

CyberWatch K-12 Division



Davina Pruitt-Mentle, PhD



Sponsored by the National
Science Foundation





Expanding Knowledge in Cyberawareness and Careers in Cybersecurity

10th Annual C3 Conference

Cyberethics, Cybersafety, and Cybersecurity

October 6-7, 2011
University of Maryland

[Learn More](#)



SAVE THE DATE

WHAT'S NEW

- SECURE IT 2011 Spring Programs
- MD High School Network Security Competition
- Mid-Atlantic CCDC High School Activities: March 10-12, 2011
- MD US Cyber Camps: July 11-14/July 18-22
- 2011 Summer CyberSecurity Pathways PD
- 2011 Summer Cyber Warrior Camps



PROGRAMS

We have a wide range of programs, content and activities for formal and informal settings. The central focus is Cybersecurity content, but it is supported by the too often neglected topics of citizen awareness of ethics, safety and security. [More](#)



WORKFORCE AWARENESS

What is CyberSecurity? What is Information Assurance? What career options are there in CyberSecurity and what pathways are there? [More](#)



C3 AWARENESS

We inform the educational community about Cyberethical, Cybersafety and CyberSecurity (C3) implications of technology use and illustrate how students, educators and parents can apply these concepts to their own setting. [More](#)



K12 IT SYSTEMS

Workshops are conducted at partner institutions on a variety of topics determined by our annual needs assessment survey. [More](#)



K-12 Programs

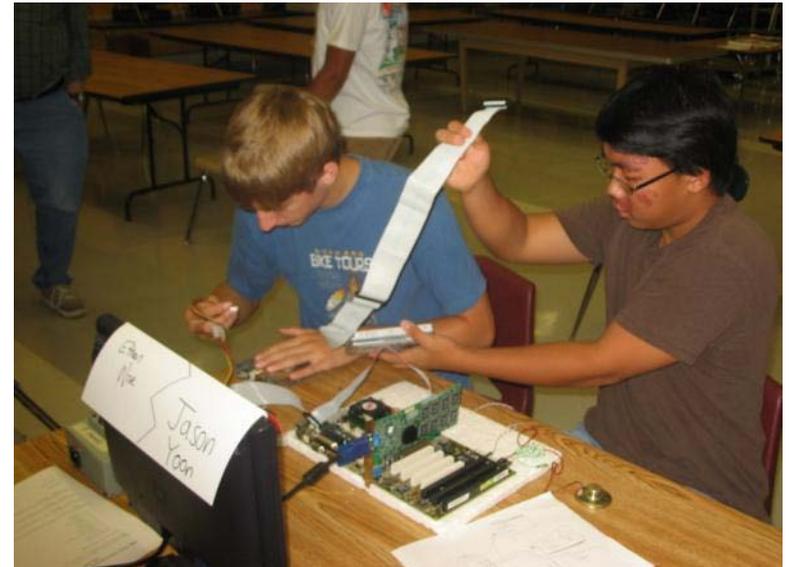


- ▶ **K-12 Division Goals include increasing:**
 - The IA workforce pipeline
 - Community awareness of IA workforce
 - Community awareness of C3-Cyberethics, Safety and Security, and
 - Security of K-12 IT systems



K-12 Pipeline

- ▶ Annual Cyberethics, Cybersafety and Cybersecurity (C3) Conference
- ▶ Cool Careers in Cybersecurity for Girls Summit
- ▶ Careers in Cybersecurity for Guidance Counselors Workshop
- ▶ After School/Enrichment Cyber Clubs
- ▶ Summer Cyber Academies
- ▶ CW K12 Content
- ▶ Competitions
- ▶ SECURE IT: *Strategies to Encourage Careers in Cybersecurity and IT*
- ▶ CTE Cybersecurity Track





New Efforts in 2011

- ▶ **HS Networking Security Competition**
- ▶ **Mid-Atlantic CCDC High School Activities: March 10-12, 2011**
 - High school shadowing and activities for HS students
- ▶ **MD US Cyber Challenge:**
MD July 11-15 and July 18-22
 - ▶ MD HS students AND teachers
 - ▶ 4 full days of instruction followed by capture the flag exercise
- ▶ **2011 Summer Cybersecurity Pathways PD**
 - For teachers teaching CTE track
 - VMware & CCNA
- ▶ **C3 Schools Initiative (Cyber Schools)**
- ▶ **CyberMaryland**
- ▶ **C3 Student/Educator Newsletter**
- ▶ **Journal of Cyberethics, Safety and Security Education**



Thank You
Davina Pruitt–Mentle
dpruitt@umd.edu
410 531 3910
cyberwatchcenter.org



K-12 Program

Annual Careers in IA/IS Guidance Counselors Workshop



Cool Careers in Cybersecurity for Girls

Educational Technology Policy, Research, and Outreach
8th Annual Cyberethics, Cybersecurity, and Cybersecurity Conference
 October 1-2, 2009
 UMD Campus Directions and Parking

Home Agendas Workshop Sponsors Hotel & Travel FAO's Press Awards Register

Sponsorship and Exhibitor Opportunities

- Connect with state and local school system decision makers
- Be recognized in the online and print conference program
- Share your organization's unique C3[®] initiatives

2009 C3[®] Conference a Success. Thanks for Attending.

Certificate of Participation
 Online Conference Evaluation
 Due Dec 7, 2009
 Content Evaluation
 Due Dec 7, 2009

2010 C3[®] Conference Information

Call for 2010 Presenters - Due May 10, 2010
 Call for Nominations: C3 Award of Excellence (Public) - Due June 4, 2010
 2010 Grant Applications (Public) - Due December 7, 2009

- C3[®] Framework
- C3[®] Matrix

2009 Speakers

- Lyn Allen
Web Wise Kids
- Jay Baresbach
Maryland State Department of Education
- Mala Bauer
CyberSmart! Education
- Frank Gallagher
Cable in the Classroom
- Ronnie S. Greenberg
Project Safe Childhood Coordinator
- Tochi Hallers
Common Sense Media

October 1-2, 2009 • University of Maryland Campus

The core mission of the C3[®] Conference is to inform the educational community about the ethical, legal, safety, and security implications of technology use and illustrate how educators and parents can apply these concepts to their own setting. Tutorial sessions include practical applications that can be immediately applied to your home or classroom setting.

Participants will hear from state and local educators, law enforcement, internet safety/security curriculum providers and researchers, and policy makers on a broad range of topics to include: current and pending legislation, educational initiatives available, the latest "hot topics" to include cyberbullying, identity theft and spoofing, internet safety provider updates, online reputation management, newly released online interactive simulations and games that promote responsible online behavior.

Cybersecurity
The Forgotten Element



Digital Footprints:
Online Identity Management
 2009 Fall STEM Coordinators Meeting

Davina Pruitt-Mentle, Ph.D.
 Director
 Ed Tech Policy, Research and Outreach

Annual C3 Conference

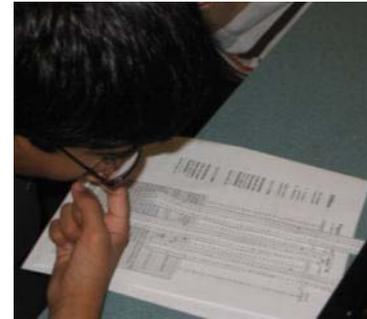
PD Opportunities and Speaking Topics



CW K12 Modules

5 Content Modules

- *Computational Logic/Programming—Scripting*
 - *Cryptography*
 - *Digital Ethics, Safety and Security*
 - *System Vulnerabilities*
 - *Digital Forensics*
- Grade bands 4–5, 6–8 and 9–12
 - Tied to national and state standards and partnering school system math, science & technology curriculum, students engage in hands-on STEM activities and improve digital literacy skills while learning and applying concepts through gaming, modeling and simulation development.
 - Speakers and field trips
 - The central focus is the field of IA, but supported by the too often neglected topics of citizen awareness of Cyberethics, safety and security.





What's Missing

High School → 2 Year → 4 Year



High School Information Assurance Track

- ▶ CW 110 Computer Ethics (can also make use of Simulation Case studies via NSF grant)
- ▶ CW 130 Understanding Operating Systems
- ▶ **CW 160 Computer Security, Security+**
- ▶ CW 150/151 Networking—w/ some existing track course (Cisco 1 & 2)

- ▶ Other ideas
- ▶ CW 230 Windows 2003 Server
- ▶ **CW 235 Network Defense and Countermeasures**

Foundation needed for:

CompTIA's Security +

Cisco CCNA Preparation certificate

Apply credits IA A.A.S. degree

CISSP Prep Exam

WIRESHARK Certified network Analyst

CCENT Cert



SECURE IT:

Strategies to Encourage Careers in Cybersecurity and IT

Elementary MINDTOOLS	Formal: Individual Classroom Activities	JR. FIRST Lego League FIRST Lego League (FLL) <u>eCYBERMISSION</u>
	Formal: Extension Units	
	Informal: After School Program	
Middle JR CYBERWARRIORS	Formal: Individual Classroom Activities	FIRST Lego League (FLL) <u>eCYBERMISSION</u> Am Comp Sc League
	Formal: Extension Units	
	Informal: After School Program	
High CYBERWARRIOR	Informal: After School Cyber Clubs & Summer Program	FIRST Tech Challenge FIRST Robotics Am Comp Sc League Image Cup High School CCC Patriots US CyberChallenge Forensics Cup DHS PSA NACLO ILO STS ISEF
	CTE : IA Track	
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;">2 Year Program</div> <div style="font-size: 2em;">➔</div> <div style="border: 1px solid black; padding: 5px;">4 Year Program +</div> </div>		
Other Activities Cool Careers in CyberSecurity for Girls Event <u>C3: CyberEthics, Safety & Security Conference</u> Careers in IS/IA and Digital Forensics for Guidance Counselors Workshop		Parent Awareness Community Awareness Teacher Training K12 C3 Awareness Contest Cybersecurity Olympiad C3 Awareness grants

6TH CYBERWATCH MID-ATLANTIC COLLEGIATE CYBER DEFENSE COMPETITION

COLLEGIATE CYBER DEFENSE COMPETITION

CYBERWATCH MID-ATLANTIC REGIONAL **CCDC**

March 10 - 12 - 2011
Smart Grid Technologies



Recent News

Sep.7 Cyber Competition Pits Hackers Against Computer Networks at Hopkins APL/CyberWatch Competition

Jun.23 Wanted: Young Cyberexperts to Defend Internet

Jun.3 CCDC and the Tale of the Insider Threat

TEAM REGISTRATION



The CyberWatch Mid-Atlantic CCDC is open to all two- and four-year undergraduate and graduate students in Delaware, Maryland, North Carolina, Pennsylvania, Virginia, and Washington, D.C. Team registrations start October 10, 2010 and are due by December 10, 2010 (by 5 PM EST).

AGENDA

The Mid-Atlantic CCDC runs for three full days. Check out the activities here.

Past Organizers, Sponsors and Contributors





Security Awareness Contest



WHAT'S IT ALL ABOUT?

The EDUCAUSE and Internet2 Higher Education Information Security Council, with sponsorship by the National Cyber Security Alliance (NCSA) and CyberWatch, is seeking creative and educational videos and posters on information security to be part of a national campaign to increase information security awareness at colleges and universities.

WHAT'S IT ALL ABOUT?

If your video or poster is selected you'll get exposure for your work on the EDUCAUSE security web site (educause.edu/security), from media announcements, and as part of campus security awareness campaigns across the country. And that's not all — winners receive cash prizes:

Gold:	Silver	Bronze:
\$1,500	\$1,000	\$500

WAYS YOU CAN PARTICIPATE:

- Training or instructional video (2 minutes or less)
- Public service announcement (PSA) (30 seconds or less)
- Poster

Submissions should address information security problems and/or suggest effective ways of handling them.

Deadline to enter: March 31, 2011

WANT MORE INFORMATION?

For topic suggestions or help, contact us.

Email: security-video@educause.edu

Web: educause.edu/securityvideocontest2011

Presented by:



Sponsored by:

