



## Oscillations in Power Systems

~ by ~

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Energy Systems Innovation Center/WSU

Tuesday, March 8 • 11:00 AM – Noon (PT) • **TEAMS ONLY**  
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### OVERVIEW

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There have been several recent widespread oscillation events in the eastern and western interconnections, and in Europe. For instance, large resonant 0.25 Hz MW oscillations were seen throughout the eastern interconnection on January 11, 2019, from a forced oscillation at a power plant in Florida. The talk will introduce the types of oscillations in power grids and their root causes. It will summarize modeling and measurement-based tools for detecting and classifying the oscillations based on linear system theoretic analysis and will present several signal processing algorithms for recognizing and analyzing such events online using synchrophasor measurements. The methodology will be illustrated on recent system oscillation events in the North American interconnections.

### BIO

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**Dr. Mani V. Venkatasubramanian** is a Boeing Distinguished Professor in Electrical Engineering at Washington State University (WSU), Pullman, WA. He also serves as the Director of Energy Systems Innovation Center (ESIC) at WSU. He received his M.S. and D.Sc. in Systems Science and Mathematics from Washington University, St. Louis, MO, and B.E. (Hons). In Electrical and Electronics Engineering from Birla Institute of Technology and Science, Pilani, India. He was an invited member of the working groups that studied the 1996 Western interconnection blackouts and the 2003 Northeastern blackout. He serves as the Chair of the IEEE PES Working Group on Power System Dynamic Measurements. He is a Fellow of IEEE.

