Criminal Investigations and Network Analysis
A DHS CENTER OF EXCELLENCE

GEORGE MASON UNIVERSITY

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THOUGHTS FROM THE DIRECTOR



Jim Jones

The DHS Centers of Excellence Summit was held the week of May 17-21, 2021. In a completely virtual format, the summit had a record number of registrants (over 1,200) including government, law enforcement at all levels, academia, and 65 different industry representatives, 61 speakers to include Secretary Mayorkas, 20 showcase booths, and 135 students from 51 different colleges and universities. Such an event does not happen without tremendous effort and cooperation across multiple entities, and the COEs worked closely with DHS, our collective partners, and the CINA summit team to develop and produce an agenda loaded with experts and timely information, successfully pushing the limits of what can be done in a virtual environment, and in so doing we engaged with a larger, more diverse, and more dispersed audience than ever before. Thank you to all who supported and attended the summit, and we look forward to continuing to collaborate and meet the challenges to come.

As many of you know, the DHS Centers of Excellence have staggered life cycles dating back to 2002, and the CINA Center will soon enter its fifth year of operation. We are proud of everything we have accomplished in the first four years, but we are even more excited about the years to come. We are moving into the new program year with a robust and growing research portfolio of more than 20 projects, our workforce development efforts continue to grow, and we are very pleased to continue working with research teams this summer and to resume our MSI week activities this August. Our accomplishments of the past, and our high expectations for the future are the product of a dedicated and highly capable team at CINA, working closely with the DHS Office of University Programs, multiple DHS components, academic institutions, and industry partners, all of whom are professionals who give generously of their time and expertise in pursuit of a safer world for all.



First Virtual DHS COE Summit Highlights COVID Operational Impact and Research

For the third time running, CINA joined our Center of Excellence counterparts and more than 1,200 registrants for the DHS COE Summit from May 17-21, 2021. Leading up to the event, attendees could visit 20 virtual COE booths featuring research videos and capabilities fact sheets. And 34 student groups presented research posters and successfully engaged in this year's Student Grand Challenge, a tabletop exercise which simulated a supply disruption due to COVID-19.

Our CINA team at Mason worked tirelessly for months leading up to the events to coordinate logistics and create content for the summit," said CINA Director, Jim Jones who facilitated a session discussion on Network Discovery from Data. "We appreciate the opportunity to showcase our center's research in this engaging format while also meaningfully collaborating with our fellow COE's to support our collective mission." Jones added.

In addition to event pre-production, CINA Science Director, Stu MacKenzie also moderated the popular DHS Leadership panel discussion on Emerging Threats and Challenges.

Get the full COE Summit recap

DHS Centers of Excellence Summit: Student Poster Session Spotlight



CINA Center nominated PhD student and Digital Forensic Examiner Dominique Calder participated in the Research Poster Session at the 2021 COE Summit, where she presented *Accurate and Time Efficient Inference of Fragment-to-File Associations*. **Watch this video to see Dominique's report out on the session.**

Facilitated by ADAC COE Director Maj Gen Randy Kee, COE nominated students participated in virtual, discussion-based tabletop exercises where they strategized dynamically to mitigate and address a series of cascading events based on a hypothetical pandemic related supply chain disruption. This instructor-led exercise followed the Homeland Security Exercise and Evaluation Program (HSEEP) format with a goal to achieve the following experiential learning objectives:

- Help students understand the perspectives and priorities of DHS component agencies, state and local authorities, and industry groups
- Provide an opportunity for a diverse group of students to discuss critical issues and exercise critical thinking skills while addressing a complex homeland security problem
- Facilitate engagement between students and homeland security professionals through webinars and mentorship leading up to and during the TTX.



Shining a Light on the Dark Web



The last decade has seen a sharp rise in criminal activity on the dark web, including the trade in illicit narcotics, identity documents, firearms, stolen data and cybercrime services. This rise has been driven in part by the greater anonymity of sites not indexed by search engines like Google, and the appeal of using relatively anonymous cryptocurrencies as payment. Dr. Tom Holt (Michigan State University) and Dr. Olga Smirnova (East Carolina University) conduct cutting edge research into dark web marketplaces to reveal their size, scope, mechanics and character. One useful resource in their work is feedback about vendors from their customers, which is often posted in vendors' threads, much as licit goods and services on the open web receive customer reviews.

To learn more about this exploration of the dark web, watch this video of Dr. Holt's talk in CINA's Distinguished Speaker Series.



Digital Archive: Jeffrey Hardy on illicit trade, trademark counterfeiting and copyright piracy



Watch the recent CINA Distinguished Speaker Series with Jeffrey Hardy as he discusses illicit trade in the forms of trademark counterfeiting and copyright piracy.

Watch the Event

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Criminal Investigations and Network Analysis (CINA)
4400 University Drive, MS2A1
Fairfax, Virginia 22030
Phone: 703-993-4409

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