

ISRCs 2011

Hosted in Boise, Idaho
August 9-11, 2011

4th International Symposium on Resilient Control 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 control system designs.

There will be four tracks for this year's symposium: • Complex Networked Control Systems • Cyber Awareness • Human Systems • Data Fusion

Statement of Themes: Energy security and sustainability are important concerns to individuals and industry alike, but even with the promise of a smart grid, increasing research will be necessary to ensure that what is achieved is more resilient in nature. As mobile and industrial robotics form an ever increasing role in both national defense and plant automation, the dependence on these systems elevates a need to ensure continued operability in spite of hazardous environments. Through appropriate sessions and presentations, this year's symposium will highlight resilience in light of the power system and robotics, bringing to light resilience perspectives important to these applications.

Submission Schedule

- Paper Submission Due: April 4, 2011 April 18, 2011 **April 25, 2011**
- Notification of Paper Acceptance: June 6, 2011
- Final Paper Submission: July 11, 2011
- Symposium Website: <http://www.inl.gov/isrcs>

Call for Papers

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

Cost

- \$395
- \$345 for registration by July 25, 2011
- \$50 discount for IEEE IES members
- Half price registration for registered students

Venue

Boise Centre
850 West Front Street, Boise, ID 83720
(208) 336-8900

Accommodations

- The Grove Hotel, (208) 333-8000
- Hotel 43, (208) 342-4622
- Hampton Inn & Suites-Boise/Downtown, (208) 331-1900

Schedule

- Day 1: Tutorial Workshop Sessions
- Day 2: Paper Sessions
- Day 3: Panel Discussions
Special Workshop on Experimental Security Panoramas

Topical Areas (including, but not limited to)

- Human Machine Interaction: cognitive modeling, machine learning, digital human modeling
- Human Systems Design: environmental configuration, tailored presentation
- Control Theory: intelligent, reconfigurable, optimal
- Control Framework: supervisory, multi-agent, distributed intelligence
- Control Security: decoys, randomization, diversity, training and cognition, decision making, measurement
- Cyber Architecture: health indicators, defense optimization
- Data Fusion: data reduction, security characterization, data diversity, anomaly detection, response prioritization
- Computational intelligence: machine learning, neural networks, fuzzy logic, evolutionary computation, Bayesian belief networks
- Cyber-physical power and energy systems: Real-time communication, protection, control, resilience, reliability, sustainability, efficiency
- Robotic systems: Failure/error tolerance and recovery, adaptable/flexible architectures, multi-level/agent systems, multi-sensor fusion, tele-presence, probabilistic behaviors, performance validation/verification, communications security

Keynote Speakers

- Prof. Massoud Amin, University of Minnesota
- Prof. Lamine Mili, Virginia Tech
- Prof. Bill Sanders, University of Illinois
- Prof. S. Shankar Sastry, University of California, Berkeley
- Prof. G. Kumar Venayagamoorthy, Missouri University of Science & Technology

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

General Chairs

- Craig Rieger, Idaho National Laboratory, craig.rieger@inl.gov
- Milos Manic, University of Idaho, misko@uidaho.edu

Organizing Chairs

- Michelle Blacker, michelle.blacker@inl.gov
- Jodi Grgich, jodi.grgich@inl.gov

Technical Program Chairs

- John Chiasson, Boise State University
- Thomas Larson, Idaho National Laboratory

Track Chairs

- Complex Networked Control Systems:
Prof. YangQuan Chen, Utah State University
- Human Systems: Prof. Barrett Caldwell, Purdue University
- Cyber Awareness: Prof. Eugene Santos, Dartmouth College
- Data Fusion: Prof. Devendra Garg, Duke University

Publication Chair

- Deborah McQueen, University of Idaho

Technical Co-Sponsor

- IEEE Industrial Electronics Society

Organizers

- Boise State University
- Idaho National Laboratory
- Idaho State University
- University of Idaho

Technical Program Committee

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- Eugene Santos, Dartmouth College
- Marco Schoen, Idaho State University
- William Smart, Washington University
- Charles Tolle, South Dakota School of Mines & Technology
- Zachary Tudor, SRI International
- Venkat Venkatasubramanian, Purdue University
- I-Jeng Wang, Johns Hopkins University, Applied Physics Laboratory