

Webinar Agenda
Advanced Sensors and Instrumentation
2015 NE I&C Review
(All Times are Eastern Daylight Time)

Wednesday, October 28, 2015

- 10:00 am Welcome and Webinar Rules (Bruce Hallbert, INL)
- 10:15 am NE I&C and NEET-ASI Overview (Suibel Schuppner, DOE/Bruce Hallbert, INL)
- 10:30 am LWRS Advanced I&C R&D Overview (Bruce Hallbert, INL)
- 11:00 am ART ICHMI R&D Overview (Richard Wood, ORNL)
- 11:30 am Materials Recovery and Waste Forms Overview (Sam Bryan, PNNL)
- 12:00 pm Lunch Break**
- 12:30 pm Materials Protection and Accountability (MPACT) Campaign Overview and Advanced Instrumentation Development Overview (Dan Vega, DOE)
- 1:00 pm Advanced Fuels Program In-reactor Instrumentation Overview (Heather Chichester, INL)
- 1:30 pm Used Nuclear Fuel Storage and Transportation Overview (Steve Marschman, INL)
- 2:00 pm Summary/Discussion (All)
- Sensors:**
- 2:30 pm Enhanced Micro-Pocket Fission Detector (MPFD) for High Temperature Reactors (Troy Unruh, INL)
- 3:00 pm High Spatial Resolution Distributed Fiber-Optic Sensor Networks for Reactors and Fuel Cycle Systems (Kevin P. Chen, University of Pittsburgh)
- 3:30 pm Robust Online Monitoring Technology for Recalibration Assessment of Transmitters and Instrumentation (Pradeep Ramuhalli, PNNL)
- 4:00 pm Under Sodium Viewing (Hual-Te Chien, ANL)
- 4:30 pm Under Sodium Viewing (Mike Larche, PNNL)
- 5:00 pm Feedback/Discussion (Bruce Hallbert, INL)
- 5:30pm Adjourn**

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- 10:00 am Welcome and Webinar Rules (Bruce Hallbert, INL)
- Digital Monitoring and Control:**
- 10:15 am Embedded I&C for Extreme Environments (Roger Kisner, ORNL)
- 10:45 am Radiation Hardened Electronics Destined for Severe Nuclear Reactor Environments (Keith E. Holbert, Arizona State University)
- 11:15 am Radiation Hardened Circuitry Using Mask-Programmable Analog Arrays (Chuck Britton, ORNL)
- 11:45 am Operator Support Technologies for Fault Tolerance and Resilience (Rick Vilim, ANL)
- 12:15 pm Lunch Break**
- 12:45 pm A Method for Quantifying the Dependability Attributes of Software-Based Safety Critical Instrumentation and Control Systems in Nuclear Power Plant (Carol Smidts, The Ohio State University)
- 1:15 pm Online Monitoring of Material Aging and Degradation (Vivek Agarwal, INL)
- 1:45 pm Enhanced Risk Monitor w/ Equipment Condition Assessment (Pradeep Ramuhalli, PNNL)
- Nuclear Plant Communication:**
- 2:15 pm Nanostructured Bulk Thermoelectric Generator for Efficient Power Harvesting for Self-powered Sensor Networks (Yanliang Zhang, Boise State University)
- Advanced Concepts of Operation:**
- 2:45 pm Computer-based procedures (Johanna Oxstrand, INL)
- 3:15 pm Control Room Modernization (Ron Boring, INL)
- 3:45 pm Concepts of Operation/Human-Automation Collaboration (Katya Le Blanc, INL)
- 4:15 pm Advanced Outage Control Center (Shawn St. Germain, INL)
- 4:45 pm Feedback/Discussion (Bruce Hallbert, INL)
- 5:15 pm Concluding Remarks (Suibel Schuppner, DOE)
- 5:30 pm Adjourn**