



ISI 2007

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ISI 2007 Preface

In the past few years, intelligence and security informatics (ISI) research, which is concerned with the study of the development and use of advanced information technologies and systems for national and international security-related applications, has experienced tremendous growth and attracted substantial interest from academic researchers in related fields as well as practitioners from both government agencies and industry. The ISI community is maturing, and a core set of research methodologies and technical approaches has emerged and is becoming the underpinning of ISI research.

The first two meetings (ISI 2003 and ISI 2004) in the ISI symposium and conference series were held in Tucson, Arizona. With sponsorship by the IEEE Intelligent Transportation Systems Society, ISI 2005 was held in Atlanta, Georgia. Building on the momentum of these ISI meetings, we held ISI 2006 in San Diego, California. In addition to the established and emerging ISI technical research topics, ISI 2006 continued a track on terrorism informatics, which is a new stream of terrorism research leveraging the latest advances in social science methodologies, and information technologies and tools.

This year, in New Brunswick, New Jersey, hosted by Rutgers University and several centers there, the conference is pleased to return to its originating focus which is to establish and strengthen links between researchers and practitioners. We have three main tracks this year. Port security and infrastructure protection is motivated by the central location of New Jersey on major land and sea traffic routes. Emergency response systems and decision making is an issue of growing importance which includes preparation not only for threats initiated by groups or individuals but also for response to natural problems such as floods and epidemics. And, since many threats in the modern world do originate with the activities of terrorists, we are continuing the track on terrorism and countermeasures, in the recognition that the best way to respond to terrorist attacks is to prevent them from the outset.

Our keynote address on the first day will be given by Mr. Steve Nixon Deputy Director for Science and Technology at the Office of the Director of National Intelligence. The Terrorism Informatics track provides the theme for the keynote address on the second day by Mr. John Brennan, formerly with the CIA. The kick-off panel for the Port Security track will feature presentations by terminal managers and Coast Guard and Port Authority experts. That for the Emergency Response track will feature presentations by experts from the New York City Fire Department, the Environmental Protection Agency, universities, and the private sector. The panel for the Terrorism and Counter-terrorism track will include experts from DHS, criminal justice, and private sector organizations dealing with counter-terrorism. The program itself features exciting sessions on: Port Security and Infrastructure Protection; Emergency Response Systems and Decision-Making; Terrorism Informatics and Countermeasures; Social Network Analysis in

Security Applications; Terrorism Informatics and Countermeasures; Infrastructure Protection and Cyber Security; Preparedness for and Response to High-Consequence Events; Deception Detection and Identity Management; Infrastructure Protection and Sensor Networks; Identity Management and Cyber Security; Link Analysis and Text Mining and Data Mining for Security Applications. We close the workshop with an exciting Sponsors Plenary Panel: The S&T Value of Operational Field Experiments.

ISI 2007, to be held at Rutgers University in New Brunswick, New Jersey, is sponsored by IEEE Intelligent Transportation Systems Society with a technical co-sponsorship from the IEEE Systems, Man, & Cybernetics Society. Locally it is supported by the DIMACS Center for Discrete Mathematics and Theoretical Computer Science, the DIMACS-CAIT Laboratory for Port Security (LPS), the Rutgers ISIPS Center for Interdisciplinary Studies in Information Privacy and Security, and the Department of Homeland Security Center of Excellence for Dynamic Data Analysis (DyDAn), headquartered at DIMACS-Rutgers.

We wish to express our gratitude to all members of the ISI 2007 Program Committee and additional reviewers who provided constructive review comments, and especially the Program Chairs, Tayfur Altiok, Benjamin Melamed Gheorghe Muresan and Daniel Zeng. We would also like to thank Feiyue Wang and Umit Ozguner of the IEEE. We wish to thank Art Becker, Larry Brandt, and Steve Dennis for their continued support of the ISI series and other related ISI



local support and the IEEE editorial and production staff for their support of the ISI conference series.



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Hsinchun Chen
Paul Kantor
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Organizing Committee



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ISI 2007 Final Program at a Glance

May 23, 2007 (Wednesday)

7:00 am--8:00 am	Registration and continental breakfast
8:00 am--8:15 am	Welcome and Conference Opening
8:15 am--9:00 am	Keynote Address, Mr. Steven Nixon , Deputy Associate Director of National Intelligence for Science and Technology (DADNI/S&T), Office of the DNI, "Science and Technology in the Intelligence Community"
9:00 am--10:00 am	Track I Plenary Panel: Port Security and Infrastructure Protection. Moderator: Jeffrey J. Milstein, Operations Manager, Moran Agency, and Sr. Agent, Port of NY/NJ Panelists: Beth Ann Rooney, Manager, Port Security, Port Authority of NY/NJ Steve Loevsky, General Manager, P&O Ports NA and Manhattan Cruise Terminal Capt. David L. Scott, Commander, USCG Sector Delaware Bay Peter Keyes, General Manager, Moran Towing, Tug and Barge Company NY Brenden T. Fitzpatrick, FBI/CGIS (Coast Guard Investigative Service), JTTF (Joint Terrorism Task Force)
10:00 am--10:30 am	Coffee break
10:30 am--12:00 am	Sessions W1-I, W1-II, W1-III
12:00 pm--1:30 pm	Lunch
1:30 pm – 2:30 pm	Track II Plenary Panel: Preparedness for and Response to High-Consequence Events Moderator: Paul J. Liroy, Ph.D. Professor and Deputy Director of the Environmental and Occupational Health Sciences Institute (EOHSI), RWJMS & RU, NJ Panelists: David Prezant, Chief Medical Officer, FDNY Office of Medical Affairs, NYC, NY Jeffrey Laskin, Ph.D. Professor and Director of the NIH CounterACT Center, RWJMS & EOHSI, NJ Paul Kalb, Ph.D. Head, Environmental Research & Technology Division, Environmental Services Department, Brookhaven National Laboratory, NY Panos Georgopoulos, Professor and Director of the Computational Chemodynamics Laboratory, EOHSI & RWJMS, NJ Jonathan G. Herrmann, P.E., BCEE, Director, National Homeland Security Research, Environmental Protection Agency
2:30 pm--4:00 pm	Sessions W2-I, W2-II, W2-III
4:00 pm--4:30 pm	Coffee break and set-up of poster session
4:30 pm--6:00 pm	Sessions W3-I, W3-II, W3-III
6:00 pm--7:20 pm	Poster Session and reception
7:20 pm--7:30 pm	Awards ceremony

May 24, 2007 (Thursday)

7:00 am--8:00 am	Registration and continental breakfast
8:00 am--8:15 am	Conference Announcements
8:15 am--9:00 am	Keynote Address , Mr. John O. Brennan, President and CEO, The Analysis Corporation, "Technology Analysis and Policy in Countering Terrorism"
9:00 am--10:00 am	Track III Plenary Panel: Future Directions in Terrorism & Counterterrorism Informatics Moderator: Bob Ross, Chief, Risk Sciences Branch, Office of Special Programs, Science and Technology Directorate, DHS Panelists: Richard Adler, President, DecisionPath, Inc. John Hunt, Major, Commanding Officer, New Jersey State Police Homeland Security Branch - Special Operations Section Leslie W. Kennedy, Dean, Rutgers School of Criminal Justice, Rutgers University, Newark, NJ Joshua Sinai, Program Manager, Terrorism and Counterterrorism Studies, The Analysis Corporation Cristopher Simmermon, Captain, Commanding Officer, Marine Services Bureau, New Jersey State Police Homeland Security Branch - Special Operations Section Michael Smith, Senior Master Sergeant, USAF Reserves (Retired) William Stryker, Chief, Office of Intelligence Analysis, DHS
10:00 am--10:30 am	Coffee break
10:30 am--12:00 am	Sessions T1-I, T1-II, T1-III
12:00 am--1:30 pm	Lunch
1:30 am--3:00 am	Sessions T2-I, T2-II, T2-III
3:00 pm--4:30 pm	Sessions T3-I, T3-II, T3-III
4:30 pm--5:00 pm	Coffee break
5:00 pm--6:00 pm	Sponsors Plenary Panel

ISI 2007 Keynote Addresses and Panel Sessions

Keynote Address

Steven Nixon, *Deputy Associate Director of National Intelligence for Science and Technology (DADNI/S&T), Office of the DNI*
"Science and Technology in the Intelligence Community"

Track I Plenary Panel: Port Security and Infrastructure Protection

Moderator:

Jeffrey J. Milstein, *Operations Manager, Moran Agency, and Sr. Agent, Port of NY/NJ*

Panelists:

Beth Ann Rooney, *Manager, Port Security, Port Authority of NY/NJ*

Steve Loevsky, *General Manager, P&O Ports NA and Manhattan Cruise Terminal*

Capt. David L. Scott, *Commander, USCG Sector Delaware Bay*

Peter Keyes, *General Manager, Moran Towing, Tug and Barge Company NY*

Brenden T. Fitzpatrick, *FBI/CGIS (Coast Guard Investigative Service), JTTF (Joint Terrorism Task Force)*

Track II Plenary Panel: Preparedness for and Response to High-Consequence Events

Moderator:

Paul J. Lioy, Ph.D. *Professor and Deputy Director of the Environmental and Occupational Health Sciences Institute (EOHSI), RWJMS & RU, NJ*

Panelists:

David Prezant, *Chief Medical Officer, FDNY Office of Medical Affairs, NYC, NY*

Jeffrey Laskin, Ph.D. *Professor and Director of the NIH CounterACT Center, RWJMS & EOHSI, NJ*

Paul Kalb, Ph.D. *Head, Environmental Research & Technology Division, Environmental Services Department, Brookhaven National Laboratory, NY*

Panos Georgopoulos, *Professor and Director of the Computational Chemodynamics Laboratory, EOHSI & RWJMS, NJ*

Jonathan G. Herrmann, P.E., *BCEE, Director, National Homeland Security Research, Environmental Protection Agency*

Keynote Address

John O. Brennan, *President and CEO, The Analysis Corporation*
"Technology Analysis and Policy in Countering Terrorism"

Track III Plenary Panel: Future Directions in Terrorism & Counterterrorism Informatics

Moderator:

Bob Ross, *Chief, Risk Sciences Branch, Office of Special Programs, Science and Technology Directorate, DHS*

Panelists:

Richard Adler, *President, DecisionPath, Inc.*

John Hunt, Major, *Commanding Officer, New Jersey State Police Homeland Security Branch - Special Operations Section*

Leslie W. Kennedy, *Dean, Rutgers School of Criminal Justice, Rutgers University, Newark, NJ*

Joshua Sinai, *Program Manager, Terrorism and Counterterrorism Studies, The Analysis Corporation*

Cristopher Simmermon, *Captain, Commanding Officer, Marine Services Bureau, New Jersey State Police Homeland Security Branch - Special Operations Section*

Michael Smith, *Senior Master Sergeant, USAF Reserves (Retired)*

William Stryker, *Chief, Office of Intelligence Analysis, DHS*

Sponsors Plenary Panel

Moderator:

~~John Audia, Manager, Special Technologies Laboratory (STL), San Diego Field Office US Department of Energy~~

Panelists:

Arthur H. Becker, *Manager, Knowledge Discovery and Dissemination Program, Department of Defense*
"Real-Time Knowledge Discovery and Dissemination"

~~John Audia, Manager, Special Technologies Laboratory (STL), San Diego Field Office US Department of Energy (to be confirmed)~~

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