

MSC NEWSLETTER – OCTOBER 2015

MSC prepares to host the 6th Annual Maritime Risk Symposium, November 16 & 17, 2015, at Stevens Institute in Hoboken. The Maritime Security Center in conjunction with the U.S. Coast Guard Research and Development Center will be co-hosting the 6th Annual Maritime Risk Symposium to be held November 16 & 17, 2015, at the Stevens Institute of Technology campus in Hoboken, NJ. The theme of the Symposium is Risk in the Western Hemisphere and Southern Border Approaches.

There is still time to register. To review a copy of the program agenda and to register to participate, please visit: www.stevens.edu/ses/msc/maritime-risk-symposium.



Register to attend the Maritime Risk Symposium!
November 16 & 17, 2015
www.stevens.edu/ses/msc/Maritime-Risk-Symposium



Maritime educators and port facility professionals from Durban, South Africa take pictures from the MSC's observation patio following a Center briefing.

Participants in the State Department's Maritime Education and Management Project attend a briefing at the Maritime Security Center. MSC recently hosted a group of maritime education and port facility professionals from Durban, South Africa as part of the U.S. State Department's International Visitor Leadership Program and Maritime Education and Management project.

The objectives of the State Department's Maritime Education and Management project are to introduce participants to U.S. maritime education including the latest technology in transportation, logistics, marine engineering, and shipyard management, expose participants to successful U.S. maritime ports' buildings, equipment, logistics, management and business strategies, and create opportunities for peer-to-peer interaction with port officials, maritime educators, and students to review best practices and share South Africa's challenges and potential.

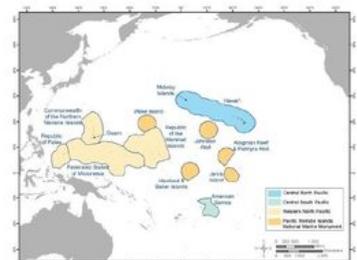
The visit to MSC included discussions on the Center's research in the areas of Maritime Domain Awareness and technology development, and student engagement in maritime security related research and career placement. DHS CDG Fellows Hasan Shahid and Alex Pollara, and Stevens Graduate Research Assistant Blaise Linn demonstrated the Center's maritime simulator, Stevens Passive Acoustic Recorder System (SPAR) and electro-optic camera capabilities.

This is the second international visitor group the Center has hosted for the U.S. State Department's International Visitor Leadership Program. In 2014, the Center hosted a meeting with leaders from Oman, Kuwait, Algeria, and Lebanon to discuss border and maritime security issues in Near East and Northern African regions.

MSC joins the Pacific Homeland Security Initiative meetings in D.C. MSC administrators accompanied MSC partner Pacific Basin Development Council (PBDC) for briefings with representatives from FEMA, U.S. Department of the Interior and House Committee staff from the offices of Hawaii Senators Mazi Hirono and Brian Scatz, and Pacific Island members of Congress Madeleine Bordallo (Guam), Tulsi Gabbard (Hawaii), Gregorio Kilili Sablan (Northern Marianas), Mark Takai (Hawaii) and Aumua Amata Radewagen (American Samoa).

These meetings are briefings on PBDC's homeland security collaborations with MSC and the Naval Postgraduate School, and to discuss MSC research and education activities and topics of concern to PBDC, e.g., including illegal fishing, illegal immigration, extreme weather events and resilience. The PBDC is a non-profit organization established by the governors of the Northern Mariana Islands, American Samoa, Guam, and Hawaii. The Council fosters the economic and social development of the Pacific Islands and conducts research and implements projects in support of their constituents. PBDC has been a partner of the DHS Center of Excellence in Maritime and Port Security since 2008.

U.S. Pacific Islands Region



MSC partner The Pacific Basin Development Council represents the homeland security, economic and social development concerns of Hawaii, Guam, Northern Marianas, and American Samoa.

Image credits: www.climate.gov



Stevens Senior Design Team is conducting research to enhance passive acoustic detection systems and are investigating the application of a microcomputer inside a buoy to send alert information to a command center. Image credits: Stevens Davidson Laboratory.

Stevens Senior Design Team to Conduct Research on Passive Acoustic Detection Systems.

MSC research PI Dr. Alexander Sutin in conjunction with Dr. Marehalli G. Prasad, Stevens Mechanical Engineering Department, Alex Pollara, Maritime Security Doctoral Fellow, and Blaise Linn, Graduate Research Assistant are mentoring a multidisciplinary senior design research team to design and build a portable underwater passive acoustic system for the detection of surface and underwater targets. The project builds upon passive acoustic research conducted by the Maritime Security Center and will use buoy equipment developed by a Stevens senior design team during the 2014-2015 academic year.

The senior design team will investigate the application of a microcomputer for acoustic signal processing inside a buoy to send alerting information to a command center. New algorithms for boat classification developed by Alex Pollara are planned to be implemented. The team will also work to develop a buoy capable of generating and storing electrical power, and distributing power to subsurface systems.

[Stevens Senior Design projects](#) are a capstone activity where students are given an opportunity to tackle a significant and challenging real-world problem while applying the knowledge that they have gained through their undergraduate studies. MSC will provide ongoing reports on the progress of the Passive Acoustic Senior Design Team over the course of the 2015-2016 academic year.

Student News:

MSC awards Mechanical Engineering and Homeland Security Doctoral Fellowship to John Martin, Jr. John Martin, Jr. was selected by a Fellowship Review Committee to receive a fully-funded fellowship to conduct research in unmanned systems for use in maritime security applications. His interdisciplinary research will focus on the development of algorithms that enable robots, e.g. underwater vehicles, to effectively navigate in the presence of uncertainty. John completed an undergraduate degree in Physics and Aerospace Engineering at the University of Maryland and graduate-level course work in Computer Science at Columbia University. His dissertation advisor is Dr. Brendan Englot, Assistant Professor, Stevens Mechanical Engineering Department.



John Martin, Jr. awarded Mechanical Engineering and Homeland Security Doctoral Fellowship.

Dr. Talmor Meir, MSC SRI and Stevens alumni, was appointed by the Institute for Water Resources U.S. Army Corps of Engineers as a Young Professional Representative to PIANC's group on Carbon Management for Port and Navigation Infrastructure.

Monique Cerqueira Zuidema (SRI 2014) has been selected to participate in an internship with Prumo Global Logistics in Brazil. Monique's responsibilities include planning and analysis, and report preparation and development. Prumo Logistics was founded in March 2007 in response to Brazil's demand for port infrastructure. The company is currently building Açú Port, located in São João da Barra (RJ).

Maritime Security Center
Stevens Institute of Technology
www.stevens.edu/ses/MSC