Keeping the power on especially to the critical facilities such as hospitals and fire department during extreme adverse operating scenarios is essential. Recent events such as Ukraine attack and Hurricane Maria has exposed the vulnerabilities of the electric grid against extreme events. 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, predictive analysis, distributed and decentralized control, flexible and adaptive control. Data from phasor measurement units (PMUs) is generated and monitored ubiquitously in smart grids, but largely unexploited in discovering knowledge and new solutions for critical power grid applications to enhance the resiliency of the smart grid. Availability of additional sensor data brings its own challenges including data anomalies, real time processing and cyber-security management. This talk will focus on real time PMU data analytics to enhance situational awareness and decision support for enabling resiliency of the power grid and associated challenges and opportunities.

**April 16, 2019 | 2:00-3:00 P.M. EDT**

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11:00-12:00 P.M. PDT)

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