



# NSF WORKSHOP

## Smart Grids Big Data

Memorial Student Center, Texas A&M University  
May 8, 2018

### Program

- 7:30 **Registration, Light Breakfast, Coffee and Tea available (Room 2400)**
- 8:00 **Welcome:** [J. Martin Scholtz](#), Executive Associate Vice President for Research, Texas A&M University
- 8:10 **Workshop Goals and Objectives:** [Mladen Kezunovic](#), Texas A&M University, PI, NSF Smart Grids Big Data (SGBD) Spoke Grant, [Bio >](#) [Slides >](#)
- 8:30 **Invited Talk:** “The Center of Excellence on Data Analytics”, [Mark A. Smith](#), EPRI, [Bio >](#) [Slides >](#)
- 9:00 **Panel 1:** “Data Analytics” [Bios of Panelists >](#) [Notes >](#)  
*Chair:* [Zoran Obradovic](#), Temple University, Co-PI, NSF SGBD Spoke Grant [Slides >](#)  
*Co-Chair and Moderator:* [P.R. Kumar](#), Texas A&M University, Co-PI, NSF SGBD Spoke Grant  
*Panelists:*  
[Vijay Gadepally](#), MIT  
[Xiaohua Tony Hu](#), Drexel University  
[John McDonald](#), GE
- 9:50 **Break (Room 2400) and Posters (Room 2401)**
- 10:10 **Panel 2:** “Synchrophasor Data” [Bios of Panelists >](#) [Notes >](#)  
*Chair:* [Tom Overbye](#), Texas A&M University [Slides >](#)  
*Co-Chair and Moderator:* [Bill Blevins](#), ERCOT  
*Panelists:*  
[Vikram Budhraj](#), Electric Power Group  
[Jeffery Dagle](#), PNNL [Slides >](#)  
[David Schooley](#), ComEd
- 11:00 **Focus Group Sessions:**
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| <p>“Geo-spatial Representation of Data and Grid Models” <a href="#">Bios of Chair &amp; Co-Chair &gt;</a> <a href="#">Slides &gt;</a> <a href="#">Notes &gt;</a><br/><b>Rm 2400</b><br/><i>Chair:</i> <a href="#">Brian Baldwin</a>, Esri<br/><i>Co-Chair:</i> <a href="#">Daniel Goldberg</a>, Texas A&amp;M University</p> | <p>“Policies towards Sharing Smart Grid Data, Workflows and Services” <a href="#">Bios of Chair &amp; Co-Chair &gt;</a> <a href="#">Slides &gt;</a><br/><b>Rm 2404</b><br/><i>Chair:</i> <a href="#">Arcot Rajasekar</a>, University of North Carolina at Chapel Hill<br/><i>Co-Chair:</i> <a href="#">Yingchen Zhang</a>, NREL</p> |
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11:50 **Lunch (Room 2406) and Posters (Room 2401)**

**Welcome:** [Dimitris Lagoudas](#), TEES Deputy Director and Senior Associate Dean for Research

**Keynote Speaker:** H.E. Eng. [Essa Bin Hilal Al-Kuwari](#), President, Qatar General Electricity & Water Corporation (KAHRAMAA), Qatar, [Bio >](#) [Slides >](#)

13:15 **Focus Group Sessions**

“Data Processing and Management” [Bios of Chair & Co-Chair >](#)

**Rm 2400**

*Chair:* [Ilkay Altintas](#), UC San Diego Supercomputer Center  
*Co-Chair:* [Arcot Rajasekar](#), University of North Carolina at Chapel Hill

“Meteorological Forecast and Weather Hazards”  
[Bios of Chair & Co-Chair >](#) [Presentation Slides >](#)  
[Notes >](#) [Report out Slides](#)

**Rm 2404**

*Chair:* [Keith Brewster](#), Oklahoma University  
*Co-Chair:* [Ryan Said](#), Vaisala (In absentia)

14:05 **Plenary Session:** Report-out by Focus Groups (Room 2400)

14:45 **Break (Room 2400) and Posters (Room 2401)**

15:05 **Panel 3:** “Smart Meter Data” [Bios of Panelists >](#)

*Chair:* [Santiago Grijalva](#), Georgia Institute of Technology, Co-PI, NSF SGBD Spoke Grant [Slides >](#)

*Co-Chair and Moderator:* [Soorya Kuloor](#), Landis+Gyr

*Panelists:*

[Garry Hayes](#), CenterPoint Energy

[Ed Berozet](#), Electric Power Research Institute

[Norayr Matevosyan](#), ComEd

15:55 **Panel 4:** “Education” [Bios of Panelists >](#) [Notes >](#)

*Chair:* [Dilma Da Silva](#) / [Le Xie](#), Texas A&M University, Co-PIs, NSF SGBD Spoke Grant

*Co-Chair and Moderator:* [Srinivasan Parthasarathy](#), Ohio State University

*Panelists:*

[Yu Ding](#), Texas A&M University

[Tao Hong](#), University of North Carolina-Charlotte

[Chris DeMarco](#), University of Wisconsin

16:45 **Announcement of Student Poster Winners**

16:55 **Closing Remarks and Action Items:** [Mladen Kezunovic](#), Texas A&M University

17:00 **Post-Workshop Reception and Posters (Room 2401)**

18:30 **Adjourn**

## **Posters (Room 2401)**

### **Focus Group: “Geo-spatial Representation of Data and Grid Models”**

	<b>Authors</b>	<b>Title</b>
<b>1.</b>	Idehen, I. <sup>P, C</sup> , T. Overbye	Wide-area Information of Processed PMU Data for Oscillation Mode and Data Error Analysis

**Focus Group: “Policies towards Sharing Smart Grid Data, Workflows and Services”**

2.	Wang, Y. <sup>P</sup> , G. Gu	False Data Injection Attacks in the Smart Grid
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**Focus Group: “Data Processing and Management”**

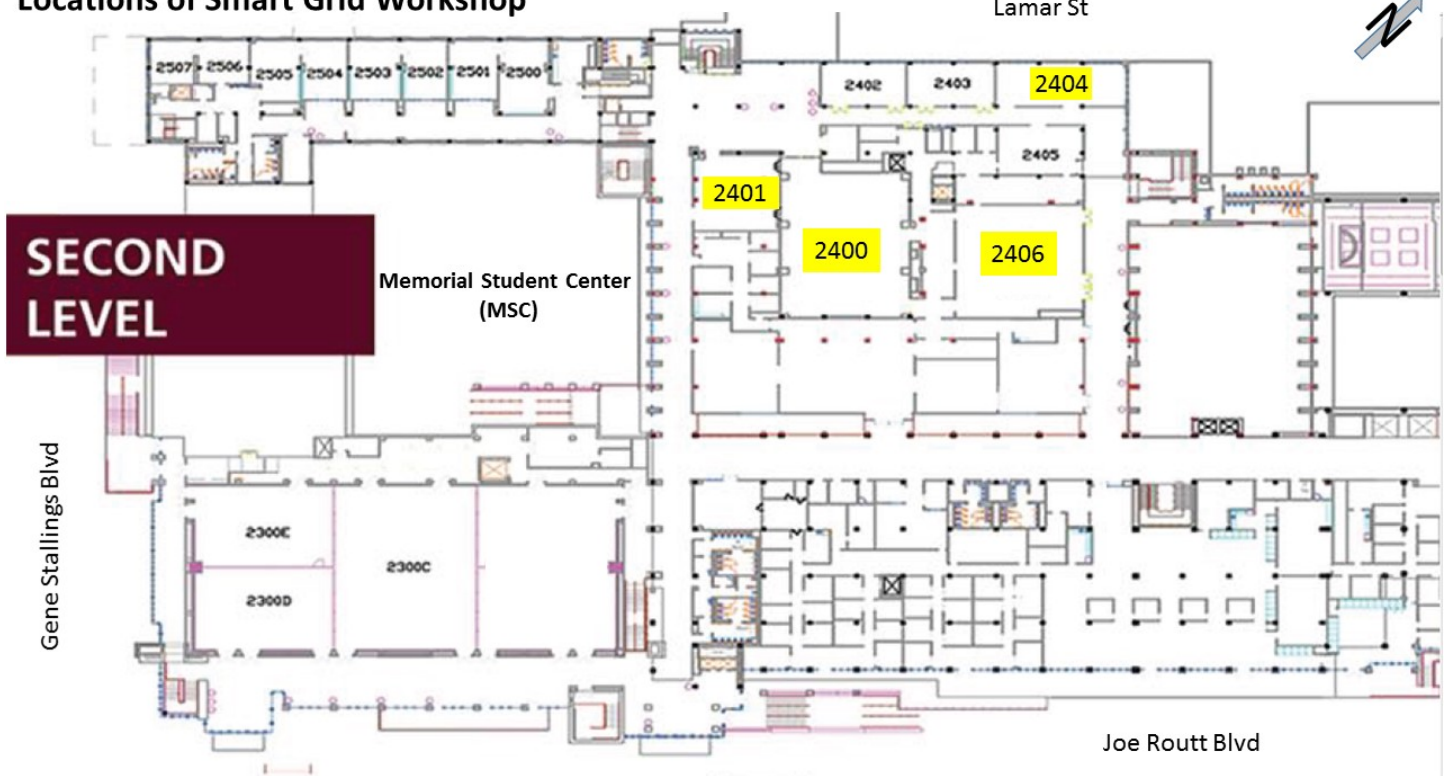
3.	Agarwal, T. <sup>P,C</sup> , R. Barzegaran, P. Niknejad	Multi-Dimensional Microgrid Synchrophasing Utilizing Time Sensitive Network- based Real-time Communication
4.	Da Silva, E. L., A. M. N. Lima, M. Correa <sup>P</sup> , M. A. Vitorino, L. Barbosa	A New Centralized Active and Reactive Power Control Strategy for Voltage Regulation in Power Distribution Networks with High Penetration of Photovoltaic Generation
5.	Dokic, T. <sup>P,C</sup>	Predictive Risk Assessment for Optimal Asset Management in Power Systems
6.	Ming, H. <sup>P,C</sup> , L. Xie, M. Campi, S. Garatti, P. R. Kumar	Scenario-based Economic Dispatch with Uncertain Demand Response
7.	Mohamed A., H. Abu-Rub, S. Refaat, M. Mosa <sup>P</sup>	Grid Integration of PV System Considering the Flexibility of Generation/Consumption using a Big Data Platform
8.	Mohamed A., S. Refaat, (S. Khalil <sup>P</sup> )	Smart grid Energy Management using big data process platform
9.	Mohamed A., M. Trabelsi <sup>P</sup> , S. Refaat	The Impact of Electric Vehicles Integration into Smart Grid using Big Data Platform
10.	Ospina, A. M. <sup>P,C</sup> , M. Soleimani	Simulation Framework for Integration of Battery Storage and Solar Generation in Distribution Power Systems
11.	Qian, C. <sup>P,C</sup> , M. Kezunovic	A Power Waveform Classification Method for Adaptive Synchrophasor Estimation
12.	Sehloff, D. <sup>P,C</sup> , A. Manur, G. Venkataramanan	A Programmable Platform for Local Data Acquisition and Processing in Microgrids
13.	Siqueira de Carvalho, R. <sup>P,C</sup> , J. Ausmus, P.K. Sen	Big Data for Smart Grid Cyber-security: Challenges and Opportunities
14.	Soleimani, M. <sup>P,C</sup> , P. Bhui	Oscillation Source Location using Local Measurements
15.	Trabelsi, M. <sup>P</sup> , A. Mohamed, S. Reffaat	The Impact of Electric Vehicles Integration into Smart Grid using Big Data Platform
16.	Wang, P. <sup>P,C</sup>	Cyber Attack Resilient System Integrity Protection Schemes based on Data-driven Techniques
17.	Xu, H. <sup>P,C</sup> , Dominguez-Garcia, P. Sauer	A Data-driven Voltage Control Framework for Power Distribution Systems
18.	Yan, Q. <sup>P,C</sup> , M. Kezunovic	Optimal Management of an Integrated Electric Vehicle Charging Station
19.	Zhang, D. <sup>P,C</sup> , K. Cummins, P. Bitzer	What GOES16 Around Comes Around

**Focus Group: “Meteorological Forecast and Weather Hazards”**

20.	Manning, J. <sup>P,C</sup>	A Multi-sensor Feedback Estimator for Forecasting Variability in Local Area Photovoltaic Power Generation
21.	Modarresi, M. S. <sup>P,C</sup> , L. Xie	Coordinated Water and Power Planning

**Legend: <sup>P</sup> – Presenter; <sup>C</sup> – Competitor**

## Locations of Smart Grid Workshop



**Thanks to Our Workshop Sponsors!**

**Project Funding Agency: National Science Foundation (NSF)**



**Gold-Level Workshop Sponsors:**

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