

# CFIC@SHSU

Sam Houston State University  
Cyber Forensics Intelligence Center Newsletter



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## HIGHLIGHTS

- The CFIC is working on a Podcast for this fall. If you are interested in participating, contact the CFIC.
- The CFIC is starting the Digital Forensics Information Intelligence (DFII) Research group for the fall semester. If you are interested in giving a presentation to the group, please contact the CFIC.
- Dr. Todd McDonald from the University of South Alabama will be speaking at the CybeRsecurity EducATion InitiatiVEs (CREATIVE) in Higher Education Environments workshop at HICSS 2021.
- The Cyber Operations, Defence, and Forensics Mini-track at HICSS 2021 submission deadline is July 15, 2020.



## DIRECTOR'S MESSAGE

In today's environment, the need for cybersecurity and cyber forensics professionals continues to increase. In a recent Forbes article, they estimate that the global cybersecurity market is worth approximately \$173 Billion in 2020 and predicts that it will expand to around \$270 Billion by 2026. This environment creates an extraordinary industry demand for qualified cybersecurity and cyber forensics professionals. The CFIC strives to facilitate fulfillment of this demand by working with the Department of Computer Science at SHSU to offer industrial insight into academic programs as well as providing students with relevant and practical industry experience and competitions applicable throughout all levels of their academic pursuits. Our students gain relevant industrial experience by participating in industry-based internships coordinated in conjunction with the CFIC. I want to congratulate the Zoom team for winning the Cyber Security Competition hosted by the CFIC at SHSU. If you are interested in their video submission, please visit the CFIC YouTube channel or the events page on the CFIC Web site.

# INSIGHT

As the traditional workforce rapidly evolves into a digital work environment, organizations are becoming increasingly interested in attracting a technically oriented workforce. As more people transition to working from home, they are using some form of technology such as video conferencing to stay in touch with colleagues, make sales calls, and achieve business responsibilities. Coupling this trend with an existing shortage of qualified cybersecurity professionals in the market prompts organizations to hire computer science interns in collaboration with the CFIC. The reasons for this movement focus on the fact that:



1. Computer science interns, through the CFIC, bring a new awareness to organizations on how technology can be applied to solve existing issues, as well as emerging cybersecurity and digital investigation problems.
2. Computer science interns, through the CFIC, have an in-depth understanding of networking, hardware, and software development as well as implementing applications. These skill sets are useful for organizations needing assistance with practical operations, support, hardware deployment, software development, and cybersecurity matters in remote workforce environments.
3. CFIC Internships allow companies to evaluate a potential employee in their work environment before bringing them on as a full-time employee. These internships enable organizations to test an intern's technical and social skill sets in their culture to ensure that they complement and extend a company's existing capabilities.
4. Working with the CFIC helps companies to promote their organization in the university and the broader community. It also enables the company to establish a pipeline for acquiring technical employees in the future.

If you are interested in learning more about how an internship collaboration can benefit your organization, please contact the CFIC.



# PODCAST



The CFIC is working on starting a Podcast this fall.  
Topics of interest include but are not limited to:

- Insights from cybersecurity professionals
- Insights from cyber forensics professionals
- Technology use, abuse and misuse
- Technology implications of current events
- Active cybersecurity and forensics research
- Published cybersecurity and forensics research

If you are interested in contributing to the podcast,  
please contact the CFIC





## **Cyber Operations, Defence and Forensics Mini-track In the Software Technology Track**

We welcome ideas from people in academia, industry, government, and law enforcement.

Topics of interest include but are not limited to:

- Threat tactics
- Cyber operations,
- Defences and forensics
- Malware analysis
- “Big Data” Investigation
- Device investigations
- Anti-forensics
- Network investigations
- SCADA
- Incident management
- Situational awareness
- Legal Topics

Paper Submissions Deadline  
July 15, 2020 11:59 PM HST

## **CybeRsecurity EducATion InitiATives (CREATIVE) in Higher Education Environments**

CREATIVE 2021's main objective is to bring together academic scientists, researchers and industry leaders to exchange experiences and research results concerning high education Cybersecurity programs across the United States.

Specific topics of conversation include:

- Identifying challenges
- Identifying opportunities
- Standardizing curriculum
- Identify collaborative funding opportunities

The workshop deliverable is a report that outlines the challenges and opportunities.

Join us at HICSS for the CREATIVE Workshop

## DR. TODD MCDONALD



Dr. Jeffrey "Todd" McDonald will be speaking at the CybeRsecurity EducATion InitiatiVEs (CREATIVE) in Higher Education Environments workshop. He is a Professor of Computer Science in the School of Computing at the University of South Alabama. He received his Ph.D. in Computer Science from Florida State University in 2006, received his Master of Science degree in Computer Engineering from the Air Force Institute of Technology in 2000 and his Bachelor of Science degree in Computer Science from the U. S. Air Force Academy in 1990.

He has published over 90 papers and journals related to secure programming, software and hardware-based protection, systems assurance, anomaly detection, and malware analysis. Dr. McDonald has shared in over \$15M of grant funding from the National Science Foundation, Department of Interior, National Security Agency, Air Force Office of Scientific Research, and Air Force Research Laboratory related to cybersecurity education, cyber infrastructure development, predictive analytics, and software protection. He retired from the U.S. Air Force as a Lieutenant Colonel after serving over 21 years as a communication and cyberspace operations officer specializing in cyber systems defense, research, and education. He is a senior member of IEEE and member of the ACM, Eta Kappa Nu, Upsilon Pi Epsilon and a past member of the Military Operations Research Society.



# Partnerships

## Internship Program

Organizations partner with the Center to provide on-site internship experiences to students enrolled in the Department of Computer Science at SHSU to assist in workforce development.

\*Check the CFIC Web Site for Opportunities

## Capstone Project

Provides students with the opportunity to interact with industry while simultaneously introducing them to practical research. These projects are conducted in conjunction with industrial partners at no cost to the organization.

## Seminar Presentations

Industrial partners are invited to make presentations during the fall and spring semesters on challenges that they face from cybersecurity, digital forensics, and information assurance perspectives.



# CONTACT THE CFIC

Cyber Forensics Intelligence Center

1803 Avenue I, AB1 Room 208

P.O. Box 2090

Huntsville, Texas 77341

Phone: 936.294.4768 Fax: 936.294.4312

Email: [cfic@shsu.edu](mailto:cfic@shsu.edu)

## CFIC MISSION

To conduct world-class, leading cyber forensics and security research, provide real-world training solutions, investigate cutting edge cyber forensic investigation resources; promote professional networking; and participate in open data exchanges.

## GOALS

To bring together leading industry participants, practitioners, and faculty members from a variety of disciplines to research cyber forensic and digital security topics that are of interest to governmental, commercial and legal communities in order to:

- Deliver innovative, avant-garde, pioneering research expertise in security and forensics that solves real-world problems
- Partner with governmental, commercial, and legal communities to improve workforce education through world-class training programs
- Provide state-of-the-art research facilities, equipment, and training that empowers faculty to pursue substantial research funding
- Deliver to governmental, commercial, and legal communities a collaborative operational and investigative ecosystem for identifying and resolving cyber forensics and security challenges

## Directions

I-45, Huntsville, TX 77340 to Avenue I,  
Huntsville, TX 77340

1. Depart I-45, Huntsville, TX 77340
2. Turn East onto US-190 [SR-30] for 1.1 miles.
3. Turn Right(South) onto SR-75 [N. Sam Houston Ave] for 0.4 miles.
4. Turn Left(East) onto 16th St. for 0.2 miles.
5. Turn Right(South) onto Avenue I for 0.1 miles.
6. Arrive Avenue I.

The Cyber Forensics Intelligence Center is located in AB1 Room 208

