

4th IEEE PES Day Webinar Series

16TH April 2021 | 10:00AM – 11:00AM
(SGT, GMT+8)

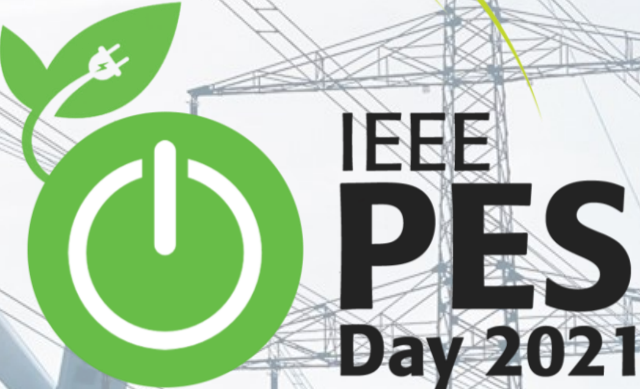
IEEE PES SG + NTU + PNNL = 4th IEEE PES Day

Advanced Simulation and Learning Techniques for Grid
Modernization and Resilience




Presenter Dr. Qihua Huang

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Title: Advanced simulation and learning techniques for grid modernization and resilience

Abstract: Electric grids are going through a dramatic and fundamental transformation to be sustainable and resilient. There are increasing penetrations of inverter-interfaced renewable generation, energy storage and flexible loads. At the same time, there are growing interdependence of power systems and other energy sectors (buildings, transportation, gas, water) as well as IT and communication infrastructures. This has led to fundamental challenges in simulation, operation and control of power systems. The first part of this talk discusses advanced multi-fidelity, multi-scale and multi-physics co-simulation techniques and tools that we developed to characterize and understand emerging system behaviors across much wider spatial and temporal spectrums as well as multiple energy sectors. The second part focuses on our recent work on reinforcement learning-based control and decision support to enhance power system resilience against emergent events.

Time: April 16, 2021 10:00 AM to 11:00 AM (SGT, GMT+08)

Join Zoom Meeting: <https://ntu-sg.zoom.us/j/92675808233>

Meeting ID: 926 7580 8233

Passcode: 992621

Bios:



Dr. Qihua Huang is a senior power system research engineer in the Electricity Security Group, Pacific Northwest National Laboratory (PNNL). He received his Ph.D. degree in Electrical Engineering from Arizona State University in 2016, his M.Eng and B.Eng. degrees in Electrical Engineering from South China University of Technology in 2012 and 2009, respectively. His research interests include power transmission and distribution system modeling, simulation and control, and application of machine learning and advanced computing technologies in power and cyber-physical energy systems.

Dr. Huang was awarded the 2019 IEEE Power and Energy Society (PES) Prize Paper Award and 2018 R&D 100 Award. He was recipient of two IEEE PES General Meeting best conference paper awards. He is the vice-chair of IEEE PES Intelligent Data Mining and Analysis (IDMA) Working Group. He serves or has served as an Associate Editor of CSEE Journal of Power and Energy Systems, and IEEE ACCESS, Guest Editor of IET Generation, Transmission and Distribution, and IET Smart Grid.



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