

INL News Release
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INL promotes expertise at 2010 International Symposium on Resilient Control Systems (ISRCS)

IDAHO FALLS -- Idaho National Laboratory is helping generate novel research and codify resilience in next-generation control system designs by hosting the 3rd International Symposium on Resilient Control Systems in Idaho Falls Aug. 10-12. Resilient control systems ensure that the nation's infrastructure is protected from threats and play a critical role in keeping our nation safe.

INL is a leader in resilient controls research. The lab sponsors the symposium to support a multidisciplinary approach to the complex nature of control system interdependencies that ensure safe and secure operation of critical components of the nation's infrastructure including electrical grids, water supplies and transportation.

Idaho State University and University of Idaho are co-hosting the event, and the IEEE Industrial Electronics Society (IES) will be a technical co-sponsor. Conference attendees will have the opportunity to participate in four tracks set up to provide discussion and collaboration. The track sessions will include:

- Human Systems – Human reliability analysis that provides information on ergonomics, workload, complexity, training and experience. The analysis may be used to characterize and quantify human actions and decisions.
- Data Fusion – Various data types associated with proper operation or performance of critical infrastructure, including cyber and physical security, process efficiency and stability, and process compliancy.
- Cyber Awareness – Because of the human element of a malicious actor, traditional methods of achieving reliability cannot be used to characterize cyber awareness and resilience. Novel techniques in characterizing wellness and randomizing system response to the adversary are needed.
- Complex Networked Control Systems – Understanding how control systems become more decentralized and their ability to characterize interactions, performance and security while ensuring resilience.

Keynote speakers will include Dr. Chitra Venkatramani, manager of the Distributed Streaming Systems group at the IBM T.J. Watson Research Center; professor Mo-Yuen Chow, from North Carolina State University; professor Bogdan "Dan" Wilamowski, editor-in-chief of IEEE Transactions on Industrial Electronics; and Floyd "Ben" Cole III, technical director of the Research Directorate at the National Security Agency.

"Attendees will see papers in each area of resilience, but more importantly, sessions that combine two or more aspects," said Craig Rieger, conference chair and INL's Distinctive Signature lead for Instrumentation Controls and Intelligent Systems. "There will be plenty of time to allow networking between individuals from academia, government and industry."

"This effort is significant because just as the nervous system is critical for monitoring and control of our bodies, so are the control systems critical to ensure our infrastructure works efficiently, effectively and safely."

More information about the symposium and its keynote speakers is on the ISRCS website page:
<https://secureweb.inl.gov/ISRCS2010/default.aspx>.

INL is one of the DOE's 10 multiprogram national laboratories. The laboratory performs work in each of DOE's strategic goal areas: energy, national security, science and environment. INL is the nation's leading center for nuclear energy research and development. Day-to-day management and operation of the laboratory is the responsibility of Battelle Energy Alliance.

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