



PSERC WEBINAR

Leveraging Utility Outage Data to Quantify Resilience

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We start with the detailed historical outage data that is routinely collected by transmission and distribution utilities. This outage data is processed into resilience events of all sizes, and outage, restore and performance processes for each event. This leads to resilience metrics and quantification of resilience risk. Statistical models of the processes lead to further insights and relationships for resilience metrics. The overall effect of resilience mitigations can be quantified by "rerunning history" by sampling with selected outages deleted. This work is collaborative with Svetlana Ekisheva at NERC for transmission systems, and Arslan Ahmad, Nichelle'Le Carrington, and Zhaoyu Wang at Iowa State University for distribution systems.

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[LINK TO WEBINAR](#)

1:00-2:00 P.M. ET

(10:00-11:00 A.M. PT)

Ian Dobson was educated at Cambridge University (BA Math) and Cornell University (PhD Electrical Engineering). He worked for 5 years as a systems analyst in Britain for EASAMS Ltd., including contract work for the United Kingdom Atomic Energy Authority. He was faculty at the University of Wisconsin-Madison from 1989 to 2011. He is currently Sandbulte professor in the electrical and computer engineering department at Iowa State University. Ian is a Fellow of the IEEE. Ian has worked on voltage collapse blackouts, power system stability, power electronics, and applications of bifurcations and nonlinear dynamics. He is currently interested in data analytics, complex systems, power system blackouts and resilience, and is developing a probabilistic risk analysis for power systems subject to extreme weather and cascading failure. Details and publications are available at <http://iandobson.ece.iastate.edu>

