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CFIC@SHSU

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TABLE OF CON ENT

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10 1010 10

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Highlights

Director's Message

DFI Seminar Schedule

DFI Seminar Speaker: Selim Ozcan

DFI Seminar Speaker: Ahmet Aydogan

DFI Seminar Speaker: Furkan Paligu

Partnerships

Contact Us

HIGHLIGHTS

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- The March Digital Forensics Intelligence (DFI) Research group speakers include Mr. Selim Ozcam, Mr. Ahmet Aydogan, and Mr. Furkan Paligu.
- The DFI research group presentation schedule is available on the CFIC website.



DIRECTOR'S MESSAGE

The identification of the zero-day vulnerabilities in Microsoft Exchange, a recent cyber-physical attack on the Oldsmar water treatment facility in Florida, and the Verkada breach highlight the fact that digital resources are potentially always at risk. Combining this information with an increasingly complex threat landscape forces organizations and shareholders to question cyber-attack mitigation strategies and tactic effectiveness in today's increasingly digital-dependent business environment.

The reality is there is no single solution to these multifaceted technical, social-technical, or managerial problems. Partnering with the CFIC is oneway organizations can help to mitigate risks. We can help you investigate specific problems, identify resident residual data on systems, develop potential mitigation solutions, and test resolution effectiveness. Contact the CFIC to see how faculty and students can help solve your cybersecurity and cyber forensic problems.

DFI Seminar Schedule March

03/01/2021: Selim Ozcan

Doctoral Student: Sam Houston State University *Centrality and Scalability Analysis on Distributed Graph of Large-Scale E-mail Dataset for Digital Forensics*

03/08/2021: Ahmet Aydogan Doctoral Student: Sam Houston State University *Employing a Continuous Measurement Process During Digital Tool Validation*

03/15/2021: No speaker: SHSU Spring Break

03/22/2021: Furkan Paligu

Doctoral Student: Sam Houston State University Browser Forensic Investigations of WhatsApp Web Utilizing IndexedDB Persistent Storage

DFI Seminar Speaker: Selim Ozcan



Selim Özcan is a research assistant and a Ph.D. student majoring in Digital and Cyber Forensic Science at the Computer Science Department of Sam Houston State University. He also currently works in The Center for Resilient Networks and Applications at Simula Metropolitan Center for Digital Engineering in Norway. He previously worked as a senior researcher at the Cloud Computing and Big Data Laboratory of the Scientific and Technological Research Council of Turkey (TUBITAK). His doctoral studies focus on e-mail forensics analysis using big data approaches. In particular, Selim's research focuses on improving digital forensics analysis in terms of performance and accuracy. Selim holds a Master of Science degree in Cybersecurity Engineering from Istanbul Sehir University and a Bachelor of Science degree in Computer Engineering. His M.Sc. thesis was about Transfer Learning Effects on Image Steganalysis with Pre-Trained Deep Residual Neural Network Model. His research areas include software engineering, big data, cloud computing, artificial intelligence, cybersecurity, digital forensics, distributed systems, and internet topology and measurements. He gained experience in steganography, image steganalysis, deep learning, convolutional neural networks, residual learning, transfer learning during his M.Sc. studies, and big data and cloud computing during his B.Sc. studies. He has contributed to several open-source community projects, including LibreOffice Online and Apache Ambari. He has certificates in Professional Scrum Master I, Hadoop Fundamentals I, Hadoop Administration, Spark Fundamentals I, Introduction to MapReduce Programming, Neural Networks and Deep Learning, Improving Deep Neural Networks: Hyperparameter tuning, Regularization, and Optimization, and Structuring Machine Learning Projects.

DFI Seminar Speaker: Ahmet Aydogan



Ahmet Aydogan attended the exchange program between Firat University and Sam Houston State University in 2013. While he was a student in the Software Engineering department at Firat University, he expanded his research on cybersecurity and published his first article. Later, he attended the Computer Science department of Sam Houston State University to continue his education.

During the aforementioned period, he worked in T.A positions. Participating in E.U.R.E.C.A events, he wrote three more articles, all on cybersecurity. he is currently working on his Ph.D. in Digital Forensics at Sam Houston State
University. During his doctoral studies, besides working in the G.A position, he tries to contribute to the development of Digital Forensics within the IEEE Standards Association. his work generally continues on IoT System Security, cryptology, and cyber manipulation techniques.

DFI Seminar Speaker: Furkan Paligu

Furkan Paligu is an instructor of computer science at North American University and a Ph.D. student of digital and cyber forensics at Sam Houston State University. He has a bachelor's degree in Computer Science from Marmara University and a master's degree in Cybersecurity Engineering from Istanbul Sehir University. During his bachelor's, he spent a year at Linkoping University in Sweden as an exchange student. He worked on the Application of Bee's Algorithm to Cellular Manufacturing Problem at Cardiff University in UK/Wales as part of his mandatory summer practice.



After his bachelor studies, he has taken part in various information technology and cybersecurity projects as a software developer and software security engineer in the Turkish Scientific and Technological Research Association (Equivalent of National Science Foundation in the USA) from 2012 to 2018. An extensive part of his work focuses on large-scale projects in complex domains that require extensive teamwork. These domains include data leak prevention systems, voice translation engines, customer application, management systems, static code analyzers, malware scanning systems operating on cloud architecture, electronic signature systems, and electronic cash registers. He was the project manager of the National Static Code and Quality Metrics Analyzer Project from January 2018 to August 2018. In August 2018, he left the project to pursue his Ph.D. degree in SHSU. Starting from January 2020, he has been teaching Computer Networks, Network and Computer Security, Internetworking, Network Administration, Cloud Computing, and Computer Organization at North American University. His research interests are browser security and forensics, malware analysis, sound recognition, and static code analysis.

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VOL. 3 ISSUE 3

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.



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.

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Seminar Presentations

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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