



INFORMS UH Lecture Series

FALL 2009

Presents

Professor David Morton

University of Texas at Austin

Title: Interdicting Nuclear Smugglers

11:00 am -12:00 pm Friday, September 18, 2009
102 D, Eng. Building D2

Abstract

The US government has put significant effort into countering nuclear proliferation and terrorism. The Second Line of Defense (SLD) program is part of global nuclear detection architecture and aims to prevent illicit trafficking in nuclear and radiological materials by securing international land borders, seaports, and airports that may be used in smuggling material. Resource limitations are inevitable, and to maximize effectiveness, limited detector resources must be carefully allocated. We describe a class of network interdiction models to select detector locations in support of SLD. The models are hierarchical, stochastic, and can involve strategic gaming. The performance of the detection equipment depends on the material being sensed, geometric attenuation, shielding, and a number of other factors. Using a stochastic radiation transport code, we estimate detection probabilities for a specific set of such parameters, and inform our interdiction model with these estimates.

Details can be found at <http://www.uh.edu/~informs/events/events.htm>.

If you have any questions regarding this event, please contact Dr. Gino Lim at 713-743-4194 or at ginolim@uh.edu.