CRIS, Third International Conference on Critical Infrastructures
Conference Program (September 25th 2006)

Location: Salon A/B, Hilton Hotel Old Town Alexandria

8:00   Registration and Continental Breakfast (Salon A/B Foyer)

9:00   Welcome by the Local Organizing Committee Chair

9:15   Keynote Speech
By Charles W. Steger, President of Virginia Tech
Virginia Tech one of the founding members of CRIS is a public land-grant
university serving the Commonwealth of Virginia, the nation, and the world
community. The discovery and dissemination of new knowledge are central to
its mission.

10:00 Coffee Break

10:30 CRIS Remarks
By Nouredine Hadjsaid, President of CRIS

11:00 Program Overview and House Announcements
By Virgilio Centeno, Chair of Technical Committee

11:30 Lunch   Salon C

1:00 to 5:00 pm
   Session I: Critical Infrastructure Interdependency Modeling
   Salon A&B
   Session Chair: Nouredine Hadjsaid
- **Critical Infrastructure Interdependency Modeling: A Survey of US Research**
  D. Dudenhoeffer, P. Pederson, S. Hartley, and M. Permann
- **An Approach to Modeling and Mitigating Infrastructure Interdependencies**
  G. Dondossola, G. Deconinck, F. Di Giandomenico,S. Donatelli, M. Kaâniche, P. Verissimo
- **Vulnerability of Networked Infrastructures: Anomalies, Errors, Interdependencies**
  B. Vamanu,, M. Masera
- **Modeling of Infrastructure Interdependencies**
  D. Reed , S. Chang , and T. McDaniels

   BREAK (3:00 to 3:30 pm)

- **Computational Complexity of Analyzing the Dynamic Reliability of Interdependent
  Infrastructures;** C. Barrett, H. B. Hunt III, M. V. Marathe, S. S. Ravi,D. J. Rosenkrantz, R.
  E.Stearns, M. Thakur
- **A Generic Architecture of the Networked Critical Infrastructure System: GANetCI**
  X. Liu, Y.L. Tu, W.J. Zhang, R. Deters, C.L. Chai
- **Exercising a novel quantitative approach on CIP. VITA - Vital Infrastructure Threats
  and Assurance**
  J. L. Mata, C. Gomez, E. Luiijf , J. Ober; R. Schaefer

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7:30 to 8:00 Breakfast (Jefferson Foyer)

8:00 to 12:00 am   Jefferson Room

Session II: Infrastructure Security Assessment
Chair by James Thorp
- **A Case of Sensor Network for a Secure Electric Energy Infrastructure**
  Ramon A. Leon (*), G. Manimaran (*), V. Vittal (+)
- **Anomaly Detection Approach to Safeguard Critical Infrastructures: A Knowledge Engineering Process on a SCADA Case Study;** L. Lavalle, C. Balducelli, G. Vicoli
- **Security Assessment of Electrical Infrastructures Under Terrorism**
  C. Tranchita (*+), N. HadjSaid (*), A. Torres (+)
  BREAK (9:30 to 10:00 am)
- **An Approach to Statistical Estimation of Cascading Failure Propagation in Blackouts**
  Kevin R. Wierzbicki,   Ian Dobson
- **Structural Analysis of Electrical Power Networks**
  Karla Atkins (*), Jiangzhuo Chen (*), V. S. Anil Kumar (*) and Achla Marathe (*)
- **Power Grid Stability in Small World Perspective**
  Charles Kim

12:00 to 1:00 pm   Lunch at Salon A

1:00 to 5:45 pm   Jefferson Room

Session III: Wide Area Measurement Applications
Chair by Arun G. Phadke
- **Phasor Measurement Systems in the Western Grid**
  Kenneth E. Martin
- **Wide-Area Situational Awareness of Power Grids with Limited Phasor Measurements**
  Ning Zhou, Zhenyu Huang, Jarek Nieplocha, Tony B Nguyen
- **Wide Area Monitoring System of IPS\UPS: Application for Digital Model Validation**
  B. Avuey, Y. Kulikov
- **State Estimation (SE) using Wide Area Information Sharing (WAIS) and Phasor Measurement Units (PMUs)**
  R.F. Jeffers, J. De La Ree, J.S. Thorp
  BREAK (3:00 3:15)
- **Analysis of Contingencies with Phasor Measurement Units, Causes and Effects in Power Systems and their Components, CFE Mexico;**   E. Martínez Martínez
- **Real-Time Identification of Inter-area Oscillating Models in Power Systems**
  J. Warichet , J-C. Maun, T. Sezi
- **Study of WAMS Based Backup Protection**
  H.M. Xu, T.S. Bi, S.F. Huang, Q.X. Yang
- **Intelligent Blackout Prediction Using Synchronized Phasor Measurement: Simulation Case Study**
  P. Komarnicki, Z. A. Styczynski, G. Müller, R. Krebs, O. Ruhle
- **Solutions for Voltage Stability Monitoring and Control**
  M. Begović, B. Milošević,

1:30 to 5:00 pm Madison Room
Session IV: Natural Events Impact on Infrastructure
Chair by Lamine Mili
- **Impact Analysis of Critical Infrastructure Interdependencies During the 2004 Hurricane Season in Florida**
  J. Bigger, M. Willingham, L. Mili, F. Krimgold
- **An Overview of Electric Power Delivery System Damage for Hurricanes Rita and Katrina**
  D. Reed
- **On Transmission Restoration Evaluation After Ice Storms Using Monte Carlo Techniques**
  E. Broström L. Söder
  BREAK (3:00 to 3:30)
- **Ex-Post Analysis of Authority Reponse to Two Torrential Rain Flooding Situations in Finland: A Case for Prioritization;**   T. Raivio, Y. Gilbert and H. Lonka
- **The Storm Gudrun A Seven-Weeks Power Outage in Sweden**
  J. Johansson, S. Lindahl , O. Samuelsson , H. Ottosson

6:30 to 8:00 pm CRIS Dinner, Salon A

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7:30 to 8:00   Breakfast (Jefferson Foyer)

8:00 to 12:00   Jefferson Room

Session V: Communication Infrastructure Security and SCADA Systems
Chair: Runa Gustavsson
- **An Experiment Driven Approach Towards Dependable and Sustainable Future Energy Systems**
  P. Mellstrand and R. Gustavsson
- **Identification of Sources of Failures and Their Propagation in Critical Infrastructures from 12 Years Public Failure Reports;** H. A. Rahman, K. Beznosov, J. R. Martí
- **Threats to Electric Power Grid Security through Hacking of Networked Generation Control**
  C. DeMarco, Y. Braden
  BREAK (9:30 to 10 am)
- **Toward Unified Concepts for Critical Information Systems**
  M. Al-Kuwaiti and N. Kyriakopoulos
- **The CAPS-SNL Power System Security Test Bed**
  R. Hovsapian, J. Tang, P. McLaren, D. Becker
- **Optimal Substation Location and Network Routing Using Genetic Algorithm**
  A. Josephine Amala, M. Ponnavaikko
- **Preventing Buffer Overflows by Dynamic Environment Hardening**
  P. Mellstrand and R. Gustavsson

8:00 to 11:30 Madison Room

Session VI: Enhanced Use of Distributed and/or Alternative Energy
Chair Virgilio Centeno
- **Flexible Electric Infrastructures for Advanced Distribution Automation**
  B. Enacheanu, B. Raison, D. Ivanova, R. Caire, A. Aubry, N. Hadjsaid
- **Security Improvement in Critical Infrastructures Using Fuel Cell Back Up Power Systems**
  J. Haubrock, G. Heideck, Z. Styczynski
   Otto-von-Guericke-University of Magdeburg, Germany
- **Intelligent Distribution Grid Solution to Facilitate Expanded Use of Dispersed Generation Potential in Critical Situations**
  T.T.Ha Pham, Y. Bésanger, N. Hadjsaid
  BREAK (9:30 to 10:00 am)
- **Fast Transient Stability Analysis of Distribution Networks to Keep Distributed Generation On-Line; L. Le-**
  Thanh, T. Tran-Quoc, J. Lossec, N. Hadjsaid, C. Kieny , J.C.Sabonnadière, O.Devaux, O.Chilard , L. Nguyen-
  Thanh
- **A New Fault Location Algorithm for Distribution Feeders Considering Different Power Injection of Distributed Generators**
  Arturo Suman Bretas, Rodrigo Hartstein Salim
- **High Impedance Fault Detection and Location in Unbalanced Distribution Feeders With Distributed Generation Using Artificial Neural Networks**
  Arturo Suman Bretas, Rodrigo Hartstein Salim

12:00 to 1:00 Lunch Salon B

1:00 to 5:00 pm   Jefferson Room

Session VII: Panel on Critical Infrastructure Protection
Chair: Sandro Bologna
(See additional Handout on Panel)

Session VII
Panel on Critical Infrastructure Protection
September 27th, 2006, from 1:00 to 5:00 pm
Jefferson Room

Chair: Sandro Bologna
ENEA, Italian National Agency for New Technology, Energy and the Environment

Panelists

Giovanna Dondossola, CESI RICERCA, Italy
Program Coordinator of CRUTIAL, CRitical UTility InfrastructurAL Resilience

Felix Flentge, Fraunhofer Institute, Germany
Program Coordinator IRRIIS, Integrated Risk Reduction of Information Based Infrastructure Systems

Paul Friessen, Fraunhofer Institute, Germany
Program Coordinator CI 2 RCO, Critical Information Infrastructure Research Coordination

Jose Luis Mata, Red Electrica de Espana, Spain
Program Coordinator VITA, Vital Infrastructure Threats and Assurance

BREAK (3:00 to 3:30 pm)

Nouredine Hadjsaid, Institut National Polytechnique de Grenoble, France
Program Coordinator GRID

Luis Kun, National Defense University , USA
Chairman, IEEE Critical Infrastructure Committee

Thomas Birkland, National Science Foundation, USA
Program Director of IMHR, Infrastructure Management and Hazard Response