

# Faculty Excellence Speaker Series



## SYNCHRONIZED PHASOR MEASUREMENT DATA AND THEIR APPLICATIONS IN POWER SYSTEMS

Presented by Dr. Joe H. Chow

### DATE

Friday,  
January 15, 2016

### TIME

11:00 a.m. – 12:00 p.m.

### LOCATION

Harris Corporation  
Engineering Center  
(HEC), Room 101

### HOSTED BY

Faculty Excellence,  
the Office of the Provost  
and the Department of  
Electrical & Computer  
Engineering

This talk will present research conducted at Rensselaer Polytechnic Institute on the use of synchronized phasor measurements to improve the reliable operation of power systems. The discussion will include an introduction to phasor measurements, then several research topics will be discussed:

- Phasor data management using low-rank matrices and matrix completion algorithms
- Phasor-only state estimation across power control regions
- Disturbance propagation
- Wide-area control accounting for data latency

Some of these endeavors are multidisciplinary in nature and are the results of collaboration with control and signal processing researchers.

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**Joe Chow, Ph.D.**, received his M.S. and Ph.D. degrees from the University of Illinois, Urbana-Champaign. After working in the General Electric power system business in Schenectady, he joined Rensselaer Polytechnic Institute in 1987, where he is now a professor of electrical, computer and systems engineering and the campus director of the Center for Ultra-Wide-Area Resilient Electric Energy Transmission Networks (CURENT). His research interests include power system dynamics and control, synchronized phasor data, voltage stability, and control of renewable resources. He is a fellow of IEEE and a past recipient of the IEEE PES Charles Concordia Power System Engineering Award.