IEEE PES Subcommittee on Big Data & Analytics for Power Systems
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IEEE BDA Webinar Series: Big Data & Analytics for Power Systems

Big Data Access, Analytics and Sense-Making

Zhenyu (Henry) Huang
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2:00pm-3:00pm, Tuesday, EST, Oct. 30
(1:00pm-2:00pm, CST) (12:00pm-1:00pm, MST) (11:00am-12:00pm, PST)

Abstract: Modern power systems have more and better sensors for observing and optimizing their system performance and economics. These sensors generate vastly larger volumes of data of various types and speeds that need to be handled efficiently and effectively for driving meaningful analytics. To compound this challenge, large-scale analytics involves modeling and simulation that generate even more data. All these data eventually need to be converted into knowledge and information that make sense to operators and planners, so actions could be taken to manage the complexity of power systems. This seminar will put the power system data challenge into perspectives compared with other domains and will look at borrowing techniques from other domains to enable large-scale data access, analytics and sense-making. The techniques include those in the areas of mathematics, computing and visualization. Tools and resources (some publicly accessible) will be discussed as examples of approaches to tackle the big data challenge in power systems.

Bio: Zhenyu (Henry) Huang (M'01 SM'05 F'17 IEEE) received his B. Eng. from Huazhong University of Science and Technology, Wuhan, China, and Ph.D. degree from Tsinghua University, Beijing, China, in 1994 and 1999, respectively. From 1998 to 2003, he conducted extensive research at the University of Hong Kong, McGill University (Canada), and the University of Alberta (Canada). He is currently Laboratory Fellow and Technical Group Manager at Pacific Northwest National Laboratory, Richland, Washington, USA. Dr. Huang has over 140 peer-reviewed publications. His research interests include high performance computing, data analytics, and optimization and control for power systems and other related infrastructures. Dr. Huang is a Fellow of IEEE and active in several IEEE Power and Energy Society (PES) technical committees. He led the Richland Chapter to win the 2007 IEEE PES Outstanding Small Chapter Award. He is the recipient of the 2008 PNNL Ronald L. Brodzinski's Award for Early Career Exceptional Achievement and the 2009 IEEE Power and Energy Society Outstanding Young Engineer Award. Dr. Huang is a registered Professional Engineer in Washington State.

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