Criminal Investigations and Network Analysis
A DHS CENTER OF EXCELLENCE

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NEWS

CINA Request for Proposals

CINA invites submissions for two RFPs that have just been released. These RFPs will remain open from December 16 to January 31. We would appreciate your help in spreading the word to generate great new proposals for CINA research. Learn more through the links below:

CINA's annual RFP

CINA's special RFP on Cyber-Enabled Human Crime

Tech Transfer Presentation – Small Business Innovation Research (SBIR) program

On Thursday, Nov 7, 2024, CINA Transition Advisory Board member Gary White, Founder and Principal of Mapportunity, discussed technology transfer within the federal government, focusing on nontraditional contracting methods like Other Transaction Authorities (OTAs) and the Small Business Innovation Research (SBIR) program. Tailored for CINA research teams, the presentation explored how OTAs and the SBIR can help transition research into real-world solutions by fostering government and industry partnerships. Learn how to leverage these tools to accelerate innovation and enhance collaboration opportunities by clicking the link below.

View the webinar

CINA-funded undergraduate researcher receives 2024 Tom Barker Outstanding Undergraduate Award from the Southern Criminal Justice Association

Abigail Curran, a CINA-funded undergraduate researcher studying Criminal Justice and Sociology at Clemson University, received the 2024 Tom Barker Outstanding Undergraduate Award from the Southern Criminal Justice Association (SCJA). She was recognized with this award for both her outstanding classroom performance (a GPA of 3.93) and her research contributions. Curran is a research assistant on the CINA project "Understanding and Disrupting the Formation of New Criminal Networks: The Case of Novel Illicit Drug Trafficking Operations" based at Clemson University and co-led by CINA PIs Tom Sharkey and Bryan Miller.

On this project, she held interviews with law enforcement and led their qualitative analysis to better understand the structure and operations of fentanyl trafficking networks. She shared how this could lead to better data for network analytics to disrupt these networks during her SCJA poster presentation.

"The important work that CINA sponsors is imperative to understanding the extensive criminal-related issues occurring within our country and providing innovative solutions to focus on aiding and informing law enforcement and individuals within the criminal justice field that work tirelessly day in and day out for justice.

CINA provides accessible and collaborative ways for evidence-based practices to seamlessly integrate into existing systems. As a researcher and a new postgraduate, I am grateful that I get to begin my career working for this center's mission and ideals."

Read more

Understanding DHS: Custom and Border Protection 101 Insights

In the wake of 9/11, the U.S. faced a pressing question: how could it better anticipate and intercept threats before they reached its borders? Out of that need, the National Targeting Center (NTC) was born, becoming the central hub of Customs and Border Patrol's (CBP) intelligence and security efforts. The NTC brings together a dedicated team—CBP officers, Border Patrol agents, intelligence analysts, and specialists—each playing a role in a high-stakes mission. With four divisions—Passenger, Cargo, Counter Network, and the National Vetting Center—the NTC covers a vast landscape of national security issues, from terrorism and counterintelligence to the fight against transnational crime and smuggling networks.

Every day, these teams work around the clock, collaborating with federal, state, local, and international partners to screen, assess, and intercept high-risk travelers and cargo. In doing so, the NTC stands as a first line of defense, protecting the nation's borders and public safety, lawful trade, and travel.

Watch the presentation



George Mason offers forensic science training at "body farm" that could solve future cases

A recent news article highlighted George Mason's Forensic Science Program and CINA's MSI Summer Program, where a student team from Southern University at New Orleans (SUNO) came to Northern Virginia this past summer for a program that paired aspiring scientists from Historically Black Colleges and Universities

(HBCUs) and other minority-serving institutions with George Mason experts in Criminal Investigations and Network Analysis (CINA) Center.

This 10-week program, DHS Summer Research Team Program for Minority Serving Institutions, ran from June through August and was funded by a Department of Homeland Security (DHS) grant to meet critical research needs in the national security realm while diversifying the criminal justice system.

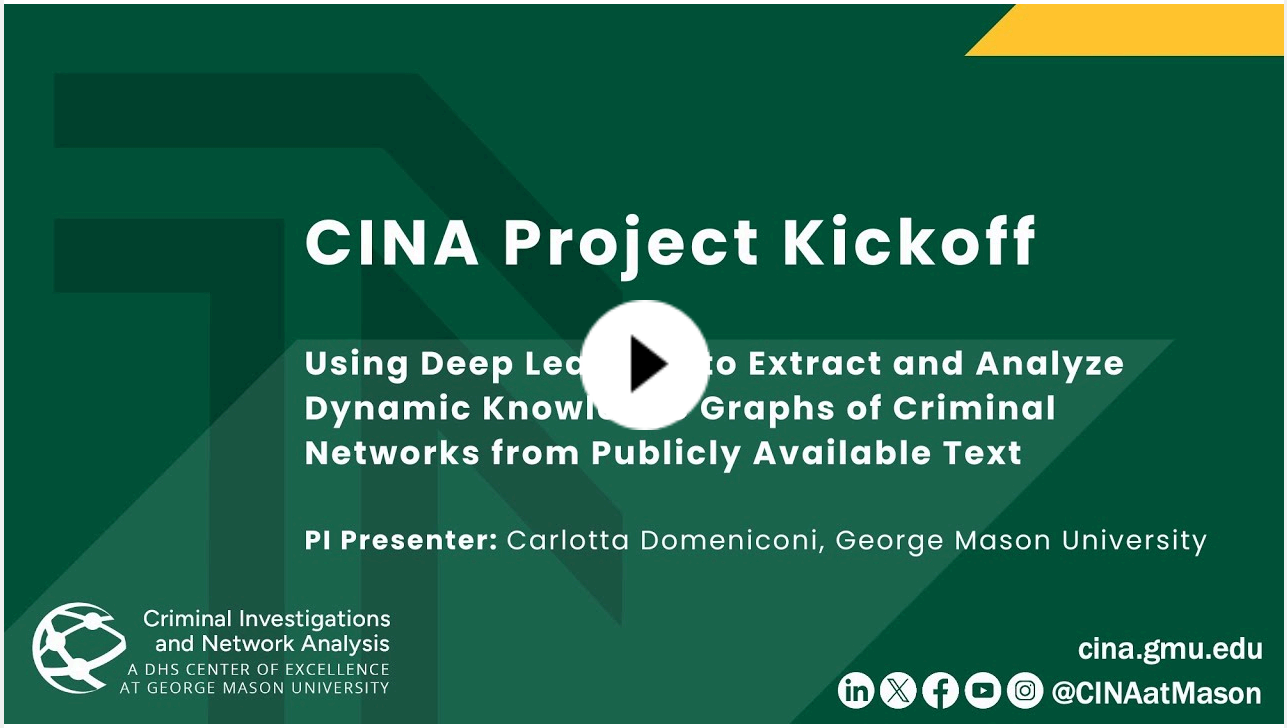
Read the full article

Apply for the 2025 Summer Research Team Program



Project Kickoff: Building Dynamic Knowledge Graphs of Criminal Networks

On November 18, 2024, CINA hosted a kickoff with Carlotta Domeniconi, Professor of Computer Science at George Mason University, who presented her team's new project titled "Using Deep Learning to Extract and Analyze Dynamic Knowledge Graphs of Criminal Networks from Publicly Available Text." The researchers aim to automate the building and analysis of models of criminal networks from textual data to better understand how they operate, and how they change and adapt over time, with the ultimate goal to help counteract them. Watch the presentation below.



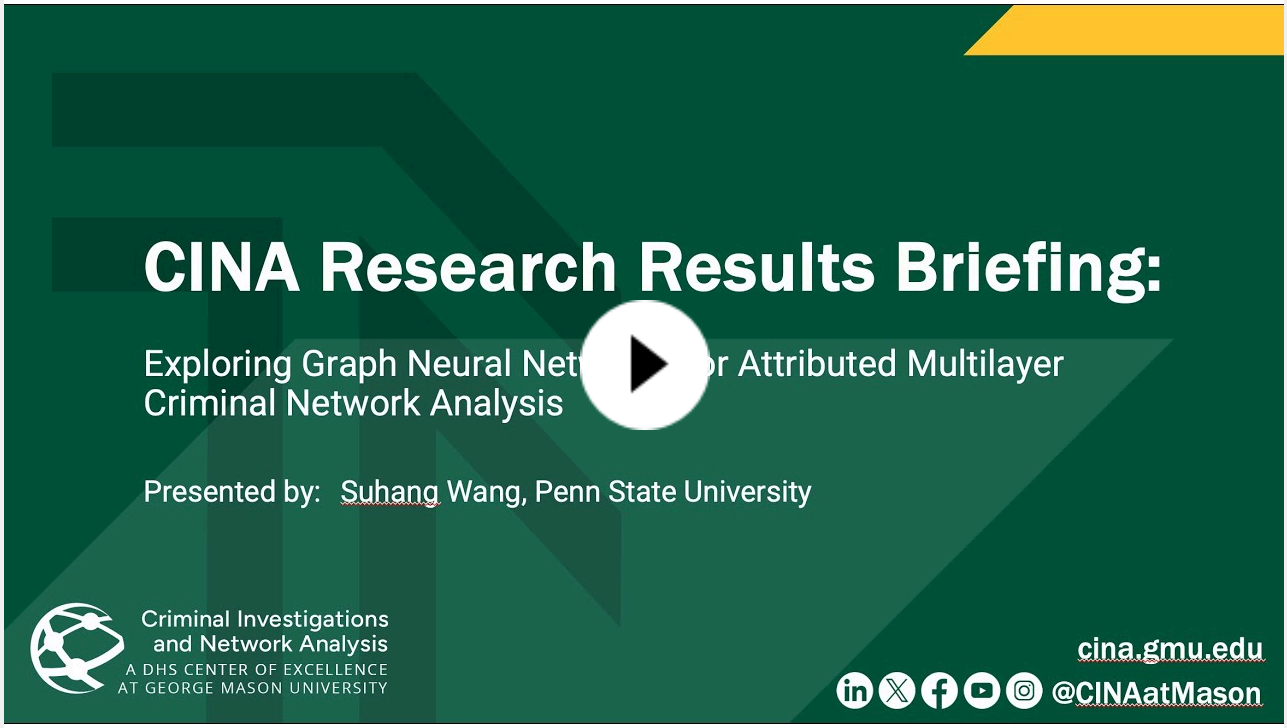
Research Results: Digital Holographic Acquisition, Storage, Retrieval and Analysis of Three-Dimensional Fingermarks

Dr. Partha Banerjee, Professor of Electro-optics and Director of the Holography and Metamaterials Laboratory at the University of Dayton, and Dr. Akhlesh Lakhtakia, the Evan Pugh University Professor and Charles Godfrey Binder Professor of Engineering Science and Mechanics at the Pennsylvania State University presented findings last month on digital holographic analysis of 3D fingermarks. This innovative approach introduces a new identification tool for traditional forensics, offering improved accuracy through hologram correlation. To learn more about the 3D identification tool, review the project brief below.



Research Results: Exploring Graph Neural Networks for Attributed Multilayer Criminal Network Analysis

On October 1, 2024 CINA hosted a briefing with Suhang Wang, Associate Professor with the College of Information Sciences and Technology at Penn State University, who presented groundbreaking research on attributed multilayer criminal networks using graph neural networks. This approach opens new possibilities for understanding complex criminal connections. Watch the research results briefing.





CINA Distinguished Speaker Series with Dr. Abby Stylianou - Wednesday, January 29: "TraffickCam: Identifying Where Victims of Human Trafficking and Child Sexual Abuse are Photographed"



Join us on Wednesday, January 29 for the upcoming virtual CINA Distinguished Speaker Series event featuring Dr. Abby Stylianou, Associate Professor of Computer Science at Saint Louis University, and a Fellow of the Taylor Geospatial Institute as she discusses "TraffickCam: Identifying Where Victims of Human Trafficking and Child Sexual Abuse are Photographed."

This event will take place virtually via MS Teams. The information to attend virtually will be sent to participants upon registration. Faculty, students, industry, and government attendees are welcome.

Register Now

CINA Distinguished Speaker Series with Colton Seale, Global Intelligence Consultant - Tuesday, March 11



Join us on Tuesday, March 11 for the upcoming virtual CINA Distinguished Speaker Series event featuring Colton Seale, Founder & Principal Consultant at Pyxis Academy, as he delves into the art and science of Intelligence Interviewing and what he's learned from his 20 years as an FBI Special Agent with the High-Value Detainee Interrogation Group and Counterterrorism Fly Team.

This event will take place virtually via MS Teams. Upon registration, participants will receive information on how to attend virtually. Faculty, students, industry, and government attendees are welcome.

Register Now

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