Patented passive acoustic detection system undergoing commercialization. Stevens Institute of Technology and Sonardyne Inc., a subsidiary of U.K. based Sonardyne International Ltd., manufacturer of subsea navigation and security technologies, have executed a licensing agreement for intellectual property of the Stevens Passive Acoustic Detection System (SPADES), which uses sound processing to detect, track and classify vessels, swimmers and divers.

Researchers at Stevens developed SPADES as a cost effective, highly-portable, near shore and harbor surveillance system to protect naval ships, ports, waterways, and high-value maritime assets from threats posed by divers or small vessels. SPADES can be used standalone, or to augment a Sentinel active sonar, to provide an enhanced underwater surveillance solution. SPADES can covertly classify and track sound sources in the water without transmitting a signal that can be detected. This licensing agreement enhances Sonardyne’s defense and maritime security capability and builds on Sonardyne’s recent record sales of the Sentinel diver detection systems.

“Sonardyne is a recognized key player in the diver detection sonar business,” said Stevens Director of Advanced Research Programs, Dr. Hady Salloum. “SPADES complements Sonardyne’s active system, Sentinel, to provide a unique, integrated solution for dealing with underwater and surface threats.” "Our technology partnership with Stevens will bring to market a unique combination of underwater surveillance capabilities that will enhance the protection we can provide high risk marine assets," said Sonardyne's Managing Director, John Ramsden. For the complete Stevens press release, please click on the following web link: Stevens Passive Acoustic Detection System [SPADES].

Alex Pollara, DHS CDG Maritime Systems Fellow is working to provide CSR camera feeds to USCG Sector New York. During his ten week summer internship at the USCG Sector New York, Alex Pollara, Maritime Systems Master's Degree Fellow and USCG Auxiliary member, is working in collaboration with Dr. Barry Bunin, Chief Architect, Maritime Security Laboratory and Stevens Research Engineer, Alex Sedunov, to provide Sector New York with access to Stevens video surveillance capabilities from its vantage point on the Hudson River, adjacent to New York City.

Working closely with his colleagues from the USCG Auxiliary, Alex is also deploying small passive sonar recording systems at various points of interest in the Hudson River to detect vessels and collect vessel signature data for on-going CSR research. The data collected will be used to provide statistics on unreported incursions in areas of interest in the New York Harbor and is part of the CSRs on-going End-to-End (E2E) plans to transition data to its stakeholders for operational use. Updates on E2E projects will be covered in upcoming newsletters.
CBP Officers discuss security operations in hands-on tour of Port New York/Newark. Students and researchers in the CSRs 2013 Summer Research Institute learned first-hand from CBP officers about the day-to-day complex operations of the field operations group. Coordinated by Bradford Slutsky, Program Manager, the visit included presentations and discussions with CBP representatives; Ed Fox, Assistant Port Director, Paula Heacock, Chief, Anthony Maresca, Deputy Chief, John Dietze, Supervisory Officer, Scott Rutledge, Supervisory Officer, Keyvon Santiago, Supervisory Agricultural Specialist, and Eric Demarest, Officer.

The tour included observations of the agency's radiation portals and portable x-ray machines, and a visit to the CBP warehouse where containers are physically inspected and analyzed. The CBP visit has become an annual event and an integral learning experience for the participants and researchers in the CSR Summer Research Institute. For a Stevens news item featuring the activities of this summer's SRI students, please click on the following link: Summer Research Institute 2013.

Additional Center News:
SRI students, CSR researchers and representatives from CBP visited the National Urban Security Technology Laboratory (NUSTL), hosted by Dr. Adam Hutter, Director, on June 10, 2013, in NYC. NUSTL is the DHS’s Science and Technology Directorate’s technical authority responsible for the testing and evaluation of technologies for first responders and law enforcement. The federally-funded organization analyzes operational end-user environments and serves as the technical authority between the interests of end-users and technology developers.

CSR welcomed the following guest speakers on-campus at Stevens Institute of Technology as part of the center’s seminar series and the Summer Research Institute: Lt. Commander, Anne Morrissey, Chief of the Waterways Management Division at USCG Sector New York, provided a talk entitled Coast Guard’s role, before, during and after Hurricane Sandy, Dr. Charles D. Ferguson, President, Federation of American Scientists, provided a lecture entitled Defense in Depth in Countering Nuclear and Radiological Terrorism, and Mr. Nick Pera, Deputy Director Plans and Programs, Strategic Systems Programs, U.S. Navy, discussed the history of the U.S. TRIDENT missile program.

Prof. Harry Bader at the University of Alaska Fairbanks participated, on behalf of CIMES, in a recent Arctic security table top exercise sponsored by NORAD at the National Defense University in Washington, DC. The exercise included a suite of civilian and military partners from Canada, USA, Denmark, and Norway dedicated to the safety and use of Arctic maritime waters which included key elements from US DHS. The exercise explored capabilities for search & rescue, environmental protection, navigational safety, and border security. Professor Bader, as UAF-CIMES representative, was the only academic participant in the exercise.

CSR Director, Julie Pullen, provided an invited talk entitled S&T Research and Development in Support of Enhanced Maritime Security at the Defense Strategies Institute, Maritime Security Symposium, held June 25-26, 2013, in Alexandria, VA.