CSR USCG, CBP and NUSTL stakeholder’s discuss data transition and ongoing center projects at regional stakeholder engagement meeting. CSR hosted a regional stakeholder’s meeting on July 17, at the center’s offices located at Stevens Institute of Technology. Stevens video and acoustic surveillance capabilities and the integration of Rutgers University’s HF Radar vessel detection feeds into Coast Guard operational systems were key areas of discussion with meeting attendees, including the Captain of the Port of NY and NJ, representatives from the USCG Research and Development Center, Customs and Border Protection, and the Director of the DHS National Urban Security Technology Laboratory (NUSTL).

CSR research presentations highlighted the center’s ongoing research in the areas of decision support systems led by Drs. Jeff Nickerson and Liz Lennon, and strategies for port resilience led by CSR PI Jim Rice from the Center for Transportation and Logistics at MIT. Summer Research Institute students, Randy Soto, University of Puerto Rico-Mayaguez, Nick Monzillo, Stevens Institute of Technology and Kristen Stilson, Elizabeth City State University, each presented their respective team’s summer research projects focused on the integration of HF radar data into the Coast Guard’s Watchkeeper system, a CBP Trade Facilitation case study and the use of vessel acoustic signatures to classify and characterize boats in the Hudson River. CSR’s next Stakeholder Engagement meeting will be held mid-fall.

University of Alaska Fairbanks researchers conduct common operating picture exercise in Barrow, Alaska. The CIMES team at the University of Alaska Fairbanks (UAF) is conducting a common operating picture exercise with target detection by different coastal radars and other remote-sensing assets at Barrow, Alaska over the course of this summer. At the start of this exercise, the UAF Barrow Sea Ice Radar was able to capture a unique data set of the newly refurbished USCGC Polar Star operating in moving and stationary ice. Similar data have also been obtained for a smaller French vessel and local workboats moving through openings in the ice. This data, complemented by webcam imagery, observations by local ice experts and AIS/GPS records will prove of substantial value in improving upon automated vessel detection and decision-support algorithms developed by the CIMES team. Further detailed work with the ice radar and a high-frequency oceanographic radar will include dedicated maneuvers within the radar footprint during coastal and offshore oceanographic mooring work later in the summer. For more information about the UAF exercise, please contact Dr. Hajo Eicken, International Arctic Research Center, UAF at http://www.iarc.uaf.edu/en/people/heicken.

CSR Director and Rutger’s Hugh Roarty discuss CSR research and data transition in meetings with CBP AMOC and USCG PACAREA. Dr. Julie Pullen and Dr. Hugh Roarty exchanged research ideas and discussed transition plans with DHS west coast partners from CBP and USCG. Their first meeting was held with representatives from the CBP Air and Marine Operations Center (AMOC). Mr. Jeff Mayer, Detection Enforcement Officer provided them with a tour of the facility and a brief on the maritime work within AMOC. Drs. Pullen and Roarty then gave a presentation on the CSR’s research projects and End-to-End (E2E) transition plans.

The following day they met with representatives from the U.S. Coast Guard Pacific Area (USCG PACAREA). Hosted by Mr. David Boyd and Lt. Commander Kelly Coughlin, Drs. Pullen and Roarty were provided with an introduction to the Pacific Area mission areas and then were
given a tour of the Command Center. They ended their visit with the center’s west coast stakeholders with a tour of the Port of San Francisco, hosted by Ms. Sidonie Samson, Director of Security for the Port and CSR Science and Education Advisory Committee (SEAC) member.

**CSR PI's from Rutgers collaborate with the Norwegian Research Defense Establishment and Norwegian Meteorological Institute on vessel detection and tracking.** CSR research partners from Rutgers University (Dr. Hugh Roarty and Dr. Scott Glenn) discussed surface current mapping and vessel detection applications of HF radar with representatives from the Norwegian Research Defense Establishment (Forsvarets forskningsinstitutt, FFI), the Norwegian Meteorological Institute and CodarNor. Drs. Glenn and Roarty provided a review of their CSR research projects focused on the use of HF radar for surface current mapping and vessel detection. FFI is currently evaluating a series of sensors that they will utilize for coastal surveillance. Dr. Walther Aasen provided a presentation on the status of their evaluation, including FFI’s consideration of HF radar as a viable tool for vessel detection. Dr. Anton Kjelaas presented results from the second phase of a rapid response system to map ocean currents in the event of an oil spill. The project was sponsored by the Norwegian Clean Seas Association for Operating Companies (NOFO). Mr. Bruce Hackett represented the Norwegian Meteorological Institute, whose mission is to protect life, property and the environment and to provide the meteorological services needed by society. For additional information about Rutgers’ HF radar collaborations with Norway, please contact CSR Research PI, Dr. Hugh Roarty.

CIMES and DHS-sponsored 2012 Persistent Surveillance Workshop results in a two-phase project with the University of Hawaii Manoa, Liquid Robotics Incorporated (LRI) and Teledyne Benthos. The objectives of the project are to integrate passive acoustic detectors into wave-propelled Wave Gliders to address several missions, including detecting illegal, unreported and unregulated (IUU) fishing, human trafficking and smuggling. LRI Wave Gliders are ideal platforms for persistent surveillance due to their capability to remain powered at sea for extended periods, their near-constant ability to communicate back to shore and their low profile in the water, which makes it difficult for those they are observing to detect them. Using two wave gliders towing passive acoustic systems, the UH-led team is researching best practices for detecting vessels using multiple platforms in varying environmental conditions. This research, which builds upon passive acoustic detection that CIMES has been conducting since it was established, is set to culminate in a January 2014 exercise off Hawaii. For more information about the UH Persistent Surveillance project, please contact Dr. Margo Edwards, Director of CIMES, at margo@soest.hawaii.edu.

**CIMES workshop inspires collaboration on the development of an acoustic detector equipped Wave Glider to provide persistent surveillance in effort to combat illegal, unreported and unregulated fishing.**

A team of Summer Research Institute (SRI) students designed and raced a cardboard vessel to win the first annual Metropolitan Waterfront Alliance Sink or Sail competition in Governor’s Island, NY. The student team led by Stevens Scholar and undergraduate Electrical Engineering major, Carrick Porter, competed against members from the U.S. Coast Guard and other local public and private organizations in a spirited race to successfully build and sail a two person vessel made out of cardboard and tape. The inaugural Sink or Sail competition resulted in a Stevens/SRI win, beating out the fast and furious Coast Guard by a hair. Dr. Julie Pullen, Director CSR, recently joined the Metropolitan Waterfront Alliance as a new board member. Visit the following link to read a Stevens news item about the Sink or Sail competition: Cardboard kayak wins competition.