Criminal Investigations and Network Analysis Center (CINA)
A Nationwide Consortium Led by George Mason University

A DHS Center of Excellence

Criminal activity is complex and continues to evolve, spanning physical and virtual environments. This level of sophistication poses a challenge to those charged with detecting and disrupting it. Using multidisciplinary approaches, CINA researchers develop cutting-edge tools and technologies, provide innovative solutions and strategies, and develop state-of-the-art education and training offerings to help agents more effectively thwart criminal activity, including money laundering, cryptocurrency, human trafficking, smuggling of goods and counterfeits, and illicit trading.

Research and Education Capabilities

- Criminal network analysis and predictive modeling
- Analysis of dynamic patterns of criminal activity
- Traditional and digital forensics, including multimedia analytics
- Improving investigative processes
- Education and training for current and future homeland security workforce

About CINA

LAUNCH	2017
PARTNERS	More than 63 university, nonprofit, and industry partners
EXPERTISE	Network analysis, criminology, digital and traditional forensics, multimedia content analysis, data analysis and visualization, social media analysis, criminal investigations, geospatial intelligence, cryptocurrencies, voice and video analytics
DHS ALIGNMENT	U.S. Customs and Border Protection (CBP), DHS Office of Policy, Federal Law Enforcement Training Centers (FLETC), Homeland Security Investigations (HSI), U.S. Immigration and Customs Enforcement (ICE), DHS Science and Technology Directorate (S&T), Transportation Security Administration (TSA), U.S. Coast Guard (USCG), U.S. Secret Service (USSS)

Feedback from Our Partners

"Collaborating with CINA to place student interns at C3 has been instrumental in helping us. Our CINA interns have helped develop tools for greater efficiency in our case management system, and in turn, they have learned about some of our processes and mandates. I can't say enough good things about this program and how invaluable it is to work with students who have the skill sets we need."

Brian Korzak, Unit Chief, Cyber Crime Center (C3), Homeland Security Investigations (HSI), DHS

University Partners

Arizona State University*
Auburn University
Baruch College*
Bowie State University*
California State San Marcos*
Carnegie Mellon University
Champlain College
Clemson University
Diné College*
East Carolina University
Eastern New Mexico University*
Elizabeth City State University*
Emory University
Fayetteville State University*
Florida International University*
Georgia State University*
Jackson State University*
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John Jay College of Criminal Justice*
Liberty University
Lincoln University*
Louisiana State University
Michigan State University
Morgan State University*
New York City College of Technology*
Norfolk State University*
North Carolina Central University*
North Carolina State University
Northeastern University
Purdue University
Rensselaer Polytechnic Institute
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Southern Illinois University Carbondale
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University of Texas at El Paso*
University of Texas at San Antonio*
University of Washington
University of Winchester (UK)
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   State University

*Minority Serving Institutions (MSI)

Enterprise Partners

CACI - Bluestone
Data2
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Global Emancipation Network
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The Knoble
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For more information on DHS Centers of
Excellence, please visit
**www.dhs.gov/science and
technology/centers-excellence**

Impacts

Combating the Growing Threat of Cyber-enabled Crimes

CINA's Cyber-Enabled Human Crimes (CEHC) workshop brought together subject matter experts from financial and health and human services agencies, private sector financial institutions, cyber fraud directors, and academic researchers to discuss and address the rising threat of cyber-enabled human crimes such as financial fraud, scams, child and elder exploitation, and human trafficking. The workshop identified cross-sector challenges, strategic priorities and key collaborations, and will lay the foundation for ongoing public-private working partnerships to address and combat these crimes.

Disrupting Illicit Markets

As law enforcement agencies have gained traction in shutting down darknet markets and arresting operators, criminals are moving more of their operations to Encrypted Communications Platforms (ECP), which are much more difficult for investigators to detect and shut down. CINA's research is enhancing law enforcement's ability to investigate and stop criminal activity on ECP by developing strategies for gathering intelligence from ECPs more effectively and efficiently.

Developing the Homeland Security Workforce

The advancement of artificial intelligence (AI) tools have resulted in an ever-increasing number of threats that can be exploited for cyber-criminal activities. DHS requires a well-trained workforce that is knowledgeable in emerging criminal activities, and able to identify and neutralize AI-based cyber-crimes, such as chatbots that can quickly spread automated threats on social media, in order to strengthen prevention and protection capabilities. CINA is designing a certificate program, in collaboration with consortium partner Florida International University, to increase the awareness of students, faculty, and local and federal law enforcement agents about the possible impact of AI on criminal activities.