

**2018 CAE REGIONAL RESOURCE CENTER
SOUTHEAST CYBERSECURITY CONFERENCE**

SECC

July 26-27, 2018

Orlando, FL

Renaissance Orlando at SeaWorld

uwf.edu/secc



CENTER FOR
CYBERSECURITY

AT THE UNIVERSITY OF WEST FLORIDA



Welcome to SECC



Welcome to the 2018 CAE Regional Resource Center Southeast Cybersecurity Conference. We are excited that you have joined us for this informative and collaborative exchange!

On behalf of our nation, thank you for educating America's workforce in cybersecurity, which is without a doubt, critical to our security and economic prosperity. Each one of us plays a key role in guarding our freedoms.

Thank you to the University of West Florida Center for Cybersecurity, Dr. Eman El-Sheikh, and its faculty and staff for hosting this wonderful conference! I am honored to deliver your keynote.

I hope you enjoy your time in Orlando and that you are able to network with your colleagues in this important endeavor!

Diane M Janosek, J.D., CISSP

Provost and Deputy Commandant, National Cryptologic School, National Security Agency



We are honored to host SECC, which brings the brightest cybersecurity educators and researchers in the Southeast together to build a vibrant, collaborative CAE Cybersecurity Community. We recognize your extraordinary talents and designed this conference to provide a platform to share and build expertise across our region.

We are thankful for the support of the National Security Agency and Department of Homeland Security in sponsoring the SECC.

We also thank our esteemed keynote speaker, Diane Janosek, Provost and Deputy Commandant for the National Cryptologic School, NSA. Ms. Janosek will share her insights at the forefront of cybersecurity education.

Finally, we thank all of you for attending the inaugural CAE Southeast Cybersecurity Conference. We encourage you to network with peers and leave inspired to advance cybersecurity education.

Eman El-Sheikh, Ph.D.

Director, Center for Cybersecurity, and Professor, Computer Science, University of West Florida and the Southeast CAE Regional Resource Center team at the University of West Florida

Keynote Address

EDUCATING ON CYBER RESILIENCE AND TRADECRAFT

Keynote Speaker

DIANE M. JANOSEK, J.D., CISSP

Provost and Deputy Commandant

National Cryptologic School, National Security Agency

Diane M. Janosek is currently the National Security Agency's Deputy Commandant for the National Cryptologic School, which contains five colleges to include the College of Cyber and College of Cryptology. Ms. Janosek manages and oversees the delivery of unique offerings for the nation's civilian and military intelligence global workforce in the areas of cyber, network security, cyber resilience, and encryption to ensure a strong federal workforce to defend critical national security networks.

Previously, she served in leadership roles in National Security Agency's Directorate of Technology to include serving as the Deputy Chief Information Security Officer. She has served in a variety of legal, policy and executive management positions in the U.S. Government judicial and executive branches, to include Chief Legal Officer to the Privacy and Civil Liberties Oversight Board, and as Legal Counsel at both the White House and the Pentagon. She is admitted to the Supreme Court of the United States and is certified in information and network security (CISSP). She is a member of the Defense Intelligence Senior Executive Service (SES) and holds an active Top Secret (TS/SCI) clearance. She has published a plethora of articles and serves as an Adjunct Professor at the National Intelligence University in Washington D.C. in the Master of Science in Strategic Intelligence/Technical Intelligence program. She is a guest lecturer for The Wilson Center, the nation's key non-partisan policy forum for tackling global issues.

Ms. Janosek's areas of expertise include privacy and technology, governance and data policy, export control, defense acquisition, and information security. In her current role, she is committed to the educational, leadership, professional and practical learning needs of the nation's cyber workforce in today's dynamic threat environment.

Conference Agenda

Thursday, July 26

8:00 AM - 5:00 PM

Reception Foyer

Registration

8:00 AM - 9:00 AM

Atrium C

Networking

Session & Breakfast

9:00 AM - 9:45 AM

Labrid AB

Welcome

Dr. Eman El-Sheikh

Keynote: Educating on Cyber Resilience and Tradecraft

Diane Janosek, J.D., CISSP

9:45 AM - 10:00 AM

Koi

Networking Session and Break

10:00 AM - 11:00 AM

Labrid AB

Enhancing your Curriculum using the Florida Cyber Range

Dr. Eman El-Sheikh and Steven Bazzell

10:00 AM - 12:00 PM

Mako

CAE Workshop: CAE Application

Doc St. Clair
Dr. Kevin Floyd
Karen Leuschner

11:00 AM - 12:00 PM

Labrid AB

The Value of Cybersecurity Competitions

Dr. Tom Nedorost

12:00 PM - 1:00 PM

Atrium C

Working lunch:

Birds-of-a-Feather Sessions

1:00 PM - 3:00 PM

Labrid AB

Industrial Control Systems Security Workshop

Dr. Guillermo Francia

1:00 PM - 5:00 PM

Mako

CAE Workshop: KU Mapping

Doc St. Clair
Dr. Kevin Floyd
Karen Leuschner
Anthony Pinto

3:00 PM - 3:30 PM

Koi

Networking Session and Break

3:30 PM - 4:30 PM

Labrid AB

Raising Cybersecurity Awareness Among College, High and Middle School Students

Dr. Lydia Ray

Friday, July 27

8:00 AM - 4:00 PM

Coral Ballroom Foyer

Registration

8:00 AM - 9:00 AM

Atrium C

Networking Session and Breakfast

9:00 AM - 10:00 AM

Coral Ballroom AB

Community Outreach: Inspiring Youth to Pursue Cybersecurity Education and Career Path

Dr. Yair Levy

9:00 AM - 10:00 AM

Coral Ballroom C

Mobile Digital Forensics

Dr. Hongmei Chi and Rodney Wilson

10:00 AM - 10:50 AM

Coral Ballroom C

Conducting an Inter-disciplinary GenCyber Camp for Students

Dr. Shankar Banik

10:00 AM - 10:50 AM

Coral Ballroom AB

Lessons Learned in Behavioral Cybersecurity Education

Dr. Bruce Caulkins

10:50 AM - 11:10 AM

Coral Ballroom Foyer

Networking Session and Break

11:10 AM - 12:00 PM

Coral Ballroom AB

Course Curriculum Development

Prof. Frank Katz

11:10 AM - 12:00 PM

Coral Ballroom C

Student Cyber Risk Assessment Teams

Eric Brown

12:00 PM - 1:00 PM

Atrium C

Working Lunch:

Birds-of-a-Feather Sessions

1:00 PM - 2:00 PM

Coral Ballroom AB

Integrating Database Security Knowledge Units into the Curriculum

Dr. Dallas Snider

1:00 PM - 2:00 PM

Coral Ballroom C

Modules for Integrating Cryptography into Security Curriculum

Dr. Yesem Kurt Peker

2:00 PM - 3:00 PM

Coral Ballroom C

Hackin

Dr. Nathan Fisk

2:00 PM - 3:00 PM

Coral Ballroom AB

Cyber Force Incubator (CFI) and Expanding Cybersecurity Innovative Incubator to Extended Demographics (ExCIITED)

Sharon Johnson

3:00 PM - 3:30 PM

Coral Ballroom Foyer

Networking Session and Break

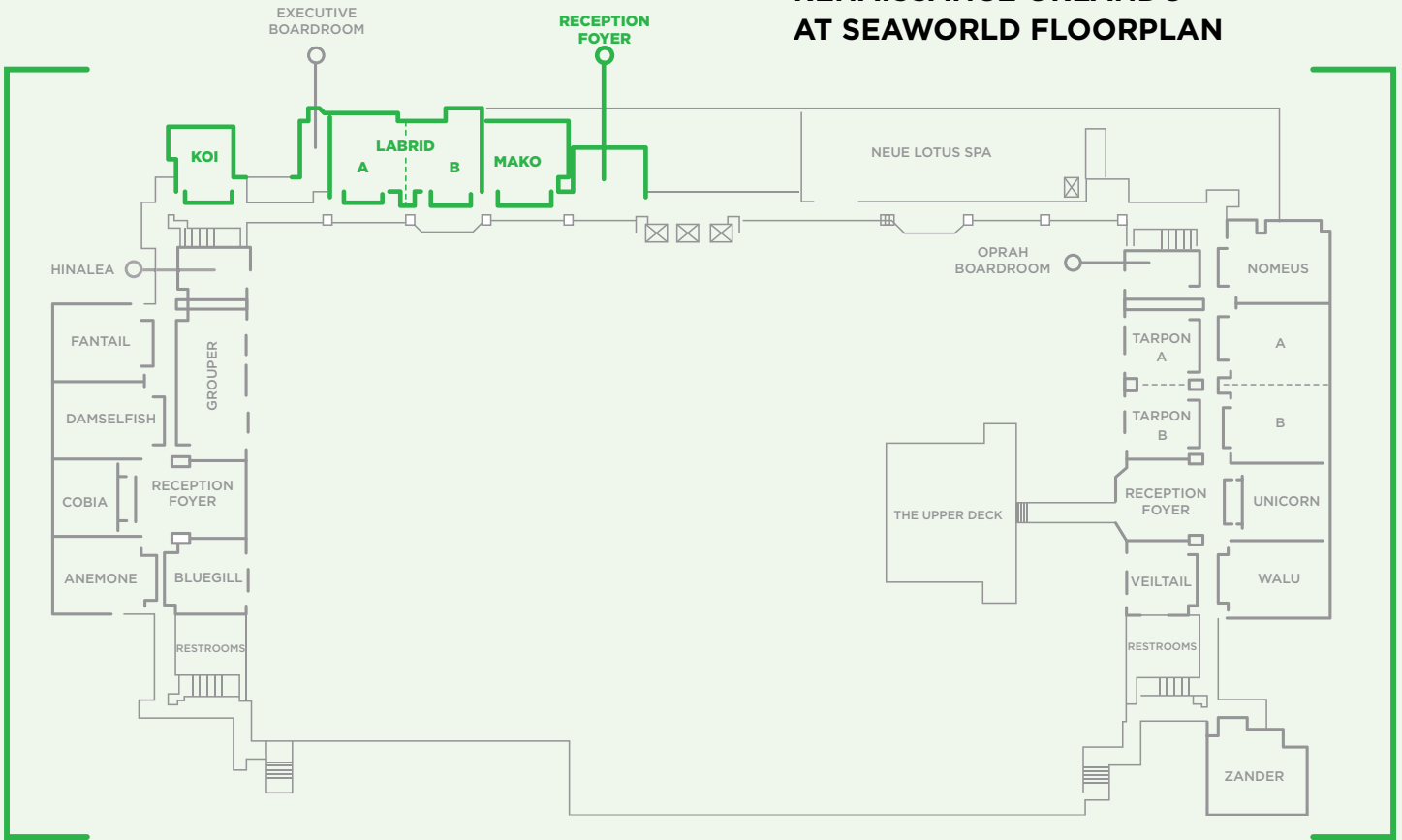
3:30 PM - 4:00 PM

Coral Ballroom AB

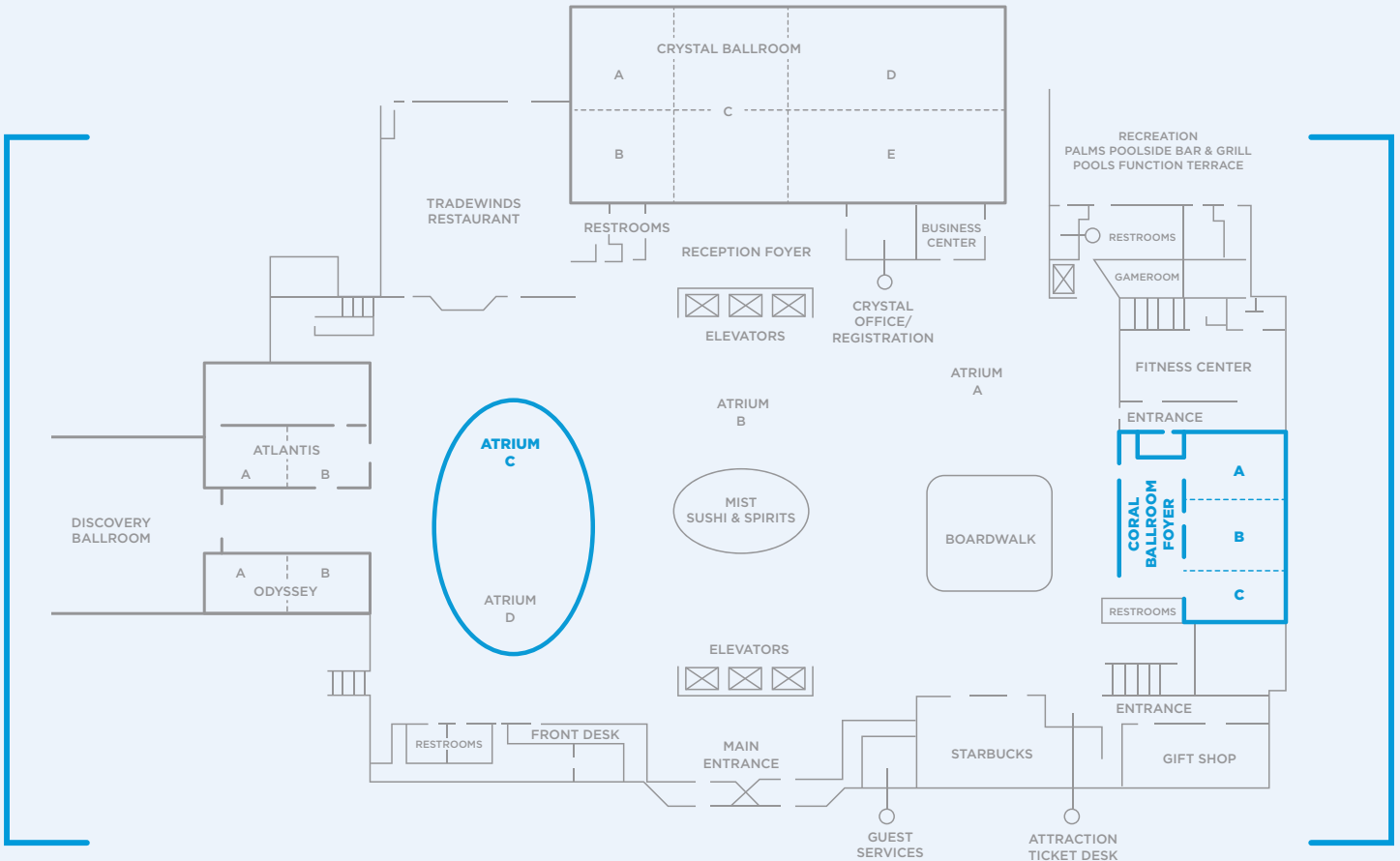
Conference Wrap-up

RENAISSANCE ORLANDO AT SEAWORLD FLOORPLAN

2ND FLOOR



1ST FLOOR



Session Descriptions

Thursday, July 26

9:00 AM - 9:45 AM

Welcome Remarks

Dr. Eman El-Sheikh

Director, Center for Cybersecurity, University of West Florida

Keynote: Educating on Cyber Resilience and Tradecraft

Diane Janosek, J.D., CISSP

Provost and Deputy Commandant, National Cryptologic School, National Security Agency

10:00 AM - 11:00 AM

Enhancing your Curriculum using the Florida Cyber Range

Dr. Eman El-Sheikh

Director, Center for Cybersecurity, University of West Florida

Steven Bazzell

System Server Administrator, University of West Florida

The Florida Cyber Range is a state-of-the-art platform for hands-on cybersecurity education, training, operations and research. The range is intended as a shared resource for the Southeast Region CAE Community to support hands-on learning for CAE curricular. This session will highlight the range capabilities and plans for developing and sharing curricular resources through the pilot program.

10:00 AM - 12:00 PM

CAE Application Workshop

Doc St. Clair

Professor, Middle Georgia State University

Dr. Kevin Floyd

Associate Dean and Professor, Middle Georgia State University

Karen Leuschner

Centers of Academic Excellence Cyber Defense Program Manager, National Security Agency

This workshop will cover the new CAE application criteria and the application process for CAE designation and re-designation. The workshop will also cover frequently asked questions and common pitfalls with the criteria for the CAE application.

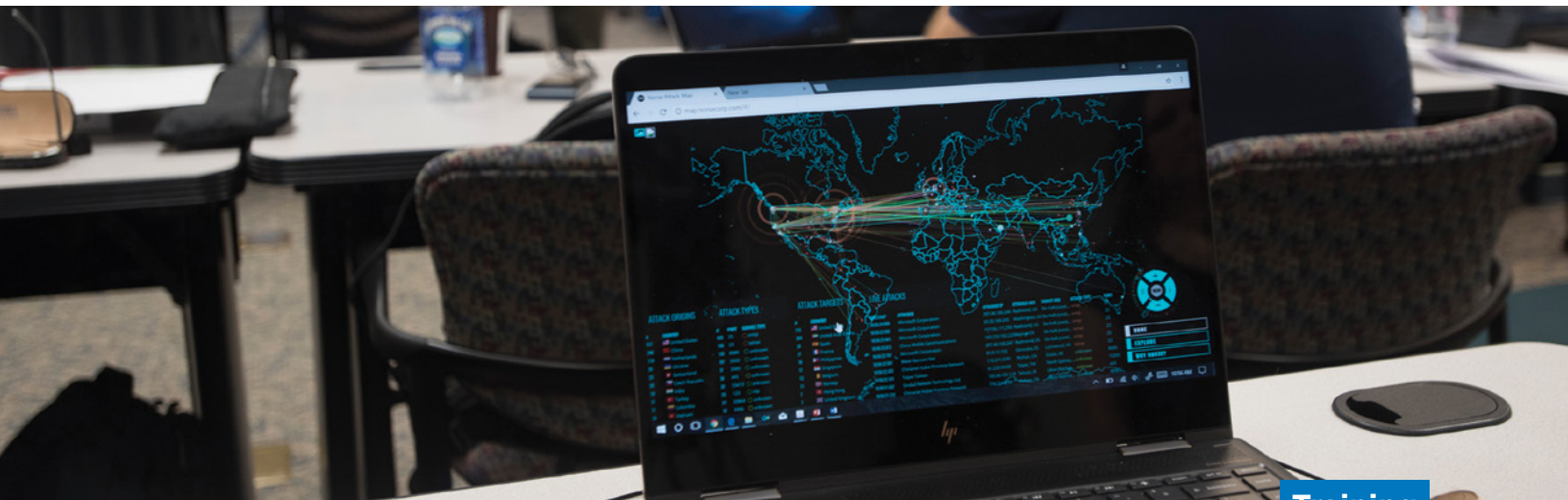
11:00 AM - 12:00 PM

The Value of Cybersecurity Competitions

Dr. Tom Nedorost

Lecturer, University of Central Florida

Cybersecurity competitions have existed for nearly two decades and new competitions continue to be created every year. These competitions have proven to be hugely popular among students. But beside all the fun and games, what value do they serve in an academic program and how can you decide which competition is the best fit for your program? This presentation will examine this value proposition and



Training

assist you in determining where to start. Many competitions are entirely virtual with little or no cost to participants while others can involve significant team travel. Various styles of cybersecurity competitions as well as information on upcoming AY18-19 competitions will be presented. You'll leave this session well prepared to start your very own collegiate cybersports team this Fall!

12:00 PM - 1:00 PM

Working Lunch: Birds-of-a-Feather Sessions

1:00 PM - 3:00 PM

Industrial Control Systems Security Workshop

Dr. Guillermo Francia III

Professor and Director, Jacksonville State University

An informal session on networking and collaboration on ICS and ES security educational and research topics. This session will provide a mini tutorial on ICS security including, but not limited to, PLC programming, HMI development, ICS reconnaissance, vulnerability assessment, and penetration testing.

1:00 PM - 5:00 PM

CAE Knowledge Unit Mapping Workshop

Doc St. Clair

Professor, Middle Georgia State University

Dr. Kevin Floyd

Associate Dean and Professor, Middle Georgia State University

Karen Leuschner

Centers of Academic Excellence Cyber Defense Program Manager, National Security Agency

Anthony Pinto

Instructor, Computer Science and CAE Faculty Fellow, University of West Florida

This workshop will cover how to map the knowledge units (KUs) for the Centers of Academic Excellence in Cyber Security (CAE) Application. If you are involved in KU mapping for any purpose, you will want to attend. The workshop will also cover frequently asked questions and common pitfalls with the criteria for the CAE application.

3:30 PM - 4:30 PM

Raising Cybersecurity Awareness Among College, High and Middle School Students

Dr. Lydia Ray

Associate Professor, Columbus State University

Cybersecurity is of increasing importance due to the rise in reliance on digital equipment and programs to manage our daily lives, including the transmission and storage of personal information. Research studies establish that an effective security awareness program is one of the most important steps toward increasing cybersecurity. We developed an online module that will help raise cybersecurity awareness among a variety of users. The main features of our module are interactivity and the presentation of shocking consequences of careless cyber habits of common Internet/technology users. We designed a survey that includes pre- and post-tests to fulfill the goals of our project and administered it to students on our campus and at local high schools. Our survey results indicate that the module has been effective particularly among non-Computer Science majors. It has raised their level of awareness not only for the specific topics that the module addresses but overall in cybersecurity. We plan to administer it to local middle schools as well.

Friday, July 27

9:00 AM - 10:00 AM

Community Outreach: Inspiring Youth to Pursue Cybersecurity Education and Career Path

Dr. Yair Levy

Professor of IS and Cybersecurity & Director of CiPHER, Nova Southeastern University

October is the National Cybersecurity Awareness Month sponsored by DHS. Nova Southeastern University (NSU) is serving as Champion of the National Cybersecurity Alliance, a DHS funded Washington-DC based organization and has been designated since 2005 by NSA/DHS as a National Center of Academic Excellence in Cyber Defense (CAE-CD). Since 2013, we have been conducting an annual outreach program called "Cybersecurity Day @ NSU" to promote interest in cybersecurity education and careers. This event was set in collaboration between NSU, federal law enforcement, industry, and Miami-Dade public schools. The event incorporates the NSA Day of Cyber, a free interactive, cyber-education and career experience. This presentation will discuss the role of a CAE in providing community outreach to inspire youth to pursue cybersecurity education and careers. It will also discuss the funding, planning, coordination, and execution of such event. The aim is to inspire other institutions to initiate their own outreach programs.

9:00 AM - 10:00 AM

Mobile Digital Forensics

Dr. Hongmei Chi

Associate Professor for FAMU center of Cybersecurity, Florida A&M University

Rodney Wilson

Graduate Student, Florida A&M University

With the rapid growth of mobile device usage, it is becoming increasingly common for law enforcement to need to seize and conduct forensic analysis on such devices. Due to the increasing concern about privacy and the vast amount of information stored on smartphones, it is increasingly challenging to conduct effective acquisition and analysis for mobile devices. Furthermore, the legal trend is to try to restrict the amount and type of data that can be analyzed without authorization such as a warrant or appropriate consent. The goal of this talk is to present methodology and supporting software tools to effectively



acquire and do an initial analysis on smartphones (Android and iPhone) under the public and volunteer scenario: law enforcement, in order to assure privacy and also efficiency agree/ indicate that their goal is to only search and seize data relevant to the crime with consent of the volunteer. In addition, we will focus on discussing privacy, mobile digital forensics standards and explore various tools used in mobile digital forensics. Those tools can include OSForensics, SQLiteSpy and SimCOM, Cellbrite, etc.

10:00 AM - 10:50 AM
Lessons Learned in Behavioral Cybersecurity Education

Dr. Bruce Caulkins
Program Director, University of Central Florida

In 2015, the University of Central Florida (UCF) created the graduate certificate program called Modeling and Simulation (M&S) of Behavioral Cybersecurity. This program provides students with specialized training and knowledge in M&S fundamentals, techniques, and applications towards the behavioral aspects of cybersecurity. The program consists of 5 graduate-level courses over 15 credit hours. This talk will discuss the program and lessons learned from three years of innovative courseware and education.

10:00 AM - 10:50 AM
Conducting an Inter-disciplinary GenCyber Camp for Students

Dr. Shankar Banik
Associate Professor, The Citadel

The Citadel will be hosting an interdisciplinary GenCyber camp this summer where faculty from Computer Science, Mathematics, Criminal Justice, Education will teach network security, secure coding, cryptography, Cybercrime, Cyber ethics, Cyber policy. In this session, we will share our model, modules, and experience.



Workshop

11:10 AM - 12:00 PM
Student Cyber Risk Assessment Teams

Eric Brown
Assistant Director, Tennessee Tech University / CEROC

This presentation will focus on the results from cybersecurity student teams participating in cyber risk assessments for small to mid-sized manufacturing businesses in Tennessee. Cybersecurity Education, Research & Outreach Center (CEROC) in cooperation with the 3-Star Industrial Assessment Center (IAC) at Tennessee Tech has completed their first full year of this program funded by the Department of Energy.

11:10 AM - 12:00 PM
Course Curriculum Development

Prof. Frank Katz
Assistant Professor, Georgia Southern University

The development of the Cyber Security program and its curriculum at a small (7000 student) public institution. How it was done, pitfalls, and best practices that were used to develop a program that would be compliant with NSA-CAE guidelines.

12:00 PM - 1:00 PM
Working Lunch: Birds-of-a-Feather Sessions

1:00 PM - 2:00 PM
Integrating Database Security Knowledge Units into the Curriculum

Dr. Dallas Snider
Associate Professor, University of West Florida

The required topics within the Database Knowledge Unit are diverse and are challenging to incorporate into an existing curriculum. In this session, we will present strategies to help develop the student learning outcomes, teaching materials, and classroom activities to satisfy the requirements for the Database Knowledge Unit.

1:00 PM - 2:00 PM

Modules for Integrating Cryptography into Security Curriculum

Dr. Yesem Kurt Peker

Assistant Professor, Columbus State University

For many not in the area of cryptography, teaching cryptography may be a challenge due to the mathematically heavy background underlying the subject. As a content developer in the Catalyzing Computing and Cybersecurity in Community Colleges (C5) Project funded by NSF, I have developed “Applied Cryptography” module that provides an introduction to the basic functions and terminology of cryptography without going into the details of the specific implementations and the mathematics involved in them. The module includes four units focusing on four main mechanisms of cryptography; namely, symmetric key encryption, public key cryptography, hash functions, and digital signatures. It provides answers to questions such as what does asymmetric encryption provide us that symmetric key encryption does not? Why are hash functions necessary in digital signatures? Why do we need digital certificates? Educators who want to introduce computer security and cryptography early in their curriculum would benefit from this session.

2:00 PM - 3:00 PM

Hackin

Dr. Nathan Fisk

Assistant Professor, University of South Florida

Finding yourself all too frequently charged with “convincing” resistant students or colleagues that diversity in cybersecurity matters? Stereotypically privileged cybersecurity dudes got you down? Just want to know a little more about feminist social theory? This workshop will explore the intersections between cybersecurity and feminist theory, working through hacker history and current trends in the industry. Participants will be provided with tools and concepts for deconstructing and resisting the more oppressive elements of cybersecurity culture, while working through a series of brief exercises. Emphasis will be placed on working toward a more inclusive vision of the field of cybersecurity, and how to facilitate and support diverse perspectives in the classroom.

2:00 PM - 3:00 PM

Cyber Force Incubator (CFI) and Expanding Cybersecurity Innovative Incubator to Extended Demographics (ExCIITED)

Sharon Johnson

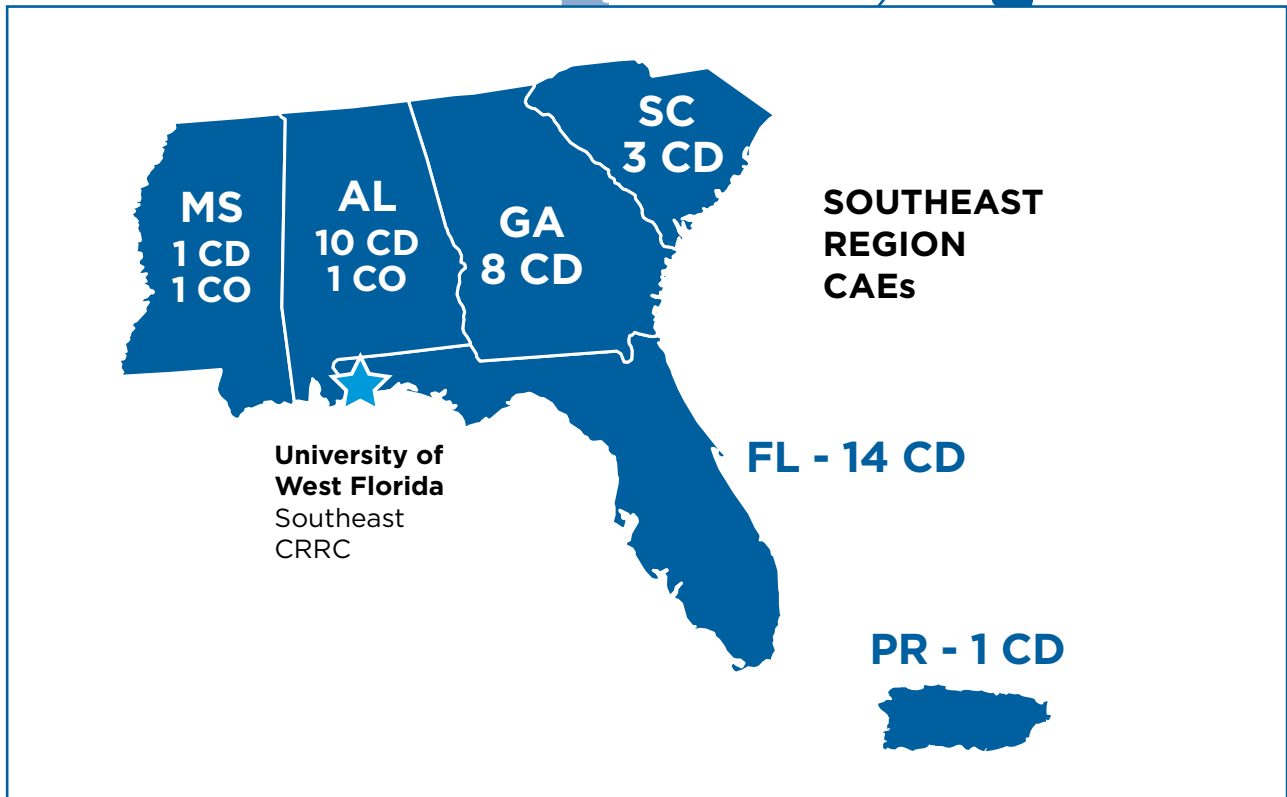
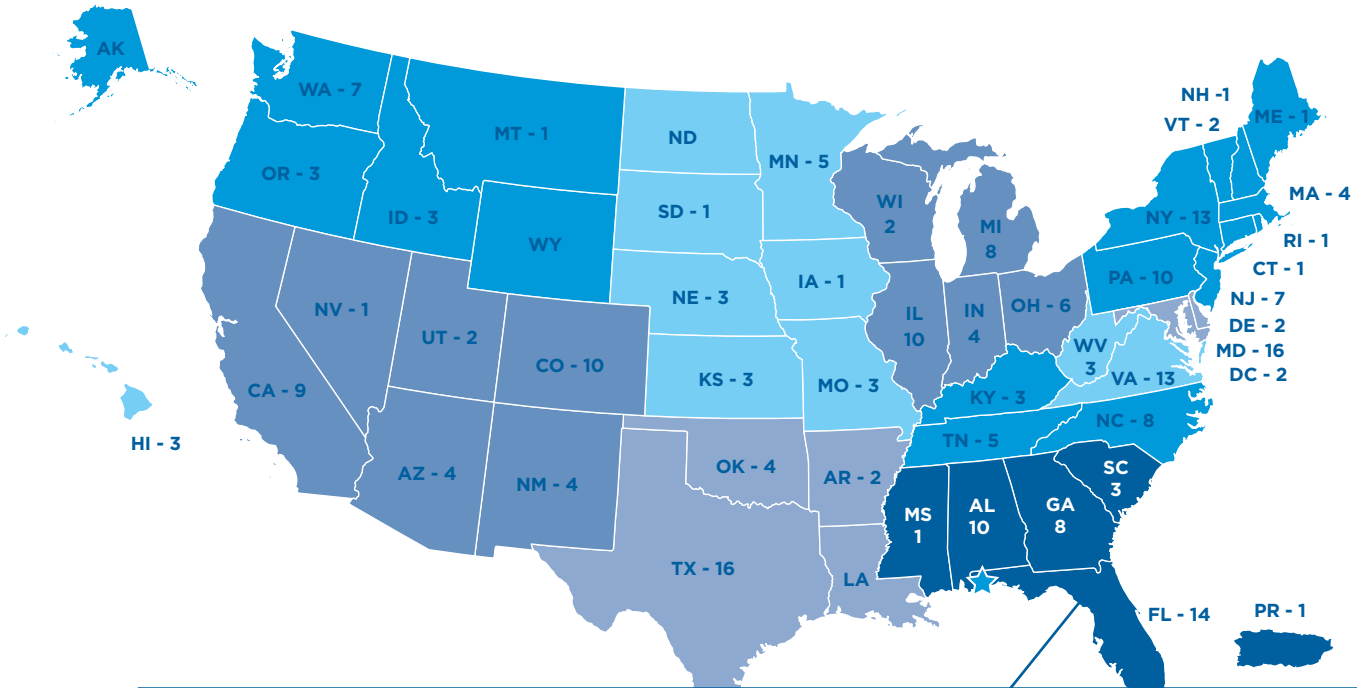
Principal Research Engineer, University of Alabama in Huntsville

In the cybersecurity industry, employers have difficulty finding qualified cybersecurity employees, and even when employees are hired they often sit idle waiting for a security clearance and certifications necessary to work in their organization. Why not get those things done while the student is in college so they can begin work immediately as an intern or college graduate? To address this issue, the Cyber Force Incubator (CFI) selects students early in their academic careers and provides hands-on training, certification instruction, sponsorship for security clearance, and placement with an employer.

Another problem is the lack of qualified cybersecurity employees from rural and underrepresented groups. To address this issue, the CFI has a component called Expanding Cybersecurity Innovative Incubator to Extended Demographics (ExCIITED). ExCIITED, funded by a National Security Agency (NSA) grant, selects rural and underrepresented high school students to receive cybersecurity training, cybersecurity coursework for college credit, sponsorship for security clearance, internship in the CFI, and placement with an employer.

Southeast Region CAEs

**NSA/ DHS CENTERS OF ACADEMIC EXCELLENCE
IN CYBERSECURITY CYBER DEFENSE (CAE-CD)
AND CYBER OPERATIONS (CAE-CO)**



ALABAMA

CAE
Designations
as of July 26, 2018

FLORIDA

CAE
Designations
as of July 26, 2018

Auburn University	CDE/R/CO
Calhoun Community College	CAE2Y
Jacksonville State University	R
Northeast Alabama Community College	CDE
Snead State Community College	2Y
University of Alabama	R
University of Alabama at Birmingham	R
University of Alabama in Huntsville	CDE/R
Tuskegee University	CDE
University of South Alabama	CDE

Daytona State College	CDE
Embry-Riddle Aeronautical University- Daytona Beach Campus	CDE
Florida A&M University	CDE
Florida Atlantic University	CDE/R
Florida Institute of Technology	R
Florida International University	CDE/R
Florida State College at Jacksonville	CAE2Y
Florida State University	CDE/R
Nova Southeastern University	CDE
Saint Leo University	CDE
University of Central Florida	CDE/R
University of Florida	R
University of South Florida	CDE/R
University of West Florida	CDE/CRRC

GEORGIA

Georgia Southern University	CDE
Augusta University	CDE
Columbus State University	CDE
Georgia Institute of Technology	R
Kennesaw State University	CDE
Middle Georgia State University	CDE
University of North Georgia	CDE

PUERTO RICO

Polytechnic University of Puerto Rico	CDE
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SOUTH CAROLINA

Clemson University	CDE
The Citadel	CDE
University of South Carolina	CDE/R

MISSISSIPPI

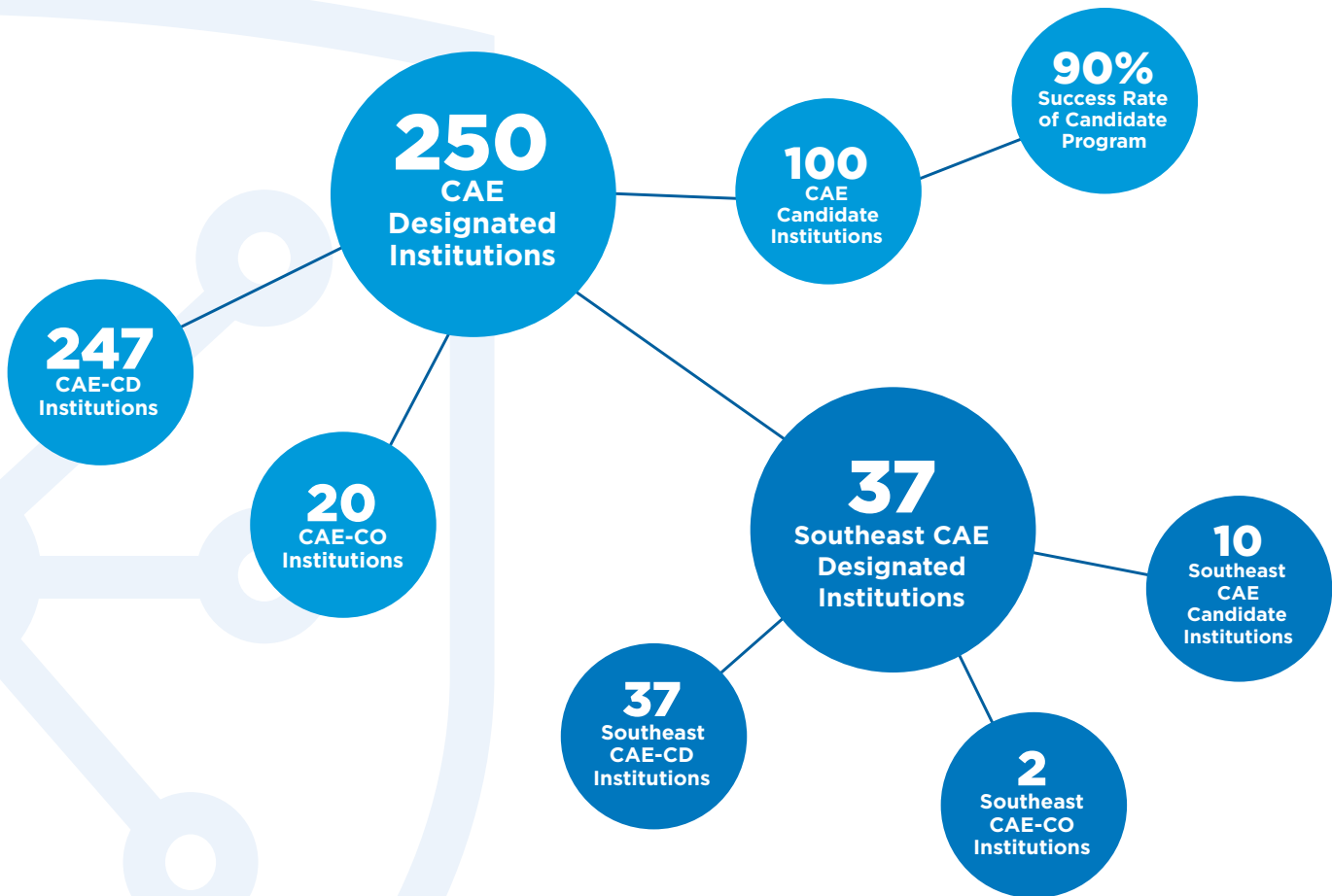
Mississippi State University	CDE/R/CO
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LEGEND

CAE-CDE	Center for Academic Excellence: Cyber Defense Four Year Baccalaureate/Graduate Education
CAE-R	Center for Academic Excellence: Cyber Defense Research
CAE-2Y	Center for Academic Excellence: Cyber Defense Two Year Education
CAE-CO	Center for Academic Excellence: Cyber Operations

By the Numbers

NATIONAL AND SOUTHEAST
CAE COMMUNITY



Special Thanks to our Sponsors

THE NATIONAL SECURITY AGENCY
AND THE U.S. DEPARTMENT OF
HOMELAND SECURITY





CENTER FOR **CYBERSECURITY**
AT THE UNIVERSITY OF WEST FLORIDA



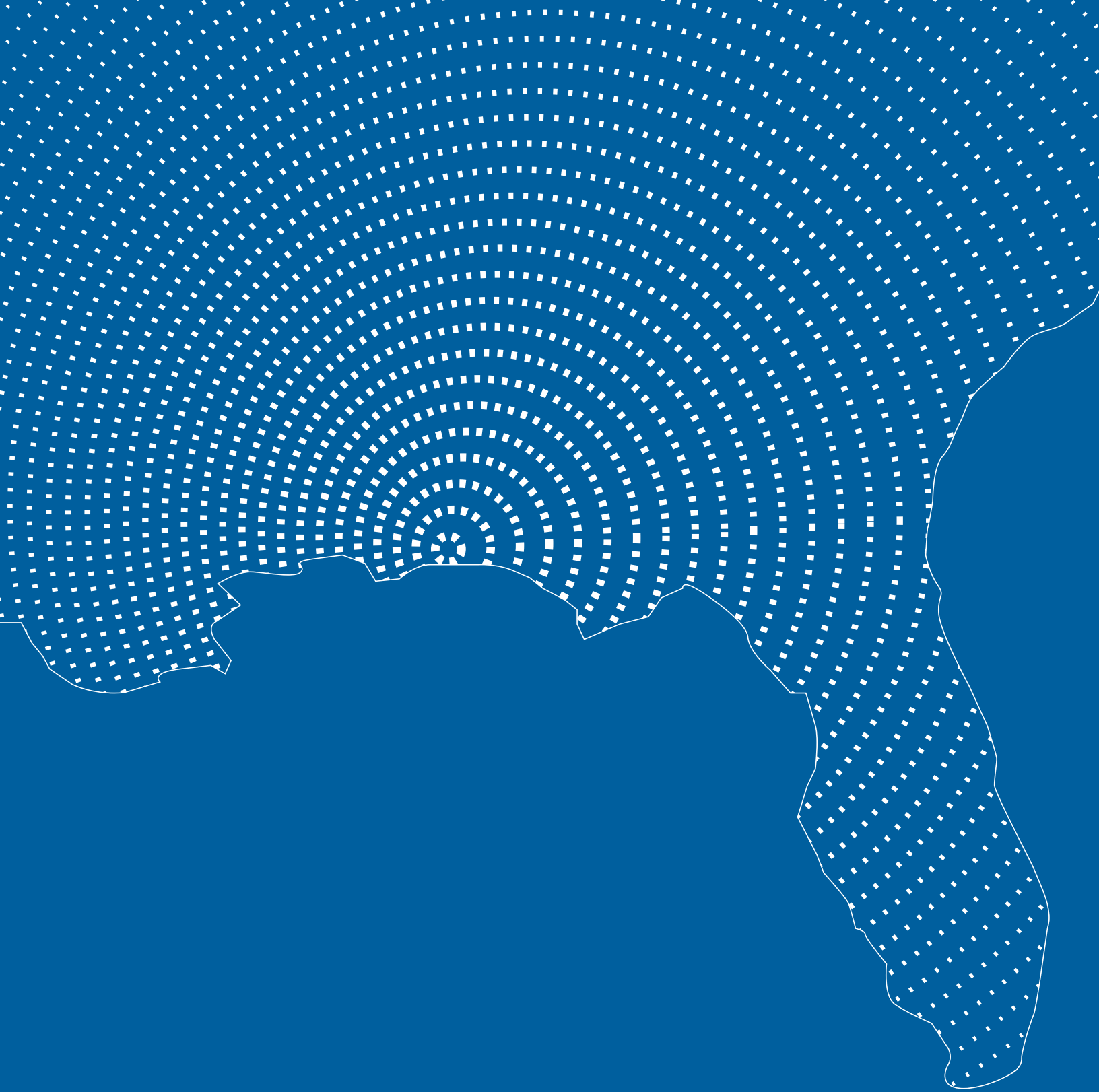
2019 CAE EXECUTIVE LEADERSHIP FORUM

April 24-25, 2019 | Hilton on Pensacola Beach, FL

Hosted by the University of West Florida Center for Cybersecurity,
CAE Regional Resource Center for the Southeast.

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SAVE THE DATE ::::



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