THE CYBERSENTINEL

The official newsletter of CyberPatriot—AFA's National Youth Cyber Education Program

March 2023

CyberPatriot XV National Finals Competition

The CyberPatriot XV National Finals Competition is set for March 18-20, 2023. After three years of virtual or hybrid events, we are excited to have all 28 teams in-person at the Bethesda North Marriott in Rockville, MD. The event kicks off on March 18 with the Opening Ceremony (live-streamed at 10:00 AM ET on CyberPatriot's YouTube channel), followed by Competition Orientation and System Familiarization in the afternoon, and The Career Portal/Industry Perspectives (TCP/IP) event in the evening.

The main event - competition day – will go all day on Sunday, March 19, starting with the Network Security Master Challenge and wrapping with the Cisco NetAcad Challenge and Boeing Cyber-Physical System Challenge.

The National Finals Competition (and CyberPatriot XV season) culminates the evening of Monday, March 20, at the Awards Banquet. Here, the winning teams are announced and deemed National Champions. The Awards Ceremony will also be live-streamed on CyberPatriot's YouTube channel starting at 6:30 PM ET.

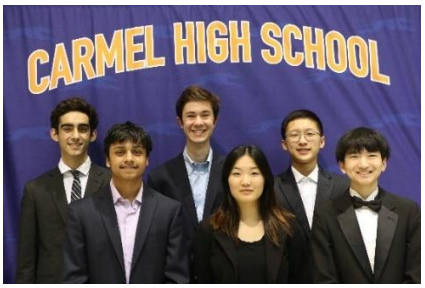
THE CHALLENGES

Network Security Master Challenge	During the Network Security Master Challenge, teams are provided with multiple virtual operating systems (also known as "images"). Each team serves as administrators for a small business, working to find and fix vulnerabilities, maintain critical services, resolve injects, and defend against hostile Red Team attackers.
Cisco NetAcad Challenge	During the Cisco NetAcad Challenge, teams are scored on their ability to demonstrate proficiency in network security administration. Cybersecurity knowledge and skills are tested with a networking quiz and a Packet Tracer network simulation exercise.
Boeing Cyber-Physical System Challenge	In the Boeing Cyber-Physical Systems Challenge, teams are presented an operational system that tracks and maintains flight information. Each team acts as a product security engineering team that has been tasked with securing the system from threats that could impact air safety.

Meet the National Finalist Teams

Congratulations to these 28 teams that qualified for the CP-XV National Finals Competition.

OPEN DIVISION



CARMEL HIGH SCHOOL
c¥b3rh0u#d5

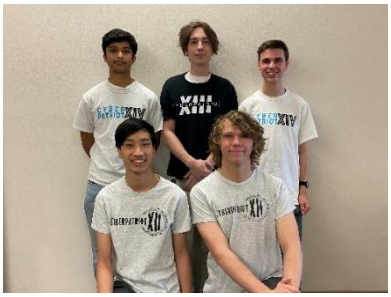
DEL NORTE HIGH SCHOOL
CyberAegis Drift

DEL NORTE HIGH SCHOOL
CyberAegis Tempest

ENOCHS HIGH SCHOOL
Pentabytes

FAITH LUTHERAN HIGH SCHOOL
Shields Up!

FRANKLIN HIGH SCHOOL
Half Dome



GRANDVIEW HIGH SCHOOL
GJD^3

HIGHLANDS RANCH HIGH SCHOOL
File Transfer Protocol

OLATHE NORTHWEST HIGH SCHOOL
ballen

SISLER HIGH SCHOOL
Syntax Error

TROY HIGH SCHOOL
Baboons Together Strong

VISTA RIDGE HIGH SCHOOL
Lone Star Company NJROTC + Moey

ALL SERVICE DIVISION

ARMY JROTC

THE KING'S ACADEMY
Team Alpha Knights

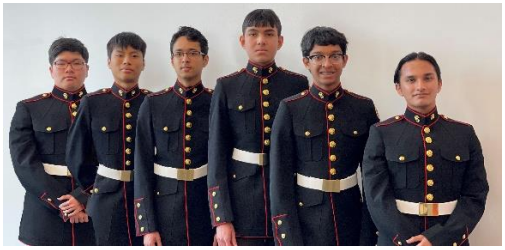
ROOSEVELT HIGH SCHOOL
TXPatriot | baits64==

NAVY JROTC

CHAPARRAL HIGH SCHOOL
Keyboard Kings

TROY HIGH SCHOOL
Runtime Terror

MARINE CORPS JROTC



ALLEN HIGH SCHOOL
C2

MARINE MILITARY ACADEMY
Devil Dogs

AIR FORCE JROTC

KNOB NOSTER HIGH SCHOOL
Komputer Kernels

SCRIPPS RANCH HIGH SCHOOL
Terabyte Falcons

CIVIL AIR PATROL

BOISE COMPOSITE SQUADRON
Boise Bees

FULLERTON COMPOSITE SQUADRON
Entropy

U.S. NAVAL SEA CADET CORP

BAND OF THE WEST DIVISION
Silicon Knights

SACRAMENTO DIVISION
Team Spartans

ALL SERVICE DIVISION WILD CARD

RARITAN VALLEY COMPOSITE SQUADRON
CyberEagles

MIDDLE SCHOOL DIVISION

DESIGN 39 CAMPUS
CyberAegis Vitalis

OAK VALLEY MIDDLE SCHOOL
CyberAegis Aeris

TOBY JOHNSON MIDDLE SCHOOL
The Other Half

CyberPatriot Cyber All-American

The Cyber All-American honor is given to those CyberPatriot competitors who have qualified for the National Finals Competition all four years of their high school careers. Past recipients include:

2015	Connor Quick	Montachusett Regional Vocational Technical School
2015	Joshua Klosterman	Big Sioux Composite Squadron
2015	Carlin Idle	Colorado Springs Cadet Squadron
2016	Victor Griswold	Colorado Springs Cadet Squadron
2017	Leon Gaulin	Montachusett Regional Vocational Technical School
2018	Noah Bowe	Colorado Springs Cadet Squadron
2018	Taylor Coffey	Colorado Springs Cadet Squadron
2020	Charissa Kim	Troy High School
2021	Evan Huang	US Naval Sea Cadet Corps Sacramento Division
2021	Justin Lin	Del Norte High School
2022	Emily Foreman	Sacramento Division
2022	Kevin Hu	Del Norte High School
2022	Emily Kelso	Sacramento Division
2022	Darius Kianersi	Thomas Jefferson High School for Science & Technology
2022	Tristan Lee	Theodore Roosevelt High School
2022	Darin Mao	Thomas Jefferson High School for Science & Technology
2022	Tanay Shah	Del Norte High School
2022	William Smith	Sacramento Division

This year, six new competitors have earned the Cyber All-American designation:

CHAN CHUNG
Troy High School

AKHIL GUNTUR
Del Norte High School

JONATHAN LIN
Del Norte High School

BRIAN NI
Troy High School

AKSHAY ROHATGI
Del Norte High School

ALVIN ZHENG
Del Norte High School

CyberPatriot Sponsor Highlight – Gannon University

BREAK INTO THE CYBER INDUSTRY

As CyberPatriot competitors, you are creating solutions for our future as you learn to prevent cybersecurity threats and defend digital footprints worldwide. Students at Gannon University in Pennsylvania are taking action just like you, designing secure systems and breaking into the cyber industry.

MIKAYLA DOCKWEILER | CYBER ENGINEERING GRADUATE
DATABASE ENGINEER ASSOCIATE, SAIC®

During her senior year in Gannon's Cyber Engineering program, Mikayla experienced a paid internship with top-secret security clearance in the artificial intelligence sector of the U.S. Government. She is now a Database Engineer Associate at Science Applications International Corporation, Inc.

"Cyber engineering professionals create new systems while securing data from its conception. When you're in the position of doing something like that... - securing data and making an idea a reality - you're never losing money or time... Companies are beginning to value this work more as technology expands and data needs protecting."

Read Mikayla's Story

CONNECT WITH STUDENTS LIKE MIKAYLA AT GANNON'S CYBER, ENGINEERING AND COMPUTING EVENTS

Join us at upcoming virtual events to gain real insight into your field of interest as you navigate the college application and decision process. Ask the questions you want to know and hear from our students sharing their classroom, research, internship and global experiences. Find out more about the current and future industry, career and salary outlooks, and more from our admissions team, professors and students in academic majors including:

- Biomedical Engineering
- Computer Science
- Cyber Engineering
- Cybersecurity
- Environmental Engineering
- Environmental Science
- Electrical Engineering
- Industrial & Robotics Engineering
- Mechanical Engineering
- Software Engineering

INSPIRING THE NEXT GENERATION:
A HIGH SCHOOL-COLLEGE STUDENT Q&A ON ENGINEERING AND COMPUTING

Wednesday, March 15 | 8 p.m. EST | Virtual

Connect with current students as they share their real experiences from applying to colleges, to selecting majors and courses, to engaging in research, projects, internships, and more.

POWERING OUR FUTURE: WOMEN IN CYBER, ENGINEERING AND COMPUTING

Thursday, April 20 | 8 p.m. EST | Virtual

Meet with women in cyber, engineering and computing at this networking and empowerment event to hear what it's like pursuing a career in these high-demand industries.

GANNON UNIVERSITY

REGISTER TODAY
GANNON.EDU/CYBER

CAMP GANNON CYBERPATRIOT
JULY 10-14

REGISTER TODAY
CYBERPATRIOT.TOTALCAMPS.COM

2023 CyberCamp Host Registration Open

Looking to keep students engaged in cybersecurity over summer break? Host Registration for 2023 CyberCamps is open until May 1!

CyberCamps emphasize fun, hands-on learning of cybersecurity principles that are relevant and applicable to everyday life. The Standard CyberCamp is designed for campers who are new to the world of cybersecurity. The goal at the end of the camp is to have students ready to compete in the CyberPatiot National Youth Cyber Competition. The Standard CyberCamp consists of an introduction to cybersecurity, cyber careers, the National Youth Cyber Defense Competition, Windows Security Policies, auditing, Linux basics, intro to CLI, and command line security.

The Advanced CyberCamp takes campers to the next level and is designed for students who have either competed in the National Youth Cyber Defense Competition or attended an AFA Standard CyberCamp. The Advanced CyberCamp curriculum consists of (1) Windows graphical utilities, command line, Sysinternals Suite, (2) Linux Init Systems, advanced command line, processes and scheduled tasks, security policies, PAM and (3) Cisco NetAcad.

On the last day of the AFA CyberCamps, campers are immersed in a mock competition where they work on securing virtual images by finding and fixing vulnerabilities.

Find out more about CyberCamps at: https://www.uscyberpatriot.org/afa-cybercamps/overview

Host organizations can choose to host a camp during any of the available weeks. Both Standard AND Advanced camps are offered each week.

WEEK	DATE
WEEK 1	June 5-9
WEEK 2	June 12-16
WEEK 3*	June 19-23
WEEK 4	June 26-30
WEEK 5	July 10-14
WEEK 6	July 17-21
WEEK 7	July 24-28
WEEK 8	July 31-Aug 4

**Juneteenth will be observed on June 19, 2023. Camps can be held this week if the host organization would like, but limited tech support will be available on that Monday, June 19th.*

CyberTitan – Canada's National Youth Cyber Education Program

All My Digital Relations: Engaging Indigenous Students in Cyber Possibilities

In this era of Truth and Reconciliation in Canada, many organizations are creating targeted approaches for the recruitment of Indigenous employees. Where are these connections in the technology industry? Over 75% of indigenous people in Canada are moving away from their home communities and living in urban centers with easier access to technology. This urbanization provides a new opportunity for Indigenous people in technology; a new generation perfecting their digital skills and either choosing to continue a career path in a new environment or return to their home communities to become subject matter experts there.

It is important to protect indigenous culture as we digitize traditions and language. These digitized cultural resources can be hacked and the results may cause irreparable damage! Technology is the door, but cybersecurity is the key that can protect both personal and cultural information, ensuring the continuance of community knowledge passed down by elders generations ago.

Seize this opportunity to make a difference in your community by enrolling in cybersecurity learning opportunities like CyberTitan. Encourage teachers in indigenous communities to become a CyberPatriot coaches so that they may work

with students to enhance their opportunities in this economic sector while also playing a part in protecting future cultural knowledge. It is the right time to educate yourself with the cyber-skills that will protect all your digital relations.

Matthew Gallina is the Education Coordinator for Indigenous Outreach on the Jumpstart Digital Careers (JDC) team at the Information and Communications Technology Council (ICTC). He is a practicing Indigenous Ally with 12 years experience in connecting with Indigenous communities across Canada.

He can be contacted by email at m.gallina@ictc-ctic.ca

Follow him on LinkedIn at https://www.linkedin.com/in/matthew-gallina-3293a1168/

CyberPatriot Shoutout

CyberPatriot Competitors Lead Cybersecurity Workshop for Underrepresented Students in San Diego

A group of students from Del Norte High School are using their cybersecurity expertise to help the community beyond the CyberPatriot competition. Two 11th graders, Aarav Arora and Vardaan Sinha, recently led a cybersecurity workshop for high-achieving African American high school students to develop cyber literacy skills and introduce Windows/Linux basics to those interested in pursuing a career in STEM. Students were taught cyber ethics knowledge, learned basic operating system security practices, and engaged in a hands-on security environment where they practiced securing vulnerable systems.

Aarav and Vardaan have been competing in CyberPatriot for the past six years and train students entering the competition. However, this experience was especially significant since they worked with a group of students who had minimal experience with online safety practices.

The students worked with a group known as Links Achiever San Diego, which recognizes bright African American high schoolers and exposes them to a program of leadership training, community responsibility, and camaraderie to prepare them for their future career paths. To date, over 850 young men have completed the program and over $1,000,000 has been awarded in scholarships. More details about the program can be found here: https://sdlinksachievers.org/

New Book on how to Teach Cybersecurity

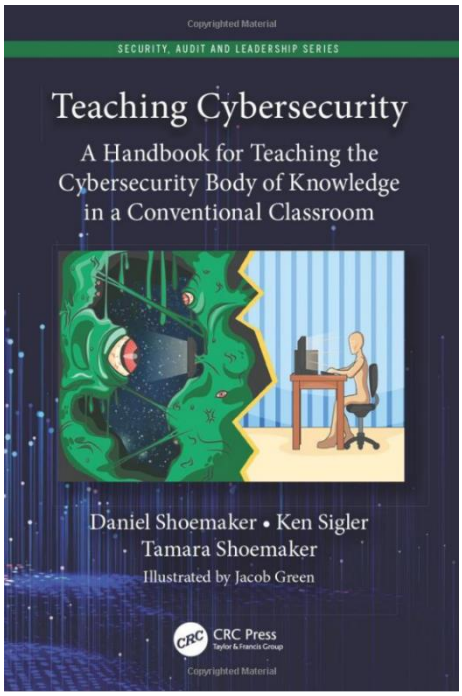
Tamara Shoemaker, the lead for Midwest CISSE Chapter CyberPatriot Center of Excellence has published a new book on teaching cybersecurity. In her work over the last 8 years working with the State of Michigan to increase cybersecurity education, she consistently ran into the same problem - teachers do not have enough resources and knowledge to teach

cybersecurity in the traditional classroom. So, she partnered with her husband Daniel Shoemaker and his writing partner Ken Sigler to help her write a commonsense book for teachers.

Here's a look at the forward of the book:

Let's be realistic here. Ordinary K-12 educators don't know what "cybersecurity" is and could probably care less about incorporating it into their lesson plans. Yet, teaching cybersecurity is a critical national priority. So, this book aims to cut through the usual roadblocks of confusing technical jargon and industry stovepipes and give you, the classroom teacher, a unified understanding of what must be taught. That advice is based on a single authoritative definition of the field. In 2017, the three societies that write the standards for computing, software engineering, and information systems came together to define a single model of the field of cybersecurity. It is based on eight building blocks.

That definition is presented here. However, we also understand that secondary school teachers are not experts in arcane subjects like software, component, human, or societal security. Therefore, this book explains cybersecurity through a simple story rather than diving into execution details. Tom, a high school teacher, and Lucy, a middle school teacher, are tasked by their district to develop a cybersecurity course for students in their respective schools. They are aided in this by "the Doc," an odd fellow but an expert in the field. Together they work their way through the content of each topic area, helping each other to understand what the student at each level in the educational process has to learn. The explanations are simple, easy to understand, and geared toward the teaching aspect rather than the actual performance of cybersecurity work. Each chapter is a self-contained explanation of the cybersecurity content in that area geared to teaching both middle and high school audiences. The eight component areas are standalone in that they can be taught separately. But the real value lies in the comprehensive but easy-to-understand picture that the reader will get of a complicated field.



The book is available for purchase on Amazon.

CyberPatriot in The News

Elk Grove students head to national cybersecurity competition | CBS Sacramento

Armed with a keyboard and mouse, some students in Elk Grove are ready to go head-to-head with professional hackers.

"We find vulnerabilities in the computer's systems to try to make them harder to hack," said Franklin High School junior Ethan Ho.

Ethan is among dozens of local students headed to the CyberPatriot National Championships, the Air Force Association's youth cybersecurity competition. Middle and high school students will face live virtual attacks from a team of cybersecurity professionals.

Ellensburg High's CyberPatriots the top team in the State | Daily Record

Members of the Ellensburg High School CyberPatriots team are celebrating a victory after being the top team in the state in the National Youth Cyber Defense Competition.

"I'm sure I yelled out loud and said 'My kids made it to state!'" said Ellensburg School District computer science teacher and CyberPatriots coach Tiffany Price.

CyberPatriots is a National Cyber Education Program created by the Air Force and Space Force. The aim of the program is to help students develop skills for STEM careers such as cybersecurity, engineering and mathematics.

Round Rock HS MCJROTC and Westwood HS AFJROTC earn top placements at CyberPatriot competition | Round Rock ISD News

The MCJROTC from Round Rock High School and the AFJROTC from Westwood High School blew away the competition at the state and national level during the CyberPatriot competition this year.

The CyberPatriot competition brought together 5,000 teams from across the nation to compete against one another. During the competition, teams performed hands-on simulations to try to identify and fix cybersecurity vulnerabilities and promote cyber education. The exercises utilize real world scenarios. After competing in a qualifying round earlier this year, the teams moved on to the state and national rounds and were placed in competition tiers. Round Rock High School was placed in the gold tier for the MCJROTC category, Westwood was placed in the gold tier for the AFJROTC category.

Want to be featured in the next edition of the CyberSentinel? Please send email highlights or accolades to info@uscyberpatriot.org.