Enabling Cyber-Power Grid Security and Resiliency

Summary

During cyber events, keeping the power on to critical facilities such as hospitals and fire departments is essential. A number of resources are available with the integration of distributed energy resources (DERs) to help improve the resiliency of critical loads during adverse events in a power grid. DERs are also being connected as Internet of Things (IoTs). Minimizing the impact of cyber-attacks on the grid depends on one of these key factors: a) planning for cyber defense, b) training of human operators and employees, and c) metric-driven control and operational decisions. A formal metric is needed to quantify the cyber resiliency of the electric grid and how to use that for operational cyber-resilience considering IoT devices. This talk will cover the basics of cyber-power resiliency, tools for operational decisions, and a testbed to validate cyber-resilience tools for the electric grid.

Speaker

Anurag K. Srivastava is a Raymond J. Lane Professor and Chairperson (ECE) at the West Virginia University. He is also an adjunct professor at Washington State University and a senior scientist at PNNL. He received his Ph.D. degree in electrical engineering from the IIT, Chicago in 2005. His research interest includes data-driven algorithms for power system operation and control, including cyber-resiliency analysis. Dr. Srivastava's high-impact research projects resulted in tools installed at the utility control center. In past years, he has worked in different capacities at the Réseau de transport d´électricité in France; RWTH Aachen, Germany; PEAK Reliability Coordinator, INL, PJM Interconnection, SEL, GE Grid Solutions, MIT and Mississippi State University. He is an IEEE Fellow, a member of several CIGRE Working Groups, and the author of more than 350 technical publications including a book on power system security and 3 patents.

Links & Information

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Duration: 1 hour

Register Here

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