Criminal Investigations and Network Analysis
A DHS CENTER OF EXCELLENCE

GEORGE MASON UNIVERSITY

September 2022 www.cina.gmu.edu

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THOUGHTS FROM THE DIRECTOR

Jim Jones

At this time each year, the CINA Center (and most of our DHS COE colleagues) are busy kicking off new research projects identified in the prior program year and approved over the summer. For CINA, we had a very strong pool of potential projects and selected a number of them for funding; we have 23 active projects as of this writing with more in the queue.

Our current portfolio covers a remarkable range of topics and problems, ranging from the tactical to the theoretical, and including data analysis and modeling, network discovery, advances in digital and traditional forensics tools and techniques, and training to help keep investigators ahead of the criminals.

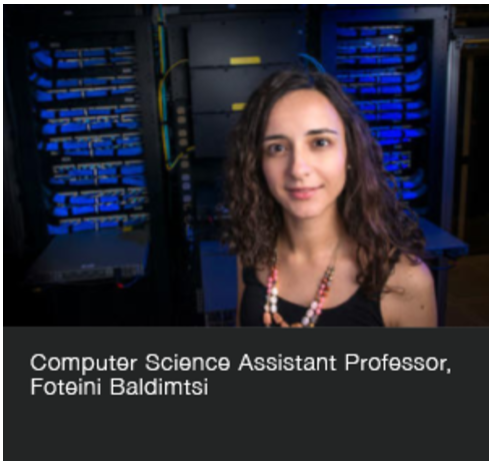
These ongoing research efforts reflect the ideas and challenges our DHS stakeholders have so generously shared with us, the projects are being led and executed by academic researchers who are all at the top of their respective fields, and the products of these projects will be transitioned to DHS and the larger community where the impact can be real and positive.

If you would like to learn more about these projects, and if you are a DHS or USG employee or contractor, you are invited to attend the CINA Annual Meeting on Wednesday, October 12, 2022, on the George Mason University campus in Fairfax, Virginia. If you are not able to attend, we will soon be posting project summaries on our website, and we are happy to answer questions and provide additional information.

I will close with a thank you and an ask; thank you to all of you in DHS, USG, and beyond, who have taken the time and energy to share your challenges, problems, and context with us. These conversations and the understanding are the lifeblood of our research portfolio - without it we are just guessing, but with it we are working on problems and solutions that matter.

The ask is to keep it coming, and to let us know what is useful and what isn't. We will continue to listen, to fix things and adjust course when needed, and to work the challenges diligently - success usually comes incrementally, but only when we keep after it.

CINA PI Foteini Baldimtsi earns NSF CAREER Award



George Mason Department of Computer Science Assistant Professor Foteini Baldimtsi has been granted a National Science Foundation CAREER Award for her project, Privacy Preserving Transactions with Accountability Extensions. Foteini is the lead of an active CINA research project examining the volume of money laundering in cryptocurrency markets; her research will also develop techniques and tools to help detect probable illicit activities in cryptocurrency transactions, which can enhance law enforcement efforts to detect and disrupt money laundering.

Baldimtsi recently discussed the ubiquity of cryptography. “We use cryptography every single day. Every time you log in to your email or make a transaction with your bank, you use cryptography. Data do not fly around unencrypted."

Read the full article

Registration closes October 7, 2022, 11:59 pm ET

Click here to register!

Bring Down Counterfeiting 2022 is a policy hackathon to combat counterfeiting of products on e-commerce sites and the criminals that benefit from it. Participants will have the opportunity to learn and interact with experts from tech and retail industries, academia, government and, of course, Amazon. Teams will compete for more than **$20,000 in prizes**. Those that make it to the final round will be evaluated by an expert panel of judges.

Counterfeiting is an industry-wide, global issue that affects all retail channels. The Organization for Economic Cooperation and Development (OECD) estimates that pirated and counterfeit products make up 2.5 percent of world trade—that's $464 billion a year. Counterfeiters are criminals that may also be associated with transnational networks engaged in a wide range of illicit behavior, including trafficking in narcotics, arms, persons, and wildlife. Billions of dollars from these activities flow through the global economy each year, distorting local economies, diminishing legitimate business revenues, eroding social conditions, harming public safety and security, and fueling conflict.

Those with interest in **public policy/governance, international trade, law and law enforcement, and transnational crime** will find this especially interesting! Technologists interested in computer science, data science/analysis, and AI/ML are also encouraged to join since the results of this policy hackathon will provide input for a technology-focused follow up challenge.

Bring a team or register on your own. The deadline to register is October 7, 2022.

Click here to to learn more and register!

Kerry Riddle Appointed as CINA Deputy Director

After serving as CINA's Financial and Administrative Specialist, Kerry Riddle has been promoted to Deputy Director of CINA.

In this role she leads project management for CINA's dynamic research portfolio, provides operational leadership for the center's activities and staff, and supports strategic planning to meet the goals established by CINA's sponsor, the U.S. Department of Homeland Security (DHS).

Riddle has served with the CINA center since 2018, and her prior experience includes several years of teaching experience, as well as service with the U.S. Navy.

Riddle holds a Master's in Business Administration and has experience in finance, project management, and business data analytics.

CINA MSI week sows

seeds for DHS research success

The opportunity to learn about pathways and possibilities within the Department of Homeland Security, often in direct discussion with DHS representatives, is priceless to the current and future leaders of the MSI community. In cooperation with the Department of Homeland Security, the CINA-supported MSI Week at George Mason University provided multiple opportunities for students and faculty to participate in professional development opportunities and activities.

This August, the Criminal Investigations and Network Analysis (CINA) DHS Center of Excellence hosted its fourth annual MSI Week program. Although last year's program was virtual due to the COVID-19 pandemic, this year CINA safely and successfully supported 25 students and faculty from seven universities who attended site tours and briefings across three George Mason University Campuses.

Participants actively engaged in face to face briefings with experts in digital forensics and human trafficking; learned about DHS Science and Technology offerings and DHS Diversity, Equity, Inclusion, and Access programs; and attended a DHS Component Spotlight on Customs and Border Patrol operations.

In addition to a full agenda of skill building workshops, talks, tours, networking events, and meetings with researchers and administrators, the students from Bowie State, the CUNY, Eastern New Mexico University, Jackson State University, Lincoln University, Sul Ross University, and the University of North Texas also were paired into multidisciplinary teams. Each team selected a topic from a list shaped by DHS and CINA research priorities, researched it, and presented opportunities to help the Homeland Security Enterprise address the chosen topic.

To learn more about how to participate in next summer's program contact us at cina@gmu.edu.

Gurvais Grigg: "Deconstructing Cybercrime Through Blockchain Forensics"

In case you missed it, watch Gurvais Grigg, Global Public Sector Chief Technology Officer at Chainanalysis, Inc. discuss "Deconstructing Cybercrime Through Blockchain Forensics." This presentation outlines trends in the illicit use of cryptocurrency and practical ways to incorporate this new asset class and solve cases.

Visit our website's digital archive to view research and upcoming events hosted by CINA.

You're invited to submit articles, photos, videos, and story ideas to include in upcoming newsletters. Submit your ideas on our website contact form.

Stay Connected

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