



Operations Research Seminar

A Network-of-Networks Approach to Counterterrorism

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With the decline of state-sponsorship, most terror organizations need to finance themselves. This may cause terrorists to take part in criminal activities, such as dealing in illicit drugs or contraband materials, human smuggling, or fraud. Terrorists may also be involved with money laundering or forging documents to conceal their identities, or weapons trafficking to obtain the materials necessary to carry out an attack. We study the connections between terror networks and criminal networks, and formulate a model for government identification of terrorists through their participation in criminal activities. The government allocates interdiction resources among networks and performs both an initial global search and a secondary local search to maximize the number of terrorists identified during the investigation of these interconnected networks.

Bio

Mr. Michael Atkinson received his B.A. from Harvard University and M.S. from Stanford University, and is currently a Ph.D. student in Stanford University. His research interest lies in mathematical modeling of homeland security issues. His works have been accepted for publication in *Proceedings of National Academy of Science* and *Operations Research*, among others.

Date: Thursday, April 3, 2008

Time: 15:00-16:00

Location: Glasgow 115