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**CURRENT EVENTS**

**CVADA to Host Maritime Cyber Security Event March 2-3**

The dependence of modern ships on sophisticated technology makes them vulnerable to cyberattacks whether intentional, unintentional, or from natural causes. This and other emerging maritime cybersecurity threats will be the focus of a special event March 2-3 on the Rutgers University campus in Piscataway, N.J., hosted by CVADA at Rutgers University, American Military University, and Combined Joint Operations from the Sea. The first day will feature a learning seminar to be followed by a symposium on the second day. Speakers will include senior officials from the USCG, U.S. Naval Academy, Canadian Forces, U.S. Merchant Marine Academy, New Jersey Office of Homeland Security and Preparedness, and S&T. Additional details, including registration and virtual participation options, are available at the website.

**ZADD Celebrates 10th Anniversary**

ZADD at Texas A&M University celebrated a decade of research and education accomplishments in animal and zoonotic disease defense this fall. Three of their recent successes include the development of a foot-and-mouth disease assay, launch of the AgConnect data analysis tool suite, and the World Organization for Animal Health recognition of the Center as a collaborating partner in biological threat reduction. Three other COEs participated in the event – CVADA, NCFPD, and NCBSI. Distinguished university guests attended in addition to Ambassador Bonnie Jenkins, Coordinator for Threat Reduction Programs for the U.S. Department of State's Bureau of International Security and Nonproliferation.

**USCG Commandant Visits CHC and CVADA**

Admiral Paul F. Zukunft met with CHC leadership, researchers and students as part of a trip to Mississippi this fall that included stops at Jackson State University (JSU) (the Center's education co-lead) and Tougaloo College (a Center partner). As part of the Center, both Minority Serving Institutions (MSIs) have incorporated homeland security science and engineering into degree programs, including coastal engineering at JSU and disaster sciences management at Tougaloo. Zukunft also heard a presentation on the computer science and engineering program at Center partner Johnson C. Smith University, an MSI in North Carolina.

Admiral Zukunft also visited CVADA at Rutgers University in the fall. The Admiral met with the Center's senior research faculty and Office of University Programs (OUP) Director Matt Clark to discuss the Center's work with the USCG on boat and aircraft resource allocation, resource management in the Arctic, and social media for disaster information and response. CVADA research has addressed several USCG complex data analytics and resource management questions, helping USCG advance several of its most important missions while advancing science. During his visit, the Admiral commented, “I greatly appreciate the brain trust that you have brought to bear on issues that are near and dear to the Coast Guard.”

**RESEARCH, INNOVATION AND PARTNERSHIPS**

**START Brief at White House Countering Violent Extremism Summit**

Executive Director Bill Braniff from START presented at the White House CVE Summit February 18. The three day summit ‘brought together local, federal, and international leaders—including President Obama, Secretary of Homeland Security Jeh Johnson, and foreign ministers—to discuss concrete steps the United States and its partners can take to develop community-oriented approaches to counter hateful extremist ideologies that radicalize, recruit or incite to violence.’ Bill Braniff’s presentation on the second day of the summit provided an analytic framework for CVE. START Researcher Stevan Weine, who has completed extensive fieldwork on building community resilience to violent extremism in Minneapolis-St. Paul, was also invited to attend the Summit.


START Studies Support DOD and DHS CVE Initiatives

START and CREATE recently completed work to assist DOD in understanding what drives recruitment to the violent extremist group known as the Islamic State of Iraq and the Levant (ISIL). They were part of the team of more than three dozen industry, academia, and policy experts asked to help the DOD Special Operations Command Central better understand ISIL as a movement. A December article in *The New York Times* describes how Maj. Gen. Michael K. Nagata, commander of American Special Operations forces in the Middle East, called on this team through DOD’s Strategic Multilayer Assessment Office. The group completed the final report in January, which laid out a framework for analyzing the psychological, ideological, narrative, organizational, leadership, emotional, cultural and inspirational (“intangible”) nature of ISIL. The report will also be used to inform DHS and other agencies’ CVE Initiatives.

CREATE Director Publishes New Textbook on Decision Analysis

Ali Abbas, director of the CREATE recently published *Foundations of Decision Analysis* with Ronald A. Howard of Stanford University. Designed for courses in decision making and engineering, the textbook helps readers understand the thought processes behind decision making in order to apply them in practice and overcome decision making challenges.

START Supports Chicago Area Law Enforcement Curriculum Development

START is serving as a resource for Cook County as it develops a curriculum for their police force on CVE in their community. Following a January briefing to Cook County’s Department of Homeland Security and Emergency Management and the International Association of the Chiefs of Police, the program manager for the curriculum effort commented, “Your presentation was top-notch and the value of the research START has undertaken and produced in this area cannot be understated…The importance of research-based and empirical validation to this work gives tremendous credence to the important concepts, principles and approaches employed in CVE and our broader [training] program.” The briefing relayed START research and analysis on radicalization, foreign fighters, and CVE research to help inform the training curriculum.

Four COEs and American Red Cross Hold Joint Tabletop Exercise

Four COEs participated in a tabletop exercise (TTX) with the Northeast Division of the American Red Cross in December. Held at the Kostas Research Institute for Homeland Security, the purpose of the TTX was to look at the potential transition of DHS-sponsored university research to Red Cross operations and specifically the application of COE tools to leverage social media during response and recovery. Forty participants attended, including Federal Emergency Management Agency Region 1, the New York City Office of Emergency Management, Massachusetts Institute of Technology, and the Red Cross (the Northeast Division Disaster Staff and Red Cross Regional teams from New Hampshire and Massachusetts). DHS COEs involved in the event included: ALERT, CVADA at Rutgers and Purdue Universities, NCFPD, and MIREES at Stevens Institute of Technology.
Advises on Boko Haram’s Increasing Violence

START Researcher and Research Director Amy Pate participated in a December virtual discussion on Boko Haram facilitated by the DOD Strategic Multilayer Assessment Office and the U.S. Army Training and Doctrine Command. Focused on the potential for political instability in Nigeria due to Boko Haram’s increasing violence, Pate presented findings on the nature of Boko Haram’s membership and recruitment, their financing, and potential vulnerabilities that the United States and its allies could exploit. She also provided commentary on the emergence and activities of vigilante groups (e.g., the Civilian Joint Task Force) and shortfalls of the Nigerian government’s response to Boko Haram. Other participants in the online discussion included representatives for United States Africa Command and the U.S. Department of State’s Bureau of Political Military Affairs.

Port Resilience Decision Framework Report Delivered to USCG

A multi-COE team delivered a Port Resilience Decision Framework and Toolkit report to the USCG this fall. Developed in close coordination with the USCG Research and Development Center (RDC), the decision framework and toolkit report outlines the challenges of prioritization of vessels during a disruption and shows how port resilience and its decision making processes rely heavily on the effective and timely communication among port stakeholders. The multi-COE team included MIREES at Stevens Institute of Technology, CVADA at Purdue University, and CHC at The University of North Carolina at Chapel Hill. The next phase of the project, which builds on the report to further develop the framework, will be undertaken by Stevens Institute of Technology and managed by the USCG RDC.

AWARDS

ALERT Director Wins National Academy’s Gordon Prize

ALERT Director Michael Silevitch and a colleague, Simon Pitts, won the Gordon prize from the National Academy of Engineering. The $500,000 award honors engineers whose accomplishments have significantly benefited society and is split between recipients and their institutions. Silevitch and Pitts won the award for developing the Gordon Engineering Leadership (GEL) program, an innovative method to provide graduate level engineers with the necessary personal skills to become effective engineering leaders. Since the inception of GEL in 2007, approximately 25 students have completed the program and are working in homeland security areas related to the COE’s mission. These include government entities, labs and industry. The GEL is an integral component of ALERT’s workforce development initiatives. ALERT has sponsored six fellowships to students enrolled in the program, including two Career Development Grant Fellows funded through OUP.

CREATE Researcher Wins Shin Research Excellence Award

A researcher affiliated with CREATE, Howard Kunreuther, was awarded the 2015 Shin Research Excellence Award on Feb. 3. The Geneva Association and the International Insurance Society (IIS) established this award to promote practical applied research in insurance and risk management and address topics that directly influence business operations. A top expert on the economics of catastrophic events, Kunreuther was recognized for his work on the role of public-private partnerships in mitigating and managing risks. He will present his research during the IIS 51st Annual Seminar this June and publish in The Geneva Papers on Risk and Insurance and an advanced online publication. Kunreuther co-directs the Wharton Risk Management Center at the University of Pennsylvania and serves as a professor there.

ZADD Director Receives University Prize for Veterinary Science

Jürgen A. Richt, director of ZADD at Kansas State University, recently received the university’s Iman Outstanding Faculty Award for Research. This award recognizes faculty members who have distinguished themselves in their profession and contributed significantly through research to improve the educational experience or impact their area of study.
EDUCATION

Apply to NCBSI’s Homeland Security Summer Scholars Program

The Homeland Security Summer Scholars Academy, offered by NCBSI at the University of Texas at El Paso (UTEP) is an annual summer research and internship program for students across the United States with an interest in homeland security related careers. The program offers two options: 1) work closely with UTEP professors engaged in new or ongoing research on border security and immigration, or 2) work under the mentorship of a homeland security/law enforcement practitioner or corporate professional involved in international trade, security and commerce, or critical infrastructure protection. Application packages are due March 20, 2015, and participants are identified through a competitive selection process.

OUP Fellow Demonstrates Promise of Innovative Bridge Repair Method

Kevin Zmetra, a PhD candidate and recipient of an OUP Career Development Grant was a key member of a research team at the University of Connecticut whose research demonstrated the effectiveness of a revolutionary bridge repair method. This method has the potential to significantly reduce cost and time of bridge repair and eliminate traffic interruptions. It uses Ultra-High Strength Concrete to repair corrosion-damaged steel girders, which can return the girder to its original (and possibly improved) strength. The Connecticut Department of Transportation funded the experimental and analytical studies and the project is being conducted in collaboration with industry partners Lafarge and Infra-Metals. Zmetra worked on the project with his advisor and the project Principal Investigator, Arash Esmaili Zaghi; and Co-Principal Investigator, Kay Wille.

OUP Awards $2.8 Million in 2014 Scientific Leadership Award Grants to Six Minority Serving Institutions

OUP recently awarded Scientific Leadership Awards (SLAs) to Alabama A&M University, JSU, Tennessee State University, Texas Southern University, University of the District of Columbia and University of Texas at San Antonio. These MSIs will partner with COEs and use their grants to develop course content and engage students and faculty in research relevant to the complex challenges faced by DHS and the Homeland Security Enterprise. The SLAs are one of OUP’s program helping to build a diverse, highly capable and technical workforce for the Homeland Security Enterprise.

For more information about DHS S&T, OUP and the DHS S&T COEs, visit http://www.dhs.gov/science-and-technology/centers-excellence.

For COE announcements and activities, visit the COE Collaboration Portal at www.hsuniversityprograms.org.

To learn about COE Tools and Technology, visit the COE Virtual Showcase at http://showcase.hsuniversityprograms.org/.