Data Analytics for Secure and Resilient Grid Infrastructure

Summary

Climate change is driving the change in how we generate, deliver, and consume energy and how we design and plan the infrastructure. For power systems, this means building more renewable and sustainable generation sources, hardening of infrastructure, and change of operations and planning against extreme weather conditions (e.g., public safety power shutoff, demand response and load curtailment). This talk will explore how we can enhance resilience of the power grid infrastructure with existing and emerging new technologies, including modeling and simulation, distributed energy resource integration, and data analytics. Especially on data analytics, we will discuss how we can leverage existing data with new types of data from emerging sensing and measurement technologies, as well as scientific achievements in artificial intelligence and machine learning. Along these efforts, publicly available data repository and platform as well as specific use cases for wildfire mitigation will be presented.

Speaker

Jhi-Young Joo is Grid Data Analytics Area Lead for Cyber and Infrastructure Resilience program at Lawrence Livermore National Laboratory (LLNL). Her current research is focused on using data to gain insight for resilient system operations and planning. Before joining LLNL in 2018, she worked as a research scientist at Lawrence Berkeley National Laboratory, and as a tenure-track faculty member at Missouri University of Science and Technology. In her current and prior positions, she has led various research projects in power systems engineering, including anomaly detection for wildfire mitigation, microgrid operations, optimal scheduling of demand response, storage integration, and distribution planning. She received her Ph.D. from Carnegie Mellon University, and M.S. and B.S. from Seoul National University, all in Electrical and Computer Engineering.

Links & Information

Tuesday, November 28, 2023
12 pm CST | 1 pm EST

Duration: 1 hour
[Register Here](#)

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