



SPONSORS AND CONTRIBUTORS













































THURSDAY AGENDA

	YESTERDAY'S FOUNDATIONS	TODAY'S WORKFORCE	TOMORROW'S SKILL		
8:30- 9:00a	Jason Warfield, Head of Solutions and Adoptions Engineering at ThousandEyes				
9:00- 9:30a	Maria Medrano, Sr. Director, Diversity Partnerships & External Engagement, Google				
9:40- 10:10a	[1.1] NDG "NETLAB+ Update"	[3.1] CompTIA "The "Skillable" IT Worker: An Investigation"			
10:20- 10:50a	•	[2.2] Jobs for the Future "Envisioning the Future of Lifelong Learning"	[3.2] Cisco Systems "Prism of Possibilities with Cisco DevRel's Network Programmability & Automation"		
11:00- 11:30a	[1.3] Cisco Systems "New Classes, Certifications & Opportunities with Skills for All"	[2.3] Bay Cyber League "Year 2 - Increasing Diversity in the Cybersecurity Talent Pool through CyberCamps & Competitions"	[3.3] Red Hat "Red Hat Community and Social Responsibility"		
LUNCH		Words from Vint Cerf			
12:30- 1:00p	[1.4] Chabot College "Wireshark Updates, Tips & Custom Profiles"	[2.4] Collin College (IT Skill Standards 2020 and Beyond) "Using the BILT Model: Developing Skill Standards, Maximizing Employer Relationship, and Getting Students Workforce Ready"	[3.4] Cisco Networking Academy "NetAcad Technical Updates"		
1:10- 1:40p	[1.5] Chappell University "QUIC Analysis"	[2.5] Google Cloud "Prepare Your Students For A Cloud-First Job Market"	[3.5] Convergence Technology Center "Diving Into 5G Technologies"		
1:50- 2:20p	[1.6] Riverside City College "CAE-CD Institutional Readiness	[2.6] VP, Client Solutions "Work Force Trends"	[3.6] University of Hawaii Maui College "Teaching in the Classroom - Cryptocurrencies, Blockchains and NFTs"		
2:30- 3:15p		AND THE WINNER [Raffle Race]			

FRIDAY AGENDA

	YESTERDAY'S FOUNDATIONS	TODAY'S WORKFORGE	TOMORROW'S SKILL		
8:30- 9:00a	Ashley Sequeira, Technical Sales Program Lead at Google				
9:00- 9:30a	Peter Coffee, VP for Strategic Research at Salesforce				
	[1.7] National CyberWatch Center at Prince George's Community College "Ready Or Not? Determining A Student's Readiness For An Information Security Fundamentals Course"	[2.7] IBM "IBM SkillsBuild"	[3.7] UiPath "Robotic Process Automation in the Classroom with UiPath"		
10:20- 10:50a	[1.8] NDG "Seeking Feedback On How To Help Programs Using Netlab+"	[2.8] VMware "Unlock Your Digital Learning With Vmware It Academy"	[3.8] Ascend Education "Filling the Gap for Microsoft Academic Learning"		
11:00- 11:30a	[1.9] Great Falls College, Montana State University "Hy-Flexing your Classroom"	[2.9] University of South Carolina "Netlab Libraries on Security Fundamentals (Sec+) and Programmable Switches"	[3.9] Wharton County Junior College "Quantum 101 - Awareness class for Quantum Information Science and Technology"		
LUNCH	Laura Quintana, VP & GM at Cisco Networking Academy				
12:30- 1:00p	[1.10] Cosumnes River College, Portland Community College "Create More Meaningful Learning Outcomes with Bloom's for Computing"	[2.10] Northwest State Community College "CyberSecurity in Advanced Manufacturing"	[3.10] uCertify "Tomorrow's Skills"		
1:10- 1:40p	[1.11] Cypress College "Best Practices in Cybersecurity Pathway Education; A 3-Year NSF-ATE Project"	[2.11] Inspirame "Tecoguide.com - Your Virtual College Advisor"	[3.11] Bay Area Community College Consortium "Virtual Production - The Convergence of Digital Media and ICT"		
1:50- 2:20p	[1.12] Cabrillo College "The Power of Professional Associations - Connect Learn Grow"	[2.12] Fresno State University "The California Cybersecurity Career Education Pipeline and Pathway"	[3.12] Laney College "BaylCT Regional Joint Venture: Artificial Intelligence & Data Analytics"		
2:30- 3:15p		AND THE WINNER [Raffle Race]			

TRACK 1: YESTERDAY'S FOUNDATIONS Day 1



9:40-10:10a	NETLAB+ Update	NDG Kaan Uzun and Richard Weeks	What is new with NETLAB+: if your organization hosts a NETLAB+ system, we have exciting updates to share. During this session, we will review the latest NETLAB+ software upgrade, including a new major release we recommend you implement. This version has been updated based on projects we worked on with a government lab. We will share with you the upgrade features, as well as the steps for you to upgrade your NETLAB+ system. During this session, we will briefly discuss how to upgrade your vSphere infrastructure. We will also briefly share lab updates.
10:20-10:50a	Best Practices for Developing and Hosting Successful Professional Development Events Collin College (National Convergence Technology Center) Ann Beheler and Mar Dempsey		The NSF's National Convergence Technology Center (CTC) regularly offers faculty professional development events across various formats, from lengthy in-person workshops to streamlined webinars. This includes the popular Working Connections series that's been running in North Texas since 2002 and attracts faculty from across the country. Surveys show that Working Connections – and its 2850 total faculty enrollments – has impacted at least 149,000 students. Attendees will hear best practices and implementation strategies developed across years of successful professional development events and learn from the CTC's successes and mistakes. Topics include event planning, topic selection, attendee registration, and survey evaluations.
11:00-11:30a	New Classes, Certifications & Opportunities with Skills for All	Cisco Systems Echo Rantanen, Ben Jehring and Patty Sloan	Learn about the Skills for All Platform from Cisco Networking Academy. Presentation includes information on courses available on SkillforAll.com, two entry level certifications coming soon from Cisco (Cybersecurity & Networking) and a demo of the features and functionality.
12:30-1:00p	Wireshark Updates, Tips & Custom Profiles	Chabot College John Gonder	Wireshark continues to be an important way to develop critical protocol chops for Cisco Academy students. Recent Wireshark versions and updates have brought new and useful features. We will examine these changes and useful Wireshark Custom Profiles collected and curated from the Wireshark masters. Custom Profiles are a great way to teach and a flexible toolset that they will use over and over. The Take-away will be a huge set of profiles to seamlessly plug in for a streamlined presentation, identification, and analysis of basic protocols like DHCP, DNS, TCP, TLS, ARP, VoIP, WIFI, IPv4, IPv6, STP, OSPF, HSRP - and also for analyzing hacks and malware.
1:10-1:40p	QUIC Analysis	Chappell University Laura Chappell	Will QUIC be the "TCP killer"? In this session, Laura Chappell takes you through the essential "must know" information about the QUIC protocol - its popularity, structure/terminology, key concepts, and use of streams over streams. Watch Laura configure her system to capture TLS session keys, capture and save some QUIC traffic, apply the decryption keys, and build a quick QUIC Wireshark profile to help analyze QUIC traffic.
1:50-2:20p	CAE-CD Institutional Readiness	Riverside City College Skip Berry and Tobi West	Learn what you can do now to prepare your institution for future designation as a CAE in cyber defense.

TRACK 2: TODAY'S WORKFORCE Day 1



9:40- 10:10a	Make Analytics Education Breakthroughs with Alteryx Designer	Alteryx SparkED Kim Yohannan and Bhumika Patel	Organizations of every type are hiring people with data analytics skills to gather insights from a tsunami of data. Alteryx, the analytics automation company, created the SparkED program to empower learners of all skill levels — across all fields of study — to develop the analytics skills they need to question, understand, and solve with data. Our no-cost program provides access to Designer education, Designer licenses, and teaching and learning resources for use in the classroom at accredited post-secondary institutions. This session will provide an overview of the increasing global demand for data analytics skills, the SparkED program, and a demo of Alteryx Designer.
10:20- 10:50a	Envisioning the Future of Lifelong Learning	Jobs for the Future Meena Naik and Eugene So	Join us as we explore emerging trends in education in support of a learning journey that reflects what it takes today: lifelong engagement. We'll explore questions including: Why do we rely on the degree as a signal for competence? How do we redefine the paradigm of what learning counts? What opportunities exist for higher education to engage in these processes? And finally, how does a skills-first paradigm allow for compromise across traditional and nontraditional pipelines for learners into the workforce?
11:00- 11:30a	Year 2 - Increasing Diversity in the Cybersecurity Talent Pool through CyberCamps & Competitions	Bay Cyber League Denise Moss and Elizabeth Shaw	Learn how we are improving our CyberCamps and Competitions program to reach more students, spark their interest in cybersecurity careers, and increase diversity in the regional talent pool.
12:30- 1:00p	Using the BILT Model: Developing Skill Standards, Maximizing Employer Relationship, and Getting Students Workforce Ready	Collin College (IT Skill Standards 2020 and Beyond) Ann Beheler and Christina Titus	The National Convergence Technology Center (CTC), funded by a National Science Foundation grant, has developed a set of best practices that energizes traditional business advisory councils through frequent, structured engagement that encourages employers to co-lead a technical program. This popular "BILT model" – Business and Industry Leadership Team – has been adopted nationwide by many programs, including entire colleges. The goal is to strengthen employer relationships, get curriculum aligned to workforce needs, and ensure graduates are "workforce ready." Recently a separate NSF project grant – ITSS 2020 – has used the BILT model to develop future-facing skill standards for seven in-demand IT job clusters. Attendees will not only learn BILT basics but also discuss ways to overcome common implementation challenges.
	Prepare Your Students For A Cloud-First Job Market	Google Cloud Carrie D'Ascoli and Sowmya Kannan	Help your students build and validate the in-demand skills needed to thrive in an ever-evolving, cloud-first world with Google Cloud Learning for higher education. Cloud is now mainstream, and as cloud adoption continues to grow, so does the demand for cloud-ready talent. 65% of IT leaders in North America report a shortage of talent with cloud computing skills. Today's students are well-positioned to fill that skill gap. With Google Cloud Learning's curriculum and career readiness programs, you'll help your students build the skills needed to take advantage of the high-growth career opportunities available. We'll share the suite of resources available at no cost for eligible faculty, which includes a faculty-led curriculum, on-demand learning, and hands-on labs. We'll explore ways in which you can incorporate these resources into your classroom and how you can support your students who are in pursuit of Google Cloud certification and other credentials.
1:50- 2:20p	Work Force Trends	VP, Client Solutions Alyssa Clopton	This presentation will cover current US entry-level, workforce trends, hiring trends, and recommendations.

TRACK 3: TOMORROW'S SKILL Day 1



			,
9:40- 10:10a	The "Skillable" IT Worker: An Investigation	CompTIA James Stanger	What does it mean to be an authentic IT worker? Hiring and upskilling are always exercises in risk management. Let's take a deeper look into what the best – and worst – organizations are doing to mitigate risk and make the best decisions. If you're interested in learning more, join CompTIA's Chief Technology Evangelist, Dr. James Stanger, as he provides a research-driven snapshot of the questions and answers involved as IT hiring managers search for the "skillable" IT worker that fits their needs. James will discuss the conversations he has had with CIOs, CISOs, and hiring managers around the world. He will outline what they are looking for as they look for workers to obtain, retain, and upskill. He will discuss more than mere technical skills. He will approach the question from an employee/employer experience perspective. If we're entering a new age of the value-added IT worker, then let's take a closer look at the values that the IT worker needs to have.
10:20- 10:50a	Prism of Possibilities with Cisco DevRel's Network Programmability & Automation	Cisco Systems Adrian ILIESIU	In this session, we will explore several Cisco APIs and how you can develop your own custom software solutions using these APIs. First, we will discover the Cisco SD-WAN REST API and how you can build your own NOC dashboard that gathers operational data from several vManage instances and consolidates all that data in a single pane of glass view. Next, we will go into the https://smartsheet. com SaaS API and how to build a Python application that uses smartsheets to manage a Cisco ACI data center fabric. We will wrap up this session with an overview of CI/CD pipelines, what they are, how to deploy your pipelines, and how to use them to automate network and infrastructure configuration.
11:00- 11:30a	Red Hat Community and Social Responsibility	Red Hat Lea Fenske and Emily Branchaw	Red Hat Academy (RHA) has established itself as a reliable, no-cost option for nonprofit educational institutions to incorporate in-demand open source skillsets into their degree programs for traditional students. But as the educational landscape shifts in the wake of rising tuition and the aftermath of the pandemic, Red Hat has renewed its commitment to education by expanding its social responsibility portfolio to include training options for nontraditional students under the Red Hat Workforce Development Program (WDP). In this presentation, you'll hear from Emily Branchaw, Sr. Business Development Manager for Red Hat WDP, and Lea Fenske, Business Development Manager for RHA, about how Red Hat's overall community and social responsibility strategy is built with the goal of training today's students for the skills and jobs of tomorrow.
12:30- 1:00p	NetAcad Technical Updates	Cisco Networking Academy Kristen Narreau	Catch the latest information and releases from Cisco Networking Academy and Skills For All
1:10- 1:40p	Diving Into 5G Technologies	Convergence Technology Center William Saichek	5G technology looks like it could be a "game changer" in terms of wireless communications, not just in the WAN but in the LAN as well. As 5th Generation Mobile Core networks (5G) begin to be deployed, they will require a high level of support from the users, subscribers, and developers. This session will demonstrate a free5GC appliance that provides an open source implementation of the 5G Core Network (5GC) as defined in 3GPP Release 15 and beyond to better understand 5G Technologies.
1:50- 2:20p	Teaching in the Classroom - Cryptocurrencies, Blockchains and NFTs	University of Hawaii Maui College Debasis Bhattacharya	While Bitcoins and other Cryptocurrencies have been around for more than a decade, the hype and speculation surrounding their prices have led to speculation and unrealistic expectations. This presentation provides an overview of the technology behind blockchains, which powers all cryptocurrencies, and a basic understanding of non-fungible tokens (or NFTs), which are smart contracts written specifically to run on blockchains. This presentation provides teaching guides and tips for educators, students, and the public.

TRACK 1: YESTERDAY'S FOUNDATIONS Day 2



	Ready Or Not? Determining A Student's Readiness For An Information Security Fundamentals	National CyberWatch Center at Prince George's Community College David H. Tobey,	Have you had students fall behind because they failed to learn the prerequisites? Have students struggled to learn new concepts without understanding what keeps them from progressing? Have you had students perform well on a knowledge test but then fail to apply the new knowledge in a lab or competition? Would you like every student in your class to be fully prepared to learn on Day 1? If you answered yes to any questions above, this session is for you! You will learn how to design and administer a new diagnostic assessment tool that enables you to provide insightful, formative feedback to students. Similar to the Concept Inventory widely used to assess comprehension in the sciences, this new tool the Readiness Inventory produces a competency profile and development plan customized
	Course	Ph.D.	for each student. Results from a nationwide pilot test will be presented, which reveal the common misconceptions that prevent mastery of information security concepts.
10:20- 10:50a	Seeking Feedback On How To Help Programs Using Netlab+	NDG Richard Weeks	NETLAB+ is designed for your academic institution to host labs online. We need your input. Join this session to discuss: NETLAB+ has been popular for Cisco Networking Academy – real gear, VMware virtualization, cyber security, custom labs, etc. 1. We notice that many of our customers depend on grant funding; however, not all have grant departments and may need help with writing a grant proposal. Do you believe there would be interest in utilizing a grant writer resource for grant proposals? 2. NDG has been working with several schools on an academic cloud and labs for critical infrastructure that may be grant-worthy projects. Is it possible to work with your school and other schools to collaborate on grant projects? 3. Cyber security for critical infrastructure for manufacturing, industrial control, water municipalities, etc., is vital to local communities. If we build CI labs for NETLAB+, will your program see value?
11:00- 11:30a	Hy-Flexing your Classroom	Great Falls College, Montana State University Cheryl V. Simpson	Information session describing how to make your classes more accessible in this new day and age. As we know, students may not be available to attend all your class sessions. How to utilize the HyFlex model to meet your students where they are, and ensure they have the best opportunity for success. (Designed for Programming, Networking and Cybersecurity classes)
12:30- 1:00p	Create More Meaningful Learning Outcomes with Bloom's for Computing	Cosumnes River College, Portland Community College Markus Geissler and Cara Tang	The ACM Committee for Computing Education in Community Colleges (CCECC) recently developed Bloom's for Computing, a list of verbs commonly used in the Computing disciplines, to enhance Bloom's Revised Taxonomy. In this workshop you will learn how to use Bloom's for Computing to craft learning outcomes and competencies that are more meaningful to faculty, students, and industry partners.
	Best Practices in Cybersecurity Pathway Education; A 3-Year NSF-ATE Project	Cypress College Behzad Izadi, Rassoul Alizadeh, Henry Hua, Daniela Juarez and Sandra Rocha	PACE (Pathway to Advancement in Cybersecurity Education) is a guided Cybersecurity pathway that introduces dual enrollment College courses as early as 9th grade with multiple educational and employment exit points. PACE was funded for the last three years by a grant from the NSF-ATE. We will share our results, including outcomes, challenges, and best practices. Interviews and testimonials will supplement the presentation from various stakeholders (i.e., instructors, students, staff, and parents) involved with the PACE project.
1:50- 2:20p	The Power of Professional Associations - Connect Learn Grow	Cabrillo College Terri Oropeza	Mentoring has long been recognized as a powerful tool in career development. Early career professionals are advised to find mentors, either informally on their own or to participate in formal mentoring programs. Mentoring is a dynamic process, and a network can help mentees identify several mentors who can address a variety of career-related needs. Community College faculty can help connect students with local technology-based professional associations. In this session, leaders from SF Bay Area professional associations will present ideas for in-classroom opportunities for students to connect with local companies and hiring managers through these organizations.

TRACK 2: TODAY'S WORKFORCE Day 2



9:40- 10:10a	IBM SkillsBuild	IBM IBM SkillsBuild	At IBM, we are committed to investing in the future of work, ensuring free education on disruptive technologies with a focus on underrepresented communities. IBM's commitment is a response to business needs and social needs. Namely, the private sector lacks qualified STEM professionals. This shortage represents an opportunity to channel STEM talent from underrepresented communities. To address these needs, IBM has established a series of commitments and programs and programs, the newest being
			SkillsBuild.
10:20- 10:50a	Unlock Your Digital Learning With Vmware It Academy	VMware Susan Coefield	Every student in IT needs to know virtualization and multi-cloud services. VMware is a leading provider of multi-cloud services for all apps, enabling digital innovation with enterprise control. This session will focus on our new courses that can be easily integrated into your existing program of students. Learn about the different job roles for students as they explore their career paths and opportunities through our Academic Software Licensing + the IT Academy program.
11:00- 11:30a	Netlab Libraries on Security Fundamentals (Sec+) and Programmable Switches	University of South Carolina Jorge Crichigno	University of South Carolina (USC) has developed two new lab libraries that are available for Netlab: 1) "Security Fundamentals" and 2) "Applications of Programmable Switches." The "Security Fundamentals" library covers aspects of network and computer security while satisfying the Security+ objectives. The labs include introductory to advanced material for social engineering, various malware experiments, network attacks, cryptography, and others. The "Applications of Programmable Switches" library covers introductory to advanced aspects of programmable data plane switches. It enables students to program the forwarding plane of modern switches.
12:30- 1:00p	CyberSecurity in Advanced Manufacturing	Tony Hills, Mike Kwiatkowski Tony Hills and Mike Kwiatkowski	The ACM Committee for Computing Education in Community Colleges (CCECC) recently developed Bloom's for Computing, a list of verbs commonly used in the Computing disciplines, to enhance Bloom's Revised Taxonomy. In this workshop you will learn how to use Bloom's for Computing to craft learning outcomes and competencies that are more meaningful to faculty, students, and industry partners.
1:10- 1:40p	Tecoguide.com - Your Virtual College Advisor	Inspirame Mauricio Gonzalez	Come learn about Teco - the only culturally relevant platform that guides users through every step in completing any academic goal from a California Community College (CTE Certificate, Associates Degree, & Transfer options). Most high school & college students need to be aware of technical certifications available through community colleges and private organizations that can help them eliminate generational poverty. Learn how Teco can expose and nudge users into the CIS world and beyond.
1:50- 2:20p	The California Cybersecurity Career Education Pipeline and Pathway	Fresno State University Keith Clement	We discuss the current cybersecurity workforce gap and analyze key contributing workforce talent acquisition and employee retention issues. Discuss the linkage and alignment of cybersecurity education programs at all levels of education from kindergarten through doctoral degrees. In addition to education minimum job requirements in cyber, we evaluate industry-recognized professional certifications and additional workforce development models like registered apprenticeships and incumbent employee training.

TRACK 3: TOMORROW'S SKILL Day 2



			·
	Robotic Process Automation in the Classroom with UiPath	UiPath Kristina Kaldon, Michaela Rosenmayer and Arya Morales	Learn about the applications of Robotic Process Automation (RPA)! UiPath is an RPA vendor that offers free resources for educators through the UiPath Academic Alliance program. RPA is relevant to all industries, using software robots to automate manual tasks involving any applications, native or web-based. UiPath has native integrations and is a technology partner with other software companies like Alteryx, SAP, Google, AWS, and more.
10:20- 10:50a	Filling the Gap for Microsoft Academic Learning	Ascend Education Jake Slater and Robert McMillen	With the withdrawal of Microsoft Official Academic Courseware, schools are struggling to find a curriculum to fulfill class obligations to students. Robert McMillen will discuss what Ascend Education is doing to fill that gap using Microsoft core classes for Windows servers and hybrid functionality. We'll look at what brought Microsoft to this decision and what colleges and universities are doing to make it work to prepare their students for the industry with Ascend courses.
11:00- 11:30a	Quantum 101 - Awareness class for Quantum Information Science and Technology	Wharton County Junior College J.B. Groves III	The National Quantum Initiative necessitates the need for QIST awareness in prepping the united States workforce for Quantum Information Science and Technology knowledge.
12:30- 1:00p	Tomorrow's Skills	uCertify Meera Yadav	It is more important than ever to develop learning resources emphasizing learning by doing. This is one of the most critical ways to bridge the gap between what the industry wants and what educational institutions teach.
1:10- 1:40p	Virtual Production - The Convergence of Digital Media and ICT	Bay Area Community College Consortium Olivia Herriford	The pandemic accelerated the use of virtual production in filmmaking. Virtual production seamlessly combines physical and virtual elements using a suite of software tools. Studios can film on a stage and view virtual graphics together in real-time. VP is a major team effort requiring a wide range of technical and artistic skills, with a DevOps of its own. This session will introduce participants to VP and a project underway to prepare ICT/DM students for jobs in this emerging industry.
1:50- 2:20p	BaylCT Regional Joint Venture: Artificial Intelligence & Data Analytics	Laney College Dan Montoya	Laney College and BaylCT will present an overview and update on a regional joint venture in the Bay Area in Artificial Intelligence and Data Analytics with the goal of establishing (1) a flagship college as an industry-supported AI Center of Excellence with stackable certificates and an AS degree for other colleges to model; and (2) DA model curriculum to help colleges update existing DA programs. Laney College and BACCC have licensed comprehensive Artificial Intelligence curricular resources developed by Intel in collaboration with community colleges in Arizona. Bay Area faculty who have completed Intel train-the-trainer workshops will share their experience. College faculty can now leverage these materials at no cost for new AI courses, programs, and degrees or to update existing offerings with AI concepts. These courses are designed to meet the growing demand for entry-level workers in Artificial Intelligence, Machine Learning, and Data Analytics.