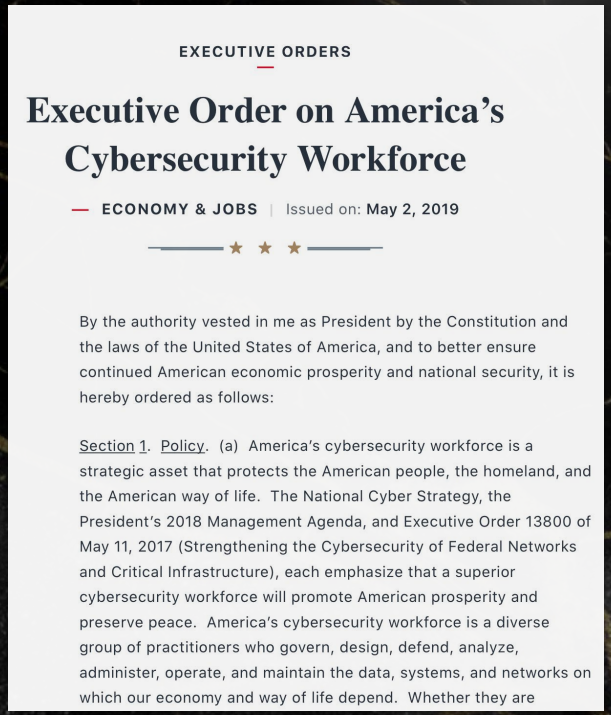
A Fundamental Shift in Cyber Research

NCGC **will be instrumental** in the continued development of next-generation cybersecurity training and simulation environments.

NCGC datasets will drive **new and innovative research programs** that will bring practical national needs to the forefront of this developing area.

NCGC provides **early visibility into industry trends** that can inform the rapid development of new business and research initiatives in Central Florida.

IST is already a leader in this field. Cutting edge cyber ranges and training environments are already being built here in Orlando.



EXECUTIVE ORDERS

Executive Order on America's Cybersecurity Workforce

— ECONOMY & JOBS | Issued on: May 2, 2019

★ ★ ★

By the authority vested in me as President by the Constitution and the laws of the United States of America, and to better ensure continued American economic prosperity and national security, it is hereby ordered as follows:

Section 1. Policy. (a) America's cybersecurity workforce is a strategic asset that protects the American people, the homeland, and the American way of life. The National Cyber Strategy, the President's 2018 Management Agenda, and Executive Order 13800 of May 11, 2017 (Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure), each emphasize that a superior cybersecurity workforce will promote American prosperity and preserve peace. America's cybersecurity workforce is a diverse group of practitioners who govern, design, defend, analyze, administer, operate, and maintain the data, systems, and networks on which our economy and way of life depend. Whether they are

*"**The Nation is experiencing a shortage of cybersecurity talent** and capability, and **innovative approaches are required to improve access to training** that maximizes individuals' cybersecurity knowledge, skills, and abilities. **Training opportunities**, such as **work-based learning, apprenticeships, and blended learning approaches, must be enhanced** for both new workforce entrants and those who are advanced in their careers."*

The White House
Executive Order on America's Cybersecurity Workforce
May 2, 2019

Get In Touch

hello@ncgc.io