# IEEE BDA Seminar Series: Big Data & Analytics for Power Systems

## Cyber-Physical Data Analytics to Enable Resilient Electric Grid

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(1:00 pm - 2:15 pm, CST) (2:00 pm - 3:15 pm, EST)

**Abstract:** Keeping the power on especially to the critical facilities such as hospitals and fire department during extreme adverse operating scenarios (e.g. Ukraine cyber-attack) is essential. There is a need for a flexible and resilient grid to minimize the impact of component failures given adverse events. Availability of data from massive sensors deployment enables new monitoring and control strategies such as early alarm and diagnosis, predicative analysis, distributed and decentralized control, flexible and adaptive control. Data in power grids are largely unexploited in discovering knowledge and new solutions for critical power grid applications to enhance the resiliency. Availability of additional sensor data brings its own challenges including data anomalies, real time processing, data fusion, data management and cyber-security management. This talk will focus on real time data analytics to enhance situational awareness and decision support for enabling resiliency of the cyber-physical power grid and associated challenges and opportunities.

**Bio:** Anurag K. Srivastava is an associate professor of electric power engineering at Washington State University and the director of the Smart Grid Demonstration and Research Investigation Lab (SGDRIL) within the Energy System Innovation Center (ESIC). He received his Ph.D. degree in electrical engineering from the Illinois Institute of Technology in 2005. Dr. Srivastava high impact research projects resulted in tools installed at the utility control center supported for more than $50M by US Department of Energy, National Science Foundation, and other funding agencies. Dr. Srivastava is an editor of the IEEE Transactions on Smart Grid, and IEEE Transactions on Power Systems. He is an IEEE distinguished lecturer and has delivered 30+ keynotes/ tutorials. He is author of more than 300 technical publications including a book on power system security and 3 patents.

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