2008 Risk Symposium Agenda
March 11-13, La Fonda Hotel
Theme*: Effective Risk Communication: Tools, Theory, and Applications*

Tuesday, March 11, 2008

6:45-7:45   Breakfast

8:00-8:45   Welcome and greetings from LANL
Special Guest Speaker: **Terry Wallace,** *Principal Associate Director for Science, Technology and Engineering*

9:00-10:30   Breakout Session

Session Title: *Risk & Homeland Security*	Session Title: *Managing Uncertainty & Risk in Nuclear Forensics*
Location: *New Mexico Room*	Location: *Santa Fe Room*
1. **Using Probabilistic Terrorism Risk Modeling For Benefit-Cost Analysis of Homeland Security Regulations** Henry Willis, Tom LaTourrette *RAND Corporation* 2. **Risk Communication in Support of Energy, Transportation and Water Services** Carlos E. Restrepo, Rae Zimmerman, Jeffrey S. Simonoff *New York University* 3. **ARMOR Protection: A Game Theoretic Approach for Randomized Patrolling and Monitoring at the Los Angeles International Airport** Milind Tambe[1], Fernando Ordóñez[1], Sarit Kraus[2], Erroll Southers[3], James Pita[1], Manish Jain[1], Christopher Portway[1], Craig Western[1], Praveen Paruchuri[4] *[1]University of Southern California* *[2]Bar-llan University* *[3]Center for Risk and Economic Analysis of Terrorism Events (CREATE)* *[4]Intelligent Automation, Inc.*	4. **Managing Uncertainty and Risk in the National Technical Nuclear Forensics Program** *Open Session with the following guest speakers* Hans Widmer[1], Yves Dardenne[2], Steven Goldberg[3] *[1]Johns Hopkins Applied Physics Laboratory* *[2]Lawrence Livermore National Laboratory* *[3]New Brunswick Laboratory*

Morning Refreshments

10:45-12:15   Breakout Session

Session Title: ***Risk Management & Response***	Session Title: ***Uncertainty Quantification & Optimization***
Location: *New Mexico Room*	Location: *Santa Fe Room*
5. Infrastructure, Social Order, and the Police Response to Hurricane Katrina Benjamin Sims *Los Alamos National Laboratory* **6. Researching Risk and Emergency Communication for Multiple Publics** Donna J. Kain, Catherine F. Smith *East Carolina University* **7. Risk-based Identity Management for Flexible Emergency Response Plans** Kenneth G. Crowther *University of Virginia*	**8. Approaches to Risk in Optimization Under uncertainty** Terry Rockafellar *University of Florida/University of Washington* **9. The Quantification of Inference Uncertainty in the Absence of Physical Tests** T. Ross[1], J. Booker[1], J. Langenbruner[2], F. Hemez[2] *[1]University of New Mexico* *[2]Los Alamos National Laboratory* **10. Approximate Reasoning Models Applied to Communication of Risk for Parties in Conflict** John Ambrosiano *Los Alamos National Laboratory*

12:30-1:30   Lunch

1:30-2:15   **Keynote Speaker: Tina Gabrielli,** *Director of Risk Management and Analysis at DHS*

Afternoon Refreshments

2:30-4:00   Breakout Session

Session Title: *Network Modeling & Interdiction*	Session Title: *Decision Support and Risk Minimization*
Location: *New Mexico Room*	Location: *Santa Fe Room*
11. Interdiction Modeling for Smuggled Nuclear Material N. Dimitrov, M.A. Gonzalez, D.P. Michalopoulos, D.P. Morton, M. Nehme, E. Popova, E. Schneider and G. Thoreson *University of Texas at Austin* **12. Hazard distribution and risk assessment in the network systems** Eugenijus Uspuras, Juozas Augutis *Laboratory of Nuclear Installation Safety* *Lithuanian Energy Institute* **13. On the Use of Approximate Reasoning Models for Incorporating Diverse Variables in Modeling Vaguely Understood Systems** George Tompkins, Sunil Donald, Brian Key, Eleanor Dixon, Gregory Chavez, Dmitry Kesselman *Los Alamos National Laboratory*	**14. Consistent Decision Making for Portfolio Selection Problems** Sundeep Samson, James A Reneke *Clemson University* **15. Risk Analysis Investment Decision Support** Frank Gilfeather *University of New Mexico* **16. Minimizing Security Risk While Maximizing Accessibility of Information** Timothy T. Elkins *Transformation Chair, United States Military Academy, West Point, NY*

4:00-4:30   Tutorial Session

5:00-7:00ish   Reception

Wednesday, March 12, 2008

6:45-7:45   Breakfast

8:00-8:45   **Plenary Speaker**: **Jeff Stehm,** *Associate Director Board of Governors of the Federal Reserve System*

9:00-10:30   Breakout Session:

Session Title: *Modeling & Resource Allocation*	Session Title: *Financial Systems & Energy Modeling*
Location: *New Mexico Room*	Location: *Santa Fe Room*
17. All Along the Watchtower: Using Risk Analysis to Evaluate Potential Solutions to Border Surveillance Cameron MacKenzie[1], Henry Willis[2] *[1]Stanford University* *[2]RAND Corporation* **18. Robust Portfolio Methods for Risk-Based Counterterrorism Resource Allocation** Don N. Kleinmuntz *Center for Risk and Economic Analysis of Terrorism Events (CREATE)* * University of Southern California* **19. Random Utility Modeling for the Rational Terrorist** Richard S. John, Heather Rosoff *Center for Risk and Economic Analysis of Terrorism Events (CREATE)* *University of Southern California*	**20. Risk and Concentration in Payment and Securities Settlement Systems** David C. Mills, Jr., Travis D. Nesmith *Board of Governors of the Federal Reserve System* **21. Financial System: Complexity, Interdependencies, and Disruptions** Alexander Outkin, Silvio Flaim, Andy Seirp, Julia Gavrilov *Los Alamos National Laboratory* **22. Energy Modeling Using FAIR** Mark McNulty *University of Wyoming*

Morning Refreshments

10:45-12:15   Breakout Session

Session Title: *Probability Risk Analysis*	Session Title: *Uncertainty Quantification*
Location: *New Mexico Room*	Location: *Santa Fe Room*

23. Estimating WMD Terrorism Attack Probabilities: Applications in Department of Homeland Security Risk Analyses
Steve P. Bennett
Science and Technology Directorate, Department of Homeland Security
 	
24. Probabilistic Risk Analysis and Terrorism Risk
Barry Charles Ezell[1], Detlof von Winterfieldand[2], Steve P. Bennett[3]
*[1]Deputy, Studies & Analysis Division
  CDAD, ARCIC*
*[2]Center for Risk and Economic Analysis of Terrorism Events (CREATE)
  University of Southern California*
[3] Science and Technology Directorate, Department of Homeland Security
 	
25. Identification and Risk Ranking of Improvised Nuclear Device Attack Scenarios
David Zerkle, Brian Key, Danny Shevitz
Los Alamos National Laboratory
	26. Simulation and Optimization as Effective Risk Analysis Tools
	Fred Ciochetto
	ORACLE Corporation
	
	27. On Fusing Linguistic and Assignment Uncertainty into Belief and Plausibility Measures
	Gregory Chavez
	Los Alamos National Laboratory
	
	28. Analyzing Uncertainty in Expert Opinions for Decision Making Under Uncertainty
	Mark McDonald, Patrick Hester, Sankaran Mahadevan
	Vanderbilt University

12:30-1:30   Lunch

1:30-2:15   **Plenary Speaker**: **Brandon Wales,** *Deputy Director HITRAC, Deputy Director IASD at DHS*

Afternoon Refreshments

2:15-2:45   Tutorial Session

2:30-4:00   Breakout Session

Session Title: *Food and Animal Defense*	Session Title: *Advanced Modeling for Risk & Capabilities*
Location: *New Mexico Room*	Location: *Santa Fe Room*
29. Overview of Risk Analysis Research at the National Center for Foreign Animal and Zoonotic Diseases (FAZD) Defense Neville Clarke[1], Michael Orosz[2] *[1]Foreign Animal and Zoonotic Diseases (FAZD) Defense Center* * Texas A&M University* *[2]University of Southern California* **30. A Semi-Quantitative Risk Methodology for Food Defense Derived from the Carver Plus Shock Model** John Ambrosiano *Los Alamos National Laboratory*	**31. The Role of Risk Analysis in the Development of Advanced Systems** S. W. Eisenhawer, T. F. Bott, J. R. Foggia *Logic Evolved Technologies, Inc* **32. Use of Combining High Fidelity Models with Fast Running Engineering Tools for Assessing Uncertainties in Complex Homeland Security Scenarios** Steve Whitehouse, John-Paul Shebalin *Applied Research Associates* **33. 64th Civil Team Capabilities** Jeffery Olichwier *Deputy Commander, 64th Civil Support Team*

4:15-5:15   Breakout Session

Session Title: *Risk Analysis for Key Infrastructure*	Session Title: *Risk Communication*
Location: *New Mexico Room*	Location: *Santa Fe Room*
34. A Common Risk Model for CIKR Victor A. Utgoff[1], James Morgeson[1], Susan Smith[2] *[1]Institute for Defense Analyses* *[2]Infrastructure Protection, Department of Homeland Security* **35. Risk Management Analysis Program (RMAP) for Commercial Aviation Security** Matthew McKean *U.S. Transportation Security Administration (TSA)*	**36. A Review of Basic Concepts and Definitions for Program and Project Risk Analysis** John P. Kindinger *Los Alamos National Laboratory* **37. Variations on Methodologies Presenting Risk Results for Construction and Experimental Projects** Bonnie Koch[1], Pat Medina[1], Tony Villegas[2] *[1]Los Alamos National Laboratory* *[2]SAIC*

Thursday, March 13, 2008

6:45-7:45   Breakfast

8:00-8:45   **Plenary Speaker: Allen Brown, Microsoft**

9:00-10:30   Breakout Session

Session Title: *Critical Infrastructure Modeling & Protection*	Session Title: *Issues in Risk Assessment*
Location: *New Mexico Room*	Location: *Santa Fe Room*
38. Pandemic Influenza Uncertainty Analysis Dennis Powell[1], Jeanne Fair[1], Rene LeClaire[1], Lori Dauelsberg[1], Leslie Moore[1], Brian Bush[1], Perry Klare[1], Sharon Deland[2], Michael Wilson[2], Adam Turk[2], Gary Hirsch[2], Michael Samsa[3], John Molburg[3] *[1]Los Alamos National Laboratory* *[2]Sandia National Laboratory* *[3]Argonne National Laboratory* **39. Learning Environment Simulator for First Responders** Rene J. LeClaire[1], Gary B. Hirsch[2], Alisa Bandlow[2] *[1]Los Alamos National Laboratory* *[2]Sandia National Laboratory* **40. Sensitivity and Uncertainty Analysis in CIPDSS** Lori Dauelsberg *Los Alamos National Laboratory*	**41. Area-wide risk communication: Japan case - Simulation and discussion on environmental risks of chemical substances** Takehiko Murayama[1], Masaru Kitano[2], Jun Sekizawa[3] *[1]Waseda University* *[2]Meiji University* *[3]Tokushima University* **42. The Challenges of Implementing a Modeling Tool in the Intelligence Community** Jonathan Lucero *Sandia National Laboratory* **43. Policy Analysis and Design Under Uncertainty for Systems-of-Systems** Howard D. McInvale, Mark McDonald, Sankaran Mahadevan *Vanderbilt University*

Morning Refreshments

10:45-12:15   Breakout Session

Session Title: *Communicating Risk*	Session Title: *Risk Modeling*
Location: *New Mexico Room*	Location: *Santa Fe Room*
44. Best Practices for Communicating Risk and Crisis Messages to the Media: Overcoming the Constraints of Message Filtering Steven J. Venette[1], Timothy L. Sellnow[2] *[1]University of Southern Mississippi* *[2]University of Kentucky* **45. A Socio-technical Approach to Assessing Infrastructure Criticality in Telecommunications Networks** Stephan Eidenbenz, Sunil Thulasidasa, Leticia Cuellar *Los Alamos National Laboratory*	**46. Application of principles of Failure Mode and Effect Analysis (FMEA) to software and hardware Reliability** Chandra S. Putcha[1], Prince Kalia[2], Frank Pizzano[3], Gordon Hoskins[3], Coy Newton[3], Kunal J. Kamdar[1] *[1]California State University* *[2]NASA Goddard Space Center* *[3]Hernandez Engineer Inc.* **47. Reliability-Based Optimal Control of Dynamic Systems- Applications to Modeling for Homeland Security** Mark McDonald, Sankaran Mahadevan *Vanderbilt University*

12:30-1:30   Lunch

1:30-2:30   **Panel Discussion, Featuring:**

    Tina Gabrielli
    Jeff Stehm
    Brandon Wales
    Allen Brown
    Chair: **Harald Dogliani**

2:30-2:45   Concluding Remarks