

U.S. Department of
Homeland Security

United States
Coast Guard



News Releases

[Home](#) > [News Releases](#) > News 2013

Acquisition Update: U.S. Coast Guard Awarded the Daniel H. Wagner Prize for Excellence in Operations Research Practice

April 10, 2013

A team of 10 researchers from the Coast Guard Research and Development Center, University of Southern California, and University of Chile were recognized April 8, 2013, as the recipients of the 2013 Daniel H. Wagner Prize for Excellence in Operations Research Practice at the annual Institute for Operations Research and the Management Science (INFORMS) Analytics Conference in San Antonio. The Coast Guard Research and Development Center and its partners' prize-winning project was titled "A Deployed Quantal Response-Based Patrol Planning System for the U.S. Coast Guard." The Wagner prize emphasizes the quality and coherence of analysis used in practical problems.



SAN ANTONIO— Lt. Kathryn Moretti, center, accepts the Daniel H. Wagner Prize for Excellence in Operations Research Practice along with team members Milind Tambe, left, University of Southern California and Fernando Ordóñez, University of Chile, April 8, 2013. Photo courtesy of INFORMS.

In their paper, the team described the model, theory and deployment of the Port Resilience for Operational/Tactical Enforcement to Combat Terrorism (PROTECT) project. PROTECT is a system that makes use of game theory for scheduling patrols to protect American ports. Game theory is the study of mathematical models that support strategic decision-making.

The PROTECT system is designed to aid Coast Guard command centers in improving results obtained with limited resources by strategically deploying Coast Guard vessels for maximum effectiveness. The Research and Development Center spearheaded the pilot testing of PROTECT in the Ports of Boston and New York and, after extensive evaluation and review, is now working to deploy it in ports across the nation.

The prize is named for the late Dr. Wagner who strove to apply mathematics to practical problems, supported by clear and intelligible writing. The prize reflects those principles by emphasizing good writing, strong analytical content and verifiable practice successes. His company, Wagner Associates, Inc., conducted leading-edge mathematical work in naval tactics, including anti-submarine warfare, detection theory and search planning. Many of the mathematical and operations research applications he developed for the U.S. Navy and Coast Guard are still used today.

For more information on the Coast Guard's Wagner Prize presentation, visit

<https://www.informs.org/Recognize-Excellence/INFORMS-Prizes-Awards/Daniel-H.-Wagner-Prize-for-Excellence-in-Operations-Research-Practice>.

For more information on the Coast Guard Research and Development Center and ongoing Research, Development, Test and Evaluation projects, visit: <http://www.uscg.mil/hq/cg9/rdc/default.asp>