CSR Newsletter — January 2013

VADM Robert C. Parker and VADM Manson K. Brown, Discuss Coast Guard Technology Needs with CSR Researchers. VADM Robert C. Parker, Commander, Atlantic Area and VADM Manson Brown, Deputy Commandant for Mission Support attended a meeting hosted by Dr. Julie Pullen, CSR Director, on January 10, 2013 in the center’s Maritime Security Laboratory at Stevens Institute of Technology in Hoboken, NJ. The meeting focused on the center’s emerging tools and technologies designed to advance Maritime Domain Awareness and the Coast Guard’s technology needs. The half-day event included hands-on demonstrations of the center’s Port Mapper Tool, Passive Acoustic System, HF Radar vessel detection iPad displays and Satellite imagery.

The meeting attendees also included, ADM James Loy, retired USCG Commandant and Chair, CSR Science and Education Advisory Committee, Dr. Joseph DiRenzo, USCG LANT Area Chief of Operations Analysis Division, CAPT. John Davis, USCG LANT-7 Chief, Intel, CDR Jim Bellaire, USCG LANT-7 Chief, Command Center, Timothy Hughes, USCG Research and Development Center, Dr. Nariman Farvardin, President, Stevens Institute of Technology, as well as CSR researchers and academic partners.

Outcomes of the visit include follow-on collaborations with LANT-7, the piloting of CSR tools in the field and placement of the center’s fellowship students in hands-on summer internships at USCG LANT-7’s facilities in Portsmouth, VA.

Annual Review and Stakeholder Meetings Focus on the Center’s Technologies and Caribbean Testbed. CSR held its 4th Annual Review Meeting in San Juan, Puerto Rico, on Wednesday, January 16, 2013, followed by the center’s second quarterly Stakeholder Engagement Meeting on Thursday, January 17.

Ms. Anh Duong, Director, Borders and Maritime Security Division, DHS S&T, together with representatives from Customs and Border Protection (CBP), DHS, U.S.Coast Guard, Puerto Rico Sea Grant, Puerto Rico Seismic Network, PR Department of Environmental and Natural Resources, and the center’s Science and Education Advisory Committee (SEAC) participated in the two-day event. The meetings were organized to highlight the center’s research activities throughout 2012 and to discuss plans for the successful transition of the center’s emerging tools and technologies to its stakeholders and end-users.

CSR’s meetings culminated in a comprehensive tour of USCG Sector San Juan’s command center, conversations with active duty Coast Guard members and an on-board tour of a Coast Guard cutter, led by CAPT. Drew Pearson, Captain of the Port of San Juan.
Presentation slides from the center's Annual Review Meeting can be accessed via the links below:

**Maritime Domain Awareness**
- **Passive Acoustics** – Dr. Sasha Sutin, Stevens Institute of Technology
- **HF Radar** – Drs. Scott Glenn and Hugh Roarty, Rutgers University
- **Satellite** – Drs. Hans Graber and Paul Mallas, CSTARS, Univ. of Miami

**Resilience Activities**
- **Port Resilience** – Dr. Kai Trepte, Massachusetts Institute of Technology
- **Resiliency in Critical Infrastructure Design** – Mr. Matt Mattingley, Mattingley Group

**Decision Support Systems**
- **Decision Support and Visualization** – Drs. Jeff Nickerson and Liz Lennon, Stevens Institute
- **Decision Support** – Dr. Bobbie Reagor, Rapid Response Institute, Monmouth University

**Educational Activities**
- **CSR Education** – Ms. Beth Austin DeFares, Stevens Institute of Technology

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**CSTARS Unveils EDGE - A Dashboard Tool Enabling End-users to Customize and Order Satellite Images.**

Dr. Hans Graber, Director of the Center for Southeastern Tropical Advanced Remote Sensing (CSTARS), at the University of Miami, recently announced the development of a new satellite image tool that enables end-users to retrieve and customize imagery from the center's vast archive of satellite images. The tool is designed to assist end-users to conduct forensic analysis and assessments of areas of interest, while allowing them to tailor the image perimeters, attributes, resolution and time scales to their needs. Upon customizing the images, end-users can then order the imagery from the CSTARS website.

For details regarding the CSTARS EDGE tool, contact Dr. Hans Graber at the Rosenstiel School of Marine & Atmospheric Science at hgraber@rsmas.miami.edu.

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AAPA Seaports features articles by Dr. Michael Bruno and Ms. Bethann Rooney, CSR SEAC member. The 2012-2013 winter edition of the Association of American Port Authorities (AAPA) Seaports Magazine, features articles written by Dr. Michael Bruno, founding director of the CSR and Dean of the Charles V. Schaefer Jr. School of Engineering and Science at Stevens Institute of Technology and Ms. Bethann Rooney, Manager, Port Security, Port Authority of New York and New Jersey (PANYNJ) and CSR Science and Education Advisory Committee.

Dr. Bruno's article entitled *Maritime Domain Awareness – a Call for Enhanced Capability*, discusses the effectiveness of the Center for Secure and Resilient Maritime Commerce’s (CSR) layered approach to advance Maritime Domain Awareness. Dr. Bruno highlights the collaborative achievements of the CSR's academic partners, the University of Miami, Rutgers University and Stevens Institute to integrate Passive Acoustic, High Frequency Radar and space-base Satellite sensors to provide comprehensive near-shore and over-the-horizon surveillance and enhanced situational awareness capabilities for our nation's maritime security. Dr. Bruno's article suggests the integrated use of these sensors, in addition to other emerging tools, as critical elements in maritime security decision support systems.
Ms. Rooney's article, *Ten Years Later, Port Security Needs Remain*, looks at the need for continued and on-going port security funding and improved legislative and regulatory policies to ensure the safety and security of our nation's seaports. Ms. Rooney's article discusses the economics of the Maritime Transportation Security Act, congressional support of the Port Security Grant Program and suggests enhancements to current regulatory policies and practices.

Copies of Dr. Bruno and Ms. Rooney's articles can be obtained at the AAPA Seaports Magazine website at: www.aapaseaports.com.

**Additional Center News & Announcements**

**CSR Director delivers talks at AMS Annual Meeting.** Dr. Julie Pullen gave an invited talk at the special Fukushima Symposium at the American Meteorological Society's annual meeting, held January 6 - 10, 2013, in Austin, TX. Her talk was entitled *Air/Sea Transport, Dispersion and Fate Modeling for Emergency Response in the Vicinity of the Fukushima Nuclear Power Plant.* Her article on the same topic appears in this month’s issue of the Bulletin of the American Meteorological Society, and was highlighted by the journal. At the AMS meeting she also organized a session and gave talks on her ONR-sponsored research focused on air/sea interaction around the volcanic islands of the Philippines and Madeira with collaborators Arnold Gordon of Columbia University, the Naval Research Laboratory, and the Universities of Philippines and Portugal.

**Maritime Security Master's Degree Fellowship Opportunities.** Applications are now being accepted!

Fellowship awards provide full-tuition support and a monthly stipend of $2,300 for the entire two year Master's degree program at Stevens Institute of Technology. Students must be US citizens to apply and agree to a minimum of one year employment in the Maritime Security/Homeland Security workforce following graduation. To learn more, please visit the Maritime Systems website and click on “Fellowship Opportunities” in the left hand navigation at: www.stevens.edu/MaritimeSystems.

www.stevens.edu/MIREEES

MIREES is a National DHS Science and Technology Center of Excellence in Port and Maritime Security.

The Center for Secure and Resilient Maritime Commerce (www.stevens.edu/CSR) is led by Stevens Institute of Technology and The Center for Island, Maritime and Extreme Environment Security (www.cimes.hawaii.edu) is led by the University of Hawaii.

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