

**Third Annual IFIP WG 11.10 International Conference
on Critical Infrastructure Protection
Moore Hall, Dartmouth College
Hanover, New Hampshire
March 22-25, 2009**

March 22, 2009 (Sunday)

06:30pm – 09:00pm: Reception and Dinner

Hayward Lounge/Wheelock Room, Hanover Inn, Main Street, Hanover, NH 03755

March 23, 2009 (Monday)

07:45am – 08:20am: Breakfast

Basement Foyer, Moore Hall, Dartmouth College

08:20am – 08:30am: Welcoming Remarks and Logistics

08:30am – 09:30am: Keynote Lecture

Statistics, Nature and the Future of Security

Daniel Geer, Chief Information Security Officer, In-Q-Tel, Washington, DC

09:30am – 10:25am: Session 1: Critical Infrastructure Protection: Challenges and Solutions

Chair: Charles Palmer, Institute for Information Infrastructure Protection, Dartmouth College, Hanover, New Hampshire

The Economics of Information Security

T. Moore

Harvard University, Cambridge, Massachusetts

Redefining Risk Analysis for Critical Infrastructure Protection

M. Theoharidou, P. Kotzanikolaou and D. Gritzalis

Athens University of Economics and Business, Athens, Greece

University of Piraeus, Piraeus, Greece

10:25am – 10:45am: Break

10:45am – 11:40am: Session 2: Control Systems Security

Chair: Stig Johnsen, SINTEF/Norwegian University of Science and Technology, Trondheim, Norway

A Taxonomy of Attacks on the DNP3 Protocol

S. East, J. Butts, M. Papa and S. Sheno

University of Tulsa, Tulsa, Oklahoma

Understanding the Physical Consequences of Attacks on Control Systems

Z. Lin, A. Cardenas, H. Tsai, S. Amin, Y. Huang and S. Sastry

National Chiao Tung University, Hsinchu, Taiwan

University of California at Berkeley, Berkeley, California

11:40am – 01:00pm: Lunch

Occum Commons, Goldstein Hall, Dartmouth College

01:00pm – 02:00pm: Keynote Lecture

Tackling the Thorny Problem of Critical Infrastructure Dependencies

Eric Luijff, Principal Consultant, TNO Defence, Safety and Security, The Hague, The Netherlands

March 23, 2009 (Monday) (continued)

02:00pm – 03:00pm: Session 3: Railroad Security

Chair: Robert Miller, National Defense University, Washington, DC

Does Liberalization Increase Systemic Risk in the Railway Sector?

M. Laperrouza

Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland

Integrating Secure Train Control and Scheduling

M. Hartong, R. Goel and D. Wijesekera

Federal Railroad Administration, Washington, DC

Howard University, Washington, DC

George Mason University, Fairfax, Virginia

03:00pm – 03:30pm: Break

03:30pm – 04:50pm: Session 4: Infrastructure Modeling and Simulation

Chair: James Graham, University of Louisville, Louisville, Kentucky

Ontology-Based Modeling and Simulation of Critical Infrastructures

V. Masucci, F. Adinolfi, G. Dipoppa, P. Servillo and A. Tofani

Center for Research in Informatics and Industrial Automation (CRIA), Portici, Italy

Italian National Agency for New Technologies, Energy and the Environment (ENEA), Rome, Italy

A Mixed Holistic-Reductionistic Approach for Modeling Interdependent Infrastructures

S. De Porcellinis, G. Oliva, S. Panzieri and R. Setola

University Campus Biomedica, Rome, Italy

University of Rome III, Rome, Italy

Japan's Critical Infrastructure Protection: Risk Components and Modeling Framework

Z. Aung and K. Watanabe

Nagaoka University of Technology, Niigata, Japan

07:30pm – 09:00pm: Dinner

Collis Common Ground, Collis Center, Dartmouth College

March 24, 2009 (Tuesday)

07:30am – 08:15am: Breakfast

Basement Foyer, Moore Hall, Dartmouth College

08:15am – 09:15am: Keynote Lecture

Global Risks, Global Solutions: Next Steps for the International Critical Infrastructure Protection Community
Brandon Wales, Director – Risk Analysis, Homeland Infrastructure Threat and Risk Analysis Center (HITRAC)
Department of Homeland Security, Washington, DC

09:15am – 10:15am: Session 5: Risk Management

Chair: Tyler Moore, Harvard University, Cambridge, Massachusetts

Information Risk Management in Tightly and Loosely Coupled Organizations

S. Dynes

Dartmouth College, Hanover, New Hampshire

Risk Modeling and Management of Billing Infrastructures

F. Baiardi, C. Telmon and D. Sgandurra

University of Pisa, Pisa, Italy

10:15am – 10:45am: Break

10:45am – 11:30am: Keynote Lecture

An Assessment of the Protection of Critical Infrastructure Systems from Electromagnetic Pulse Attacks

Henry Kluepfel, Member, Commission to Evaluate the Threat of High-Altitude Electromagnetic Pulse Attacks and
Vice President, Science Applications International Corporation (SAIC), Mendham, New Jersey

11:30am – 01:00pm: Lunch

Occum Commons, Goldstein Hall, Dartmouth College

01:00pm – 01:45pm: Keynote Lecture

Securing the Financial Services Infrastructure – Managing Third Party Risk

Kevin Streff, Director, Center for Information Assurance, Dakota State University, Madison, South Dakota

01:45pm – 02:45pm: Session 6: Control Systems Security

Chair: Eric Luijff, TNO Defense, Security and Safety, The Hague, The Netherlands

Consequences of Non-IT Directed Disturbances in Energy Sector Control Systems

R. Mullen

Robert Mullen Consulting, Bisbee, Arizona

Safety Assessment and Improvement of SCADA/ICT Systems Based on Action Research

S. Johnsen, T. Skramstad, A. Aas and J. Hagen

SINTEF/Norwegian University of Science and Technology

Norwegian Defence Research Establishment, Kjeller, Norway

02:45pm – 03:15pm: Break

03:15pm – 04:45pm: Session 7: Analysis and Visualization

Chair: John Saunders, National Defense University, Washington, DC

Interactive Visualizations for Critical Infrastructure Analyses

W. Tolone

University of North Carolina at Charlotte, Charlotte, North Carolina

Non-Deducibility Based Analysis of Cyber-Physical Systems

T. Gamage and B. McMillin

Missouri University of Science and Technology, Rolla, Missouri

An Ontological Approach for Identifying Cyber-Induced Faults in Process Control Systems

J. Hieb, J. Graham and J. Guan

University of Louisville, Louisville, Kentucky

March 24, 2009 (Tuesday) (continued)

07:30pm – 09:00pm: Dinner
Alumni Hall, Hopkins Center, Dartmouth College

March 25, 2009 (Wednesday)

07:30am – 08:00am: Breakfast

Basement Foyer, Moore Hall, Dartmouth College

08:00am – 09:30am: Session 8: Infrastructure Security

Chair: Stephen Wolthusen, Royal Holloway, University of London, Egham, United Kingdom

Stack-Based Overflow Vulnerabilities in Embedded Systems

K. Watts and P. Oman

University of Idaho, Moscow, Idaho

Analysis of Security Threats to MPLS Virtual Private Networks

D. Grayson, D. Guernsey, J. Butts, M. Spainhower and S. Sheno

University of Tulsa, Tulsa, Oklahoma

Implementation and Analysis of a Secure Modbus Protocol

I. Nai Fovino, A. Carcano, M. Masera and A. Trombetta

Joint Research Center of the European Commission, Ispra, Italy

University of Insubria, Varese, Italy

09:30am – 10:00am: Break

10:00am – 11:30am: Session 9: Control Systems Security

Chair: Igor Nai Fovino, Joint Research Center of the European Commission, Ispra, Italy

Physical Model Constraints on Intrusion Detection in Control Systems

N. Svendsen and S. Wolthusen

Gjovik University College, Gjovik, Norway

Royal Holloway, University of London, Egham, United Kingdom

An Estimation-Inspection Algorithm for Anomaly Detection in Process Control Networks

J. Rrushi and K. Kang

State University of New York at Binghamton, Binghamton, New York

Oak Ridge National Laboratory, Oak Ridge, Tennessee

Implementing Situational Awareness for Pipeline Control Operations

J. Butts, H. Kleinhans, R. Chandia, M. Papa and S. Sheno

University of Tulsa, Tulsa, Oklahoma

11:30am – 12:30pm: Lunch

Occum Commons, Goldstein Hall, Dartmouth College