



Hosted in San Francisco, California • August 13-15, 2013

1st International Symposium on Resilient Cyber Systems

The major purpose of this symposium is to extend and endorse particular concepts that will generate novel research and codify resilience in next generation cyber system designs.

Statement of Themes: The overwhelming majority of engineered systems in use today are highly dependent on computation and communication resources. This includes system at all levels, ranging for example, from our vehicles, to large-scale industrial systems and national critical infrastructures. The resilience of the underlying computational systems and infrastructures underlying these technologies is of great importance for mission continuity and success. Resilience, in this context, is understood as the ability of a system to anticipate, withstand, recover and evolve from external attacks or failures. In this symposium we will focus on the topic of resilience of cyber systems. Among others, the concepts of cyber awareness, anticipation, avoidance, protection, detection, and response to cyber attacks will be promoted and will help set the tone of the event. A better understanding and development of these concepts and its supporting technologies will help provide some of the key underlying capabilities for the design and development of resilient cyber systems.

Submission Schedule

- Paper Submission Due: April 1, 2013
- Notification of Paper Acceptance: June 3, 2013
- Final Paper Submission: July 8, 2013
- Symposium Website: <http://cybersystems2013.inl.gov/>

Cost

- \$495
- \$445 for registration by July 12, 2013
- \$50 discount for IEEE IES members
- Half price registration for registered students

Venue/Accommodations

Hilton, San Francisco Financial District
750 Kearny Street
San Francisco, California, United States 94108
Tel: 415-765-7838
Fax: 415-765-7890

Schedule

- Day 1: Tutorial & Workshop Sessions
- Day 2: Paper Sessions
- Day 3: Panel Discussions

Benefits

- Opportunity to participate in an evolving focus area within critical infrastructure protection and cyber-physical systems
- Reduced registration fee for IEEE IES members
- Optional trip to area attraction for a nominal fee

Call for Papers

Paper submission will be handled through the symposium website listed above. Please refer to this website for the latest information.

Topical Areas (including, but not limited to)

- Resilient Cyber Frameworks and Architectures: multi-agent systems for monitoring and control, supervisory control and data acquisition, distributed sensemaking and coordination
- Moving Target Defense: Moving target defense technologies, evaluation metrics, visualization and command and control capabilities
- Human Machine Interaction and Cyber Visualization: cognitive modeling, applied machine learning, visualization concepts and technologies
- Human Systems Design: environmental configuration, tailored presentation
- Sensor Architectures: embedded modeling and analysis, intelligence and agents, wireless control and determinism, multi-parameter integration and diversity
- Human and Systems Behavior: behavior modeling, attacker co-evolution, deception
- Data Fusion: data reduction, security characterization, data diversity, anomaly detection
- Computational Intelligence: machine learning, neural networks, fuzzy logic, evolutionary computation, Bayesian belief networks
- Resilient Cyber-physical power and energy systems: real-time communication, protection, control, resilience, reliability, sustainability, efficiency

Keynote Speakers

- Dr. Thomas Longstaff, National Security Agency
- Dr. Doug Tygar, UC Berkeley
- Dr. Vipin Swarup, MITRE

General Chairs

- Marco Carvalho, Florida Institute of Technology
- Miles McQueen, Idaho National Laboratory
- Annarita Giani, Los Alamos National Laboratory
- Eugene Santos, Dartmouth College

Publication Chair

- Miles McQueen, Idaho National Laboratory

Organizing Chair

- Jodi Grgich, jodi.grgich@inl.gov

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- Gregory Frazier, Apogee Research
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- Pratyusa Manadhatta, HP labs
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