CFIC@SHSU

Sam Houston State University
Cyber Forensics Intelligence Center Newsletter

TABLE OF CONTENTS

HIGHLIGHTS

- Dr. Todd McDonald, Mr. Edward Harshany, Dr. Tim Storer, and Dr. Glisson are our DFI Speakers for November.

- The Digital Forensics Intelligence (DFI) Research group presentation schedule is available on the CFIC web site.

- The CFIC is recruiting for SHSU's National Collegiate Cyber Defense Competition (CCDC) team this year.

DIRECTOR'S MESSAGE

Understanding the environment in conjunction with the problem space is paramount in cybersecurity and digital forensics environments. The CFIC achieves this goal through industry collaborations, acquiring governmental designations for degree programs, actively working on research with students, pursuing grants with various faculty at SHSU, and grant partnerships with other universities.

The speaker schedule for the fall semester is winding down. The CFIC would like to thank all the speakers who participated in the research group this year. We are actively pursuing guest speakers and would appreciate speaking to any potential colleagues willing to speak this spring. If you are interested in participating in the future, please reach out to CFIC. We are looking forward to the presentations in the Spring of 2021. Students interested in being a member of SHSU's National Collegiate Cyber Defense Competition (CCDC) team this year are urged to reach out to the CFIC and let us know. Equally, we welcome industry participation and training advice. If you would like to share your expertise with SHSU's CCDC team, please contact the CFIC.

We want to wish everyone a safe and happy Thanksgiving!

DFI November Research Line Up

11/02/2020: Dr. Todd McDonald
University of South Alabama (USA)
Forensics Analysis of Ransomware Families

11/09/2020: Edward Harshany
School of Computing Doctoral Candidate University of South Alabama
Automated Distributed File Storage State Reconstruction

11/16/2020: Dr. Tim Storer
University of Glasgow
Could we have foreseen that breach? Exploring the application of socio- technical systems simulation to security systems

10/23/2020: *Thanksgiving Holiday- No Meeting*

11/30/2020: Dr. Brad Glisson
Sam Houston State University
Residual Data Discussion

DFI Speaker: Dr. Todd McDonald

Dr. Todd McDonald 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.

DFI Speaker: Edward Harshany

Mr. Harshany is a research scientist with the Department of Defense (2012). Before his work as a research scientist, Mr. Harshany served 21 years as a U.S. Naval Officer. He received his B.S. degree in Computer Science (2000) from the University of Central Florida, his M.S. degree in Computing (2008) from the Naval Postgraduate School, and his Ph.D. (Dec 2020) in Computing at the University of South Alabama. He is a member of the University of South Alabama Data Science Ensemble and the Center for Forensics, Information Technology and Security Research Group. Mr. Harshany is a recognized international expert in Link-16/Joint Tactical Information Distribution System (JTIDS), serving as Co-Chairman of the External Time Reference committee for the Joint International Communications Review Board. His research interest lies in digital forensics, data mining, and natural language processing, with a current focus on distributed file system forensics and formal computational logic in event reconstruction of complex systems.

DFI Speaker: Dr. Tim Storer

Tim Storer is a Senior Lecturer (Associate Professor) at the University of Glasgow, where he leads the Software Engineering Laboratory. He is Deputy Director of the Scottish Informatics and Computing Science Alliance (SICSA), representing all 14 Computing Science Schools and Departments across Scottish Universities. He holds a BSc and PhD in Computing Science from the University of St Andrews.

Dr. Storer's research interests focus on the practice of software and systems engineering, with particular interests in software quality assurance, software team coordination and large scale socio-technical system simulation. He is particularly interested in studies of how software engineers operate in practice in the real world (rather than how they are described in text books) and uses methods like ethnography, surveys, interviews and think alouds within controlled laboratory settings. Beyond just observing, he also likes to occasionally meddle, using methods such as action research to make change to software workflows, or building tools that can remove the friction from software development workflows. Dr Storer has led numerous initiatives to build stronger ties between academic computing science and the outside world. His work frequently leads to interactions with the software industry and practitioners. He is the University of Glasgow's lead academic on the strategic partnership with JP Morgan and he recently initiated the SPRINT network within SICSA, providing a funding stream and forum for collaborative research and industry events and initiatives.
When he isn't doing any of that, he can usually be found at a local crag, or falling off his bike.

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

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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