



Welcome and Overview of Webinar Protocol

**Advanced Sensors and Instrumentation
Annual Webinar**

October 29, 2020

**Patrick Calderoni
National Technical Director**

Webinar protocol

1. The webinar **is being recorded. Recording and presentations will be made available to the webinar participants.**
2. All participants are muted by the Organizer, except for the Presenter. For questions or comments use the “Questions” feature on the GoToWebinar Control Panel.
3. Presenters are encouraged to use the phone for audio, if possible. This will limit issues with connectivity.
4. Questions/comments will be reported to the speaker by the moderator after each presentation (except the initial Program Overview session). You may request to be unmuted for discussion, if necessary.
5. Please report problems with the webinar technology through the ‘Questions’ feature.

Webinar Agenda

Thursday, October 29, 2020

10:00 am Welcome and Overview of Webinar Protocol (Patrick Calderoni, INL)

10:10 am ASI Program Overview (Suibel Schuppner, DOE)

10:30 am ASI Research Overview (Patrick Calderoni, INL)

10:50 am ASI Technology Qualification Process (Yogi Dayal, INL)

11:20 am Nuclear Energy Sensor database (Tim Downing, PNNL)

11:50 am Q&A Session

12:00 pm Break

Sensors and Instrumentation:

12:15 pm 3-D Chemo-Mechanical Degradation State Monitoring, Diagnostic and Prognostics of Corrosion Processes in Nuclear Power Plant Secondary Piping Structures (PI - Douglas Adams, Vanderbilt University)

12:45 pm High temperature embedded/integrated sensors (HiTEIS) for remote monitoring of reactor and fuel cycle systems (PI - Xiaoning Jiang, North Carolina State University)

1:15 pm Lunch

2:00 pm Versatile Acoustic and Optical Sensing Platforms for Passive Structural Monitoring (PI – Gary Pickrell, Virginia Tech University)

2:30 pm Integrated silicon/chalcogenide glass hybrid plasmonic sensor for monitoring of temperature in nuclear facilities (PI - Maria Mitkova, Boise State University)

3:00 pm Development of Optical Fiber Based Thermometer and its Demonstration in a University Research Reactor Using Statistical Data Analytic Methods to Infer Power Distribution from Gamma Thermometer Response – (PI - Tom Blue, Ohio State University)

3:30 pm Acousto-optic Smart Multimodal Sensors for Advanced Reactor Monitoring and Control (PI - Michael Larche, PNNL)

4:00 pm A Self-Powered, Wireless Sensor System for Remote and Long-Term Monitoring of Internal Conditions of Spent Nuclear Fuel Dry-Storage Casks – SBIR – (PI-Dan Xiang, X-waveinnovations)

4:30 pm High Fluence Active Irradiation and Combined Effects Testing of Sapphire Optical Fiber Distributed Temperature Sensors (PI - Joshua Daw/Kelly McCary, INL)

5:00 pm Feedback/Discussion (Patrick Calderoni, INL)

5:15 pm Adjourn



Lunch Break

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Technical Difficulties Will resume soon

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