

(Online) Wide Area Grid Edge Monitoring and Applications

Distinguished
Seminar Series
數據科學大師講座

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Abstract

The talk will provide an overview on the effort of power grid wide-area monitoring and observations that were made possible from the grid edge synchronized data. The critical roles of wide-area phasor measurement in situation awareness, operation, and control will be discussed. The concept of electromechanical wave propagation in power grid will be demonstrated using measurement data collected from the actual grids. Applications of time synchronized data in event location, oscillation location detection, oscillation damping control, and inertia estimation will be discussed.

Biography

Yilu Liu received her M.S. and Ph.D. degrees from the Ohio State University, Columbus, in 1986 and 1989. She received the B.S. degree from Xian Jiaotong University, China.

Dr Liu is currently the UT-ORNL Governor's Chair at the University of Tennessee and Oak Ridge National Laboratory. She is also the deputy director of the DOE/NSF engineering research center CURENT (curent.utk.edu). She led the effort to create the North American power grid Frequency Monitoring Network FNET/GridEye (fnetpublic.utk.edu, powerit.utk.edu). Dr Liu is an expert in large grid dynamic modeling, simulations, and monitoring.

Dr Liu is a member of National Academy of Engineering, a member of the National Academy of inventors, a fellow of IEEE. She can be reached at Liu@utk.edu.