

IEEE BDA Tutorial Series: Big Data & Analytics for Power Systems

Real-Time Monitoring of Distribution Systems: Challenges

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10:00 am-11:30 am, Friday, Sep. 10, 2021, Pacific Time
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Abstract: This seminar will provide an overview of the presenter's efforts within the last 30 years towards development of analytical tools for real-time monitoring of distribution systems. One of the goals of the review is to highlight some of the challenges associated with development of such tools and their adoption in practice. The review will introduce the early efforts towards the development of the main tool, which is distribution system state estimation (DSSE). Then, the challenges faced towards adoption of DSSE in practice will be reviewed. The adoption of some data analytics for addressing the challenges on load estimation and meter placement will be introduced. In the last part of the presentation, recent efforts by the author towards addressing some of the challenges faced during field implementation of DSSE will be covered.

Bio: Mesut E. Baran graduated from Middle East Technical University, Ankara Turkey in 1979 with BS in EE. He received his Ph.D. in EE from the University of California Berkeley in 1988. After working with Control Data Incorporation's Energy Management Systems division for about a year and a half, he joined North Carolina State University in Raleigh in 1991. He is currently a professor at NC State.

His research interests include analysis and control of distribution and transmission systems; application of computational methods to power engineering problems. Currently, he is a member of the Freedom Systems Center at NC State focusing on both research and education aspects of renewable electric energy systems and their integration into the electric power distribution systems.

Dr. Baran is a Fellow of IEEE.

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