

# CFIC@SHSU

Sam Houston State University  
Cyber Forensics Intelligence Center Newsletter



## TABLE OF CONTENTS

### Highlights

### Director's Message

### DFI Seminar Schedule

**DFI Seminar Speaker:**  
**Valentin Gazeau**

**DFI Seminar Speaker:**  
**Alberto Ceballos**

**Industry Highlight:**  
**MOGAS Industries**

### Partnerships

### Contact Us

## HIGHLIGHTS

- The CFIC thanks Mogas Industries for their support and participation in the CFIC Internship program.
- The doctoral students speaking in the January and February Digital Forensics Intelligence (DFI) Research group meetings include Mr. Gazeau and Mr. Ceballos.
- The DFI presentation schedule is available on the CFIC website.
- The CFIC is recruiting for SHSU's National Collegiate Cyber Defense Competition (CCDC) team for 2021.



## DIRECTOR'S MESSAGE

The CFIC welcomes everyone back for the start of the spring semester. We are looking forward to an exciting and energetic 2021! The impact of COVID on the cybersecurity world is visible through increases in the number of cyberattacks, the expanse of corporate spending, the increase in the number of remote workers, and the necessity for technical savvy employees.

This atmosphere amplifies the need for cybersecurity and naturally encourages conversations and research into integrating and optimizing artificial intelligence and data science insights to improve cybersecurity profiling, automated counter actions, vulnerability investigations, and remediation, as well as intellectual property protection. The CFIC helps organizations address these issues and may more through collaborative research opportunities.

We are highlighting several of our doctoral students' research activities in the upcoming CFIC seminars this semester. The seminars take place in room 213 on Mondays from 2:00 pm to 2:50 pm and are also available via zoom upon request. We welcome industrial input and insight into the research seminars. If you would like to participate, present, or collaborate on research, please contact the CFIC.

# DFI Seminar Schedule January and February

**01/25/2021:** Valentin Gazeau

Doctoral Student Sam Houston State University  
*Landlive: A Land Cover Artificial Neural Network*

**02/01/2021:** Alberto Ceballos

Doctoral Student: Sam Houston State University  
*Deception Detection Using Machine Learning*

**02/08/2021:** Avinash Kumar

Doctoral Student: Sam Houston State University  
*Network Attack Detection Using an Unsupervised Machine Learning Algorithm*

**02/15/2021:** Sundar Krishnan

Doctoral Student: Sam Houston State University  
*Security, Privacy and Steganographic Analysis of FaceApp and TikTok*

**02/22/2021:** Dr. Hwang

Web Services Librarian/Assistant Prof  
Sam Houston State University (SHSU)  
*SHSU Library Resources and Research Tips*

# DFI Seminar Speaker: Valentin Gazeau



Mr. Valentin Gazeau received his B.E. degree in Computer science from Sam Houston State University in 2016 and the M.S. degree in Computer Science and Engineering from Sam Houston State University in 2018. He is currently a Ph.D. candidate in the Department of Digital Forensics at Sam Houston State University, Huntsville, TX. His research interests include Cryptocurrencies, machine learning, Big data, Image processing, Digital Forensics, and deep neural networks.

He worked at Bluecham in New Caledonia as an Artificial Intelligence Engineer from 2018 to 2019, where he created a network of neural networks to process the land cover of the earth's surface using Sentinel-2 and Landsat-8 satellite images. He is also a member of the Association of Computing Machinery, where he actively makes presentations about machine learning. He was a programming teaching assistant for two years during his master's degree and is currently an instructor for the programming fundamentals course while receiving very favorable student reviews



# DFI Seminar Speaker: Alberto Ceballos

Alberto Ceballos is a Ph.D. student in the Department of Computer Science at Sam Houston State University (SHSU). Mr. Ceballos started the program in January 2020. Before starting the doctoral program, he was an undergraduate student at SHSU. In December of 2019, he graduated with a Bachelor of Science degree in Computer Science with a concentration in Information Assurance from SHSU.



Previous employment includes working as a research assistant for the Academic Success Center at SHSU and as a developer for the Cyber Forensics Intelligence Center (CFIC). Working as a developer for the CFIC provided practical research knowledge and Android and Unity coding experiences.

Mr. Ceballos' current research interest focus on the application of artificial intelligence towards network security. He has an ongoing interest in developing web applications and mobile apps as well as game development for virtual reality and multiplayer environments. These activities also prompt his overall interest in software development, design implementation, and tool development to solve problems and improve existing procedures.

# Industry Highlight: MOGAS Industries



MOGAS manufactures dependable severe service ball valves for power plants, refining and petrochemical processes, and oil & gas and mining industries worldwide.

MOGAS is known for partnering with its customers to meet the ever-increasing challenges of severe-service applications. Building upon our extensive field experience, we relentlessly pursue research & development breakthroughs in design, materials, coatings, and other technologies to deliver the most-trusted, highest-quality valves in any industry.

When a company works with MOGAS, every aspect of the experience is designed to provide the products, service, knowledge, and responsiveness needed to get the job done – on time, as promised.



# 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

## 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

**Please follow us @**



## 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