

# 2018 Winter ICT Educators' Conference Breakout Sessions

## BREAKOUT SESSION 1 - Thursday 10:30 - 11:20

<p><b>" Answering the Call: Emergent Cyber Security Demands &amp; CA-Cyberhub "</b> (Room Cakebread)</p>	<p><b>Donna Woods</b> CA CyberHub</p>	<p>CA-Cyberhub is a collaborative statewide effort of K-12, CC's, CSU's, and UC's ICT educators, and Government, Private, and Public ICT/Cyber experts and partners. Our mission is to enable a future ethical workforce by expanding and supporting quality cyber training across the state with a one-stop source for best practices and support resources gathered from all cyber training and competition activities in California.</p>
<p><b>" IoT and IT Pros "</b> (Room Silver Oak/Jordan)</p>	<p><b>Stephen Schneiter</b> CompTIA</p>	<p>The use of IoT devices is growing in industry. Many of these IoT devices are utilize cloud based apps. This is a cause of concern for many IT Pros. Some reports state one-in-five IT Pros do not know how many cloud services are in use within their organization. With the increase use of IoT device and cloud application comes increase fear of unauthorized access, data and privacy loss and confidentiality issues. Join us in this session as we discuss the challenges IT Pros face in securing networks with the implementation of IoT devices and how CompTIA A+ helps set a foundation for overcoming these challenges</p>
<p><b>" How to Successfully Leverage Professional Associations "</b> (Room: Opus One)</p>	<p><b>Anna Carlin</b> Fullerton College</p>	<p>Community colleges struggle with mapping knowledge and skills learned in their courses to those skills needed in the workplace. This session covers how common security tasks we teach in our classes ensure compliance with laws and regulations, and how best practices from standards such as the ISO 27002 can be implemented to provide a more secure operating environment. We will also discuss how these security controls can be audited to ensure that their organization is adhering to all policies, laws, and regulations while limiting the risk of being breached.</p>
<p><b>" Teaching IoT: Design Thinking and End-to-End Visualization "</b> (Room Beringer)</p>	<p><b>Dennis Frezzo</b> Cisco/CCSF</p>	<p>In this session we will examine options for using design thinking and end-to-end visualization in the teaching of IoT. An overview of relevant tools and scaffolding will be presented. A summary of recent classroom experiences at two Bay Area Networking Academies will culminate with session participants invited to share their best practices for teaching IoT.</p>
<p><b>" CCNA CyberOps: Defending the Network "</b> (Room: Caymus)</p>	<p><b>Nilay Ghoghari</b> Cisco Systems</p>	<p>Facing mounting challenges from cybercrime, cyberespionage, insider threats, and advanced persistent threats, organizations are establishing SOC teams of security professionals who can monitor, detect, and respond rapidly to security incidents before they cause damage. Students can get ready for this in-demand job market by gaining career ready cyber security knowledge and skills from the CCNA Cybersecurity Operations curriculum. Learn how you can support your students in their quests to be cyber hero and be instrumental to their success in getting high in-demand cybersecurity jobs.</p>
<p><b>WORKSHOP: (10:30-12:20)</b> <b>"Getting Started with Network Programmability"</b> (Room Kistler)</p>	<p><b>Adrian Ilesiu</b> Cisco DevNet</p>	<p>As everything gets connected, automated, and becomes software-based, software development skills are becoming critical for IT professionals. DevNet is driving the software ecosystem in the industry for Cisco. This session will bring a high-level introduction of Network Programmability. You will have an opportunity to get hands-on with an exercise including Postman, Python 3 and an API. Learn how DevNet and NetAcad are partnering to bring high-growth Network Programmability job skills to students.</p>



**Cisco Press**



**Hosted By the Western Academy Support and Training Center (WASTC), Cisco Systems, & CCC ICT/Digital Media Sector Navigators**

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**WESTERN ACADEMY SUPPORT & TRAINING CENTER**

**BREAKOUT SESSION 2 - Thursday 11:30 - 12:20**

<p><b>" Establishing Career Pathways &amp; Career Clusters for Cybersecurity "</b> (Room Cakebread)</p>	<p><b>Chuck Bales</b> Moraine Valley Community College</p>	<p>The National Security Agency has funded a group of schools to investigate recognized career pathways for students, career counselors and parents interested in helping K-12 students establish pathways of study for the cybersecurity profession. This session will present existing models, best practices, new course content and sample dual credit articulation agreements. The session will also provide information and examples for changing the state CTE career clusters pathway to incorporate cybersecurity professions. The presenters are interested in helping high school and community college faculty establish new dual credit programs.</p>
<p><b>" Network Resilience: The New Vision for Cybersecurity "</b> (Room Silver Oak/Jordan)</p>	<p><b>Stephen Schneider</b> CompTIA</p>	<p>In 2017 we saw a continued onslaught of private and public-sector hacks. Some are as trivial as the pro-ISIS graffiti incident back in February on a few state-run servers. Others are as serious as the recently-disclosed, massive Equifax attack of July through September. Why are attacks becoming more serious and impactful, even though we're spending more money on cybersecurity than ever before? Join us to learn more about what our Subject Matter Experts (SME)s and research have been telling us about today's attack strategies, and the tactics we can adopt to improve cybersecurity. We will discuss key events that continue to shape our understanding of effective cybersecurity practice, and how they have impacted the new CompTIA Security+ and CompTIA Cybersecurity Analyst+ certifications, as well as CompTIA's new cybersecurity and infrastructure pathways.</p>
<p><b>" The Latest Business-Led Curriculum for IT and Communications with Cyber Infusion "</b> (Room: Opus One)</p>	<p><b>Ann Beheler</b> Collin College (National CTC)</p>	<p>This session will include the perspective of a member of the National CTC's business council, most likely Mercedes Adams (NetApp). In this session, attendees will learn details about the resulting curriculum as well as the process of how our Business and Industry Leadership Team (BILT) led Collin College to update and revise its IT program to keep current with the ever-evolving demands of the IT workplace and make sure students learn the skills they need. The IT industry continues to evolve and change as new technologies emerge. Educators must keep up. Many programs use a traditional "business advisory council" approach: advisers meet once a year, hear a program update, and offer their tacit approval. There is frequently no specific feedback or recommendations. The BILT model, by contrast, encourages leadership groups that actively co-lead, not passive advisory groups that just approve. BILT members take an active role (including an annual job skill analysis update, guiding program curriculum to make sure educators get students workforce ready.) Ideally, BILTs meet quarterly and engage business members who know what entry-level workers need to know to be readily hired.</p>
<p><b>" Packet Tracer Activity Wizard "</b> (Room Beringer)</p>	<p><b>Bob Samson and Dennis Frezzo</b> WASTC and Cisco</p>	<p>This session will concentrate on: Opening the Packet Tracer Activity Wizard, the integrated Answer Network, Initial Network, Grading rubric, Variables, and Locking/unlocking desktop items and functions. Completion of this session will give an instructor information on how to enter and analyze a Packet Tracer lab Activity Wizard to determine the values used for grading and start the creative process for making your own Packet Tracer Activities. Basic working knowledge of Packet Tracer and bringing a laptop with PT version 7.1 installed is suggested.</p>
<p><b>" Compliant But Breached "</b> (Room: Caymus)</p>	<p><b>Anna Carlin</b> Fullerton College</p>	<p>Community colleges struggle with mapping knowledge and skills learned in their courses to those skills needed in the workplace. This session covers how common security tasks we teach in our classes ensure compliance with laws and regulations, and how best practices from standards such as the ISO 27002 can be implemented to provide a more secure operating environment. We will also discuss how these security controls can be audited to ensure that their organization is adhering to all policies, laws, and regulations while limiting the risk of being breached.</p>

### BREAKOUT SESSION 3 - Thursday 1:30 - 2:20

<p><b>" Cyber Apprenticeship: How it Works "</b> (Room Cakebread)</p>	<p><b>Nancy Jones and Tobi West</b> Coastline College</p>	<p>Coastline Community College has received a one million dollar apprenticeship grant focusing on developing a cybersecurity workforce. Our grant is registered with the State of California, Department of Apprenticeship and provides students with a sequence of seven cyber certifications/courses via distance education with a paid apprenticeship experience. We have tried to develop a sustainable model that earns FTES for others to replicate. Come and learn what we have done and what we are planning for the future</p>
<p><b>" Forging Data Science Skills with Dell EMC and NDG NETLAB+ "</b> (Room Silver Oak/Jordan)</p>	<p><b>Kim Yohannan</b> Dell EMC and NDG</p>	<p>"Data Scientists earned on average \$128,240 in 2016. And thanks to the boom in all things data and big data, demand for this skill isn't going away anytime soon. Jobs for data scientists are expected to rise 16% through 2024." 1 There is a BIG need to develop BIG data and data analytics skillsets. Dell EMC can help you guide students towards becoming key contributors on Data Science teams through our Dell EMC External Research &amp; Academic Alliances Education Program. The ERAA Education Program is fostering the next generation of IT professionals through a variety of technology-based courses made available to Universities including Data Science and Big Data Analytics (DSA). In addition, we are working with NDG to add the Dell EMC DSA labs to NETLAB+. This session will provide an overview of the big data job market, the Dell EMC DSA course, and support by NDG for the DSA labs. Business Insider. "6 tech jobs that will grow like crazy in 2017 and beyond", October 2016</p>
<p><b>" A National First: State of California IT Apprenticeship "</b> (Room: Opus One)</p>	<p><b>Julie Whitten</b> GovOps, State of CA <b>Kelly M. Mackey</b> Department of Apprenticeship Standards <b>David Ellis</b> Mission College <b>Kevin Anderson</b> Sacramento City College</p>	<p>This apprenticeship program partners the state with higher education to help address gender pay equality and provide upward mobility opportunities for existing employees. The IT Apprenticeship Program is offered jointly by SEIU Local 1000, GovOps, Mission College and Sacramento City College. It is designed to provide state employees in the greater Sacramento area, who meet specific criteria, IT skills and experience.</p> <p>It is currently designed for cohorts of up to 30 apprentices to enter a Training and Development Assignment as an Associate Information Systems Analyst for a period of up to two years.</p> <p>It 's back to school time for the 11 apprentices representing nine state departments who are participating in the first public sector Information Technology (IT) Apprenticeship program in the country. The pilot program began this past July as part of the Governor's Civil Service Improvement Initiative.</p>
<p><b>" NetAcad Technical Update and Q&amp;A "</b> (Room Beringer)</p>	<p><b>Echo Rantanen</b> Cisco Systems</p>	<p>This session will include the latest technical and program updates for Cisco Networking Academy. It will also include time for Q&amp;A with the NetAcad Technical Manager for the US</p>
<p><b>"Cyber Security for Industrial Control Systems "</b> (Room: Caymus)</p>	<p><b>Rafat Elsharef</b> Milwaukee Area Technical College</p>	<p>Discuss Cyber Security as it relates to Industrial Control Systems. Areas to discuss in this presentation : What is industrial control system as it exist now, How ICS is going to be connected to the internet, Standards, Cyber Security and ICS , Real Cases of ICS and Security, what we learned from it, recommendations and future work in this field. Also I'm in the process of working on capturing real traffic from the lab using wireshark and may discuss the analysis of my findings.</p>
<p><b>WORKSHOP:</b> (1:30-3:20) <b>"Practical Malware Analysis"</b> (Room Kistler)</p>	<p><b>Sam Bowne</b> CCSF</p>	<p>Learn how to analyze Windows malware samples, with a hands-on series of projects in a fun, CTF-style environment.</p>

### BREAKOUT SESSION 4 - Thursday 2:30 - 3:20

<p><b>" How To Develop Cybersecurity Athletes "</b> (Room Cakebread)</p>	<p><b>Dan Manson</b> Cal Poly Pomona</p>	<p>In 10 years cybersecurity competitions will be as popular for students in middle school, high school and college as traditional sports. This presentation shows how and why cybersecurity athletes will provide talent and numbers needed to help meet industry and government workforce needs.</p> <p>Cybersecurity competitions provide an ongoing virtual training ground for participants to develop, practice and validate their cybersecurity knowledge and skills using high-fidelity simulation environments. Those who participate in cyber competitions are athletes with the same training, passion and coolness as traditional physical athletes. However, there are more opportunities for these cyber athletes to go pro. Not only do participants practice their computing talents, but they also learn intangible skills such as problem-solving, teamwork and communications. Each ability is valuable for individuals looking to launch a career in cybersecurity</p>
<p><b>" Teach the Next Big Thing: Virtualization and Digital Workspace Technology "</b> (Room Silver Oak/Jordan)</p>	<p><b>Susan Coefield</b> VMware, Inc. and NDG</p>	<p>This session will cover VMware's redesigned academic program and NDG's new virtualization course</p> <p>VMware has partnered with NDG to develop an "Introduction to Virtualization" micro-course that can be a chapter in a course or a standalone demand generation content to help your self-paced learners.</p>
<p><b>" Increase Female Interest and Enrollment in Computer Information Technology (CIT)"</b> (Room: Opus One)</p>	<p><b>Chenchutta Jackson</b> Volunteer State Community College</p>	<p>Volunteer State Community College will share their initiatives to increase female enrollment in computer information technology. Details of the initiatives as well as supporting data will be presented and explained.</p> <p>Filling and closing the gap of girls and women, entering information technology/ computer science should be the duty of everyone. Statistics shows the long-term dominance of males in the computer science and information technology fields. With this inequality being the norm, society is setting itself up for failure. Research shows a consistency that exists when the industry shifts from all male technology teams to ones that are diverse. The data indicated that the development of better products increased morale, awareness of different marketplaces and demographics increased, and product perception improved due to the hiring of women in roles within technology companies. However, with this data and research showing clear positives, there is still a steady decline of women and girls interested in a STEM fields. Therefore, we are still perplexed with the questions of how do we change how women and girls perceive what computer science and information technology is and what could be done with a degree. By implementing strategies from a recent Collin College CTC Diversity workshop, Volunteer State Community College (VSCC) developed successful initiatives to increase enrollment of female students in Computer Information Technology. These efforts include but are not limited to: outreach in high schools, a coding camp for middle school girls, 'Lunch &amp; Learn' events for adult students looking for a new degree option. In this session, attendees will learn details of efforts for each initiative and data that supports the increase in enrollment and interest in CIT.</p>
<p><b>" Programming for Networking &amp; IoT: A New Frontier "</b> (Room Beringer)</p>	<p><b>Nilay Ghoghari</b> Cisco Systems</p>	<p>Programming is the language of the Digitized World and critical for IoT. Students today will need software programming skills to be successful in the IT field. Learn how NetAcad programming courses, such as Python Essentials, provide the coding foundation for Networking &amp; IoT.</p>
<p><b>" How Secure is your Bank Account Connection from Starbucks: Understanding SSL/TLS"</b> (Room: Caymus)</p>	<p><b>Joseph Vogtembing</b> Prince George's Community College</p>	<p>How secure is your Connection to your bank Account from a Starbucks Wifi: Understanding Secure Socket Layer (SSL)_Transport Layer Security (TLS)</p> <p>We all do this many times per day, through our Cell phone, laptops, desktop devices, we often connect to any Wi-Fi available and access some sensitive information: emails, bank accounts etc. How secure is it? Shall we be doing it?</p>

### BREAKOUT SESSION 5 - Thursday 3:30 - 4:20

<p><b>" Infusing Vital Employability Skills Into Cybersecurity Programs "</b> (Room Cakebread)</p>	<p><b>Dan Manson</b> Cal Poly Pomona</p>	<p>This session will introduce six new classroom activities designed to equipping students with employability skills requires more than just a capstone project. The Necessary Skills Now project paired advanced cybersecurity instructors with employers to develop a set of pilot projects that emphasize vital employability skills by integrating them into technical content in existing courses. Come learn about our field-testing phase, upcoming professional development workshops, and how your institution can participate.</p>
<p><b>" Network Deployments for Specialized Environments "</b> (Room Silver Oak/Jordan)</p>	<p><b>John Grindley</b> Straight Up Technologies</p>	<p>Straight Up Technologies will present how we use Cisco hardware and software for specialized environments Straight Up Technologies provides customized network solutions for leading-edge Fortune 500 companies, film/television productions and professional sports franchises. Our competitive edge resides in our dedication to customer service, demonstrated through stellar references and repeated business since 2004</p>
<p><b>" Driving Engagement Amongst Youth of Color in Tech "</b> (Room: Opus One)</p>	<p><b>Madeira Dynes</b> Hack the Hood</p>	<p>Hack the Hood hires local young people and trains them to provide many critical services to small businesses challenged by displacement and construction. Youth get real-world, hands-on job training, mentorship, and exposure to high-paying careers that match their interests, all while giving back to their community in a meaningful way. Small Businesses get a free online visibility and marketing services, and the opportunity to mentor a next generation of entrepreneurs.</p> <p>Hack the Hood bridges youth, the small business community, and the local tech industry to address several needs in a unique way, creating a virtuous circle that has an economic multiplier impact around neighborhood revitalization, while increasing participants resources to remain in their home city in the face of rapid rising costs of living and doing business although addressing the need for 21st century career education for low-income youth of color. While Hack the Hood's curriculum is focused on tech careers, we believe aspects of our approach could be integrated into almost any workforce and training provider's practice to increase engagement and outcomes for disconnected youth regardless of sector.</p>
<p><b>" Updates for NDG NETLAB+ labs and courses"</b> (Room Beringer)</p>	<p><b>Rich Weeks</b> Network Development Group</p>	<p>NDG works with academic institutions and industry partners to help learners develop job skills. During this session, NDG will provide an overview of labs supported by the NDG NETLAB+ lab solution and online courses developed by NDG. The presentation will cover NETLAB+ labs including Cyber Security, CCNA Security (5506 lab updates), EMC Academic Alliance Big Data Analytics, new virtualization VMware Workstation labs developed to support a new Introduction to Virtualization course and Red Hat Academy OpenStack labs to provide an overview of the cloud operating system. NDG will also present updates for the NDG Linux courses, a new Introduction to Virtualization short course being developed by NDG with the VMware IT Academy and a new Introduction to Data short course being developed by NDG and the EMC Academic Alliance.</p>
<p><b>" Have My Smart Lightbulbs Been Weaponized "</b> (Room: Caymus)</p>	<p><b>David Zeichick</b> California State University, Chico</p>	<p>A project in which students create their own IoT device, monitor the device's network traffic, and write a simplified anomaly detection program on a router.</p> <p>Projects based on current, real-world computer security issues arouse student curiosity in the field. Incorporating hands on exercises into these projects enables students to conceptualize computer security concepts that are often theoretical. A current issue plaguing the industry is poorly designed, misconfigured Internet of Things (IoT) devices found in the home. To address this issue students created their own IoT device and analyzed the security implications of their design.</p>
<p><b>WORKSHOP:</b> (3:30 - 5:20) <b>"Programming Smart Devices in Cisco Packet Tracer"</b> (Room Kistler)</p>	<p><b>Echo Rantanen</b> Cisco Systems</p>	<p>This hands-on session includes creating and programming a smart device in Packet Tracer and connecting Packet Tracer to real-world data using an API. This session requires Packet Tracer 7.1.</p>

### BREAKOUT SESSION 6 - Thursday 4:30 - 5:20

<p><b>" Cyber Defense Competitions and Higher Education "</b> (Room Cakebread)</p>	<p><b>Irvin Lemus</b> Cabrillo College &amp; BACCC</p>	<p>A look into how higher education can team up with local MS/HS to build opportunities that benefit the students and institutions involved.</p> <p>This presentation focuses on how Community Colleges and other institutions can team up with their local Middle/High schools via competitions to create opportunities for pathways, dual enrollment, and other potential next steps.</p>
<p><b>" Get Started with Image Recognition with Apache Spark "</b> (Room Silver Oak/Jordan)</p>	<p><b>Dave Nielsen and Ashley Zhao,</b> Intel Software</p>	<p>Deep Learning is a fascinating area of innovation. Not just in Silicon Valley, but all over the world. Deep Learning is often characterized as the most visual form of Artificial Intelligence, which will remake our world with self-driving cars, photo entertainment, video surveillance, etc. Join this talk by industry veteran, Dave Nielsen of Intel and Ashley Zhao, a recent graduate from UC San Diego. Expect to hear a high level introduction along with a simple demonstration of Image Recognition using Deep Learning in Apache Spark using the open source library BigDL</p>
<p><b>" Bridging The Gap Between Manufacturing Industries And Engineering Education "</b> (Room: Opus One)</p>	<p><b>Wilkistar Otieno, Naira Campbell-Kyureghyan, and Rafat Elsharef</b> University of Wisconsin-Milwaukee <b>Michael Cook</b> Rockwell Automation</p>	<p>The exponential growth of the worlds' middle-class population and opportunities and values of Industrial Internet of Things have been the fundamental enablers for the Connected Systems Industrial Framework. These advancements provide tremendous opportunities for companies to increase their productivity and quality, reducing the time to market, productions costs and equipment downtime, while ensuring network and data security. Additionally, the emergence of collaborative mobile robots has certainly provided more equipment connectivity, especially in spaces that were traditionally reserved for humans, such as factory floors, warehouses, office spaces and even homes, thus necessitating the need to re-visit safety standards. These rapid advancements have not only created new opportunities, but have formed a gap between industry needs and engineering education, which is widening at a fast rate.</p> <p>Hear about a case a successful industry-university partnership between the University of Wisconsin-Milwaukee, Rockwell Automation and Cisco in the creation and implementation of a course on Connected Systems Concepts. This cross-disciplinary course covers a range of timely subjects including an analysis of global market and economic trends, industrial globalization and policies, internet of things fundamentals (IoT), remote monitoring/control, network architecture and cybersecurity, big data and data analytics, and organizational behavioral changes resulting from IoT implementation.</p>
<p><b>" Hardening Your Linux System: An Introduction to SELinux "</b> (Room Beringer)</p>	<p><b>Trevor Chandler</b> Lonestar College</p>	<p>Workshop will cover the following:: * What is SELinux? * Benefits of SELinux * SELinux concepts and terminology * SELinux commands * Understand the differences between SELinux and other access control or security mechanisms * Understand the security challenges that SELinux addresses * Demonstration of the protection that SELinux provides If attendees would like to engage with some of the items that will be demonstrated, they are encouraged to bring a laptop with CentOS installed on the laptop or within a virtual machine. Attendees should have an intermediate-level of Linux skills of Linux.</p>
<p><b>" Why Teach Cyber Security - Virtual Tour of Microsoft's Security and Response Center"</b> (Room: Caymus)</p>	<p><b>Douglas Spindler</b> College of Marin</p>	<p>When it comes to cyber crimes there are no borders. Take a virtual tour of Microsoft's Security and Response Center where Microsoft partners Apple, Cisco, and law enforcement agencies from around the world to investigate cyber crimes. Learn about cyber crimes and the affect they have on society.</p>



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**BREAKOUT SESSION 7 - Friday 10:30 - 11:20**

<p><b>" Increasing STEM Participation Through Competition "</b> (Room Cakebread)</p>	<p><b>Carey Peck</b> LAUSD, CyberPatriot Program</p>	<p>Presenting the LAUSD model for the development, management, and financing of a computer security program anchored on the CyberPatriot program. The presentation will include a sire budget model, how to obtain expert coaching, online resources, and lessons learned from the largest public school program in the country, and from the current National Champions</p>
<p><b>" Wireshark "</b> (Room Silver Oak/Jordan)</p>	<p><b>Laura Chappell</b> Wireshark University</p>	<p>Laura Chappell is an American researcher and educator. She is best known as the founder of Wireshark University. She has authored two publications on Wireshark: Wireshark Network Analysis: the Official Wireshark Certified Network Analyst Study Guide · Wireshark 101: Essential Skills for Network Analysis. You don't want to miss this Laura's return to the ICT Educator's Conference.</p>
<p><b>" Learning Portfolio &amp; Platform Overview "</b> (Room Opus One)</p>	<p><b>Barbara Termaat</b> Cisco Systems</p>	<p>Updates on how the NetAcad learning and platform portfolio is evolving to address the increasing market demand for networking, security, and IoT skills using learning tools and modalities that will keep our students at the front of the line for entry-level jobs into the future. We'll also look at some examples of how skills-to-job pathways are evolving as a result of the digital transformation.</p> <p>The Cisco NetAcad learning portfolio has grown significantly, and will continue to expand to provide more relevant pathways for different types of learning programs and evolving job descriptions. How can you confidently work with other instructors and decision makers to build learning pathways with so many new options? Introducing the new NetAcad Portfolio Card Deck! See how this fun, interactive tool helps you to more quickly advance the conversation—and take a deck home with you to put it into practice!</p>
<p><b>" Audio Networking: Facts and Fiction "</b> (Room Beringer)</p>	<p><b>Andrew Maz</b> Cerritos College</p>	<p>Audio networking presents an ease of managing audio that rivals traditional analog and digital connections. Devices can easy to setup and configure, with audio being routed to a variety of locations over standard network connections. Documentation for protocols such as Dante are plentiful, but even so, there are significant pitfalls one can encounter if not careful. Creating audio networks requires knowledge beyond traditional networking and a different approach to planning and deployment. Understand audio production workflows is critical when designing this type of network. This presentation will introduce audio workflows and how they can integrate with network environments. The examples draw from personal experience in designing and implementing audio network in fixed environments and mobile systems. Strategies for planning and designing audio networks in new facilities will also be explored</p>
<p><b>" Benefits of the NSA/DHS Centers of Academic Excellence Program "</b> (Room: Caymus)</p>	<p><b>Stanley Kostka</b> Moraine Valley Community College</p>	<p>This session will provide an overview of the cyber defense Centers of Academic Excellence program sponsored by NSA/DHS. The session will review designation criteria, application timelines and mentoring programs. The session will also review benefits to institutions that earn this designation.</p> <p>The cyber defense Centers of Academic Excellence program was created to establish a national criteria for schools preparing the nation's future cyber defenders. This session will provide an overview of the program requirements, identify current schools that have earned the designation and review the benefits of earning this designation. You will learn about funding available to assist in the cost of completing the application. The presenter will also discuss previous grant opportunities for CAE institutions and provide information for new schools interested in the application process.</p>
<p><b>WORKSHOP:</b> (10:30-12:20) <b>"Hands-On Introduction to Cisco's IoT Fundamentals Curriculum"</b> (Room Kistler)</p>	<p><b>Kerry A. Bruce</b> WASTC Instructor Trainer/CNM</p>	<p>In this session we will provide an overview of Cisco's New IoT Curriculum and conduct a guided hands-on IoT activity where you will build an IoT device utilizing Raspberry Pi, Arduino, Microbit, or similar microcontroller/System on a Chip (SoC).</p> <p>"The Cisco Networking Academy's IoT Fundamentals curriculum provides students with a comprehensive understanding of the Internet of Things (IoT). It develops foundational skills using hands-on lab activities that stimulate the students in applying creative problem-solving and rapid prototyping in the interdisciplinary domain of electronics, networking, security, data analytics, and business."* The hands-on IoT activity we have you assembling and coding and Internet connected IoT device to demonstrate the comprehensive nature of IoT related activities in your CIS/CS programs.</p> <p>*<a href="https://www.netacad.com/group/resources/iot-fundamentals/2.0">https://www.netacad.com/group/resources/iot-fundamentals/2.0</a></p>

## BREAKOUT SESSION 8 - Friday 11:30 - 12:20

<p><b>" CyberSecurity Education: Make Learning Coding Great Again!"</b> (Room Cakebread)</p>	<p><b>Oner Celepcikay</b> Wharton County Junior College</p>	<p>Teaching Cybersecurity in getting students excited about Learning Coding in two phases: First, students will learn cybersecurity concepts such as good password management, encryption to protect data, malware, and also be trained on hacker-attack threats including SQL Injection, Data Theft, Social engineering etc. Secondly, students will be introduced to higher level programming languages (Python) and write simple apps and games that will reinforce the cybersecurity concepts they learned. Students will be trained to be White Hat Hackers through by using virtual machines, playing capture-the-flag (CTF) games and hacking lab exercises Expected Outcomes: - Students will be more interested in pursuing computer science degree possibly specializing on cybersecurity - This effort will help to fill much needed cybersecurity workforce - Students will be attracted toward learning coding and programming languages.</p>
<p><b>" Bridging the Gap Between Education and Industry in the Digital Transformation "</b> (Room Silver Oak/Jordan)</p>	<p><b>Trisha Turlington</b> Red Hat</p>	<p>As technology drives new innovation, we are creating an ever-evolving skills gap in industry unless we prepare our graduates with the necessary skills to keep up with the demands of enterprise. The digital transformation includes a huge push to the cloud and the involvement of emerging technologies such as containers and micro-services. While people and talent represent the single biggest issue when it comes to furthering business innovation and the success of technology companies, Red Hat steps in as a market leader in Linux and Open Source to help higher education institutions keep pace with the growing demands of enterprise Partnering with Red Hat ties higher education institutions to our market leadership and provides them with the resources to become an active driver in fueling technological innovation in their communities. As you instill open source principles early in a student's career, you are not only leaving a lasting impact on the student, but you are also becoming a conduit to local companies for the next generation of IT leaders. Our program is based on the premise that learning involves not just thinking, but doing. Join us to learn how you can challenge your students with rigorous, hands-on instruction, developed collaboratively by Red Hat engineers, partners, and consultants, that will help ease the pathway from lecture and labs to relevant commercial applications</p>
<p><b>" DevOps Nation: A Regional Collaborative Degree &amp; Certificate Program "</b> (Room Opus One)</p>	<p><b>Courtney Brown</b> Merritt College</p>	<p>The Knowledge Skills and Abilities (KSA) required by DevOps are too broad for any one college to develop and maintain curriculum. Several colleges joined together to create a degree while developing their own specialty. Collaborative program agreements allow regional adaptation to rapidly-changing, short technology cycles like DevOps. Through multi-college shared ownership drive and secure enrollment at each college balancing supply/demand, &amp; leveraging Regional Joint Venture investments such as Netlab. If your College has implemented the IT Model Curriculum or any of its components, you are ready to join the RJV by selecting a pathway.</p>
<p><b>" Future of Networking "</b> (Room Beringer)</p>	<p><b>Rick Graziani</b> Cabrillo College</p>	<p>Future of Networking: Preparing for network automation and programmability without going crazy</p>
<p><b>" NSA CAE Centers Regional/National Resource Centers "</b> (Room: Caymus)</p>	<p><b>Corrinne Sande and Nancy Jones</b> CyberWatch West and Coastline College</p>	<p>In order to assist colleges that are aspiring toward the Center of Academic Excellence (CAE) designation, 9 colleges have been named CAE Regional Resource Centers. These centers provide assistance to colleges in their region and help to build the overall cybersecurity community. In addition, four colleges have been named CAE National Resource Centers. These centers provide mentoring and other services nationwide. Come to this session to learn how your college can participate in this initiative and how your college can earn the highly coveted Center of Academic Excellence in Cyberdefense designation.</p>





## BREAKOUT SESSION 9 - Friday 1:30 - 2:20

<p><b>" CyberTech Girls "</b> (Room Cakebread Silver Oak/Jordan)</p>	<p><b>Tobi West</b> Coastline College</p>	<p>As an early part of the pathway to cybersecurity professions, Coastline Community College held its second annual hands-on technology event called CyberTech Girls. Middle school and high school girls were introduced to a variety of technology topics and cybersecurity roles. Over 100 girls participated and 30 volunteers supported the event, including representatives from CrowdStrike, Synopsis, JPL/NASA, Kaiser Permanente, Cheyenne High School, and Northrup Grumman. College students from Coastline Community College and Cal Poly Pomona helped run the activities and engage with the girls to develop their interest in technology and cybersecurity related fields. Learn more about CyberTech Girls to develop your own or find out how we might work together to bring a CTG event to your area.</p>
<p><b>" The Ever-Changing Landscape of Skills for the Cybersecurity Super Hero "</b> (Room Silver Oak/Jordan)</p>	<p><b>Stephen Schneider</b> CompTIA</p>	<p>Throughout 2017 we continued to see the rise of cybersecurity breaches in every industry. Outlooks for 2018 show even more attacks expected. Technology changes constantly! The IT Pro must be armed with the right set of skills and tools to protect and defend the network! More and more devices are connected to our networks, attacks can come from internal, external and IoT threats. Marketing teams are busy trying to persuade administrators to purchase their vendor's "cure all" tool to save the day. The real IT Pro Super Hero knows there is no such thing as a one-size-fits all solution. In this session we will look at the desired skill sets cyber-crime stoppers need to have combined with the right tools to effectively combat the bad guys and save the company data!</p>
<p><b>" Incorporating Secure Coding Concepts in the Curriculum "</b> (Room Opus One)</p>	<p><b>Rajiv Malkan</b> Lone Star College - Montgomery</p>	<p>Everyday we are hearing about data breaches in the news. More security vulnerability are due to coding errors that go undetected during the development stages of the software life cycle. Incorporating secure software development process is one of the key to decreasing the vulnerabilities for potential exploitation by hackers. Many new products are enhanced with embedded software such as -- Autonomous Vehicles, Internet of Things, Software Defined Networks and Infrastructure -- it is critical to teach secure coding and software security concepts in the curriculum. This presentation will demonstrate how to incorporate secure coding tools in the curriculum. Presenter will demonstrate projects and labs used to teach secure coding concepts in programming for web, mobile and/or enterprise development. Project and lab handouts will be distributed so that the participants can use it in their classes for Spring 2018.</p>
<p><b>" Azure Workshop - Learn the Basics of Azure in an hour "</b> (Room Beringer)</p>	<p><b>Douglas Spindler</b> College of Marin</p>	<p>Azure is Microsoft's public cloud service. Understand what the difference is between a virtualized server, a virtualized virtual environment and Docker. Many companies are abandoning their on premise private cloud servers in favor of Microsoft's Azure to save time and money. In this workshop you will be introduced to Microsoft Azure. Learn how to provision Windows and Linux servers, manage disk drives and configure network settings. Cloud computing is chaining the role of IT Pro into DevOps and the skills a DevOps professional needs to know. This is a hands-on workshop.</p>
<p><b>" The C5 Cybersecurity Curriculum Materials "</b> (Room: Caymus)</p>	<p><b>Melissa Dark</b> Purdue University (C5)</p>	<p>This session will show teachers how to access a set of cybersecurity curriculum modules that have been developed by C5, a National Science Foundation funded project.</p> <p>Eight cybersecurity instructional modules and a framework for an integrated course were developed as part of the NSF funded C5 project. All C5 instructional modules map in varying degrees to three curricular standards, which are AP CSP, NSA CAE2Y Knowledge Units, and ACM CS 2013. The seven instructional modules have been integrated to create the framework for an AP CSP-aligned course, CSP-Cyber. This session will provide an overview of the modules, and show teachers how to access and use them in their classes.</p>
<p><b>WORKSHOP (1:30 - 2:30):</b> <b>"Teaching the Internet of Things Has Just Become Far More Interesting"</b> (Room Kistler)</p>	<p><b>William Saichek</b> Orange Coast College</p>	<p>The IoT explosion has led to new developments in easy-to-use—and easy-to-program—microcontrollers. This session will continue the discussion of how the IoT can be integrated into your curriculum and focus on exercises in programming microcontrollers using Samsung SmartThings, Amazon Echo, and Raspberry-PIs/Arduinos.</p> <p>Last year we demonstrated how Internet of Things (IoT) devices can be incorporated into your curriculum using cost-effective technologies such as media distribution, lighting, and environmental controls. The IoT explosion has led to new developments in easy-to-use—and easy-to-program—microcontrollers. Samsung, Amazon, and others have entered the marketplace and are providing their APIs at no cost and creating developers' networks to encourage new applications and services. This session will continue the discussion and provide a hands-on exposure of how IoT can be integrated into your curriculum and focus on exercises in programming microcontrollers using Samsung SmartThings, Amazon Echo, and Raspberry-PIs/Arduinos.</p>