



**Homeland  
Security**

Science and Technology

## Maritime Security Center (MSC)

### A DHS Center of Excellence

*MSC enhances Maritime Domain Awareness and develops strategies to support Marine Transportation System resilience and educational programs for current and aspiring homeland security practitioners.*

#### LAUNCH ▶

2014

#### PARTNERS ▶

More than 18 university, private industry, and government partners

#### EXPERTISE ▶

Maritime domain technology development, engineering and science, resilience strategy, cybersecurity

#### DHS ALIGNMENT ▶

U.S. Coast Guard, U.S. Customs and Border Protection, U.S. Immigration and Customs Enforcement

### Research and Education Capabilities

- Underwater and surface threat detection and tracking
- Sensor integration and optimization
- Port resilience planning and assessment
- Education and training for the current and future homeland security workforce



**MARITIME  
SECURITY CENTER**  
A DEPARTMENT OF HOMELAND SECURITY CENTER OF EXCELLENCE

*A nationwide consortium led by:*

**Stevens Institute of Technology**

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### Feedback from Our Partners

*"The U.S. Customs and Border Protection's (CBP) opportunities to engage with MSC, **regularly lead to innovative perspectives and outcomes in support of the Homeland Security mission.** Interactions with the MSC in field-based activities and technology demonstrations have facilitated a dynamic exchange of information and ideas between CBP Officers and researchers on present and future operational needs and considerations."*

**Bradford N. Slutsky**, Chief Watch Commander  
National Targeting Center - Cargo Division, CBP, 2018

*"The National Urban Security Technology Laboratory (NUSTL) has greatly benefited from our ongoing partnership with MSC. **We are continually impressed by the quality and dedication of the MSC staff and students in the development and execution of projects** that are targeted to address real world homeland security concerns."*

**Dr. Adam Hutter**, Director  
National Urban Security Technology Laboratory, 2018



## University Partners

Elizabeth City State University, NC\*

Florida Atlantic University, FL

Louisiana State University, LA

Massachusetts Institute of  
Technology, MA

Stevens Institute of Technology, NJ  
University of Puerto Rico-Mayaguez,  
PR\*

University of Miami, FL

*\*Minority Serving Institution (MSI)*

## Enterprise Partners

American Bureau of Shipping

Mattingley Group

MIT Lincoln Laboratory

MITRE Inc.

National Urban Security Technology  
Planning Laboratory

Pacific Basin Development Council

Plum Island Animal Disease Center

Port Authority of New York/  
New Jersey

The Aerospace Corporation

U.S. Coast Guard Research and  
Development Center

U.S. Customs and Border Protection  
Air and Marine Operations Center



For a complete list of partners  
and more information, please visit  
[www.stevens.edu/msc](http://www.stevens.edu/msc)

For more information on DHS  
Centers of Excellence, please visit  
[hsuniversityprograms.org](http://hsuniversityprograms.org)



## Impacts



### Engineering sensor systems for multi-use homeland security applications

MSC is developing and applying sensor technologies for the U.S. Navy and U.S. Coast Guard to detect underwater threats to new land-based applications in remote border areas. MSC has also developed a patented aircraft detection system to fill gaps in surveillance capabilities in rugged border environments, which helps U.S. Customs and Border Protection to detect, track and classify ultralight aircraft smuggling contraband into the United States.



### Aiding decision-makers in making U.S. ports more resilient to disruptions

Extreme weather events, labor strikes, and man-made disasters threaten to disrupt the crucial flow of cargo at U.S. ports. MSC is developing a Port Resiliency Assessment and Planning tool to simulate the potential impacts on intermodal networks, supply chains and port communities and to develop mitigation strategies to increase their resilience against disruptions.



### Building cybersecurity capacity and bolstering maritime asset protection

Cyber threats to vessel navigation, cargo inventory and port facility systems are major concerns to the U.S. Coast Guard in their mission to enforce the physical and operational safety and security of the Marine Transportation System. MSC is supporting the U.S. Coast Guard by providing maritime cyber-awareness training and developing a simplified set of cybersecurity standards for conducting security reviews of vessels and port facilities.