

Save the Date!

June 28-30 (Wed-Thurs-Fri), 2017



Community
College
Cyber
Summit

Hosted by Prince George's Community College (PGCC)



PRINCE GEORGE'S
COMMUNITY COLLEGE



NATIONAL
CYBERWATCH
CENTER

Washington, DC

Third Annual



Community
College
Cyber
Summit

2016

Community College of Allegheny County and
Wyndham Grand Pittsburgh Downtown Hotel

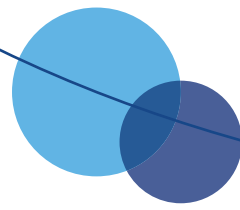
Pittsburgh, Pennsylvania • July 22-24, 2016



NATIONAL
CYBERWATCH
CENTER

CCAC®





Summit at a Glance

FRIDAY • JULY 22	
Community College of Allegheny County (CCAC)	
Noon	Buses from Wyndham Grand Pittsburgh Downtown Hotel to CCAC
11:00 a.m. – 5:30 p.m.	Registration/Check-In at CCAC
1:00 – 2:45 p.m.	Opening Plenary <ul style="list-style-type: none"> • Welcomes • 1st Keynote: Peter Romness
3:00 – 6:00 p.m.	Friday Afternoon Concurrent Sessions 3:00 – 6:00 p.m. Workshops I
3:00 – 4:00 p.m.	Presentations IA
4:05 – 4:50 p.m.	Networking opportunity
5:00 – 6:00 p.m.	Presentations IB
6:00 – 6:15 p.m.	Buses from CCAC to Wyndham Hotel
7:00 p.m.	Sponsor reception at hotel (heavy hors d'oeuvres)
SATURDAY • JULY 23	
Community College of Allegheny County	
7:00 – 8:00 a.m.	Breakfast at the Wyndham Grand Hotel
8:00 – 8:15 a.m.	Buses from hotel to CCAC
8:00 a.m. – 5:00 p.m.	Registration/Check-In at CCAC
10:00 a.m. – 5:00 p.m.	Sponsor/producer exhibits at CCAC
9:00 a.m. – noon	Concurrent Sessions II Workshops II
9:00 – 10:00 a.m.	Presentations IIA
10:05 – 10:50 a.m.	Birds of a Feather Roundtables
11:00 a.m. – noon	Presentations IIB
Noon – 1:50 p.m.	Lunch Plenary Lunch and 2nd Keynote: Dr. Nancy Mead and Girish Seshagiri
2:00 – 2:50 p.m.	After Lunch Presentation CyberCorps SFS Expansion: Dr. Victor Piotrowski and Dr. Corby Hovis
3:00 – 6:00 p.m.	Concurrent Sessions III Workshops III
3:00 – 4:00 p.m.	Presentations IIIA
4:05 – 4:50 p.m.	Student Poster Session
5:00 – 6:00 p.m.	Presentations IIIB
6:15 p.m.	Buses from CCAC to hotel Dinner on your own; Pittsburgh Nite on the Town

SUNDAY • JULY 24	
Wyndham Grand Downtown Pittsburgh	
7:00 – 8:45 a.m.	Morning Plenary Breakfast and 3rd Keynote: Ashley Tolbert
9:00 a.m. – noon	Concurrent Sessions IV Workshops IV
9:00 – 10 a.m.	Presentations IVA
10:10 – 10:50 a.m.	Student Panel's Perceptions of 3CS
11:00 a.m. – noon	Presentations IVB
	Closing of Summit – Noon
	Afternoon Activities (optional add-ons) Software Engineering Institute at Carnegie Mellon University Carnegie Science Center Museum Pittsburgh Pirates vs. Philadelphia Phillies



TIME SLOT	LEAD PRESENTER	LOCATION	SHORT TITLE
SATURDAY AFTERNOON WORKSHOPS 3 • 3:00 – 6:00 P.M.			
W3-1	Vargas	M-219	Cybercrime 101
W3-2	Wolfe	M-435	Cloud-Based Wireless Security Infrastructure
W3-3	Sande	M-511	CAE2Y Principals Meeting
W3-4	Hawthorne	M-527	Infusing Cybersecurity Content into CS (Part 3)
W3-5	Nestler	M-710B	NICE-Challenge Project
SATURDAY AFTERNOON PRESENTATIONS 3A • 3:00 – 4:00 P.M.			
P3A-1	Hurd	K-103	New Cybersecurity Educational Model
P3A-2	Sands	M-436	Role of NSF ATE Cybersecurity Centers
P3A-3	Petersen	K-104	NICE Opportunities for CCs to Participate
P3A-4	Nielsen	K-106	Open Education Resources
P3A-5	Archer	K-203	Technical Customer Service - Soft Skills
SATURDAY AFTERNOON PRESENTATIONS 3B • 5:00 – 6:00 P.M.			
P3B-1	Jones	K-103	Teaching Cybersecurity in Critical Infrastructure
P3B-2	Kazanjan	K-104	Cyber Sec Capstone in Netlab
P3B-3	O'Brien	M-436	NCC Complete Cloud-Based Lab Solution
P3B-4	Nielsen	K-106	Bachelor's of Applied Science in Cybersecurity at a CC
P3B-5	Piazza	K-203	Cybersecurity Workforce Analysis
P3B-6	Sands	K-206	Internet of Everything: Security Is Everthing
SUNDAY MORNING WORKSHOPS 4 • 9:00.– NOON			
W4-1	Nabozny	Duquesne	Network Security Analysis
W4-2	Leary	Stanwix	Curriculum Task Force Committee
SUNDAY MORNING PRESENTATIONS 4A • 9:00.– 10:00 A.M.			
P4A-1	Vargas	Benedum	Yes, Cryptography Can Be Interesting
P4A-2	Bhattacharya	Forbes	Teaching Cybersecurity Across the Disciplines
P4A-3	Servin	Commonwealth I	Computer Security Labs in CS II
P4A-4	Portillo	Board Room	NCSA Advisory Board Meeting
P4A-5(1)	Winski	Commonwealth 2	Assessment in a Virtualized Lab Environment
P4A-5(2)	Rich-Wittrig	Commonwealth 2	Gamifying Learning Material
SUNDAY MORNING PRESENTATIONS 4B • 11:00. A.M. – NOON			
P4B-1	O'Brien	Benedum	NCC Information Security Degrees/Certificates
P4B-2	West	Board Room	How to Host Cyber Patriot Competitions
P4B-3	Wang	Forbes	Project-Based Curricular Service Learning
P4B-4	Zdravkovich	Commonwealth I	Transfer Models and Issues
P4B-5	LeClair	Commonwealth 2	Maximizing a MOOC

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Welcome to the third annual Community College Cyber Summit (3CS), the conference devoted to expanding the role of community colleges in cybersecurity education.

National CyberWatch Center (CyberWatch), headquartered at Prince George's Community College since its inception in 2005, is the organizing force behind the creation of 3CS. We have partnered with multiple NSF ATE centers, federal agencies, private businesses, and the Community College of Allegheny County to bring about this event.

The Community College Cyber Summit is emblematic of the growing number of community colleges and students who are engaging in cybersecurity. More faculty and more colleges are attending, and more of our cybersecurity-aware students enter the workforce better prepared to secure this nation's computer networks, write secure computer software, conduct computer forensics investigations, and respond to computer security incidents. To meet the growing demand for a cybersecurity-conscious and trained workforce, community colleges are stepping up to the challenge.

The Community College Cyber Summit provides an opportunity for community colleges to share what we have learned, to advance our own knowledge in this field, to build relationships within the academic community and beyond, and to expand the playing field to additional colleges.

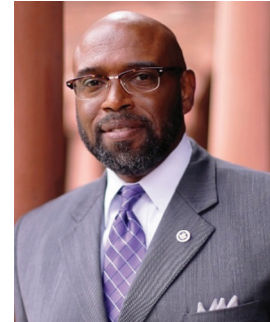
I wish you a most successful Summit!

Dr. Charlene M. Dukes
President
Prince George's Community College



Welcome to the third annual Community College Cyber Summit and to the Allegheny Campus of the Community College of Allegheny County. We are honored to serve as the host for this timely conference focusing on issues impacting cybersecurity education.

As one of the largest community colleges in the Commonwealth of Pennsylvania, CCAC annually educates nearly 30,000 credit students through more than 150 degree, certificate, diploma and transfer programs and offers thousands of students access to noncredit and workforce development courses. Currently celebrating our 50th anniversary, we are proud that we have served as the college of choice for one in every three adult residents in the county—and that we are responsible for educating more than one million individuals since the college’s founding in 1966.



Certainly, CCAC has undergone considerable change in the decades since. Who would have ever imagined then the type of program offerings we routinely offer today—programs like information technology, mechatronics, robotics, nanotechnology and the reason we all have gathered together—cybersecurity?

It would not be a stretch to suggest that perhaps no other program area of interest has the potential for such a broad-reaching impact on the college, the community and the city than cybersecurity. Located as we are in one of the most highly educated and technologically advanced cities in the country, CCAC, like the rest of Pittsburgh, would be hard-pressed to meet the challenges of a highly targeted and sustained cyberattack. Just the mention of a potentially serious cyber threat is enough to keep most company CEOs, not to mention quite a few college presidents, up at night. And of course, as college presidents, we bear the responsibility of ensuring that we are providing future generations with the knowledge and skills they will need to combat cyber challenges as yet unimagined.

For this reason, the 3CS Planning Committee has developed more than 60 cybersecurity-related workshops and presentations for you during this three-day summit. In addition, the summit will include a series of roundtables and a number of interesting vendor exhibits.

We have also arranged several unique Pittsburgh tours for you, including visits to Carnegie Mellon University’s Software Institute and the Carnegie Science Center as well as a trip to award-winning PNC Park to watch the Pittsburgh Pirates take on the Philadelphia Phillies—even if you aren’t a baseball fan, the views of the city from the stands are something to behold.

We hope you enjoy your time at CCAC and in the “Silicon Valley of the East”, but more importantly, we hope you take away vital information on the growing field of cybersecurity and the all-encompassing role it plays in our increasingly complex and challenging world.

Sincerely,

A handwritten signature in black ink, appearing to read "Quintin Bullock", with a horizontal line extending to the right.

Dr. Quintin B. Bullock
President
Community College of Allegheny County



Welcome and Thank You



Thanks to all of you who have made this third Community College Cyber Summit a reality.

We thank the Community College of Allegheny County, host for this year's summit at their Downtown Campus and at the Wyndham Grand Pittsburgh Downtown Hotel. We thank the NSF ATE centers, the summit producers:

- National CyberWatch Center at Prince George's Community College, Maryland
- National Resource Center for Systems Security and Information Assurance (CSSIA) at Moraine Valley Community College, Illinois
- CyberWatch West (CWW) at Whatcom Community College, Washington
- Cyber Security Education Consortium (CSEC) at University of Tulsa, Oklahoma
- Advanced Cyberforensics Education Consortium (ACE) at Daytona State College, Florida
- Broadening Advanced Technological Education Connections (BATEC) at University of Massachusetts Boston

We thank our federal agency partners: National Science Foundation (NSF), National Security Agency (NSA), Department of Homeland Security (DHS), and National Initiative for Cybersecurity Education (NICE) at the National Institute of Standards and Technology. And we thank our industry sponsors, including Jones and Bartlett Learning; Palo Alto Networks Academy; Tennessee Tech Cybersecurity Education, Research & Outreach; EC-Council; and No Starch Press.

We are delighted to have outstanding keynote speakers, including Peter Romness, Dr. Nancy Mead and Girish Seshagiri, and Ashley Tolbert. Your colleagues are offering about fifty concurrent sessions during the three-day summit, including three-hour workshops and one-hour presentations, demos, and participatory exercises, all with specific takeaways designed to update your cybersecurity knowledge and better prepare your colleges in the cybersecurity arena.

A special thanks goes to the 3CS Executive Steering Committee and the 3CS Program Committee.

And most of all, thanks and welcome to all of you who are attending. You are the leaders, the pathfinders, the movers and shakers whose dedication, knowledge, and perseverance will help community colleges forge a new path in cybersecurity education, expanding it to the entire National Critical Infrastructure and thereby helping to keep our country safe.

Dr. Bob

Dr. Bob Spear, 3CS Chair



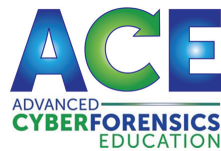
Thanks to the organizations that make 3CS possible!

Third Annual



Community
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Summit
2016

Producers



Federal Partners



Sponsors



EC-Council
Hackers are here. Where are you?

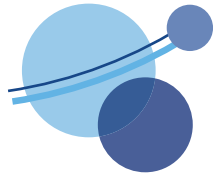
Special thanks to our host college



Thanks also to the 3CS committees and staff!

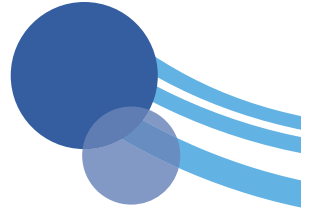
3CS Steering Committee

Dr. Bob Spear, Chair
Dr. John Sands
Dr. Philip Craiger
Casey O'Brien
Corrinne Sande
Dr. Vera Zdravkovich
Dr. Sheryl Hale
Bonita Richardson
Michael O'Brien
Deborah Boisvert
Lynn Dohm
Fran Melvin



3CS Program Committee

Corrinne Sande, Chair
Dr. John Sands, Chair
Dr. Philip Craiger
Deborah Boisvert
Casey O'Brien
Dr. Bob Spear



3CS Tactical Committee

Lynn Dohm, Chair
Fran Melvin
Zach Lawrence
Michael Burt
Teri Kepner
Anita Shelton
Dr. Jo Portillo
Ginny Swyndroski



About the Community College Cyber Summit (3CS)

The third annual Community College Cyber Summit (3CS) is organized and produced by six Advanced Technological Education (ATE) centers funded by the National Science Foundation (NSF) and involved in cybersecurity. 3CS meets the perceived need for a national academic conference that focuses exclusively on cybersecurity education at the community college level. Faculty, administrators, and other stakeholders in community college cybersecurity education are invited and encouraged to attend.

Theme

EXPANDING THE BOUNDARIES OF CYBERSECURITY PROGRAMS AT COMMUNITY COLLEGES

The first three Summits have been held in conjunction with the High Impact Technology Exchange Conference (HI-TEC) in 2014 and 2016, and in conjunction with the Colloquium for Information Systems Security Education (CISSE) in 2015. The HI-TEC association allowed us to attract national leaders and innovators in community college STEM education, focusing on the role of cybersecurity in all STEM disciplines, as exemplified by the schools and programs of ATE Centers and Projects. The association with CISSE provided access to robust university cybersecurity programs, especially those at Centers of Academic Excellence (CAE), and encouraged the formation of alliances between community colleges and the university community.

Beginning in 2017, and with three successive successful conferences behind us, 3CS will venture forth on its own. SAVE THE DATE! Next year's Community College Cyber Summit will take place in Washington, DC, June 28-30, 2017, hosted by Prince George's Community College.

What makes 3CS different? Why should someone attend? Why is this not just another typical academic conference? Here is why: 3CS focuses on topics not typically addressed at other conferences, including:

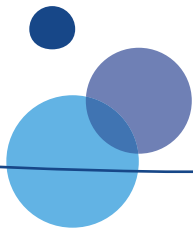
- advanced technical workshops for experienced community college faculty.
- new techniques and strategies both within and outside the classroom that community college faculty and administrators can adopt to strengthen their existing cybersecurity education courses and programs.
- new research on community college cybersecurity education.
- vendor exhibits that emphasize cybersecurity education at the community college level.

EduPlus Mobile App

An innovation at this year's Summit is the use of our EduPlus Mobile App. Please download the app to your mobile device, and search for "2016 Community College Cyber Summit." You will then use this app before and during the Summit for the following tasks:

- Sign-up for concurrent sessions (workshops and presentations). As many sessions have limited seating capacity, you can ensure that you will be able to participate in your selected sessions by registering to attend them.
- Find each session. The app includes session locations and descriptions, presenter bios, and campus maps.
- Evaluations: At the end of every plenary and concurrent session, find that session on the mobile app and submit a quick (4-question) evaluation. Also please complete the Overall 3CS Evaluation at the end of the conference and before you head for home.





2016 Community College Cyber Summit

Daily Schedule

Session Type

“**Workshop**” identifies a three-hour session in an attendee-participation format.

“**Presentation**” identifies a one-hour session in a variety of possible formats.

Tracks

Track 1 – For faculty and colleges new to the cybersecurity field

Track 2 – For faculty experienced in cybersecurity and for colleges with established cybersecurity education programs

Track 3 – For infusing cybersecurity throughout the nation’s critical infrastructure and across the college curriculum

FRIDAY • JULY 22

Community College of Allegheny County (CCAC)

TIME	DESCRIPTION
Noon	Buses from Wyndham Grand Pittsburgh Downtown Hotel to Community College of Allegheny County (CCAC)
11:00 a.m. – 5:30 p.m.	Registration/Check-In at CCAC
	OPENING PLENARY Friday Afternoon July 22 Plenary – Foerster Student Services Center Auditorium (1:00 – 2:45 pm)
1:00 – 2:00 p.m.	<p>Introductions and Welcomes</p> <ul style="list-style-type: none"> • Dr. Bob Spear, 3CS Chair • Dr. Quintin Bullock, President, Community College of Allegheny County • Dr. Charlene Dukes, President, Prince George’s Community College • EduPlus Mobile App for 3CS – Lynn Dohm, 3CS Tactical Committee Chair • 3CS Evaluations – Corrinne Sande, 3CS Program Committee Chair
2:00 – 2:45 p.m.	Keynote Address: Peter Romness, <i>Cybersecurity is Too Hard – Striving for Simple, Open, Automated and Effective</i>

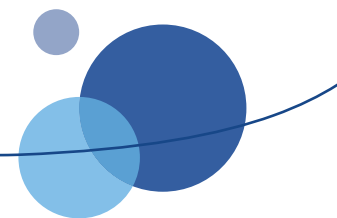


Peter Romness

Peter Romness is the cybersecurity solutions lead for U.S. Public Sector at Cisco. He has been helping government customers achieve their missions throughout his 30 years of experience at companies such as Cisco, Hewlett-Packard, AT&T and Panasonic. His current focus is helping government leaders protect their organizations from cybersecurity threats. Responsibilities include bringing cybersecurity solutions to market, developing new cybersecurity solutions for governments in the U.S., and helping the IT community understand the latest architectural solutions available to protect their employees, organizations, and intellectual property. Though Peter has an engineering degree, his passion is to make cybersecurity easier to understand and to take action upon for non-technical business leaders, non security staff as well as the seasoned security team.

2016 Community College Cyber Summit

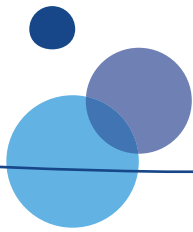
Daily Schedule



FRIDAY • JULY 22

AFTERNOON CONCURRENT SESSIONS I

TIME	DESCRIPTION	LOCATION
3:00 – 6:00 p.m.	Friday Afternoon Concurrent Workshops I	
	<p><i>Intro Cybersecurity Curriculum Resources for Your Classroom</i> Session ID: W1-1 • Track/Format: Track 1/Workshop Presenters: Deborah Boisvert, Broadening Advanced Technological Education Connections (BATEC); University of Massachusetts Boston, Massachusetts [Lead] Dr. John Sands, Center for Systems Security and Information Assurance (CSSIA); Moraine Valley Community College, Illinois</p> <p>This workshop features hands-on exploration of two curriculum units/course modules that are freely available and ready to implement in your introductory classroom. <i>Orientation to a Cybersecurity Career</i>, a 16-hour unit designed to introduce the many career opportunities in the Information Security career field, provides a self-exploration of the cybersecurity careers currently available as well as how and where to gather data associated with currently advertised jobs. Each participant completes an extensive job search, analyzes findings, and presents the knowledge, skills and abilities required of each job posting culminating in a self-assessment survey and creation of a custom study plan. <i>Cybersecurity Essentials</i> is a 30-hour unit that can be added to an existing IT Essentials or A+ curriculum to expose students to cybersecurity. This new curriculum maps to elements of the NICE Framework and provides a learning environment in which students build practical skills and problem solving abilities.</p>	Milton Hall, Room M-219
	<p><i>Teaching Network Forensics and Incident Response</i> Session ID: W1-2 • Track/Format: Track 2/Workshop Presenters: Dr. Philip Craiger, Advanced Cyberforensics Education Consortium (ACE); Daytona State College, Florida [Lead] Patrick Vilkinofsky, Daytona State College, Florida</p> <p>This workshop introduces a course in network forensics and incident response taught at Daytona State College. In addition to a discussion and description of topics covered, participants will get hands-on experience using several of the assignments from the course. Topics include identifying anomalous network packets; malware analysis; honeypots and host-based intrusion detection systems; recovering and analyzing volatile evidence; forensic imaging over a network; and identifying and analyzing evidence of a server intrusion.</p>	Library, Room L-513
	<p><i>Powershell Programming for Cybersecurity Professionals</i> Session ID: W1-3 • Track/Format: Track 2/Workshop Presenter: Michael Masino, Center for Systems Security and Information Assurance (CSSIA); Madison Area Technical College, Wisconsin</p> <p>This session will provide a hand-on experience of the new CSSIA freely distributed “PowerShell Scripting for Cyber Security Professionals” activity library. The session will walk you through several of the activities that are now available through the Center for Systems Security and Information Assurance virtual lab library. The session will also present a new Capture the Flag (CTF) virtual environment developed around this activity library. The CTF environment is design to be used by faculty in local cybersecurity competitions events, as advanced assessments instruments or as high level capstone exercises. All participants will have the ability to download the activity library.</p>	Milton Hall, Room M-511



2016 Community College Cyber Summit

Daily Schedule

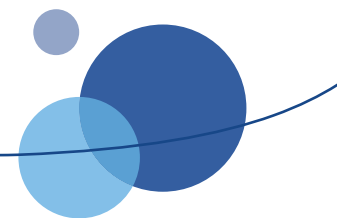
FRIDAY • JULY 22

AFTERNOON CONCURRENT SESSIONS I (cont'd.)

TIME	DESCRIPTION	LOCATION
3:00 – 6:00 p.m.	<p align="center">Friday Afternoon Concurrent Workshops I (cont'd.)</p> <p><i>Infusing Cybersecurity Content into Introductory Computer Science Courses (Part 1 of 3 parts)</i> Session ID: W1-4 • Track/Format: Track 3/Workshop Presenters: Dr. Elizabeth Hawthorne, Union County College, New Jersey [Lead] Dr. Melissa Dark, Purdue University, Indiana</p> <p>The C5 Project is creating cybersecurity content for infusion into computer science courses taught at community colleges. This cyber-infused content is based on careful research into relevant curriculum frameworks, professional society curricular recommendations (ACM CS2013), as well as government standards from the College Board (AP CS Principles) and the current NSA/DHS CAE Core Knowledge Units for two-year cybersecurity programs.</p> <p>This 9-hour hands-on workshop trains community college faculty to modernize their introductory computer programming courses (CS0 and CS1) with contemporary cybersecurity content. The workshop includes demonstrations of instructional modules from faculty peers as well as practice time to hone and own the cyber-infused CS materials. Faculty take home all instructional materials for free dissemination to students and colleagues.</p> <p>This workshop is limited to 24 community college faculty willing to adopt and pilot test the C5 instructional modules in their courses during the fall 2016 and spring 2017 terms and provide feedback for revision and improvement. Workshop participants will be selected based upon their ability and commitment to adopt, test, and disseminate the modules.</p>	Milton Hall, Room M-527
3:00 – 4:00 p.m.	<p align="center">Friday Afternoon Concurrent Presentations IA</p> <p><i>Course Development: A Unique Model Using a Faculty and Student Team</i> Session ID: P1A-1 • Track/Format: Track 1/Panel Presenters: Cathryn Balas, Broadening Advanced Technological Education Connections (BATEC); Clark State Community College, Ohio [Lead] Mike Qaissaanee, BATEC; Brookdale Community College, New Jersey</p> <p>Clark State Community College's Cyber-Pro program, established through an NSF ATE grant, has experienced good success over eight years using combined student intern and faculty extern teams to create faculty learning and development opportunities. With the aid of BATEC and its associate Brookdale Community College, that approach has been expanded to place faculty and students together in a special summer long Ethical Hacking program culminating in a Hack-a-thon. This presentation will provide participants an opportunity to learn about the unique blending of student learning with faculty development to create a new cybersecurity course which can be used by faculty at community colleges and high schools to provide hands-on experience in ethical hacking to students.</p>	Science Building, Room K-103

2016 Community College Cyber Summit

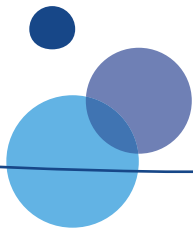
Daily Schedule



FRIDAY • JULY 22

AFTERNOON CONCURRENT SESSIONS I (cont'd.)

TIME	DESCRIPTION	LOCATION
3:00 – 4:00 p.m	Friday Afternoon Concurrent Presentations IA (cont'd.)	
	<p><i>Puzzle-Based Learning Approach to Teaching Cyber Security Concepts</i> Session ID: P1A-2 • Track/Format: Track 1/Demo Presenters: Dr. Tom Pigg, Cyber Security Education Consortium (CSEC); Jackson State Community College, Tennessee Dr. Dipankar Dasgupta, University of Memphis, Tennessee Traditional teaching and learning methods are not adequate to teach students how to defend against new attack patterns and emerging vulnerabilities which could not be anticipated in the classroom – advanced persistent threats, spear phishing, targeted malware, and zero day attacks. The central idea behind puzzle-based learning is that the human mind is stimulated most when it encounters a scenario to solve a challenge. Solving puzzles is an interesting and effective way of learning complex logic and abstract concepts. Puzzles formulate a problem in a specific format that encourages the solver to use his/her skills and expertise and to think out of the box. This presentation will include a demonstration of innovative puzzles/games that have been developed to assist in the learning process for cyber security education. The participants will be given access to the puzzles/games that have been completed via DVD or the project website.</p>	Science Building, Room K-104
	<p><i>Expanding the Articulation Model</i> Session ID: P1A-3 • Track/Format: Track 2/Roundtable Presenters: Dr. Margaret Leary, National CyberWatch Center (NCC); Northern Virginia Community College, Virginia [Lead] Dr. Vera Zdravkovich, C5 Project, Whatcom Community College, and National CyberWatch Center (NCC), Prince George's Community College, Maryland; Bill Wolfe, Center for Systems Security and Information Assurance (CSSIA); Moraine Valley Community College, Illinois Many students attending community colleges are transitioning adults seeking to upgrade IT skills as a foundation to pursuing a master's in cybersecurity. Is there a sufficient body of students across the nation to warrant an SFS scholarship opportunity to finish the second year of their associate degrees at community colleges, then move into master's degree programs at SFS universities? Attendees will be polled for interest. A second issue under consideration is the development of a job fair for community college students, similar to that of the SFS job fair for 4-year and graduate students.</p>	Science Building, Room K-106
	<p><i>Common Attack Methods and Security Analyst Challenges</i> Session ID: P1A-4 • Track/Format: Track 2/Lecture & Demo Presenter: Hamid Abdollahian, Cuyahoga Community College, Ohio This presentation covers the new Cisco Cyber Security specialist certification exam (SCyber 600-199) and specifically, how security analysts develop their skills and what topics are discussed in the Cisco training course. This session discusses the job role of a security analyst and the complex nature of learning how to identify threats and intrusions on the network with the variety of technology products and SIEM (Security Information and Event Management) tools available. The responsibilities often include the following areas: monitoring, traffic analysis, event and alarm handling, and incident response. This presentation will outline how Cisco has identified and worked with subject matter experts in intrusion analysis and operations; then incorporated their knowledge and expertise into a course which seeks to develop the skills of an entry-level security analyst.</p>	Science Building, Room K-203



2016 Community College Cyber Summit

Daily Schedule

FRIDAY • JULY 22

AFTERNOON CONCURRENT SESSIONS I (cont'd.)

TIME	DESCRIPTION	LOCATION
3:00 – 4:00 p.m	Friday Afternoon Concurrent Presentations IA (cont'd.)	
	<p><i>Cyber-Technology Pathways Across Maryland</i> Session ID: P1A-5 • Track/Format: Track 3/Paper Presenters: Zach Lawrence, National CyberWatch Center; Prince George's Community College, Maryland [Lead] Beatrice Fabuyi, Prince George's Community College, Maryland</p> <p>Cyber-Technology Pathways Across Maryland (CPAM) is a grant awarded by the US Department of Labor to 14 community colleges in Maryland to develop new initiatives to create cybersecurity awareness. Employers in all industries and in all occupational specialties require employees to have a pool of potential employees who have the ability to meet and pass the challenges of rigorous background checks and security clearance screening processes. Under the CPAM grant, Prince George's Community College has developed both credit and noncredit course Introduction to Security Clearance and Background Checks to meet this need. Studies show that security-cleared candidates earn an average of \$19,138, or 22 percent, more than their closest non-cleared peers.</p>	Science Building, Room K-206
	<p><i>Becoming the Enemy: Understanding How Hackers Work</i> Session ID: P1A-6 • Track/Format: Track 2/Demo Presenter: Jon Zeolla, Steel City Information Security, LLC, Pittsburgh, Pennsylvania</p> <p>This presentation focuses on understanding how black hat hackers work and using that knowledge to protect yourself and the companies you work with. To illustrate this, I will be demonstrating some hacking techniques and then ways that you can monitor for and stop these sorts of attacks. I will also be providing some suggestions on how to continue learning and growing in your InfoSec career.</p>	Science Building, Room K-402
4:05 – 4:50 p.m	<p align="center">Networking Opportunity</p> <ul style="list-style-type: none"> • Meet your colleagues – Foerster Student Services Center, Auditorium; Cafeteria; Lobby • Check your email – Open Student Lab (SSC, 3rd floor) 	



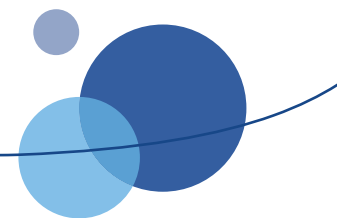
Remember to submit
your session evaluation
after each session
that you attend.



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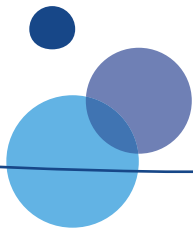
Daily Schedule



FRIDAY • JULY 22

AFTERNOON CONCURRENT SESSIONS I (cont'd.)

TIME	DESCRIPTION	LOCATION
5:00 – 6:00 p.m.	Friday Afternoon Concurrent Presentations IB	
	<p><i>Developing a University Cybersecurity Center for the University and Community at Large</i> Session ID: P1B-1 • Track/Format: Track 1/Panel Presenters: Dr. Kevin Floyd, Advanced Cyberforensics Education Consortium (ACE); Middle Georgia State University, Georgia [Lead] Alan Stines, Middle Georgia State University in Macon, Georgia Dr. Nelbert St. Clair, Middle Georgia State University in Macon, Georgia</p> <p>The Middle Georgia State University Center for Cybersecurity Education and Applied Research (CCEAR) supports the university's mission to produce inspired, lifelong learners whose scholarship and careers enhance the region through professional leadership, innovative partnerships and community engagement. The mission of CCEAR is to educate the future cybersecurity workforce and provide consultation to local businesses, governmental units, and interested parties. As part of its commitment to educating students and members of the community, CCEAR has committed itself to providing a quality education in research in the key cybersecurity areas of information assurance, computer network security, digital forensics, cryptography, risk assessment and mitigation, disaster recovery and management, security regulations and compliance, and information security management.</p>	Science Building, Room K-103
	<p><i>National Cybersecurity Student Association</i> Session ID: P1B-2 • Track/Format: Track 1/Panel Presenter: Dr. Jo Portillo, National CyberWatch Center (NCC); Portillo & Associates LLC, Kansas [Lead]</p> <p>Learn about the National Cybersecurity Student Association, a program under the National CyberWatch Center. This group supports the cybersecurity educational programs of academic institutions, inspires career awareness, and encourages creative efforts to increase the number of underrepresented populations in the field.</p>	Science Building, Room K-104
	<p><i>Exploring the Labyrinth: DHS Cybersecurity Workforce Support Tools</i> Session ID: P1B-3 • Track/Format: Track 2/Demo Presenter: Dan Stein, US Department of Homeland Security, Washington, DC</p> <p>DHS is a leader in the development and promotion of cybersecurity workforce tools such as the national cybersecurity workforce framework, the national cybersecurity course catalog and the national cybersecurity workforce toolkit. DHS also offers a suite of training tools, available to all government employees, that allow users to advance their cybersecurity skills. How can community college professors use these tools to support their own knowledge and promote cybersecurity careers in the classroom? This session will include a demonstration of these offerings and an explanation of their applicability to the community college environment.</p>	Science Building, Room K-106



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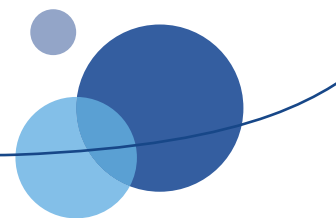
Daily Schedule

FRIDAY • JULY 22

AFTERNOON CONCURRENT SESSIONS I (cont'd.)

TIME	DESCRIPTION	LOCATION
5:00 – 6:00 p.m.	Friday Afternoon Concurrent Presentations IB (cont'd.)	
	<p><i>ACM Joint Task Force: Developing Undergraduate Cybersecurity Curricular Guidance</i> Session ID: P1B-4 • Track/Format: Track 3/Panel Presenters: Dr. Diana Burley, National CyberWatch Center (NCC); George Washington University, Washington, DC [Lead] Dr. Elizabeth Hawthorne, Union County College, New Jersey The ACM Joint Task Force on Cybersecurity Education (JTF) is developing comprehensive curricular guidance in cybersecurity education that will support future program development and associated educational efforts. In this session, JTF members will provide an overview of the task force mission, objectives, and work plan. After the overview, task force members will provide an update on the development process and solicit input from audience members.</p>	Science Building, Room K-203
	<p><i>Co-op and Internship Opportunities for Community College Students</i> Session ID: P1B-5 • Track/Format: Track 3/Panel Presenters: Dr. Vera Zdravkovich, CS Project, Whatcom Community College, and National CyberWatch Center (NCC), Prince George's Community College, Maryland [Lead] Corrinne Sande, CyberWatch West; Whatcom Community College, Washington; Anna Carlin, CyberWatch West; California State Polytechnic University, Pomona, California Internships and co-op opportunities for community college students in general, and cybersecurity students in particular, have been scarce at best. Few such programs have been successful. This panel on "Co-op and Internship Opportunities for Community College Students" will describe how to start and build an internship program at a college that does not have one. Panelists will also describe government internship and co-op opportunities. The National Security Agency (NSA) has established a NEW co-op program for community college students nationally that provides sustained/paid working experience along with studies and a possible way to employment. A representative of another government agency, DHS, will describe a different community college student internship model. This presentation will end with an open discussion on issues/challenges involved in these efforts. As the result of this panel we hope to produce a set of recommendations to colleges, businesses and agencies.</p>	Science Building, Room K-206
<p><i>Academic Engagement of the National Initiative for Cybersecurity Education</i> Session ID: P1B-6 • Track/Format: Track 1/Demo Presenter: Dr. Davina Pruitt-Mentle, National Initiative for Cybersecurity Education (NICE), National Institute of Standards and Technology, Maryland Cybersecurity practitioners have taken a variety of routes to get to their jobs. However, as the profession continues to evolve and the demand for a skilled workforce grows so does the need for better defined academic and career pathways. The National Initiative for Cybersecurity Education (NICE) - a partnership between government, academia, and the private sector - is working to energize and promote a robust network and an ecosystem of cybersecurity education, training, and workforce development. This presentation will report highlights of a variety of NICE coordinated activities, discussing in detail NICE academic efforts and various opportunities for 3CS participants to be more involved and engaged with the NICE program. The session will also seek audience input on federal policy activities and programs designed to create a world-class cybersecurity education, training, and workforce system.</p>	Science Building, Room K-402	

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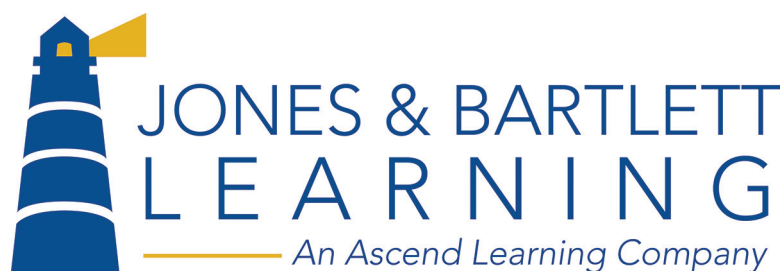
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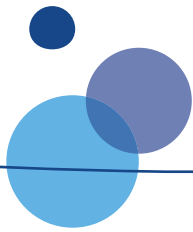
FRIDAY • JULY 22

EVENING ACTIVITIES

Wyndham Grand Pittsburgh Downtown Hotel

TIME	DESCRIPTION	LOCATION
6:00 - 6:15 p.m.	Buses from CCAC to Wyndham Hotel	
7:00 p.m.	Sponsor Reception (heavy hors d'oeuvres)	Wyndham Hotel, Commonwealth Ballroom





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SATURDAY • JULY 23

MORNING ACTIVITIES

Wyndham Grand Pittsburgh Downtown Hotel

TIME	DESCRIPTION	LOCATION
7:00 – 8:00 a.m.	Breakfast	Wyndham Grand Hotel, Commonwealth Ballroom
8:00 – 8:15 a.m.	Buses from hotel to CCAC	

DAYTIME ACTIVITIES

Community College of Allegheny County, Foerster Student Services Center (SSC), Auditorium Lobby

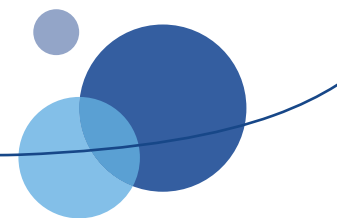
TIME	DESCRIPTION	LOCATION
8:00 a.m. – 5:00 p.m.	Registration/Check-In	SSC, Auditorium Lobby
10:00 a.m. – 5:00 p.m.	Sponsor/producer exhibits	SSC, Auditorium Lobby

MORNING CONCURRENT SESSIONS 2

TIME	DESCRIPTION	LOCATION
9:00 a.m. – Noon	<p align="center">Saturday Morning Concurrent Workshops 2</p> <p><i>Micro Labs: A Low-Cost Raspberry Pi Networking & Security Environment</i> Session ID: W2-1 • Track/Format: Track 1/Workshop Presenters: Shamsi Moussavi, Broadening, Advanced Technological Education Connections (BATEC); Mass Bay Community College, Massachusetts [Lead] Giuseppe Sena, MassBay Community College, Massachusetts; Andrew Liberatore, MassBay Community College, Massachusetts; Christopher Bergerson, MassBay Community College, Massachusetts Raspberry Pis (RPi) are great versatile tools to experiment with many computing concepts. An RPi is a very inexpensive credit card-sized single-board computer developed in the United Kingdom in order to teach basic computer science in schools. We use RPis to teach programming, networking, robotics, and computational thinking to high school students and college freshmen, and we are developing curriculum for interdisciplinary courses. We use a very inexpensive (\$300-\$400) network of RPis, switches, and routers that mimics a real network environment, and the whole network fits in a standard suitcase, making it an ideal mobile networking lab for classrooms, presentations, and community events. The micro labs presented at the workshop use common tools such as Cisco Packet Tracer, WireShark, EtherApe, and others. You will leave this workshop with a set of instructions for creating the networks as well as the lab exercises.</p>	Milton Hall, Room M-219

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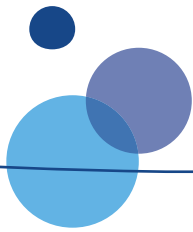
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MORNING CONCURRENT SESSIONS 2 (cont'd.)

TIME	DESCRIPTION	LOCATION
9:00 a.m. – Noon	Saturday Morning Concurrent Workshops 2 (cont'd.)	
	<p><i>CAE2Y Application Process</i> Session ID: W2-2 • Track/Format: Track 2/Workshop Presenters: Dr. John Sands, Center for Systems Security and Information Assurance (CSSIA); Moraine Valley Community College, Illinois [Lead] Dr. Vera Zdravkovich, C5 Project, Whatcom Community College, and National CyberWatch Center (NCC), Prince George's Community College, Maryland; Corrinne Sande, CyberWatch West; Whatcom Community College, Washington</p> <p>This session will provide an overview of the CAE2Y application process. The session will allow participants to create an account and walk through the entire process. The presenters will provide several tools and resources that can be used to developing your institution's application. The session will also introduce a new program designed to provide resources for schools interested in becoming mentors or mentees in the application process. Presenters will also share curriculum, content and assessment instruments that can be adopted by your institution in aligning to the curriculum requirements. Finally, the session will review several successful applications to give the participants a perspective on the rigor and standards expected of CAE2Y recognized institutions.</p>	Milton Hall, Room M-435
	<p><i>Unique uses of NETLABs and Virtualization in the Classroom</i> Session ID: W2-3 • Track/Format: Track 2/Workshop Presenter: Bill Wolfe, Center for Systems Security and Information Assurance (CSSIA); Moraine Valley Community College, Illinois</p> <p>This workshop will discuss unique uses of NETLABs and Virtualization in the Classroom to deliver enhanced LAB activities for Computer Technology and Computer Science Programs. Case Studies discussed will be related to Security, Voice, Wireless, Ethical Hacking, Digital Forensics, Storage, Big Data and Cloud Technologies. Attendees will be able to experience these Virtual LABs up-close, personal and first hand during the workshop.</p>	Milton Hall, Room M-511
	<p><i>Infusing Cybersecurity Content into Introductory Computer Science Courses (Part 2 of 3 parts)</i> Session ID: W2-4 • Track/Format: Track 3/Workshop Presenters: Dr. Elizabeth Hawthorne, Union County College, New Jersey [Lead] Dr. Melissa Dark, Purdue University, Indiana</p> <p>This is the second 3-hour segment of a 9-hour workshop. See the description of Workshop W1-4 on Friday afternoon.</p>	Milton Hall, Room M-527



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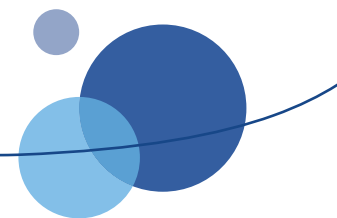
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MORNING CONCURRENT SESSIONS 2

TIME	DESCRIPTION	LOCATION
9:00 – 10:00 a.m.	Saturday Morning Concurrent Presentations 2A	
	<p><i>Using Virtualization for Teaching Online Cybersecurity Courses: Benefits, Pitfalls, and Resources</i> Session ID: P2A-1 • Track/Format: Track 1/Paper Presenter: Dr. Philip Craiger, Advanced Cyberforensics Education Consortium (ACE); Daytona State College, Florida Labs are an integral part of teaching cybersecurity: Students need to become familiar with tools and techniques commonly employed in cybersecurity. At the same time, more institutions are moving courses online as a means of reducing resource requirements. In this presentation we describe the use of virtualization to support lab assignments for students who are in 100% online courses. Topics include discussion of various methods of virtualizing labs; benefits and pitfalls for each method; student acceptance and issues; and links to resources for virtualized labs.</p>	Science Building, Room K-103
	<p><i>How to Beat the Odds and Build a Robust Reputable InfoSec Program When Everything Is Against You</i> Session ID: P2A-2 • Track/Format: Track 1/Hands-On Lab Presenter: Patricia Tamburelli, County College of Morris, New Jersey Perseverance does pay off! The Professors Tamburelli developed their first course at County College of Morris (CCM) in information security in 2000. This course grew into a three course Information Security Certificate that was mapped to a federal standard, CNSS 4011, making CCM the only two-year school in New Jersey so recognized. Today CCM has a robust, reputable, recognized presence in cybersecurity education. We have applied for CAE2Y designation, have applied for cybersecurity grants, and have competed successfully in Collegiate Cyber Defense Competitions. We have become a true Center for Cyber Security. All this was accomplished in a region not known as a cybersecurity hotbed, with school administration that did not have a clue what we were doing and what we were trying to build and with virtually no funding. In this session, hear how we did it and how we are still doing it and participate in hands-on activities to bring this success back to your institutions.</p>	Milton Hall, Room M-220
	<p><i>The Next Generation of Cyber Security Training: Where Do We Go from Here?</i> Session ID: P2A-3 • Track/Format: Track 2/Audience Participation Presenter: Dr. Wayne Machuca, Mt. Hood Community College, Oregon What should information systems training in general, and cybersecurity training in particular look like over the next 10-15 years? In this audience participation session, we will discuss what will be the relevant skills that colleges should deliver in this rapidly evolving arena.</p>	Science Building, Room K-106
	<p><i>Mobile Forensics Tools for Free (Part 1)</i> Session ID: P2A-4 • Track/Format: Track 2/Paper Presenter: Dr. Charline Nixon, Calhoun Community College, Alabama This session demonstrates open source mobile forensics tools for educators. These tools are readily available, some are free, and some might require minimal cost to use the tools. [Note: This is Part 1 of a 2-part presentation.]</p>	Milton Hall, Room M-436

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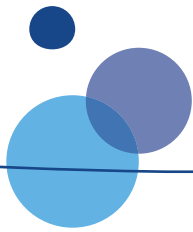
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MORNING CONCURRENT SESSIONS 2 (cont'd.)

TIME	DESCRIPTION	LOCATION
9:00 – 10:00 a.m.	Saturday Morning Concurrent Presentations 2A (cont'd.)	
	<p><i>Transfer Pathways in Cybersecurity Education: Challenging Routes, Promising Practices</i> Session ID: P2A-5 • Track/Format: Track 2/Paper Presenters: John Sener, National CyberWatch Center & CyberWatch West; Sener Knowledge LLC, Maryland Dr. Elizabeth Hawthorne, Union County College, New Jersey; Lou Piazza, Broadening Advanced Technological Education Connections (BATEC); University of Massachusetts, Boston, Massachusetts; Donald Brady, Middlesex Community College, Massachusetts; Dr. Margaret Leary, National CyberWatch Center (NCC); Northern Virginia Community College, Virginia</p> <p>Transfer pathways are an academic gauntlet that stymies students in all fields, and cybersecurity is no exception. This presentation will describe the challenges faced by students seeking to use transfer pathways; the varieties of available transfer pathways; promising and potentially exemplary transfer practices, including examples from cybersecurity education and other fields; and a proposal for improving transfer pathways for cybersecurity education students.</p>	Science Building, Room K-203
	<p><i>Multidisciplinary Approaches to Cybersecurity Education</i> Session ID: P2A-6 • Track/Format: Track 3/Paper Presenter: Christie Jones, George Mason University, Virginia [Lead]</p> <p>This session will present the multidisciplinary approaches the Center for Infrastructure Protection and its George Mason University partners have developed to meet the need for a cyber-aware workforce.</p>	Science Building, Room K-206
	<p><i>Curriculum Pathways for Cyber Security and Cyber Intelligence Education</i> Session ID: P2A-7 • Track/Format: Track 3/Paper Presenter: Dr. Moussa Ayyash, Chicago State University, Illinois</p> <p>This session presents a model curriculum pathway for cybersecurity and cyber intelligence (CS&I) education for community college students, highlighting collaboration between Chicago State University's Intelligence Community Center for Academic Excellence (IC CAE) and Moraine Valley Community College's Information Assurance Center for Academic Excellence (IA CAE). Included are these topics:</p> <ul style="list-style-type: none"> • What is security intelligence? • Why is security intelligence education important? • Connecting cyber intelligence and cybersecurity • A curriculum pathway between cybersecurity and cyber intelligence programs: CSU/MVCC Model – articulation and research opportunities • Skills of cybersecurity and intelligence (CS&I) analysts • Educational background and CS&I majors: STEM and other fields • Hands-on demo of data obfuscation tools and several other tools to engage students. 	Science Building, Room K-402
10:05 – 10:50 a.m.	Birds of a Feather Roundtables	
	<ul style="list-style-type: none"> • Post your topic, attract colleagues with congruent interests – Foerster Student Services Center, Auditorium; Cafeteria; Lobby • Check your email – Open Student Lab (SSC, 3rd floor) 	



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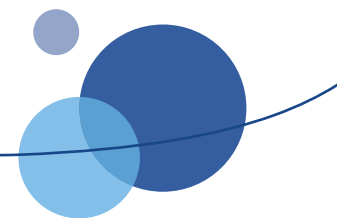
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MORNING CONCURRENT SESSIONS 2 (cont'd.)

TIME	DESCRIPTION	LOCATION
11:00 a.m. – noon	Saturday Morning Concurrent Presentations 2B	
	<p><i>Offering Courses Through Multiple Modalities (M&M's)</i> Session ID: P2B-1 • Track/Format: Track 1/Demo Presenter: Linda Lee, Carl Sandburg College, Illinois</p> <p>Have you heard about Multiple Modality? Multiple Modality (M&M courses) are courses that allow students to attend online, via Skype, or come to class. This is a great format for low enrollment courses or programs. It allows students to attend via the modality that works best for them. Data collected to date shows that the majority still will come to your class, but a some choose to attend via Skype and others choose to be entirely online. The format can actually be free-flowing, allowing the students to float between all three modes!</p>	Science Building, Room K-103
	<p><i>Orientation to Careers in Cyber Security</i> Session ID: P2B-2 • Track/Format: Track 1/Demo Presenter: Justin Valentino, Center for Systems Security and Information Assurance (CSSIA); Moraine Valley Community College, Illinois</p> <p>The faculty at Moraine Valley Community College will present a new course now freely available to community college. This course provides an over view of the career opportunities in the cybersecurity career profession. The course consists of four self-directed lessons that prepare students to build a personal academic plan to prepare them for a job in the cybersecurity profession. The course includes an overview of career opportunities in the cybersecurity field, an overview of the different social media and job search aggregators including Moster, Indeed and Career Builders. The course also provides a survey of the academic and industry certification credentials required in today's cybersecurity workforce. The final activity requires the student to build a custom personal academic plan.</p>	Science Building, Room K-104
	<p><i>Designing a Cyber Security Competency Based Capstone Course</i> Session ID: P2B-3 •Track/Format: Track 2/Roundtable Presenter: Dr. Deanne Wesley, Forsythe Technical Community College, North Carolina</p> <p>Presenters will discuss the importance of building a competency based security undergraduate capstone class. Presenters will demonstrate a competency based model approach and demonstrate various resources that can be utilized in this model. Presenters will also discuss and demonstrate how they incorporate this model into their security courses.</p>	Science Building, Room K-106
	<p><i>Mobile Forensics Tools for Free (Part 2)</i> Session ID: P2B-4 • Track/Format: Track 2/Hands-On [requires computer lab] Presenter: Dr. Charline Nixon, Calhoun Community College, Alabama</p> <p>This session demonstrates open source mobile forensics tools for educators. These tools are readily available, some are free, and some might require minimal cost to use the tools. [Note: This is Part 2 of a 2-part presentation.]</p>	Milton Hall, Room M-436

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MORNING CONCURRENT SESSIONS 2 (cont'd.)

TIME	DESCRIPTION	LOCATION
11:00 a.m. – noon	Saturday Morning Concurrent Presentations 2B (cont'd.)	
	<p><i>Applying the NIST Framework for Improving Critical Infrastructure Cybersecurity to College Curricula</i> Session ID: P2B-5 • Track/Format: Track 3/Paper Presenter: Casey O'Brien, National CyberWatch Center (NCC); Prince George's Community College, Maryland This presentation will explore how the NIST Framework for Improving Critical Infrastructure Cybersecurity can be applied to community college curricula. A case study approach will be used to highlight technologies that should be integrated into existing cybersecurity technical courses, but are currently are not. Participants will get access to resources and content that is currently not being taught in community college information security programs.</p>	Science Building, Room K-203
	<p><i>Why Clubs/Centers in Cybersecurity at Community Colleges?</i> Session ID: P2B-6 • Track/Format: Track 3/Panel Presenters: Dr. Dan Manson, CyberWatch West; California State Polytechnic University, Pomona, California [Lead] Dr. Christine Barrow, Prince George's Community College, Maryland; Tobi West, CyberWatch West; Coastline Community College, California; Dr. Jo Portillo, Portillo & Associates LLC, Kansas Clubs at 4-year colleges are an established part of the student's life. Dr. Dan Manson is working with high schools in California to bring student clubs to high schools. However, in community colleges, with the transient and commuting student body, this is more difficult and often disregarded. Why clubs in general and why cybersecurity clubs in community colleges? Research shows that disciplinary clubs can enhance student success, improve retention and improve student transfer. Dr. Christine Barrow at Prince George's Community College in Maryland led a very successful STEM Collegian Center and a Hacker Space Club and has data proving their effectiveness and impact on students. Ms. Tobi West started a cybersecurity club and is hosting CyberPatriot training and competitions at Coastline Community College in California. These examples will be shared with participants and the discussion will attempt to identify challenges and interest in cybersecurity student clubs at community colleges.</p>	Science Building, Room K-206



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LUNCHTIME PLENARY

Noon – 2:45 p.m.

TIME	DESCRIPTION	LOCATION
Noon – 12:45 p.m.	Lunch	Foerster Student Services Center, Cafeteria
12:45 – 12:55 p.m.	CISSE Update: Dr. Corey Schou and Pat Tamburelli, Colloquium for Information Systems Security Education	SSC, Auditorium
1:00 – 1:45 p.m.	Keynote Address: Dr. Nancy Mead and Girish Seshagiri	Auditorium



Dr. Nancy Mead

Nancy R. Mead is a fellow and principal researcher at the Software Engineering Institute (SEI). Mead is an adjunct professor of software engineering at Carnegie Mellon University. She is involved in the study of security requirements engineering and the development of software assurance curricula. She also served as director of software engineering education for the SEI from 1991 to 1994. Her research interests are in the areas of software security, software requirements engineering, and software architectures.

Prior to joining the SEI, Mead was a senior technical staff member at IBM Federal Systems, where she spent most of her career in the development and management of large real-time systems. She also worked in IBM's software engineering technology area and managed IBM Federal Systems' software engineering education department. She has developed and taught numerous courses on software engineering topics, both at universities and in professional education courses.

Mead is a Fellow of the Institute of Electrical and Electronic Engineers Inc. (IEEE) and the IEEE Computer Society, and a Distinguished Member of the ACM. She received the 2015 Distinguished Education Award from the IEEE Computer Society Technical Council on Software Engineering. Mead has more than 150 publications and invited presentations, and serves on the Editorial Board for the International Journal on Secure Software Engineering. She has been a member of numerous editorial boards, advisory boards and committees.

Mead received her Ph.D. in mathematics from the Polytechnic Institute of New York and received a B.A. and an M.S. in mathematics from New York University.



Girish Seshagiri

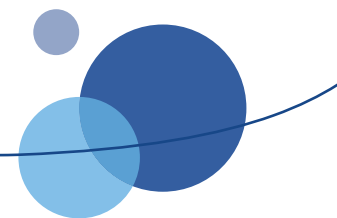
Girish Seshagiri, vice president and chief technology officer, Ishpi Information Technologies, is a globally recognized thought leader in software assurance, software quality management, secure software development, software process improvement, and modern methods of managing knowledge work. As a visionary and an innovator, Seshagiri is the architect of several disruptive technology innovations and strategic initiatives, including High Velocity Development (a hybrid agile development process), firm fixed price performance based software development contracting, and software quality guaranteed by a lifetime warranty against defects. He is the author of the visionary white paper "Emerging Cyber Threats Call for a Change in the 'Deliver Now, Fix Later' Culture of Software Development" and is a highly respected speaker, coach, and instructor.

Seshagiri, an early adopter of the Dual Vocational Training Model for skills formation and a staunch advocate of regional workforce development, is providing the founding organizational leadership to the definition and implementation of the Central Illinois Center of Excellence for Secure Software (CICESS).

Seshagiri has an MBA (Marketing) from Michigan State University

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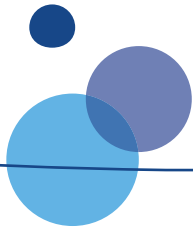


SATURDAY • JULY 23

AFTER LUNCH ACTIVITIES

Foerster Student Services Center • 2:00 – 2:50 p.m.

TIME	DESCRIPTION	LOCATION
2:00 – 2:50 p.m.	Visit the display booths of 3CS producers, partners, and sponsors	SSC, Auditorium Lobby
	Check your email—Open Student Lab	SSC, 3rd floor
2:00 – 2:50 p.m.	<p>Special Presentation:</p> <p><i>CyberCorps® Scholarship for Service (SFS) Program Expansion for Community College Students</i></p> <p>Session ID: SAL-1 • Track/Format: Track 2/Paper</p> <p>Presenter: Dr. Victor Piotrowski, National Science Foundation [Lead] Dr. Corby Hovis, National Science Foundation</p> <p>The CyberCorps® Scholarship for Service (SFS) Program was designed to increase the number of cybersecurity-trained college graduates in Federal, state, local and tribal governments. Since 2001, SFS scholarships have been awarded to more than 2,600 students, and there are 63 institutions currently offering SFS scholarships to students in undergraduate and graduate degree programs. Upon graduation, scholarship recipients are required to work for a period equal to the length of their scholarship in an authorized government position. Under a new mandate from Congress, the SFS program is being expanded to community colleges that have a formal agreement with an existing SFS school. Community college students can receive scholarship support in their sophomore year and continued scholarship support in both their junior and senior years at the upper division institution. This presentation explains how the new program works and how your school may participate. Though any community college may be eligible, CAE2Y schools are especially encouraged to attend.</p>	SSC, Auditorium



2016 Community College Cyber Summit

Daily Schedule

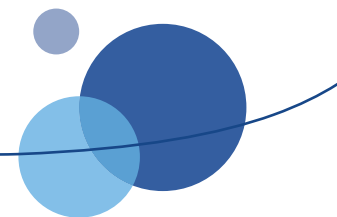
SATURDAY • JULY 23

AFTERNOON CONCURRENT SESSIONS 3

TIME	DESCRIPTION	LOCATION
3:00 – 6:00 p.m.	Saturday Afternoon Concurrent Workshops 3	
	<p><i>Cybercrime 101</i> Session ID: W3-1 • Track/Format: Track 2/Workshop Presenters: David Vargas, National CyberWatch Center (NCC); Montgomery College, Maryland [Lead] Daniel Seliverstov, Montgomery College, Maryland; Gian C. Cuya, Montgomery College, Maryland Where do hackers go to store the data they have stolen? Where can they communicate with the utmost secrecy? And where can they quickly (and safely) monetize the results of their work? Known by many names, the Darknet is a hidden area of the Internet that is commonly used for illegal activities. Because of the anonymity it provides, the Darknet has become the natural home to those who exploit personal computers and corporate networks. This lab course is an introduction to the primary tools used to access the Darknet. After explaining what the Darknet is, attendees will be taken to Darknet sites using some of the more common navigation tools. Because the Darknet's most popular application is the Tor Browser, attendees will learn this application first.</p>	Milton Hall, Room M-219
	<p><i>Cloud Based Wireless Security Infrastructure</i> Session ID: W3-2 • Track/Format: Track 2/Workshop Presenter: Bill Wolfe, Center for Systems Security and Information Assurance (CSSIA); Moraine Valley Community College, Illinois A major challenge for network and cybersecurity managers concerns mobile devices on the organization's wireless network. This session will examine new technologies to manage, monitor and control mobile devices. Topics include emerging technologies, standards and products; cloud based management; authentication systems; secure communications; Highly Available Redundant Architecture; and guarding the organization's air space. With Cloud Managed Services becoming mainstream and utilized by companies of all sizes and industries, Meraki offers a number of solutions utilizing Cloud Based Services for Network Infrastructure. The exposure to these cloud based services allow students to be more valuable to future employers by gaining hands-on experience with IaaS (Wireless, Switching and Security). This session will allow attendees to experience first hand the Meraki Dashboard, various Cloud Services and a Virtual Infrastructure which can be configured and managed and made available within an instructors curriculum and classroom activities.</p>	Milton Hall, Room M-435
	<p><i>CAE2Y Principals Meeting</i> Session ID: W3-4 • Track/Format: Track 3/Workshop Presenters: Corrinne Sande, CyberWatch West (CWW); Whatcom Community College, Washington; Dr. Tony Coulson, CyberWatch West; California State University San Bernardino, California; Dr. Deanne Wesley, C5 Project; Forsythe Technical College, North Carolina Meeting to discuss organization of CAE2Ys and how we can have a stronger voice in the CAE program. A representative from the National Security Agency has been invited to speak.</p>	Milton Hall, Room M-511

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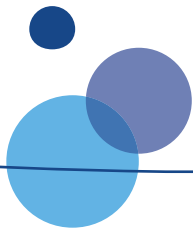
Daily Schedule



SATURDAY • JULY 23

AFTERNOON CONCURRENT SESSIONS 3 (cont'd.)

TIME	DESCRIPTION	LOCATION
3:00 – 6:00 p.m.	Saturday Afternoon Concurrent Workshops 3 (cont'd.)	
	<p><i>Infusing Cybersecurity Content into Introductory Computer Science Courses (Part 3 of 3 parts)</i> Session ID: W3-3 • Track/Format: Track 2/Workshop Presenters: Dr. Elizabeth Hawthorne, Union County College, New Jersey [Lead] Dr. Melissa Dark, Purdue University, Indiana This is the third 3-hour segment of a 9-hour workshop. See the description of Workshop W1-4 on Friday afternoon.</p>	Milton Hall, Room M-527
	<p><i>Using the NICE-Challenge Project to Develop Real World Skills in Cybersecurity</i> Session ID: W3-5 • Track/Format: Track 3/Workshop Presenters: Dr. Vincent Nestler, CyberWatch West; California State University, San Bernardino, California [Lead] James Ashley III, California State University, San Bernardino, California The NICE-Challenge project (nice-challenge.com) is a federally funded project that creates real world scenarios based on the tasks listed in the NICE Framework. These scenarios or challenges are available for instructors to use for their students. The challenges can be used within a period of instruction or as projects at the completion of appropriate preparation. The challenges are available to schools free of charge. This session will be both informational and hands-on driven. The session will be broken down in to three parts. The first part will be informational giving a brief description and demonstration of the NICE Challenges. The second part will be a hands-on session where participants can work through the scenarios together. The third part will be a brief description of how to integrate the challenges in the curriculum.</p>	Milton Hall, Room 710B
3:00 – 4:00 p.m.	Saturday Afternoon Concurrent Presentations 3A	
	<p><i>New Cybersecurity Educational Model</i> Session ID: P3A-1 • Track/Format: Track 1/Paper Presenter: Andrew Hurd, Excelsior College, Albany, New York You have choices when developing a cybersecurity curriculum: Is your institution focusing on industry certifications, credit-bearing certificates, or associate or bachelor's degrees? Is one cybersecurity degree enough, or do you need specializations within the degree? Excelsior College's use of stackable credentials for cybersecurity is a dynamic approach to adapt to the ever-changing industry. This model allows the college to evaluate an individual's previous education and experience to create a degree plan that best suits that individual while fitting into Excelsior's cybersecurity program. The college offers a series of cyber certificates that stack upon each other to form a body of knowledge. The certificates target job titles and provide individuals the ability to obtain the skills and education needed to perform those jobs. Come learn about the curriculum development process that Excelsior used to design a sustainable model that is dynamic and adaptable for all learners.</p>	Science Building, Room K-103



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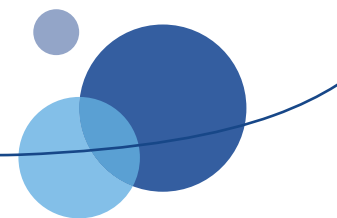
SATURDAY • JULY 23

AFTERNOON CONCURRENT SESSIONS 3 (cont'd.)

TIME	DESCRIPTION	LOCATION
3:00 – 4:00 p.m.	Saturday Afternoon Concurrent Presentations 3A (cont'd.)	
	<p><i>Role of NSF ATE Cyber Security Centers and Projects</i> Session ID: P3A-2 • Track/Format: Track 1/Panel Presenters: Dr. John Sands, Center for Systems Security and Information Assurance (CSSIA); Moraine Valley Community College, Illinois [Lead] Dr. Bob Spear, National CyberWatch Center (NCC); Prince George’s Community College, Maryland; Casey O’Brien, National CyberWatch Center (NCC); Prince George’s Community College, Maryland; Dr. Philip Craiger, Advanced Cyberforensics Education Consortium (ACE); Daytona State College, Florida; Dr. Sheryl Hale, Cyber Security Education Consortium (CSEC); Oklahoma State University, Oklahoma; Corrinne Sande, CyberWatch West; Whatcom Community College, Washington</p> <p>This panel will introduce the National Science Foundation (NSF) Advance Technology Education (ATE) funded centers and projects. The National Science Foundation has funded several regional and national centers. Each of these centers play an important role in building quality cybersecurity program across the nation’s community colleges. These centers and projects offer a host of resources and provide assistance to institutions developing or improving their cybersecurity programs. These resources include a curriculum framework, curriculum content, faculty development events, access to virtual teaching and learning environments and access to several national student skills competitions. The directors of each of these centers and projects will review their roles and the services they provide.</p>	Milton Hall, Room M-436
	<p><i>Opportunities for Community Colleges to Participate in the National Initiative for Cybersecurity Education</i> Session ID: P3A-3 • Track/Format: Track 1/Demo Presenters: Rodney Petersen, National Initiative for Cybersecurity Education (NICE), National Institute of Standards and Technology, Maryland [Lead] Dr. Davina Pruitt-Mentle, National Initiative for Cybersecurity Education (NICE), National Institute of Standards and Technology, Maryland</p> <p>The National Initiative for Cybersecurity Education (NICE) - a partnership between government, academia, and the private sector - is working to energize and promote a robust network and an ecosystem of cybersecurity education, training, and workforce development. This presentation will report on a variety of NICE coordinated activities that support the NICE Strategic Plan, detailing opportunities for community colleges participation.</p>	Science Building, Room K-104

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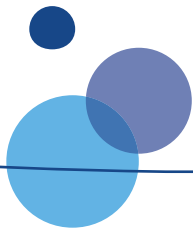
Daily Schedule



SATURDAY • JULY 23

AFTERNOON CONCURRENT SESSIONS 3 (cont'd.)

TIME	DESCRIPTION	LOCATION
3:00 – 4:00 p.m.	Saturday Afternoon Concurrent Presentations 3A (cont'd.)	
	<p><i>Cybersecurity and the State of Open Education Resources</i> Session ID: P3A-4 • Track/Format: Track 2/Paper Presenter: Brady Nielsen, Spokane Falls Community College, Washington</p> <p>Educational materials are the cornerstone for teachers and students. The textbook publishing industry has some quality and refined offerings, but they come with a price. They also have restrictions on their use, the ability to modify or share their content. Open Education Resources (OER) is gaining momentum in the academic world. Groups such as OpenStax and OER Commons are producing and collecting large volumes of quality resources that are no cost, open for modification and can be redistributed freely. I have started on a journey that has opened my eyes to the value of free resources that is so much more important than saving students money on purchasing books. After a year of searching I want to share my findings with you. We all have accumulated our custom content to provide a better learning experience. With a concerted effort, we can begin to build a better set of tools we can all use to create an excellent free learning environment.</p>	Science Building, Room K-106
	<p><i>Technical Customer Service - Soft Skills Essentials for Success</i> Session ID: P3A-5 • Track/Format: Track 3/Audience Participation Presenters: Judy Archer, North Central Texas College, Texas [Lead] Susan Svane, North Central Texas College, Texas</p> <p>Ask any employer about the pool of potential employees and the lack of soft skills ALWAYS come up! Of course our graduates are being trained with technical expertise but often it's the lack of soft skills that cost them the job interview or long term employment. See how North Central Texas College is bridging the gap in preparing the workforce of the future with essential to long term success in their careers and their lives.</p>	Science Building, Room K-203
4:05 – 4:50 p.m.	<p style="text-align: center;">Students and Careers Foerster Student Services Center, Cafeteria</p> <ul style="list-style-type: none"> • Come meet the students of 3CS! Find yourself a future new hire! • Every student attending 3CS in any capacity will be invited to attend this session. Each student will be placed at a roundtable, along with a group of faculty, administrators, and government and industry attendees. • At each roundtable, the discussion will focus on that student's progress, prospects, academic program, and career possibilities. • Alternatively: Check your email in the Open Student Lab (SSC, 3rd floor), or visit the sponsor/producer display tables (SSC, Auditorium Lobby) 	SSC Cafeteria



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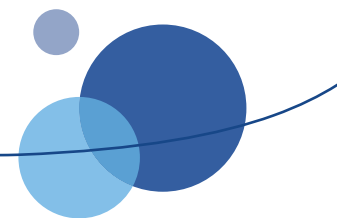
SATURDAY • JULY 23

AFTERNOON CONCURRENT SESSIONS 3 (cont'd.)

TIME	DESCRIPTION	LOCATION
5:00 – 6:00 p.m.	Saturday Afternoon Concurrent Presentations 3B	
	<p><i>Teaching Cybersecurity in Critical Infrastructure Systems at Community Colleges</i> Session ID: P3B-1 • Track/Format: Track 1/Panel Presenters: Christie Jones, National CyberWatch Center (NCC); George Mason University, Virginia [Lead] Corrinne Sande, CyberWatch West; Whatcom Community College, Washington; Stephen Miller, Eastern New Mexico University Ruidoso, New Mexico</p> <p>The Critical Infrastructure Higher Education Initiative (CI HEI), in partnership with CyberWatch, is building a course designed to address the technical, industry and policy aspects of cyber security issues involved in SCADA and industrial control systems of critical infrastructure systems. The course will be complete in March 2016, and this presentation will introduce the finalized curriculum and related course materials to the 3CS community. Speakers will also answer any questions faculty and educators may have about implementing the course into their programs.</p>	Science Building, Room K-103
	<p><i>Cyber Security Capstone in Netlab</i> Session ID: P3B-2 • Track/Format: Track 1/Demo Presenter: Philip Kazanjian, Bunker Hill Community College, Massachusetts</p> <p>Illustration/presentation of the capstone course. Discussing the benefits and any challenges encountered when developing the curriculum and VMs for the virtual environment.</p>	Science Building, Room K-104
	<p><i>National CyberWatch Center's Complete, Cloud-based Lab Solution</i> Session ID: P3B-3 • Track/Format: Track 1/Demo Presenter: Casey O'Brien, National CyberWatch Center (NCC); Prince George's Community College, Maryland</p> <p>National CyberWatch launched a complete cloud-based lab solution that provides the following benefits to academic institutions: FREE to instructors; no hardware or software costs for schools (cloud-based); industry-validated content; tech support; competency-based lab exercises with associated virtual machines; full Learning Management System (LMS) integration; no browser plugins; HTML5 user interface; and mapped to professional certifications. Come check out the hands-on demonstration and receive a free access code.</p>	Milton Hall, Room M-436

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AFTERNOON CONCURRENT SESSIONS 3 (cont'd.)

TIME	DESCRIPTION	LOCATION
5:00 – 6:00 p.m.	Saturday Afternoon Concurrent Presentations 3B (cont'd.)	
	<p><i>Creating a Bachelor's of Applied Science in Cybersecurity at a Community College</i> Session ID: P3B-4 • Track/Format: Track 2/Paper Presenters: Brady Nielsen, CyberWatch West; Spokane Falls Community College, Washington [Lead] Max Josquin, Spokane Falls Community College, Washington</p> <p>It might not be on our website yet, but Spokane Falls Community College almost has a new degree offering. Join us while we share our experience of creating our in-house 2 + 2 Bachelor's of Applied Science in Cybersecurity. Our journey has been a roller-coaster of brilliant ideas, top-level encouragement and bureaucratic torture! We will cover how we selected our topics, which students we are targeting and the work we have done to develop a community network of employers and advisers to our degree. See what we are working on and how we collected the information to build a new degree in cybersecurity that expanded on an existing AAS in related fields.</p>	Science Building, Room K-106
	<p><i>Cybersecurity Workforce Analysis</i> Session ID: P3B-5 • Track/Format: Track 3/Paper Presenter: Lou Piazza, Broadening Advanced Technological Education Connections (BATEC); University of Massachusetts, Boston, Massachusetts</p> <p>In 2014, there were 238,158 online job postings for cybersecurity jobs in the United States (an increase of 91% over 2010). The pressure on employers to attract and retain top talent has driven average advertised salaries up to almost \$84,000 (well above the industry average for IT jobs). The discipline of cybersecurity is rich in both promises and challenges. It features high-demand, high-growth, and high-paying careers. It demands a rigorous, well-documented skill set validated by academic credentials and industry certifications. CyberSecurity: Defending our Nation's Assets from an Ever Increasing Threat is a 60-page research report produced by Burning Glass Technologies and Broadening Advanced Technological Education Connections (BATEC). This session will review the highlights of this data-driven analysis of the workforce characteristics in cybersecurity. Seven job categories will be dimensioned (number of jobs, average wages, % open to middle skill employment) and described (academic credentials, certifications, and primary job responsibilities) on both a national and regional level.</p>	Science Building, Room K-203
	<p><i>Internet of Everything: Security Is Everything</i> Session ID: P3B-6 • Track/Format: Track 3/Audience Participation Presenter: Dr. John Sands, Center for Systems Security and Information Assurance (CSSIA); Moraine Valley Community College, Illinois</p> <p>Internet of Everything (IoE) is one of the fast growing fields. It has been predicted that by year 2020 we will have 50 billion connected devices. The IoE industry is expected to explode to a worth of \$19 trillion. Today we want to monitor various sensor data, appliances and machines over the internet as well as control them remotely over the internet. This impact of this technical progression will impact many aspects of our lives including the medical field; industrial controls and manufacturing; building automation; transportation; our vehicles; the smart grid; and smart homes. The cybersecurity implications of this growth are momentous. Learn about national efforts to build curriculum and content to help community colleges begin to prepare students for the tremendous career opportunities associated with the commercial development.</p>	Science Building, Room K-206



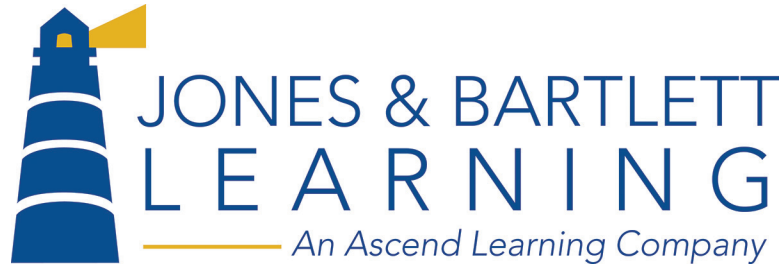
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Daily Schedule

SATURDAY • JULY 23

EVENING ACTIVITIES

TIME	DESCRIPTION
6:15 p.m.	Buses from CCAC to Wyndham Hotel
	Dinner on your own; Pittsburgh Nite on the Town



2016 Community College Cyber Summit

Daily Schedule

SUNDAY • JULY 24

MORNING ACTIVITIES

Wyndham Hotel, Commonwealth Ballroom

TIME	DESCRIPTION	LOCATION
7:00 – 8:00 a.m.	Breakfast	Wyndham Grand Hotel, Commonwealth Ballroom
8:00 – 8:45 a.m.	Keynote Address: Ashley Tolbert	



Ashley Tolbert

Ashley Tolbert is a Cyber Security Engineer at Stanford's Linear Accelerator Center (SLAC), focusing on security operations in risk management, cyber security awareness and training, and incident response.

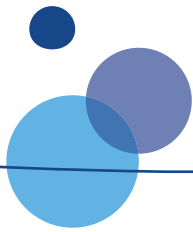
She has a diverse background that includes researching cyber security at NASA's Jet Propulsion Lab, modeling software for NASA Ames, and creating enterprise applications at the ABB Research Center in Germany.

Directly prior to her work at SLAC, Ashley earned a master's of science in Information Security Policy and Management from Carnegie Mellon University. She holds a bachelor's degree from Auburn University, where she studied software engineering.

Ashley's academic interests include the intersection of privacy and security, global privacy law, and cyber risk intelligence.

Invite and Include: Diversity Outreach in Cyber Security

A lack of diversity and inclusion in the early, introductory stages of the information security field is one of the foremost impediments to attracting and retaining the sort of diverse talent the industry sorely needs. According to a 2015 report from the Bureau of Labor Statistics by Peninsula Press, there are more than 209,000 cyber security jobs in the U.S. that are unfilled. Given that cybersecurity is one of the biggest challenges to our nation's security, and given that we're facing a major talent shortfall in the industry, figuring out how to make everyone feel welcome and included is important. This talk will highlight the positive impacts of outreach, discuss the speaker's experience with the "Unicorn" effect, and touch on how the boundaries of cyber security can be expanded through diversity.



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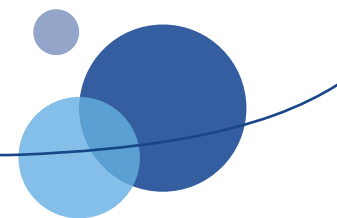
SUNDAY • JULY 24

MORNING CONCURRENT SESSIONS 4

TIME	DESCRIPTION	LOCATION
9:00 a.m. – Noon	Sunday Morning Concurrent Workshops 4	
	<p><i>Performing a Network Security Analysis: Students Applying Skills in the Real World</i> Session ID: W4-1 • Track/Format: Track 2/Workshop Presenter: Keith Nabozny, Macomb Community College, Michigan</p> <p>Looking for a way for students to apply skills learned in their security classes to the real world? Have you considered a network security analysis? This session will share an assignment designed and perfected since 2013 to engage students by applying their network security skills to a real world assignment. The network security analysis asks students to review multiple facets of security for an actual client, including network and wireless security, PC/device security, authorization/authentication/accounting, backups/disaster recovery, physical security, and user education. Professor Nabozny will share the network security analysis template document provided to students, the scaffolding used to guide students through the process of completing the assignment, the grading rubric used to assess the completed assignments, examples of analyses completed by students, and discussion of potential pitfalls and how to avoid them. You will walk away with the foundation for an engaging and instructive assignment!</p>	Wyndham Hotel, Duquesne
	<p><i>Curriculum Task Force Committee</i> Session ID: W4-2 • Track/Format: Track 2/Meeting (by invitation only) Presenter: Dr. Margaret Leary, National CyberWatch Center (NCC); Northern Virginia Community College, Virginia</p> <p>The Curriculum Task Force continues to develop a common curriculum for community college cybersecurity. This meeting is limited to members of the task force.</p>	Wyndham Hotel, Stanwix
9:00 – 10:00 a.m.	Sunday Morning Concurrent Presentations 4A	
	<p><i>Yes, Cryptography Can Be Interesting</i> Session ID: P4A-1 • Track/Format: Track 1/Demo Presenters: David Vargas, National CyberWatch Center (NCC); Montgomery College, Maryland [Lead] Rey Ferrufino, Montgomery College, Maryland; Matthew Hauri, Montgomery College, Maryland</p> <p>Cryptography is considered a foundation security technology. As a result, it is covered at some level in almost every security course. However, its key concepts can be difficult for students to master. In this presentation, attendees will be introduced to techniques and applications that can help students better understand encryption. After a general introduction to cryptography, the presentation will discuss the primary protocols and algorithms used by today's predominant security technologies. There will then be a discussion of encryption-related issues including the current Going Dark Debate. The presentation will end by demonstrating several websites and applications that can be integrated into security courses to help students gain a better understanding of cryptography.</p>	Wyndham Hotel, Benedum

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Daily Schedule



SUNDAY • JULY 24

MORNING CONCURRENT SESSIONS 4 (cont'd.)

TIME	DESCRIPTION	LOCATION
9:00 – 10:00 a.m.	Sunday Morning Concurrent Presentations 4A (cont'd.)	
	<p><i>Teaching Cybersecurity Across the Disciplines at the University of Hawaii Maui College</i> Session ID: P4A-2 • Track/Format: Track 3/Paper Presenter: Dr. Debasis Bhattacharya, University of Hawaii Maui College, Hawaii</p> <p>Cybersecurity is a topic that is prevalent in many colleges. However, does this field belong to computer science and information technology? Or does it span other disciplines where students and faculty are not familiar with the underlying technologies? A cybersecurity project at the University of Hawaii Maui College, funded by the NSF SFS program, attempts to bridge this gap among the disciplines and also targets women and minorities. Using undergraduate research projects, curriculum modules and guest lectures targeted at diverse fields from health care to accounting, this session will provide participants with the means to educate a wider spectrum of students. This session will provide participants with details on best practices, techniques and guidance to spread cybersecurity education across the disciplines, with special focus on attracting minorities and women.</p>	Wyndham Hotel, Forbes
	<p><i>Computer Security Labs in CS II: An Applied Secure-Programming Approach to Fundamentals in Programming</i> Session ID: P4A-3 • Track/Format: Track 3/Demo Presenter: Dr. Christian Servin, El Paso Community College, Texas</p> <p>This demo presents a set of computer programming labs for the Elementary Data Structures and Algorithms course (a.k.a. CS II). Designed in Java and assigned to students for the last four semesters, these labs are inspired by current computer security issues faced by employers in the El Paso region. Topics include a biometric simulation, password protection, modeling Multi-Level Security (MLS) systems, and deciphering passwords. The programming labs were designed based on learning outcomes that are recently aligned to the ACM/IEEE cs2013 curricula; a document that compiles 12 knowledge areas (KA) in computer science, and plenty of knowledge units (KU). The cs2013 curricula also helps to separate the notion of a specialized course and the learning outcomes that a knowledge unit should address. Therefore, we design these programming labs based on learning outcomes from cs2013 with the emphasis in cybersecurity to teach secure code in CS II.</p>	Wyndham Hotel, Commonwealth 1
	<p><i>National Cybersecurity Student Association Advisory Board Meeting</i> Session ID: P4A-4 • Track/Format: Track 2/Meeting (by invitation only) Presenter: Dr. Jo Portillo, National CyberWatch Center (NCC); Portillo & Associates LLC, Kansas</p> <p>This meeting is limited to members of the National Cybersecurity Student Association Advisory Board.</p>	Wyndham Hotel, Board Room



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Daily Schedule

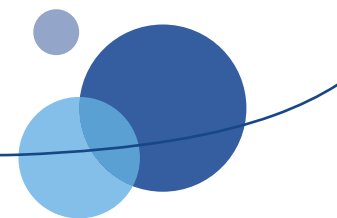
SUNDAY • JULY 24

MORNING CONCURRENT SESSIONS 4 (cont'd.)

TIME	DESCRIPTION	LOCATION
9:00 – 9:30 a.m.	Sunday Morning Concurrent Presentations 4A (cont'd.)	
	<p><i>Assessing Student Performance in a Virtualized Lab Environment</i> Session ID: P4A-5(1) • Track/Format: Track 2/Demo Presenter: Nicholas Winski, Carnegie Mellon University, Pennsylvania</p> <p>Virtualized labs offer a unique opportunity for students to gain hands-on experience with cybersecurity tools and concepts without impacting real-world systems. One significant challenge with virtualized lessons is that it can be more difficult to determine if a student has satisfied the learning objectives associated with a piece of content. This session covers some of the concepts being explored for assessing student performance within a virtualized environment. Real-world examples of these concepts will be demonstrated on a cybersecurity training platform managed by the Cyber Workforce Development Team at the Software Engineering Institute.</p>	Wyndham Hotel, Commonwealth 2
9:30 – 10:00 a.m.	<p><i>Improving Student Interest by Gamifying Learning Material</i> Session ID: P4A-5(2) • Track/Format: Track 2/Paper Presenter: Melanie Rich-Wittrig, Carnegie Mellon University, Pennsylvania</p> <p>To address the growing need for cybersecurity professionals, more efforts are being made to expose students to the discipline at a younger age. While kids often perceive hackers as cool, many feel the skills and knowledge to reach that level are beyond their reach. We believe incorporating gamification concepts into learning materials is one way to improve student interest and put them down the path towards a cybersecurity career. This session will cover some of the gamification concepts being explored by the Cyber Workforce Development Team at the Software Engineering Institute. Examples from recent outreach efforts at the high school level will be the primary focus.</p>	Wyndham Hotel, Commonwealth 2
10:05 – 10:50 a.m.	Sunday Morning Student Panel	
	<p>Student Panel's Perceptions of 3CS Come find out what the students attending 3CS think of our conference!</p>	Wyndham Hotel, Commonwealth 1
11:00 a.m. – Noon	Sunday Morning Concurrent Presentations 4B	
	<p><i>National CyberWatch Center Information Security Degree and Certificate Programs</i> Session ID: P4B-1 • Track/Format: Track 1/Demo Presenter: Casey O'Brien, National CyberWatch Center (NCC); Prince George's Community College, Maryland</p> <p>In this hands-on demonstration, Casey O'Brien, executive director of the National CyberWatch Center, will highlight various two-year degree and certificate programs in Cyber Defense, Network Security Administration, Systems Security Administration, Network Forensics, and Secure Software Development. If you are looking for an entire degree or certificate program for your school, wondering how to stack various certificates together, or need updated, quality cybersecurity content, this is the workshop for you.</p>	Wyndham Hotel, Benedum

2016 Community College Cyber Summit

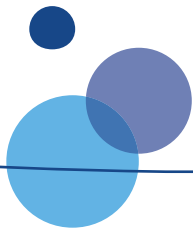
Daily Schedule



SUNDAY • JULY 24

MORNING CONCURRENT SESSIONS 4 (cont'd.)

TIME	DESCRIPTION	LOCATION
11:00 a.m. – Noon	Sunday Morning Concurrent Presentations 4B (cont'd.)	
	<p><i>How to Host Cyber Patriot Competitions</i> Session ID: P4B-2 • Track/Format: Track 1/Roundtable Presenter: Tobi West, CyberWatch West; Coastline Community College, California</p> <p>This breakout will share ideas and best practices for developing a Cyber Patriot Regional Competition model as used by the Orange County Community College Consortium (OCCCC) to engage K-12 students in Cyber Patriot Competitions and trainings offered at local community colleges. This past year, Coastline Community College, working in conjunction with the OCCCC, developed and implemented a successful first year Cyber Patriot competition event series including multiple colleges and 26 K-12 teams. Strategies and issues will be shared.</p>	Wyndham Hotel, Board Room
	<p><i>Benefits of Project Based Curricular Service Learning for Cybersecurity Education</i> Session ID: P4B-3 • Track/Format: Track 1/Panel Presenter: Dr. Ping Wang, Community College of Allegheny County, Pennsylvania</p> <p>This panel presentation discusses the benefits of a project-based curricular service learning model for cybersecurity education. Led by their instructor, the student panel describes and discusses an actual service learning project in a cybersecurity class that these students have completed. The service learning model provides valuable opportunities for students to actively apply their learning to community service, gain hands-on experience, improve their knowledge retention and skills in problem-solving, reflection and critical thinking, and cultivate a strong professional and community service ethic that is critical to a successful career. The purpose of the panel presentation is to share successful experience in cybersecurity education methodology with others.</p>	Wyndham Hotel, Forbes
<p><i>Transfer Models and Issues</i> Session ID: P4B-4 • Track/Format: Track 3/Panel Presenters: Dr. Vera Zdravkovich, C5 Project, Whatcom Community College; and National CyberWatch Center (NCC), Prince George's Community College, Maryland [Lead] Dr. Jim Robertson, University of Maryland University College, Maryland; Dr. Gary Griffith, Walden University, Minnesota; Dr. Tony Coulson, California State University, San Bernardino, California</p> <p>Seamless and successful transfer from a 2-year cybersecurity program to a baccalaureate program had been questionable at best. Very few baccalaureate granting institutions accept the Associate of Applied Science (AAS) degree typically granted in the cybersecurity program. The Associate of Science, AS, degree with greater emphasis on the general education program, while typically more acceptable, does not always transfer. This Transfer Models and Issues Panel will present several transfer models available to the community college students in cybersecurity programs, an online program offered by University of Maryland University College, another one offered by Walden University, and a statewide transfer program at the California State University San Bernardino. These will serve as a springboard for general discussion of issues and challenges involved in transfer/articulation. We hope to produce a set of recommendations for effective transfer from 2- to 4- year institutions.</p>	Wyndham Hotel, Commonwealth 1	



2016 Community College Cyber Summit

Daily Schedule

SUNDAY • JULY 24

MORNING CONCURRENT SESSIONS 4 (cont'd.)

TIME	DESCRIPTION	LOCATION
11:00 a.m. – Noon	Sunday Morning Concurrent Presentations 4A (cont'd.)	
	<p><i>Maximizing a MOOC to Teach Cybersecurity Concepts to Engineering Technology Professionals</i> Session ID: P4B-5• Track/Format: Track 3/Demo Presenters: Dr. Jane LeClair, National Cybersecurity Institute at Excelsior College, Washington, DC Dr. Denise Pheils, Owens Community College, Ohio</p> <p>This session introduces attendees to the power and value of a MOOC as a means to educate people in different fields about cybersecurity safety awareness. As proof-of-concept, the NCI Cybersecurity for Engineering Technology Professionals is offered. Concepts include pre- and post-tests, instructor moderation, badging, and OER resources. The format is easily adaptable and can be modified to reach any profession and knowledge level. Lessons learned are shared to help attendees avoid mistakes and capitalize on successes. The resources and OERs will be shared with attendees.</p>	Wyndham Hotel, Commonwealth 2

2016 Community College Cyber Summit

Daily Schedule

SUNDAY • JULY 24

NOON AND AFTERNOON ACTIVITIES

TIME	DESCRIPTION
Noon	3CS Closes <ul style="list-style-type: none">• Please remember to complete the 3CS Overall Summit Survey using the EduPlus Mobile App (click on the “Survey” button on the main screen).• Mark your calendar for next year’s 3CS in Washington, DC, June 28-30, 2017• Stick around for one of our post-3CS tours (see below), especially if you are staying in Pittsburgh for HI-TEC• Hail and farewell until next year!

Post 3CS Tours and Pittsburgh Attractions

Buses will be provided for the tours to Carnegie Mellon University, Carnegie Science Center, and PNC Stadium. (However, if you choose to visit the Carnegie Science Center or attend the Pirates-Phillies baseball game, you will be responsible for your own transportation back to the hotel. Both venues are an easy, 15-minute stroll from the hotel, or a short subway ride.) If you wish to attend any of these, please pre-register using the EduPlus Mobile App, so that we can be sure to reserve adequate space on the bus and/or tour. Buses will leave the Wyndham Hotel at 12:30 pm.

Carnegie Mellon University – CERT Distributed Learning Center

This tour will take place at the CERT Distributed Learning Center (CDLC) located on campus at Carnegie Mellon University. The main focus will be an administrative view of the internals behind the training platform managed by the Cyber Workforce Development Team at the Software Engineering Institute. The process for developing virtualized labs on the platform will also be discussed. Guests will have the opportunity for some hands-on time with the platform at provided workstations.



Carnegie Science Center

A 5-star-rated science museum in downtown Pittsburgh. This museum contains a plethora of fascinating science exhibits and interactive displays. See <http://www.carnegiesciencecenter.org/> for details. The individual ticket price is \$20. We will get group discount pricing of \$10 per person, if we have at least 15 people pre-registered for this event by July 14.



Pittsburgh Pirates vs. Philadelphia Phillies Baseball Game

The Pirates play their home games at PNC Park, about a 15-minute walk or 5-minute car ride from the Wyndham Hotel. Game time is at 1:35 pm.

Follow this link if you wish to purchase tickets to the game:

http://purchase.tickets.com/buy/MLBEventInfo?agency=MLB&pid=8137891&tfl=Pittsburgh_Pirates-Tickets-Single_Game_Tickets-Lowest_Price-xo

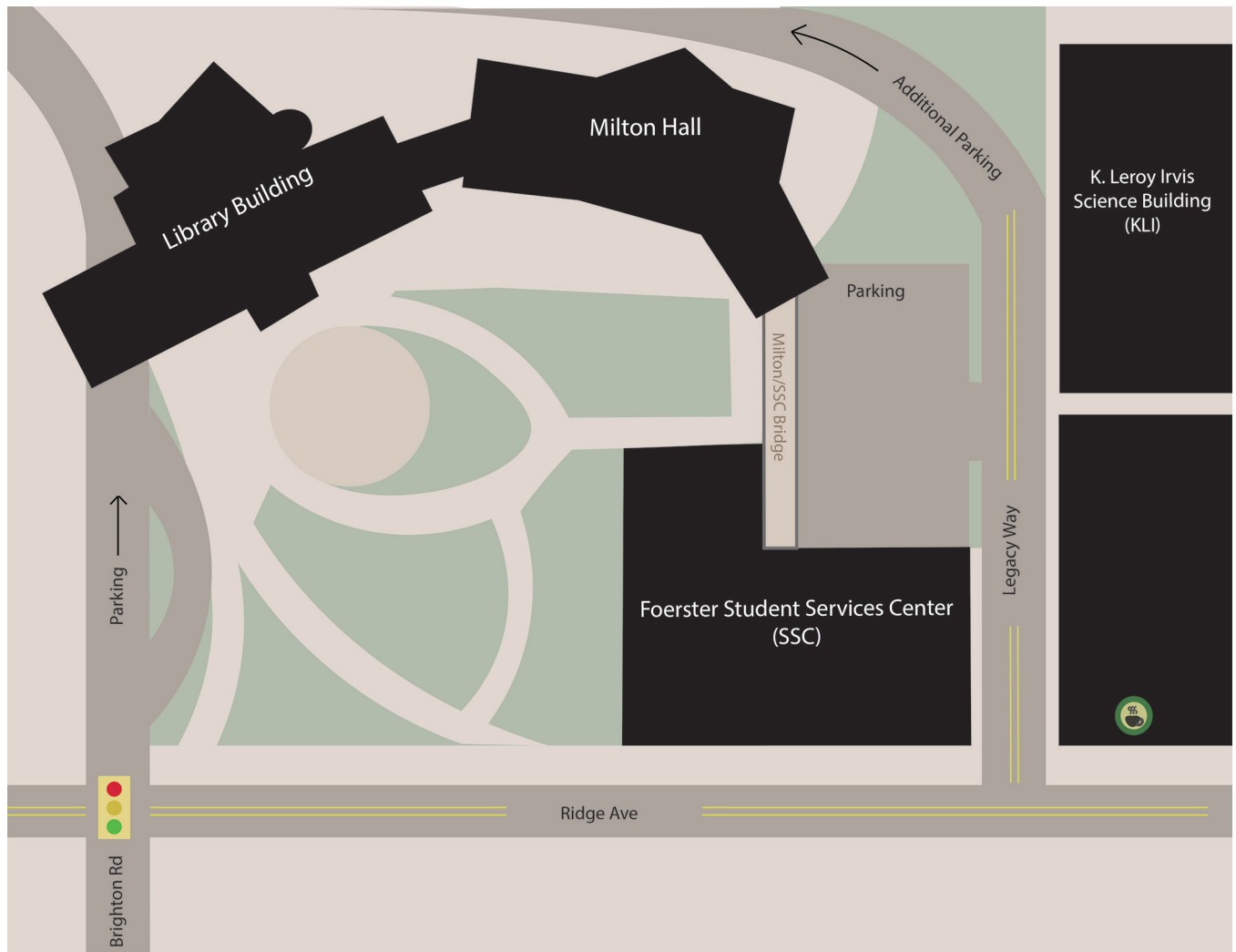


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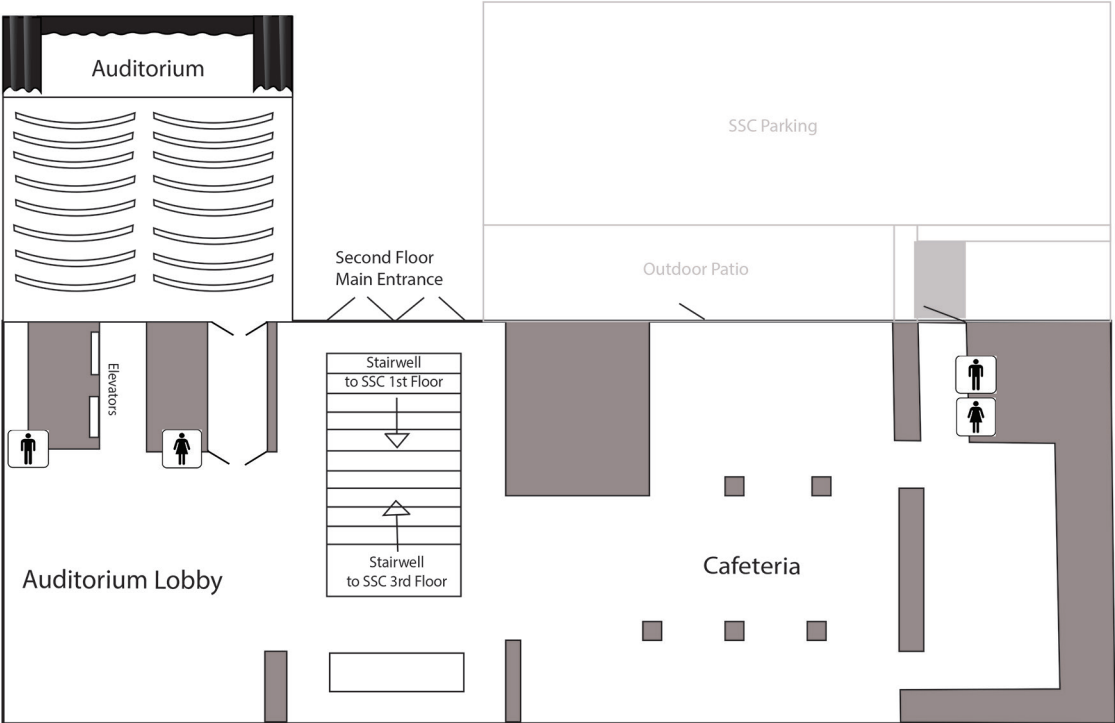
Community College of Allegheny County Campus Map



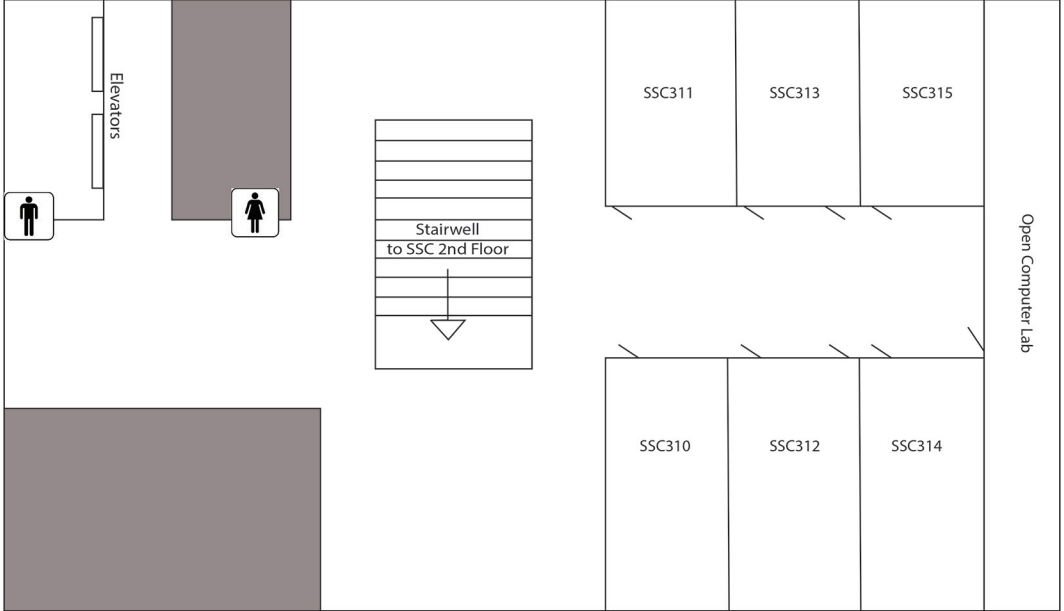
Community College of Allegheny County Foerster Student Services Center (SSC)



Second Floor



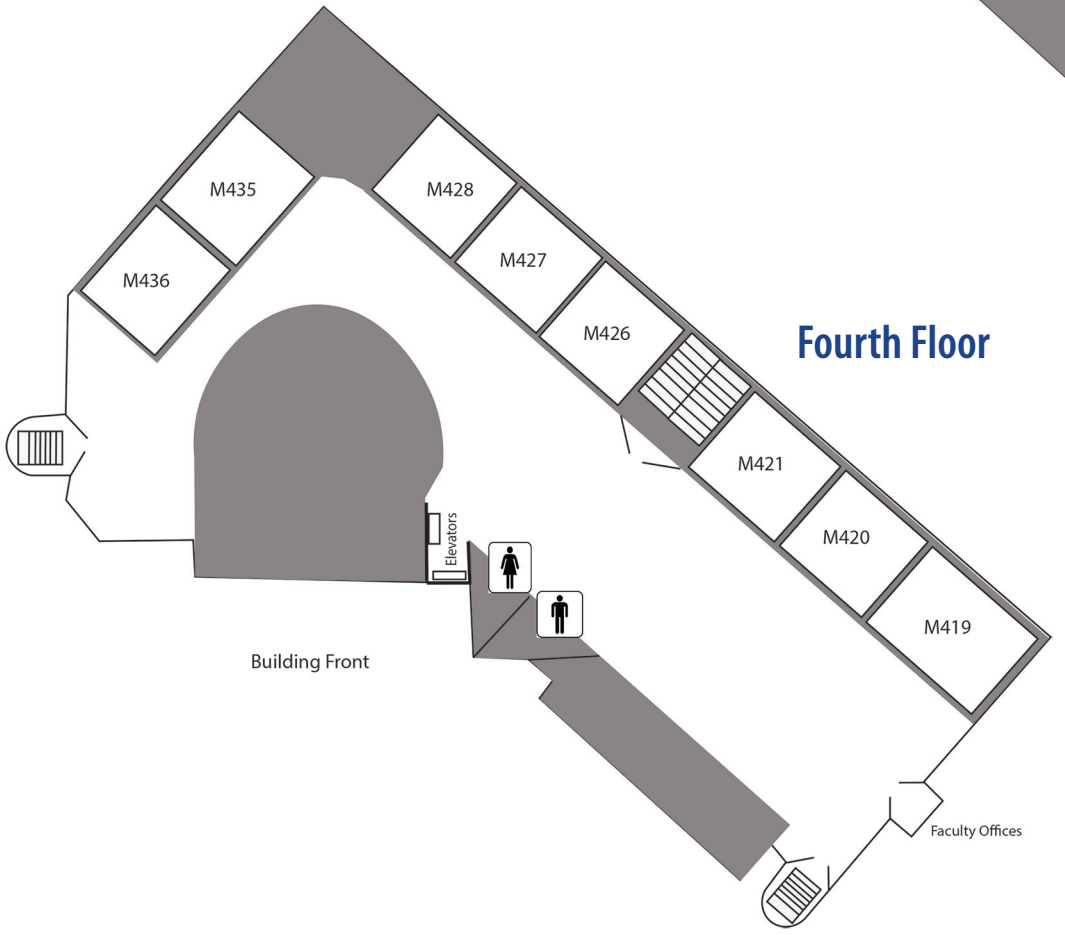
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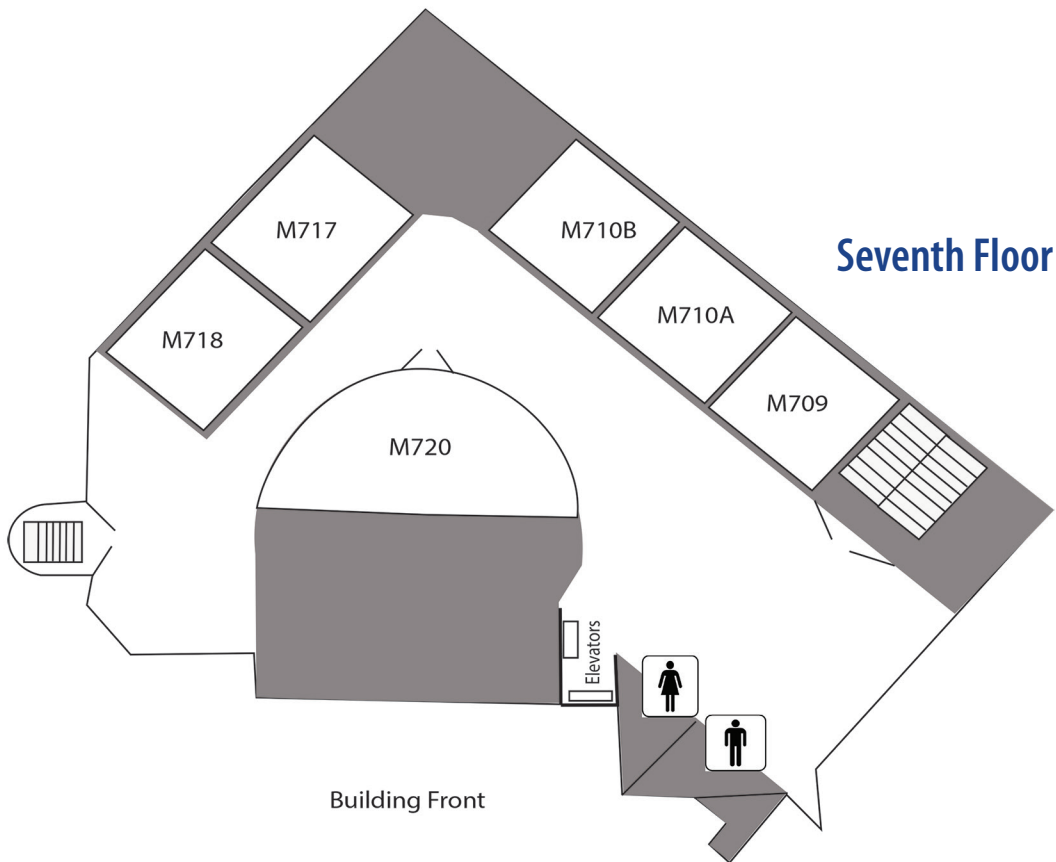
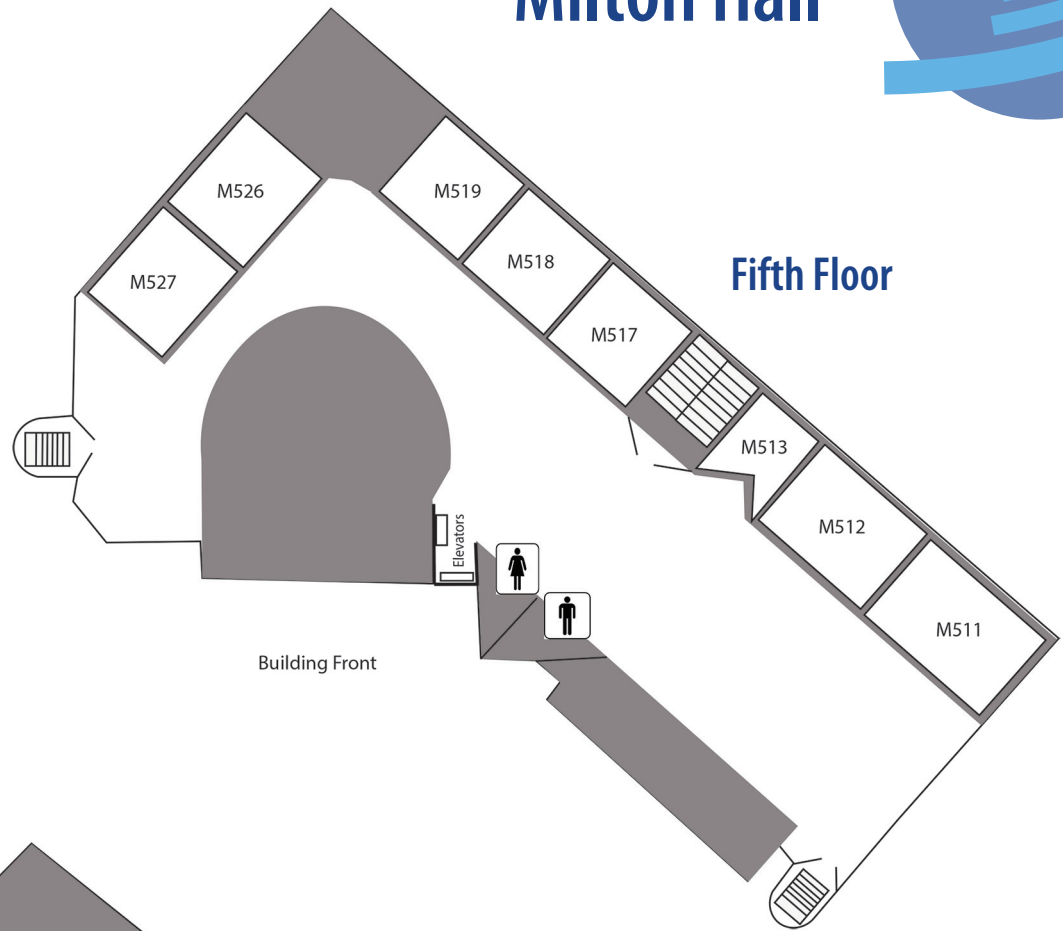


Community College of Allegheny County

Milton Hall



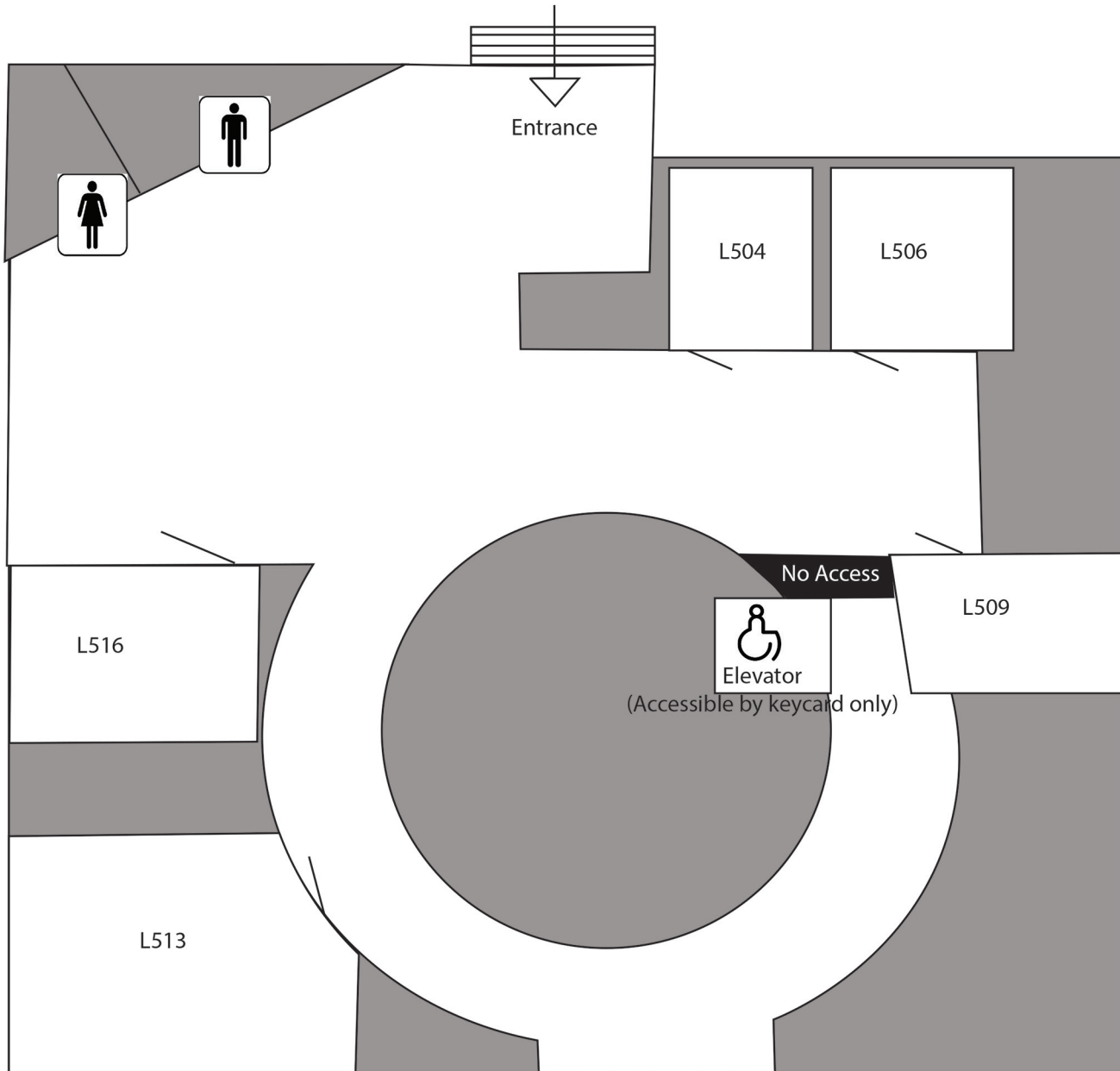
Community College of Allegheny County Milton Hall



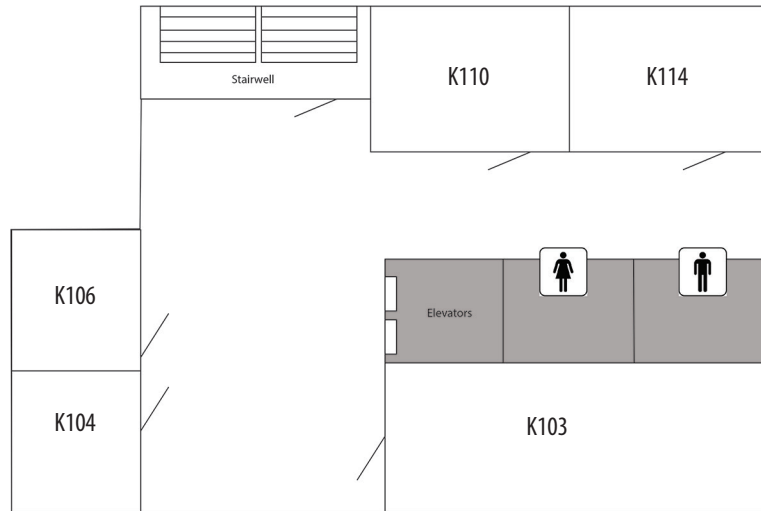


Community College of Allegheny County Library

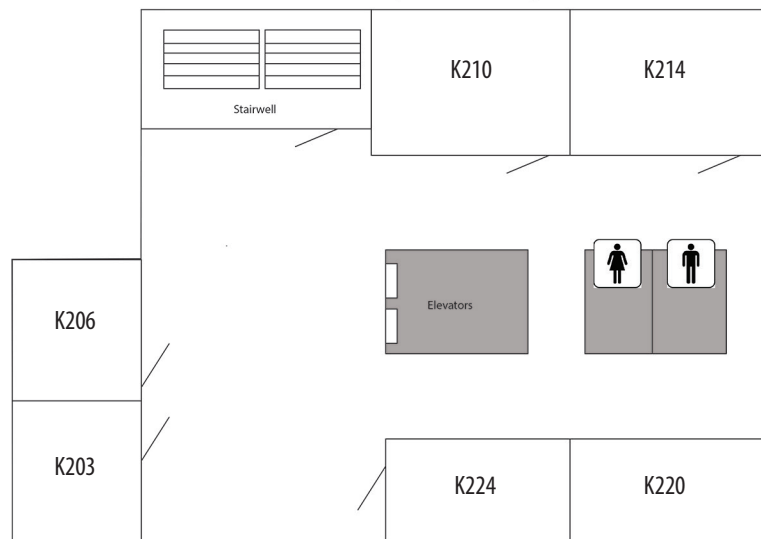
Fifth Floor



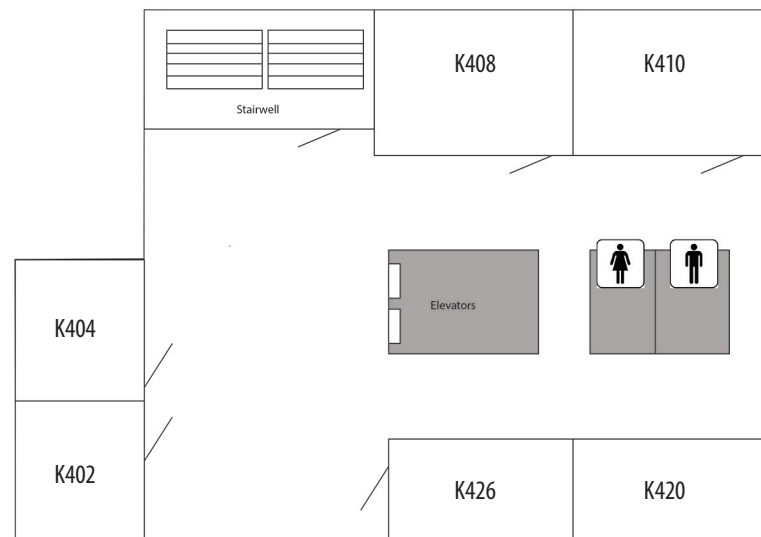
Community College of Allegheny County K. Leroy Irvis Science Building (KLI)



First Floor



Second Floor



Fourth Floor



Wyndham Grand Pittsburgh Downtown Hotel Meeting Rooms

Lobby Level





Concurrent Sessions Quick Locator

TIME SLOT	LEAD PRESENTER	LOCATION	SHORT TITLE
FRIDAY AFTERNOON WORKSHOPS 16 • 3:00 – 6:00 P.M.			
W1-1	Boisvert	M-219	Intro Cybersecurity Curriculum Resources
W1-2	Craiger	L-513	Network Forensics and Incident Response
W1-3	Masino	M-511	Powershell Programming
W1-4	Hawthorne	M-527	Infusing Cybersecurity Content into CS (Part 1)
FRIDAY AFTERNOON PRESENTATIONS 1A • 3:00 – 4:00 P.M.			
P1A-1	Balas	K-103	Course Development with a Faculty/Student Team
P1A-2	Pigg	K-104	Puzzle-Based Learning
P1A-3	Leary	K-106	Expanding the Articulation Model
P1A-4	Abdollahian	K-203	Attack Methods and Security Analyst Challenges
P1A-5	Lawrence	K-206	Cyber-Technology Pathways Across Maryland
P1A-6	Zeolla	K-402	Becoming the Enemy: How Hackers Work
FRIDAY AFTERNOON PRESENTATIONS 1B • 5:00 – 6:00 P.M.			
P1B-1	Floyd	K-103	Developing a University Cybersecurity Center
P1B-2	Portillo	K-104	National Cybersecurity Student Association
P1B-3	Stein	K-106	Labyrinth: DHS Cybersecurity Workforce Tools
P1B-4	Burley	K-203	ACM Joint Task Force: Cybersecurity Curriculum
P1B-5	Zdravkovich	K-206	Co-op and Internship Opportunities
P1B-6	Pruitt-Mentle	K-402	NICE Academic Engagement
SATURDAY MORNING WORKSHOPS 2 • 9:00 A.M.– NOON			
W2-1	Moussavi	M-219	Micro Labs with Raspberry Pi
W2-2	Sands	M-435	CAE2Y Application Process
W2-3	Wolfe	M-511	NETLABs and Virtualization
W2-4	Hawthorne	M-527	Infusing Cybersecurity Content into CS (Part 2)
SATURDAY MORNING PRESENTATIONS 2A • 9:00.– 10:00 A.M.			
P2A-1	Craiger	K-103	Using Virtualization for Teaching Online
P2A-2	Tamburelli	M-220	Build a Robust Reputable InfoSec Program
P2A-3	Machuca	K-106	Next Generation of Cybersecurity Training
P2A-4	Nixon	M-436	Mobile Forensics Tools for Free (Part 1)
P2A-5	Sener	K-203	Transfer Pathways in Cybersecurity Education
P2A-6	Jones	K-206	Multidisciplinary Approaches
P2A-7	Ayyash	K-402	Cybersecurity and Cyber Intelligence
SATURDAY MORNING PRESENTATIONS 2B • 11:00. A.M. – NOON			
P2B-1	Lee	K-103	Multiple Modalities (M&M's)
P2B-2	Valentino	K-104	Orientation to Careers in Cybersecurity
P2B-3	Wesley	K-106	Competency-Based Capstone Course
P2B-4	Nixon	M-436	Mobile Forensics Tools for Free (Part 2)
P2B-5	O'Brien	K-203	Applying the NIST Framework
P2B-6	Manson	K-206	Why Clubs/Centers in Cybersecurity?