Pacific Basin Development Council addresses maritime security issues unique to remote and extreme island territories. Ms. Carolyn Imamura, from CSR's partner organization, the Pacific Basin Development Council (PBDC), led a delegation of representatives from the Pacific Islands of American Samoa and the Northern Mariana Islands, in a visit and discussion with Dr. Michael Bruno, founding director CSR, at Stevens Institute of Technology on February 23, 2013.

As part of a series of meetings with representatives from the U.S. Government in Washington, DC, the PBDC representatives were invited to visit the CSR facilities located at the Stevens campus in Hoboken, NJ. The purpose of the meeting was to demonstrate and discuss the center’s tools and technologies that are currently being developed and deployed to enhance maritime domain awareness in the areas of most concern to the PBDC and the U.S. island territories.

The PBDC is a non-profit organization established in the 1980's by the governors of the Northern Mariana Islands, American Samoa, Guam and Hawaii, to focus on the economic and social development concerns of the Pacific Islands. The organization actively engages in projects and research initiatives in the interest of enhancing the economic development and the safety and security of the Pacific Island territories from natural and man-made threats. In 2010 the PBDC sponsored the participation of two students from the University of Guam to participate in the CSR's Summer Research Institute.

FCC field hearing taps experts from Academia, Industry and Public Safety for post-Sandy communications infrastructure protection recommendations. On February 5, Stevens Institute of Technology hosted a field hearing organized by the Federal Communications Commission (FCC) to examine challenges to the nation's communications networks during natural disasters and in other times of emergency crisis. Representatives from Google, AT&T, National Emergency Number Association, Clear Channel Radio, WABC-TV, the Fire Department of New York, Stevens Institute of Technology, and the City of Hoboken, among other relevant local and state organizations, participated in the two panel discussion event.

The first panel moderated by FCC Chief of Public Safety, David Turetsky, focused on Communications in Times of Emergency, and the other panel led by moderator Sean Lev, General Counsel of the FCC, explored New Ideas to Improve Communications Services. Recommendations and excerpts from the panel discussions can be found in the complete Stevens news story via the following web link: Stevens hosts FCC Post-Sandy field hearing.

Multi-use technology promotes strategic CSR/IOOS partnership. From surface current patterns through tsunami wave warnings to surface vessel detection and tracking, High Frequency Radar (HF radar) is maturing as a versatile multi-use technology serving diverse stakeholders. CSR is leveraging this multi-use capability by forging strategic partnerships with regional partners of the national Integrated Ocean Observing System (IOOS). CSR focuses on a layered vessel surveillance system for port security, where HF radar bridges the over-the-horizon gap between satellite surveillance and near-shore passive acoustic detection and tracking. Eleven coastal observing systems and regional associations, together with participating federal agencies constitute the national coastal component of U.S. IOOS; a network that provides coastal ocean data and data products to stakeholders in commerce, government, education, tourism, research and law enforcement. IOOS supports a national HF radar surface current network that provides data to assist diverse stakeholders including the U.S. Coast Guard for search and rescue and oil spill tracking, fishery scientists for larval dispersion studies and fishermen for targeted fishing efforts among others.
Research support by CSR partners from the Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) enhances the center’s HF Radar near-shore and harbor surveillance capabilities for New York Harbor and approaches. In the eastern Caribbean IOOS affiliate CSR partners at the Caribbean Coastal Ocean Observing System (CariCOOS) host joint CSR/CariCOOS operation of the HF radar Mona Passage array.

These groups recently demonstrated the feasibility of vessel detection and tracking from the remote Mona Island environment in a multi-agency experiment involving U.S. Coast Guard and the Puerto Rico Department of Natural Resources and the Environment. IOOS affiliates benefit from this partnership by service to their stakeholders while providing to CSR the access to computational facilities, field bases, and administrative and personnel support. Such strategic partnerships based on mutual need and complementary capabilities strengthen and extend individual capabilities. CSR is pleased to contribute to and be part of the national IOOS effort.

**Dr. Barry Bunin challenges students to a game of Risk in his Advanced Maritime Security course.** Dr. Bunin has a passion for teaching! As the Program Director for the Maritime Security track within the Maritime Systems program at Stevens Institute of Technology, Dr. Bunin teaches complex technical subjects in ways that interest and engage his students. In a recent session of his Advanced Maritime Security (OE 629) course, Dr. Bunin taught the principles of “Game Theory”, by challenging his students to a strategic game of Risk.

A current trend in homeland security research, Game Theory is being used to develop strategies to minimize risk when faced with limited resources and deployable assets. According to Dr. Bunin, “The board game, “Risk” embodies many of the thought concepts to develop such strategies.”

As a testament to his teaching capabilities, Dr. Bunin successfully conveyed the concepts of Game Theory, while being woefully defeated by Maritime Systems Fellows Grace Python and Alex Pollara.

**NJOHSP tabletop exercise teaches students and emergency responders about operational coordination in crisis events.** Stevens Maritime Systems Fellowship students, Danielle Holden and Chris Francis, attended an emergency management tabletop exercise hosted by the New Jersey Office of Homeland Security and Preparedness (NJOHSP), in early February, at One Police Plaza in New York City. The exercise included members from the New York Police Department, U.S. Coast Guard, Fire Department of New York, and other local municipal emergency response organizations, with the purpose of simulating a crisis event impacting multi-jurisdictional, geographical areas.

The exercise engaged the participants in a walk through and discussion of the strategic and tactical approaches to ensure unified command in the wake of a terrorist attack in the NY/NJ area. The moderator for the tabletop exercise presented hypothetical crisis scenarios to promote discussion among agencies on the details of operational coordination. Discussion also included issues regarding identity verification and critical transportation. Information about NJOHSP table top exercises and other training opportunities can be found on the organization's website at [http://www.njhomelandsecurity.gov/exercises.html](http://www.njhomelandsecurity.gov/exercises.html).

**S&T’s National Urban Security Technology Laboratory opens doors to its new location in NYC!** Dr. Julie Pullen, CSR Director, attended the ribbon cutting ceremony for the National Urban Security Technology Laboratory’s (NUSTL) new state-of-the-art laboratory facilities in lower Manhattan, New York City. NUSTL is operated by the DHS Science and Technology Directorate and is responsible for testing, evaluating and analyzing homeland security capabilities for the local, state and federal emergency response communities protecting our nation’s cities. NUSTL serves as the technical authority for the development and integration of homeland security technologies into the operational environments of the responder community.

As key resource for the responder community, NUSTL also hosts New York Science and Technology Forum (NYAST) meetings and seminars. This past month, the organization hosted a NYAST forum entitled *Storm and Disaster Mitigation Technologies - Preparing for the Next Super Storm.*

CSR looks forward to its continued interactions with NUSTL in their new home! To learn more about NUSTL, please visit their website at: [http://www.dhs.gov/st-nustl](http://www.dhs.gov/st-nustl).