

# PROGNOSTIC SENSING AND MODELING FOR RESILIENCE MANAGEMENT OF EXTREME EVENTS

TUESDAY: SESSION 3, TRACK 1

## SESSION CHAIRS

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Kris Villez, Oak Ridge National Laboratory, Oak Ridge, TN, USA

Abraham Ellis, Sandia National Laboratories, Albuquerque, NM, USA

Tim McJunkin, Idaho National Laboratory, Idaho Falls, ID, USA

## SPEAKERS

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- Suzanne Groneman, City of Reno, Reno, NV, USA
- Ben Jenkins, Idaho Falls Power, Idaho Falls, ID, USA
- Mohammed Bed-Idris, University of Nevada, Reno, NV, USA

## SESSION ABSTRACT

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The generation of cheap and novel sensors and the advent of cheap computing on the edge and in the cloud has spurred interest in moving power grid management from a reactive approach focused on quick response to failures to a prognostic approach based on prediction of the location and time of future faults and adverse events, ahead of disruptive failures. In this session, we reflect on current practices and innovations in this space of resilient management of the power grid design and management. These developments will contribute to an anticipatory approach to deliberate and random faults in the electricity network and its supervisory control layer, in turn leading to a sustainable management of the cyber-physical power grid infrastructure.

The session will include the following two talks, followed by Q&A and technical discussion:

- *Micro-grid with Hydro Test Project* – Bear Prairie, Idaho Falls Power
- *Resilience Valuation of Solar plus Storage: A Methodology, Tool, and Implementation* - Mohammed Bed-Idris, University of Nevada, Reno and Suzanne Groneman, City of Reno, Reno, NV, USA