



MSC NEWSLETTER – SEPTEMBER, OCTOBER & NOVEMBER 2016

FAU to host a workshop on Enhancing Port Resilience. MSC research PIs from Florida Atlantic University (FAU) will be hosting a workshop on Enhancing Port Resilience on Friday, December 2, 2016, at the FAU SeaTech Facility located in Dania Beach, FL. MSC partners and contacts are invited to attend.

The workshop will include a broad audience of port and coastal community stakeholders in discussions on current and developing efforts in port resiliency and risk management studies, and modeling and simulation tools for assessing and planning for threats and hazards to ports and their waterside and landslide distribution capacities.

To learn more and to confirm your intent to participate, please contact Dr. Manhar Dhanak, Professor and Director, Institute for Ocean and Systems Engineering - SeaTech at ghanak@fau.edu.



[Workshop on Enhancing Port Resilience](#)
Contact **Dr. Manhar Dhanak, FAU**, to participate.

Image credits: Port Everglades, therealdeal.com

Canadian government and maritime industry representatives discuss areas of interest in MSC meeting.



MSC research PIs meet with maritime industry and government officials from Canada to discuss areas of interest and collaboration.

MSC hosted a delegation of Canadian government and maritime industry representatives on November 17, 2016, to discuss areas of mutual interest in research and technology development.

The visit was the result of contacts made at the DHS S&T Technology Showcase held this past May in Washington, DC. Coordinated by the DHS Office of University Programs, the Technology Showcase provided an opportunity for DHS Centers of Excellence to discuss their research capabilities and demonstrate their technology developments, while networking with DHS component agencies and homeland security stakeholders. While participating in the event, the Center demonstrated its latest developments in underwater passive acoustic detection systems.

MSC and the Canadian delegation are exploring opportunities for collaboration and will continue their talks early next year.

MSC holds Annual Review Meeting in Washington, DC.

Stakeholders from the U.S. Coast Guard, Customs and Border Protection and DHS S&T Borders and Maritime Security Division joined MSC research PIs and DHS Office of University Programs administrators for a one-day meeting to review the Center's research projects and integrated education programs.

Dr. Hady Salloum, MSC Director and Associate Dean for Research, Stevens Institute of Technology provided a discussion on the Center's current and proposed research projects, and research PIs from Florida Atlantic University, University of Miami, American Bureau of Shipping (ABS) and Louisiana State University reviewed research milestones and accomplishments in the areas of Port Resilience, Satellite Surveillance, Maritime Cybersecurity and Maritime Incident Discussion-based Tabletop Exercises. Information regarding these research projects and details on MSC student achievements, can be found in the MSC Year 2 Annual Report. To review a copy of the Center's annual report, please visit: <https://msc.hsuniversityprograms.org/centers-of-excellence/msc/>



MSC research projects discussed at annual review meeting held at Stevens Institute of Technology office facilities in Washington, DC

Image credit: compete.org



MSC awards ABS a Maritime Cybersecurity Research Contract.

The Maritime Security Center (MSC) is pleased to announce that ABS, a leading provider of classification and technical services to the global marine and offshore industries, has been awarded a research contract by the DHS Center of Excellence for Maritime and Port Security for a two-year research program focused on defining risk-based performance standards for maritime cyber risk management, as well as criteria for establishing a framework for maritime cyber policy among other areas.

The award is the result of a competitive request for proposals announced by the Center in March 2016. A press release on the ABS Maritime Cybersecurity research award can be found in the Center Activity Spotlight section of the MSC DHS University Programs website at: <https://msc.hsuniversityprograms.org/centers-of-excellence/msc/>

MSC students provide support for Port Authority of NY & NJ active shooter response exercise. MSC and Stevens Institute of Technology students recently provided support for a Port Authority of NY & NJ (PANYNJ) Active Shooter Full-Scale Exercise at the Bayonne Cruise Terminal in Bayonne, NJ. The exercise was part of the Port Authority's ongoing series of emergency preparedness drills aimed at enhancing the agency's response to a range of all-hazards events.

Coordinated by the PANYNJ Office of Emergency Management, the exercise included a series of scenarios designed to test the emergency response, coordination and communications among Port Authority Police and other local, state and Federal law enforcement groups. Throughout the exercise, the students role-played passengers at the terminal acting out the responses of victims in a crisis event. This is the fourth PANYNJ full-scale exercise that MSC students and administrators have participated in. The previous exercises have been held at the Newark Liberty International Airport in Newark, NJ.



MSC provides support for PANYNJ active shooter exercise at the Bayonne Cruise Terminal.

Image credits: Ceresglobal.com

STEVENS INSTITUTE OF TECHNOLOGY
University Seminar Series
Sponsored by the Maritime Security Center

Crossing Borders

Invasive beetles find new homes and threaten mass deforestation in the U.S.

BY Dr. Helen Hull-Sanders
Post-Doc, Stevens Institute of Technology



ABSTRACT
Invasion by an organism into a non-native region is often conceptually described as occurring in three phases: arrival, establishment and dispersal. Dispersal by the Asian Longhorned Beetle (ALB) has been documented in several states (IL, NY, NJ, MA and OH); however, the transitional phase, establishment, is often not observed, and is less documented. An establishment event (within four years of arrival) for ALB was studied in a small, isolated population within the regulated quarantine zone of Worcester County, MA. Seventy-one infested red maple trees and 450 un-infested trees were surveyed. Tree ring analysis show that within this establishing population, ALB initially infested one or two trees, before moving through the stand below the canopy and infesting new trees based not on distance or direction but on tree size. Outside of this stand, survey data suggest long-distance dispersers may have emerged above the canopy from this establishment area, and followed the direction of prevailing winds.

BIOGRAPHY
Raised in the south, Helen attended the University of Texas at Austin and majored in zoology. Her first student job was the rearing of the cotton boll weevil. This was her introduction to working with invasive pests. After a short sojourn at Tulane University Medical School as an epidemiology researcher, Helen returned to graduate school at the University of New Orleans. This provided the opportunity to live and study at the Smithsonian Tropical Research Institute, Barro Colorado Island, Panama.

In the few months between finishing her master's thesis and beginning work on her Ph.D., she worked on Project Full Stop for the USDA Agricultural Research Service. The project was commissioned by Congress to stop the spread of the Formosan Subterranean Termites, believed to have been first introduced from Asia with the return of troops after WWII.

Later working under contract with the USDA Plant Protection and Quarantine laboratory in Buzzards Bay, MA, Helen developed and organized an ARCGIS database of trees infested by the invasive Asian Longhorned Beetle.

EVENT DETAILS

DATE:
Thursday, October 6, 2016

TIME:
12:00 - 1:00 p.m.

LOCATION:
Babbio Center, Room 607
Maritime Security Laboratory
Stevens Institute of Technology

ATTENDANCE:
This event is open to all Stevens students, faculty, staff and invited guests.

RSPV:
L'Ann Blum, MSC
Email: lblum@stevens.edu
Phone: 201-216-4058

WEBSITE:
stevens.edu/msc

MARITIME SECURITY CENTER

MSC guest speakers provide talks on Invasive Species and Border Security and Cybersecurity Policy and Ethics.

MSC recently hosted two guest speakers as part of the Center's Maritime Systems Seminar Series. The talks explored issues regarding the impacts of invasive species on the U.S. agricultural system and ethical and legal considerations as they relate to the use of cyber intelligence and counterintelligence.

In her talk entitled *Crossing Borders: Invasive beetles find new homes and threaten deforestation in the U.S.*, Dr. Helen Hull-Sanders, Post-Doc, Stevens Institute of Technology, discussed the arrival, establishment and dispersal by the Asian Longhorned Beetle in several states, including an area within Worcester County, MA. Dr. Hull-Sanders discussed research findings from the Worcester County event and how the findings can contribute to remediating other such invasive species events. Dr. Hull-Sanders is currently conducting research in support of Customs and Border Protection in its efforts to detect invasive species in agricultural and food products before they enter the country. Seminar attendees included representatives from the U.S. Department of Agriculture and members from the Stevens community.

In a separate seminar held on October 21, Dr. Eduardo Martinez, Instructor, Security and Global Studies, American Military University, provided an engaged discussion on the government's use of cyber intelligence to identify and capture potential threats against the U.S., and how such cases involving U.S. citizens

challenges one's right to privacy under the Fourth Amendment of the Constitution. The talk entitled *Cybersecurity Policy and Ethics* included case studies highlighting ethical and legal issues as they related to the USA PATRIOT Act. Seminar participants included Stevens faculty, staff, students and invited guests.