NSA/DHS Centers of Academic Excellence in Cybersecurity



COMMUNITY QUARTERLY

Quarterly Newsletter

Discovering and discussing the everchanging landscape of Cybersecurity Education for NSA Center of Academic Excellence designees.



2019 CAE in Cybersecurity Symposium

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Staff greet guests as they enter the CAE in Cybersecurity Symposium.

2019 CAE in Cybersecurity Symposium

The Centers of Academic Excellence in Cybersecurity (CAE-C) Community hosted its sixth annual symposium on November 21-22 in Phoenix, Arizona.



Executive Leadership Forum

Please join us at the CAE Executive Leadership Forum on May 19-21 in Chicago, Illinois.



Newsletter created by the CAE in Cybersecurity Community in Collaboration with the CAE-CD Program Office.



2019 Designated CAEs

Each year the CAE-CD Program Office designates institutions that meet the rigorous curriculum and staffing...

Community Spotlight

2019 CAE in Cybersecurity Symposium

The Centers of Academic Excellence in Cybersecurity (CAE-C) Community hosted its sixth annual symposium on November 21-22 in Phoenix, Arizona. With 361 representatives from 241 CAE-C designated institutions, the event marked the largest symposium ever hosted by the community. In addition to the growth in attendance, the program for the event also marked a milestone for the entire community with the addition of two program tracks-CAE in Cyber Defense Education (CAE-CDE) and CAE in Research (CAE-R).

Up to his usual antics, Dr. Tony Coulson from the CAE-C Community kicked off the symposium on November 21st by thanking our sponsors (National Initiative for Cybersecurity Education (NICE), the National Security Agency (NSA), as well as the National Cybersecurity Training and Education (NCyTE) Center), providing a brief overview of the program, and teasing his infamous door prizes. Following Dr. Coulson's brief introduction, Carrol Parker, chief for the Center for Education, Innovation, and Outreach for the NSA's National Cryptologic School, and Diane Janosek, commandant of the National Cryptologic School for the NSA, reaffirmed the agency's commitment to the CAE-C program and commended our efforts as a community to produce the next generation cyber workforce.

The community also heard from Lynne Clark, deputy chief of the Center for Education, Innovation, and Outreach for the NSA's National Cryptologic School, about the evolution of the CAE-C program, objectives for 2020, and an overview of program changes. Also commenting on the importance of the proposed program changes were two panels, the Executive Leadership panel— comprised of University Presidents and Deans from two and four year institutions—and the CAE National Resource Center (CNRC) panel.

The Executive Leadership panel consisted of Dr. Paul Maurer, president of Montreat College, Lawrence Rose, dean of Jack H. Brown College at California State University, San Bernardino (CSUSB), Dr. Ryan Carstens, president of Eastern New Mexico University-Ruidoso (ENMU-Ruidoso), and Randy VanWagoner, president of Mohawk Valley Community College (MVCC). Each member of the Executive Leadership panel discussed the strategic implications of the proposed changes and reaffirmed how these changes would positively impact the community.

In addition, the CNRC Panel comprised of Dr. Tony Coulson (CNRC–CAE in Cybersecurity Community),



Corrinne Sande (CNRC–Candidates Program), Art Conklin (CNRC–Knowledge Unit Development), and Margaret Leary (CNRC–Peer Review) discussed the tactical and operational benefits of the proposed program changes. This article does not discuss the proposed CAE-C program changes. For an overview of the proposed changes, please refer to the symposium presentation archive at <u>https://www.</u> <u>caecommunity.org/content/symposium-presentationarchive</u>.



The CNRC panel, Margaret Leary (left), Art Conklin (middle), Corrinne Sande (middle), Dr. Tony Coulson (right), and Lynne Clark (far right), discuss CAE-C program changes.

Commenting on programs affiliated with the CAE-C community, Corby Hovis, program director for the Division of Undergraduate Education, and Li Yang, program director for the Division of Graduate Education from the National Science Foundation (NSF) provided an overview of investments in cybersecurity education, reaffirmed the organization's commitment to cybersecurity education, and provided an overview of planned activity for 2020. In addition, Rodney Petersen, director of the National Initiative for Cybersecurity Education (NICE) also asked the community to comment on updates to the NICE Framework per the President's Cybersecurity Workforce Executive Order, which will continue accepting comments until January 13, 2020. For more information, please visit <u>https://www.nist.gov/nice/ framework</u>.

Kicking off the working lunch, Anastacia Webster, CAE-C Community program manager, discussed available resources, current and upcoming website changes, as well as a planned user survey on the community website taking place from January 1st-31st 2020. In addition, she also provided an overview of the resources available on the Department of Homeland Security's (DHS) National Initiative for Cybersecurity Careers and Studies (NICCS) website on behalf of Latasha McCord from the Cybersecurity and Infrastructure Security Agency (CISA). To view available resources on the NICCS website, please visit <u>https://niccs. us-cer.gov/</u>. The community also heard from Amy Hysell, CAE-C Community assistant, about the CAE Virtual Career Fair, sponsored by the National Cybersecurity Training and Education (NCyTE) Center and NSF, on September 27th, 2019. A total of 758 students/alumni and 73 industry representatives (representing 20 employers and 4 CAE-C designated institutions) participated in the event.



Following the CAE-C Community updates, Paul Wagner, Jason Denno, and Tom Jewkes from the University of Arizona discussed programs, curriculum, and future initiatives during this year's CAE Spotlight segment. The CAE Spotlight institution, selected by the CAE-CDE program committee, is recognized for its efforts



as a CAE-C designated institution as well as its efforts to

After the CAE Spotlight presentation, the community split into the CAE-CDE and CAE-R session tracks. The CAE-CDE session track included discussions from Lynne Clark from the NSA on 2020 critical community actions and initiatives, Dr. Vincent Nestler from CSUSB on competencies, and the fastpitch segments from members of the community. Fastpitch speakers included Kyle Jones from Sinclair College, Guillermo Francia, III from the University of West Florida, Mark Thompson and Ram Dantu from the University of North Texas, Siddharth Kaza from Towson University, Mark Loepker from the National Cryptologic Museum, and Cara Tang from Portland Community College. All fastpitch talks are available on the CAE-C Community Website in the Symposium Presentation Archive. The CAE-R track included discussions from Michael Kunz from Sandia National Laboratories on successful research projects, Dr. Li Yang from NSF on funding opportunities, and Yingfei Dong from the University of Hawaii, Dan Dougherty from Worcester Polytechnic Insitute,C and Martha Crosby from the University of Hawaii at Manoa on CAE-Rs and collaboration.

To conclude the first day, the entire community, except for all government representatives, gathered back into the main ballroom to discuss questions, concerns, and initiatives for 2020. The event ended with a brief overview of the program and directions for the following day.

For the day two of the symposium on November 22nd, participants reported directly to their respective tracks (CAE-CDE and CAE-R).

The CAE-CDE track consisted of two special interest groups. Yair Levy from Nova Southeastern University and Eric Berkowitz from Roosevelt University led a special interest group on a fundamentals course, while Allen Parish from Mississippi State University and Siddharth Kaza from Towson University led a group focused on developing a professional society for cybersecurity education.

The CAE-CDE track also included six presentations from twelve members of the community, including Wei Li from Nova Southeastern University, Chris Simpson from National University, Shelly Heller from George Washington University, Zachary Zaccagni and Ram Dantu from the University of North Texas, Jinpeng Wei and Bei-Tseng Chu from the University of North Carolina at Charlotte, Deanne Cranford-Wesley from Forsyth Technical Community College, Melissa Dark from Dark Enterprise, Inc., Mark Loepker from



Shelly Heller from George Washington University presents on "Reach to Teach" at the CAE in Cybersecurity Symposium.

the National Cryptologic Museum, as well as Faisal Kaleem and Portia Pusey from Metropolitan State University. All presentations provided to the community are available on the CAE-C Community website.

The CAE-R track heard from Melissa Dark from Dark Enterprise, Inc. and Agnes Chan from Northeastern University on the History and Highlights of INSuRE.

Next, the community split up into five different rooms to discuss regional community activities. Discussions in these rooms included regional activity for 2019, planned regional activity for 2020, program changes, as well as regional engagement.

During the working lunch, Dr. Tony Coulson (CNRC), Corrinne Sande (CNRC), and Lynne Clark (NSA), answered questions gathered from the community on the first and second day of the symposium ranging from the new CAE-C program changes to the annual report to general questions about the program.

To conclude the activities of the symposium, Lynne Clark (NSA), presented details on the new program guidelines and split the community into three groups (community college, bachelors and graduate programs, and research) to once again ask for feedback on the proposed changes. Once the group discussions finished, the community met once more in the ballroom to discuss final comments and questions that arose over the twoday symposium.

The CAE in Cybersecurity Community thanks all attendees for their participation in the symposium. We would also like to thank this year's program committees (CAE-CDE Track: Amelia Estwick from Excelsior College, Faisal Kaleem from Metropolitan State University, and Kim Muschalek from San Antonio College; CAE-R: Agnes Chan from Northeastern University, Donwan Shin from New Mexico Tech, and Jennifer Cuttler from Texas A&M University.

All materials from the symposium are available on the website at <u>https://www.caecommunity.org/content/</u> <u>symposium-presentation-archive</u>. We look forward to seeing you at next year's symposium in Atlanta, Georgia!





CAE-CD Program Office Activities

CAE-CO Meeting

On Monday, November 18th, representatives from CAE-CO schools met for a day of networking and collaboration and to discuss upcoming changes to the CAE designation process. Representatives from the NSA and FBI, along with PIs from 20 universities, met to share their progress and vision for their programs.

Lynne Clark (Chief, NSA/DHS National Centers of Academic Excellence in Cyber Defense Program Office) shared the upcoming changes to the CAE designation process. It was reported that students were using the tool to determine which institution to apply to, indicating the farreaching impact of the CAE program, as well as the value for students and institutions.

Throughout the day, presenters spoke about the

importance of the CAE Community, resources available to designated schools, the Cybersecurity Scholarship Program (CySP), and the value of KUs, among other things. During discussion times, topics discussed included the desire for more collaboration between CO schools and a greater focus on the differentiation between CDE and CO institutions, including addressing the overlap between CO, CDE, and R designation qualifications.



Community Activities **Reminders:**

- Annual reports are due February
 15 for all schools except those who were newly designated in 2019.
- All CDE institutions that are redesignating in 2020 have been extended. A new re-designation date will be assigned at a later date.
- All CAE-R new and re-designation applications are due by February 1.
- We're in the process of updating the requirements for use of the logo.
 Please look for guidance for use in the near future.

Please complete the annual report document no later than February 15, 2020. If you designated or re-designated in 2019 you do not need to submit an annual report for the 2019 year. If you are both CAE-CDE and CAE-R, please complete both. If you haven't received the template for completion, please email askcaeiae@nsa.gov.





Community Activities Resources Available to the Community

National Initiative for Cybersecurity Careers & Studies

The National Initiative for Cybersecurity Careers & Studies (NICCS) is the nation's one-stop shop for cybersecurity careers and studies. It connects the public to information on cybersecurity awareness, degree programs, training, careers, and talent management.

NICCS accomplishes this through a number of interactive resources such as the NICCS Education and Training Catalog which lists over 4,000 cybersecurity courses offered by organizations across the nation and is growing every day.

Centers of Academic Excellence (CAE) who become NICCS training providers may promote their courses on the NICCS website for free, reaching a broader audience and receiving increased exposure. In 2019 alone, site visitors viewed the courses we advertised nearly 1,308,000 times!

To show appreciation to the CAEs who contribute to the NICCS Training Catalog, we also highlight different CAEs each quarter, on the CAE Highlights page.

To become a NICCS training provider, please visit the Vendor Vetting page and submit an application. Once we have received your application, we will send instructions for submitting courses.

To learn more about NICCS or the CAE program visit <u>niccs.us-cert.gov</u> or email us at <u>NICCS@hq.dhs.gov</u>.

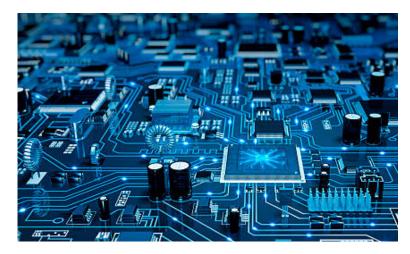
Designated Institutions

2019 CAE in Cybersecurity Designated Institutions

Each year the CAE-CD Program Office designates institutions that meet the rigorous curriculum and staffing requirements as Centers of Academic Excellence (CAE) in Cybersecurity.

The following institutions received their CAE-CD, CAE-CO, or CAE-R designations. Designated institutions were recognized at either the National Cyber Summit Conference in June or the National Initiative for Cybersecurity Education Conference in November.

Air Force Institute of Technology **Arapahoe Community College Auburn University Baker College Bluegrass Community and Technical College Brookdale Community College Butler Community College Century College Coastline Community College Columbus State Community College Delta College** Embry-Riddle Aeronautical University, Prescott Campus **Estrella Mountain Community College** Florida Atlantic University Georgia Institute of Technology Germanna Community College **Glendale Community College Grand Canyon University Great Falls College Montana State University** Hill College Johnson County Community College Lansing Community College LeMoyne-Owen College Lincoln Land Community College Macomb Community College Madison College McLennan Community College Missouri University of Science and Technology



Mt. Hood Community College **Murray State University** North Carolina A&T State University Northern Kentucky University **Ohlone College Owensboro Community and Technical College** Purdue University Northwest **Rock Valley College** Sierra College South Carolina State University Southern Maine Community College Southwest Virginia Community College Spokane Falls Community College St. Petersburg College **Trident Technical College** University of California, Irvine University of Hawaii at Manoa University of Kansas University of Louisville University of Maine at Augusta University of Missouri - Columbia University of New Hampshire University of North Texas **University of South Florida** Virginia Western Community College Walden University Webster University Westchester Community College Wichita State University

Congratulations to the newly designated CAE in Cybersecurity institutions and welcome to the CAE in Cybersecurity Community! To learn more about CAE designated institutions, please visit <u>https://www.caecommunity.org/</u> <u>content/cae-institution-map</u>.



Upcoming Events



2020 CAE Designation and Scholarship For Service (SFS) Workshop San Antonio, Texas

Time: 8:30am-5:00pm

The 2020 CAE workshop will review the required two-part application process required for designation as a Center of Academic Excellence in Cybersecurity (CAE) in Cyber Defense. **For more information, please visit:** <u>https://ncytecenter.wildapricot.org/event-3671183</u></u>

Women in Cybersecurity Conference in Aurora, Colorado

Time: 8:00am-5:00pm

Women in CyberSecurity (WiCyS) is the premier organization with national reach dedicated to bringing together women in cybersecurity from academia, research and industry to share knowledge, experience, networking and mentoring. **For more information, please visit:** <u>https://www. wicys.net/</u>

12-14 MAR

19-21 MAY

Executive Leadership Forum Chicago, Illinois

Time: 8:00am-5:00pm

The forum unites executive leadership from academia, industry and government to seek collaborative strategies and solutions to advance cybersecurity.



Upcoming Events



National Cyber Summit in Huntsville, Alabama

Time: 8:00am-5:00pm

Join academics and professionals in the field of cybersecurity as they discuss cyber training, education, and workforce development.

For more information, please visit: https://www.nationalcybersummit.com/

CAE Forum Virtual Event

Time: Third Wednesday of Every Month @ 1:10pm Eastern Time

CAE Forum is a live, online webinar where members of the CAE in Cybersecurity Community can give non-technical presentations to the community. **For more information, please visit:** <u>https://www. caecommunity.org/content/cae-forum-resources</u>

Winter 2019

Winter 2019

CAE Tech Talk Virtual Event

Time: Third Thursday of Every Month @ 1:10pm Eastern Time

CAE Tech Talk is a live, online webinar where members of the CAE in Cybersecurity Community can give technical presentations to the community. **For more information, please visit:** <u>https://www.caecommunity.org/content/cae-tech-talk-resources</u>

Stay current on all Community events by checking out the community calendar at <u>https://www.caecommunity.org/content/calendar.</u>

The CAE-CD Program Office uses the contact information uploaded into <u>www.iad.gov/nietp</u> to send out routine reminders, solicitations, and event invitations. Please ensure that you have updated your information with the correct contacts from your institution.

CAE-CD Program Staff Contacts

- Lynne Clark Chief, NSA/DHS National Centers of Academic Excellence in Cyber Defense Program Office
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 NSA/DHS Centers of Academic
 Excellence Cyber Defense Education
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- Alice Smitley CAE Grant and Scholarships Program Manager
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- Josh Odum CAE Grant and Scholarships Program Assistant

2020 CAE Community Executive Leadership Forum

MAY 19 - 21, 2020 • CHICAGO, IL

Hosted by Dakota State University and Moraine Valley Community College

Winter Edition 2020



Newsletter created by the CAE in Cybersecurity Community in collaboration with the CAE-CD Program Office.



Contact

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- <u>askcaeiae@nsa.gov</u>
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DAKOTA STATE

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SAVE THE DATE

To submit ideas, stories, photos, events, feedback, or more, please email us at info@caecommunity.org.