



National Center for
Risk and Economic Analysis of Terrorism Events

CREATE Receives U.S. Coast Guard Meritorious Team Commendation for Service

Date: June 21, 2013

CREATE researcher, Milind Tambe, visited the U.S. Coast Guard Atlantic Area where he delivered a presentation about ARMOR-PROTECT and the application of Game Theory to Security Operations to a national audience.

During his visit, Milind was presented with the Coast Guard Meritorious Team Commendation by Captain Keith Smith, the Chief of Staff of Coast Guard Atlantic Area. The award was bestowed upon Milind Tambe, his team of students - Eric Shieh, Rong Yang and Fei Fang, postdoctoral researcher Albert Jiang, Isaac Maya and Steve Hora of CREATE, and the very large US Coast Guard team implementing and analyzing PROTECT throughout the United States.

The award's full citation reads, "The Commandant of the Coast Guard takes pleasure in presenting the Coast Guard Meritorious team commendation for service set forth in the following:

For exceptionally meritorious service from December 2010 to March 2013 while serving the Coast Guard Port Resilience for Operational/Tactical Enforcement to Combat Terrorism (PROTECT) Team.

Springboarding off the University of Southern California's ARMOR (Assistant for Randomized Monitoring Over Routes) model as a best practice, this team created an innovative approach to optimize patrol schedules and actions for the Coast Guard Ports, Waterways and Coast Security missions. As such, patrol routes, times and actions at critical infrastructure were randomized and rendered unpredictable so as to best thwart planning of adverse actions by those who would harm our ports and waterways.

The PROTECT model was first prototyped in the Port of Boston. Following this successful prototype, field application was expanded to the Ports of New York and Los Angeles-Long Beach, vastly larger ports with significant economic impact. Through this model, the coast Guard introduced an unpredictable patrolling methodology resulting in the true or perceived increase in security presence, ultimately aiding in the disruption of an adversary's planning cycle. By producing an efficient and academically defensible model, the Team has provided long-term benefit to the Coast Guard's resource allocation and planning process.

The PROTECT model has been so well received that Coast Guard Atlantic Area has directed the model's implementation in eight ports within the Western Rivers of the United States. Through the diligent work of the team, the possibility of utilizing game theory is currently being studied in multiple Coast Guard mission areas in order to make prudent operational decisions that optimize limited resources to meet an ever-increasing demand. This innovative tool earned the prestigious 2012 Daniel H. Wagner Prize for Excellence in Operations Research, a first for any US military branch.

The dedication, pride, and professionalism displayed by the PROTECT team in keeping with the highest traditions of the United States Coast Guard."

Photo courtesy of PACS Sarah Foster of USCG Atlantic Area.



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