

UTICA UNIVERSITY

2022 Cyber Forensics Student Competition and Conference*

Utica University will be hosting the 2022 Cyber Forensics Student Competition and Conference (CFSCC). This CFSCC event is created as part of Utica University's effort to provide experiential learning opportunities for university students. The event is funded by the U.S. Department of Justice's Bureau of Justice Assistance grants, which will also support the year 2023 Utica University Competition and Conference.

The 2022 conference theme is "Evolution of Illicit Crypto Use." Over the years, cryptocurrency has reportedly been prevalent in illicit darkweb marketplaces, especially in sex and drug trafficking incidents, ransomware, and various financial schemes. The 2022 Conference will provide an opportunity to learn about illegal crypto trends from field experts and Utica University faculty members. First, the Non-Profit Organization, Anti-Human Trafficking Intelligence Initiative, will share their current efforts to stop illicit cryptocurrency use in human trafficking. A group of Utica University faculty in cybersecurity and financial crime programs will also discuss their insights on the impact of cryptocurrency and higher education program development. Lastly, Utica University students will share their internship and research experience working in the relevant area.

The Cyber Forensics Student Competition will be held virtually as a team competition a day before the Conference. The final scores and winning teams (the first three teams) will be announced during the award ceremony at the Conference. For this competition, university student teams will engage in cybercrime investigation-focused activities centered on digital forensics. The Cyber Forensics Student Competition will serve to connect common goals, needs, and interests for promoting the best practices of cybercrime investigation by combining technical skills and the legal area.

There will be a maximum of 10 university student teams in the competition, including five Non-Utica teams from Boston University, Bridgewater State University, and Scranton University. Each team will consist of two experts in digital forensics/mobile forensics/hacking and one legal expert in cybercrime investigation.

Pre-Registration in advance for this meeting:

https://utica-edu.zoom.us/webinar/register/WN_wOm971enTbqQXAt64Atj7A

Friday, April 22, 2022

9:00 AM – 9:10 AM	Opening remarks Kyungseok Choo The Department of Justice Grant Program Lead/Co-PI
9:10 AM – 9:20 AM	Congratulatory remarks Todd Pfannestiel Provost, Utica University
9:20 AM – 9:30 AM	Welcoming remarks Stephanie Nesbitt Dean of School of Business and Justice Studies
9:30 AM – 9:50 AM	Keynote Speaker Aaron Kahler Founder/C.E.O., ATII (Anti-Human Trafficking Intelligence Initiative)
9:50 AM – 10:00 AM	Break
10:00 AM – 10:50 PM	Faculty Researchers Panel Austen Given, Andrew Carr, Sue Lynch
10:50 AM – 11:00 AM	Break
11:00 AM – 11:50 AM	Student Research and Internship Panel Larry Cameron, Chief Information Security Officer, ATII Utica University Students Randall Chiera, Jaydy Hernandez, Trung Nguyen
11:50 AM -12:00 PM	Student Competition Award Ceremony Ismael Morales The competition results will be announced.
12:00 PM-12:05 PM	Closing remarks Kyungseok Choo The Department of Justice Grant Program Lead/Co-PI

Competition: Thursday, April 21, 2022 from 9 am to midnight

Please note that the competition registration will be sent out only to the invited teams. If you like to participate in the competition, please contact Prof. Ismael Morales at ismoreles@utica.edu

Competition Guidelines

The competition comprises two components: 1) Forensics Capture the Flag (CTF) Challenge and 2) Written Legal Evidence Report

1. Forensics CTF Challenge (50 %)

The challenges will lead to flags entered on Capture the Flag Framework (CTFD), an open-source CTF platform that allows tracking progress, completed challenges, and position in the CTF. Each challenge or set of challenges will have varying levels of difficulty to access the flags. Different skillsets and specializations will be required to access and complete the challenges. Challenges are designed with a focus on digital/cyber forensics.

- 1) **The challenge will start at 9 am and end midnight on April 21, 2022.** At the start of the challenge, all teams will be provided with two written scenarios detailing the crimes under Investigation, the forensic evidence being provided, the information the teams are being requested to investigate and report on, and a rubric clarifying how points may be earned.
- 2) Teams will have approximately fifteen (15) hours from the start of the competition until the end of the competition to analyze evidence before presenting their findings to the judges.
- 3) As per Competition Rules and Guidelines, teams can use any technical approach(es), tools, and techniques that they feel are suitable to conduct their Investigation of the scenario, provided teams stay within the boundaries of both their legal authority and applicable laws.

2. Written Legal Evidence Report (50%)

Teams should produce a written report for the provided scenario, which documents the background of the scenario, the authorized legal request(s) if made, a table of evidence, the collection and analysis process, and a summary of their report before the fifteen (15) hours competition deadline.

Technical Approach and Techniques Utilized	Utilization of any technical approach(es), tools, and techniques suitable to conduct their Investigation of the scenario: An example format for this portion: <ol style="list-style-type: none">1. Description of tasks accomplished2. Description and Rationale for the use of the selected tool(s) used for each task
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Evidence Discovered and Categorized	<p>Evidence identification, categorization, and handling procedure to preserve the evidence's integrity and legality: The example below will be duplicated for each piece of evidence.</p> <p>Evidence #1: <Provide item name> Evidence Description <Provide a brief description of the item> Evidence Type: <Provide a summary of the type of evidence this item belongs to> Special Handling: <Provide special handling required to preserve evidence integrity></p>
Legal Authority	<p>Authority requests to investigate beyond the current scope of the scenario (criminal Investigation): An example below can be used to describe the situation to contact a “Case Agent” for legal requests or discussion to resolve the issue.</p> <p>Legal Authority Request #1: <Provide > Rationale for Request <Provide a brief description of the Rationale> Request Resolution: <Provide a summary of how this request was resolved></p>
Summary Analysis of Body of Evidence	<p>Analysis of every individual evidence artifact recovered from the scenario and the team’s overall summary analysis of their Investigation. The following items will determine the grading criteria for this section:</p> <p>Evidence #1: <Provide item name> Significance to the Investigation: <Provide an analysis on the significance of the evidence to the Investigation> U.S. Penal Code or Rationale: <Describe how the evidence discovered supports your assessment of this crime></p> <p>Evidence #2: <Provide item name> Significance to the Investigation: <Provide an analysis on the significance of the evidence to the Investigation> U.S. Penal Code or Rationale: <Describe how the evidence discovered supports your assessment of this crime></p> <p>Evidence #3: <Provide item name> Same as the evidence # 1 and #2 above</p> <p>Summary of the Investigation: <Provide the significance of this Investigation, any closing comments, observations, and/or potential future developments.></p> <p>An example language: We are able to justify the prosecution of X named individual for the following crime based on the fact that he/she was positively identified committing the following illegal acts, which were supported by the following evidence described in detail above.</p>

List of Speakers/Participants

Dr. Todd Pfannestiel

Provost and Senior Vice President for Academic Affairs



Dr. Pfannestiel has the overall responsibility for Utica University's academic programs and faculty across all three Schools, as well as oversight of the University Library and Learning Commons, International Programs, Graduate Studies, Learning Services, and the Registrar's Office. He came to Utica following a twenty-year career at Clarion University of Pennsylvania where he previously served as Provost and as Dean of the University of Arts, Education, and Sciences. He is also a Professor of History, having taught a range of courses in recent American history, as well as authored *Rethinking the Red Scare: The Lusk Committee and New York State's Crusade Against Radicalism*, and co-authored *Creamed Onions for Supper: The Great Depression in Western Pennsylvania*. He earned his Ph.D. in History from The University of William and Mary, where he held a Mellon Fellowship in the Humanities. He also attended Duke University as a National Science Foundation Graduate Fellow in Economics and earned his bachelor's degree in History and Economics from the University of Arkansas, where he graduated as a Fulbright University Honors Scholar *summa cum laude*.

Stephanie R. Nesbitt, JD, MBA

Dean, School of Business and Justice Studies and Associate Professor of Risk Management and Insurance



Stephanie joined the Utica University faculty in August 2012 as an assistant professor in risk management and insurance and director of the risk management academic program. Before joining the Utica University's faculty, she spent 16+ years working as a risk manager and practicing attorney in both the retail and healthcare industries. Since joining Utica University, she has held the positions of director- risk management and insurance program, director- M.B.A. programs, and associate dean- business and economics programs.

She received her J.D. from the University at Buffalo School of Law, M.B.A. from Syracuse University, and B.A. in Speech Communication from Ithaca University. Stephanie has been a featured speaker at several national, state-wide, and regional industry and academic conferences on topics such as insurance cost allocation methods, the impact of risk management on healthcare quality, individual and team accountability to improve healthcare quality, HIPAA and patient privacy, academic program design in graduate business education, and student engagement as a component of student success. She is a member of the Academy of Management and is licensed to practice law in the state of New York.

Stephanie's research interests lie in the areas of the development and implementation of business education programs, the impact of teaching modalities on student success, and the legal/regulatory/risk implications of business' ever-increasing reliance on cyber technology. Her most recent publications include a co-authored chapter titled "Five Eyes and One Problem" in the June 2020 book Contemporary Intelligence Analysis and National Security: A Critical American Perspective, and the co-authored research article "Bueller...Bueller?: Predictors of Behavioral Engagement, as Measured by Student Attendance, in a Blended M.B.A. Environment," published in the B.R.C. Journal of Advances in Education.

Away from campus, she spends her leisure time much as she does her work hours, in constant motion. Stephanie holds a 3rd degree (san dan) black belt in Shorin-Goju Ryu style karate and was granted the title of sensei in her dojo in August 2014. She is also an avid, albeit slow, runner, hiker, and cyclist.

Aaron Kahler- Keynote Speaker

Founder and C.E.O. of the Anti-Human Trafficking Intelligence Initiative (ATII).



Aaron Kahler, C.F.E., CAMS, CCI, CTCE, is the Founder and C.E.O. of the Anti-Human Trafficking Intelligence Initiative (ATII). He is also the Co-founder and Chair of the Anti-Human Trafficking Cryptocurrency Consortium (ATCC).

Prior to ATII, Aaron has held a number of management consulting and private industry roles as a practice leader in the area of AML/BSA Compliance and Financial Crimes within the financial services industry. He was also a Director of A.M.L. Market Planning for a large global data and software company.

He has 20 years of experience working with institutional clients within banking, capital markets, brokerage, asset management, money service businesses, crypto exchanges, hedge and private equity funds. Aaron is an Anti-Money Laundering (A.M.L.), Bank Secrecy Act (B.S.A.), USA PATRIOT Act and Office of Foreign Assets Control (OFAC) regulatory compliance subject matter expert who also specializes in fraud management, financial crimes investigation and investigative due diligence-Know Your Customer (KYC).

Aaron is an Advisory Member of the Cryptocurrency Compliance Cooperative (CCC), M.S. Investigations Board Member for the University of New Haven, Advisory Council Member for the Association of Certified Fraud Examiners (ACFE) and an Advisory Council Member for The Center for Identity Management and Information Protection (CIMIP). He also serves as a Co-Chair within the Technical Committee on Blockchain and Distributed Ledger Technologies (D.L.T.) at IEEE Technology and Engineering Management Society (TEMS). He earned a Bachelor of Science in Economic Crime Investigation from Utica University (Formerly Utica College of Syracuse University).

Larry Cameron-Guest Speaker for Student Internship Session

Chief Information Security Officer at ATII.



Larry Cameron, CCI, CTCE, D.E.I., MDI, TINV, TG2 is the Chief Information Security Officer at ATII.

Larry has 20+ years experience in the technology and cyber security industries. He is the Chief Information Security Officer at the Anti-Human Trafficking Intelligence Initiative (ATII) and an OSINT Investigator / Lead Cryptocurrency Forensic Specialist for the National Child Protection Task Force (NCPTF). He is a certified Digital Evidence Investigator (D.E.I.), Mobile Device Investigator (MDI), Triage

Investigator (TINV), Certified Cryptocurrency Investigator (CCI), CipherTrace Certified Examiner (CTCE) and holds over 50 other Industry, I.T. & Security certifications. He manages technology in multiple disciplines and works with local, state, federal and international Law Enforcement on Human Trafficking and Child Exploitation investigations.

Kyungseok Choo Ph. D

Department of Justice Grant Program lead and Professor



Kyungseok Choo is the U.S. Department of Justice Grant Program lead for the Computer Forensics and Digital Evidence Student Opportunity Program Development and Professor of Criminal Justice and Economic Crime at Utica University. He also serves as the chairperson for Special Interest Group of Cryptocurrency in Human Trafficking.

He has more than \$12 million external research grant experience from which he has directly managed over \$4 million research budget including the current D.O.J. grant. The list of selected grants is as follows: 1) Office of Juvenile Justice and Delinquency Prevention (OJJDP)-Juvenile Drug Court Guidelines, 2) National Institute of Justice (NIJ)-a school safety intelligence fusion center in Miami-Dade, 3) Department of Education-Louisiana Safe and Successful Schools Initiative, 4) Bureau of Justice Assistance (BJA)- Sex Offender Authentication, 5) Korean Institute of Criminology (K.I.C.)- transnational human trafficking study, and 6) Massachusetts Shannon Community Safety Initiative.

The research results have been published as academic journal articles in *Journal of Contemporary Criminal Justice*, *Juvenile & Family Court Journal*, *Asian Journal of Criminology*, *Victims and Offenders*, *Sex Offender Law Report*, *British Journal of Community Justice*, *Crime and Criminal Justice International*, and *Women and Criminal Justice*. His book "Gangs and Immigrant Youth" published in 2007 has been well received.

Andrew Carr

Director of Cybersecurity Graduate Programs, Associate Professor of Cybersecurity



Mr. Carr currently holds the role of Director, Cybersecurity Graduate programs and Assistant Professor of Cybersecurity focusing on the field of digital forensics and incident response. Andrew previously held the position of Professor of Practice in Cybersecurity at Utica University and prior to that was an Adjunct Instructor for five years.

Andrew spent the last three and a half years in supervisory roles at leading firms within the demanding field of incident response. In these roles Andrew maintained expertise in digital forensic analysis, threat actor tactics, techniques and procedures, ransomware negotiations, application of data privacy law in relation to breach events, OFAC compliance, financial audit considerations for cyber incidents, intellectual property theft investigations, and cryptocurrency tracing. Andrew was part of several hundred incident investigations during his time in the incident response field ranging from healthcare providers to private equity firms and educational institutions.

Prior to Utica University Andrew spent more than eight years as a senior computer forensic examiner at the Wallie Howard Jr. Center for Forensics Sciences. In that role Andrew performed forensic examinations on a multitude of digital devices while upholding strict accreditation requirements under ISO/IEC 17025 standards and routinely testified in federal and state courts. During this time, he also worked as part of the New York State Digital and Multimedia Technical Working Group to help further the science of computer forensics and assist agencies in preparing for accreditation in conducting computer forensic analysis. He ultimately trained for and became a technical assessor for the ANSI National Accreditation Board for testing laboratories operating under ISO/IEC 17025 standards in the discipline of digital forensics.

Andrew's educational background includes an Associate's degree in Criminal Justice from Mohawk Valley Community University, Bachelor's degree in Cybersecurity Information Assurance from Utica University, and a Master's Degree in Cybersecurity Intelligence and Forensics from Utica University. Andrew has received extensive computer forensics training from industry leading organizations including SANS, IACIS, NCFI and NW3C and currently holds GIAC Certified Incident Handler (GCIH) and CipherTrace's Cryptocurrency Tracing Certified Examiner (CTCE) certifications.

Jack (Austen) D. Givens

Associate Professor of Cybersecurity



From 2015-2019, Givens was Assistant Professor of Cybersecurity at Utica University, after having worked as a Teaching Assistant (2011-2012), Adjunct Lecturer (2012-2014), and Professor of Practice (2014-2015) in the MS-Cybersecurity program. During the 2018-2019 academic year, he also served as Director of Graduate Cybersecurity Programs.

His research has appeared in *The Cyber Defense Review*, published by the U.S. Military Academy at West Point; *Homeland Security Affairs*, published by the Naval Postgraduate School; the *National Cybersecurity Institute Journal*, and the *Journal of Homeland Security and Emergency Management*. He is author of the 2020 book *Disaster Labs: How American States Use Partnerships to Manage the Unthinkable* and co-author of the 2014 book *The Business of Counterterrorism: Public-Private Partnerships in Homeland Security*, which former Secretary of Homeland Security Tom Ridge called "must-read."

From 2007-2010 Givens was Project Manager for the National Homeland Security Project at Virginia Commonwealth University, a VCU-led research initiative focusing on state-level homeland security programs. He was previously based in New York City on the client services team for SelectMinds, Inc., a social networking firm that was later acquired by Oracle. From 2005-2006 he was an I.T. consultant with Apptis, Inc. at Transportation Security Administration headquarters in Arlington, Virginia, where he served on a team monitoring the performance of a \$750 million I.T. managed services contract with Unisys, Inc.

On November 1 2018, Givens was appointed to serve on the national staff of the U.S. Coast Guard Auxiliary as Branch Assistant for External I.T. Security Awareness, a capacity in which he develops I.T. security awareness and training products for the 28,000+ members of the U.S. Coast Guard Auxiliary and Coast Guard forces worldwide.

He is an alumnus of the University of Virginia (BA-Foreign Affairs), Virginia Commonwealth University (MA-Homeland Security), and King's University London (PhD-Public Policy).

Ismael Morales

Assistant Professor of Cybersecurity



Morales's experience in multiple domains encompasses software engineering, DoD geo-spatial information systems, legal/news and business, automotive industrial engineering, DoD logistics, and DoD cybersecurity research and development.

His activities in support of the National Air and Space Intelligence Center, the N.S.A., the U.S. Army Intelligence Command, the Air Force Research Lab, and the Department of Defense included software development, kernel programming, cybersecurity R&D, and technical management in classified and unclassified

domains. He has also served as the principal security assessor for multiple D.O.D. agencies and commercial businesses for information assurance certification and accreditation. His hobbies include coaching and playing soccer, and long-distance running.

Suzanne Lynch

Professor of Practice



Suzanne Lynch MS Professor of Practice – Economic Crime, has extensive experience in fraud, money laundering and cybercrime investigations for Fortune 500 companies working with national and international law enforcement agencies

Professor Lynch has conducted numerous training sessions on fraud detection, prevention and investigations for global law enforcement groups as well as financial institutions throughout the world. Lynch is the Director of Financial Crime Program undergraduate and graduate degrees. She has designed numerous academic courses for both that study the application of economic crime theories to current challenges in the field of fraud and financial crime investigations and management.

Her outreach efforts have drawn in entities like the Association of Certified Anti Money Laundering Specialists (ACAMS), the U.S. Marshals Service, the Army National Guard, The Anti-Human Trafficking Intelligence Initiative (ATII) and Ciphertrace to invest professional effort in aligning respective personnel with tailored certificate programs.

She holds a B.S. degree in Criminal Justice from Wayne State University in Detroit, Michigan and a M.S. in Economic Crime Management from Utica University.

Randall Chiera

Research Assistant/ Conference MC



Randall is a student in his third year Fraud and Financial Crime Investigation and Cybersecurity dual-major also pursuing a minor in Computer Science at Utica University. Besides working on the Bureau of Justice Assistance grant provided to Utica University, he is also the Chief Justice of student government as well as the president of multiple student organizations. He has previously worked at a law firm in downstate N.Y. as well as at a small software company.

Jaydy Hernandez

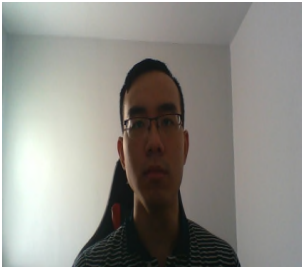
Intern



My name is Jaydy C Hernandez and I am from New York City. I am a senior at Utica University graduating in December 2022. I am a criminal justice major with a double minor and concentration. My minors are in fraud and financial crime investigation and homeland security and emergency management. My concentration is in cyber criminology and policy and homeland security. I am currently an intern at the Anti-Human Trafficking Intelligence Initiative. The work that I have done so far includes training in Polaris, ManchesterCF, ACAMS and Rebecca Bender's Trafficking Truths E-course. All of these trainings were based on human trafficking 101, anti-money laundering, cases on human trafficking and misconceptions in human trafficking. After completing the training you move on to an assigned project.

Trung Nguyen

Research Assistant



A senior who is currently pursuing a degree in cybersecurity, I specialize in conducting cyber operations that involve performing penetration tests, reporting vulnerabilities, and possibly creating custom patches. As a soon-to-be cybersecurity professional, I abide myself by the hacker ethic that hackers are always curious individuals whose thirst for knowledge knows no limits. Thus, it is my number one priority to learn as much as I can while I am still in school, and I hope that I will be able to utilize the skills and knowledge that I have learned in college to solve real-life challenges in order to both strengthen my skill set and grow as a professional in this discipline.