



## Industry Advisory Board Meeting Highlights December 7-9, 2022



*Texas A&M University in College Station, TX*

This December, the Industry Advisory Board (IAB) meeting took place at Texas A&M University in College Station, TX. The meeting venues were very modern and elegant.

The meeting was attended by 98 people:

- 20 industry members representing 15 industries
- 41 university faculty and staff from 12 universities
- 33 students
- 4 guests

Our host during the 3-day long meeting was Mladen Kezunovic site director at Texas A&M University. We thank him, Andrea Kishne, Tom Overbye, and Texas A&M for taking care of the many logistical and catering arrangements needed for such a complex undertaking.

### Wednesday, December 7<sup>th</sup>

The meeting started in the early afternoon with stem meeting sessions that included the following presentations:

#### Markets:

- Kory Hedman (Arizona State), *Chair*
- Tongxin Zheng (ISO-NE), *Vice Chair*

#### Systems:

- Venkataramana Ajjrapu (Iowa State), *Chair*
- Bo Gong (SRP), *Vice Chair*

#### T&D:

- Sakis Meliopoulos (Georgia Tech), *Chair*
- Kurt LaFrance (CMS), *Vice Chair*

### Thursday, December 8<sup>th</sup>

After breakfast, the day began with a warm welcome from Dr. E. Brendan Roark, Associate Vice President for Research at Texas A&M University, and an organizational update by Dr. Kory Hedman, PSERC's director.

Throughout the morning and early afternoon, attendees had the opportunity to listen to presentations regarding the ten project proposals that emerged from the annual solicitation process held during the fall. The presentations were:

- **Proposal #4 (Systems):** *Adaptive Transmission and Distribution Modeling and Simulation Tools for Supporting Integration and Operation of High Penetration of DERs*  
Project Leader: Qihua Huang (Colorado School of Mines)  
Team Members: Venkataramana Ajjrapu (Iowa State) and Meng Wu (Arizona State)
- **Proposal #5 (Systems):** *Multi-layer Control System for Massive Deployment of Grid Forming Inverters*  
Project Leader: Saeed Lotfifard (Washington State)  
Team Members: Ali Saberi (Washington State) and Dominic Gross (Wisconsin)
- **Proposal #6 (Systems):** *Data-Driven Stability Analysis of IBR-rich Grids with hybrid EMT+Phasor models*  
Project Leader: Amarsagar Reddy Ramapuram Matavalam (Arizona State)  
Team Members: Vijay Vittal (Arizona State) and Subhonmesh Bose (Illinois)
- **Proposal #8 (Systems):** *Data-Driven Resilience Modeling, Prediction, and Enhancement*  
Project Leader: Zhaoyu Wang (Iowa State)  
Team Members: Ian Dobson (Iowa State) and Anamika Dubey (Washington State)
- **Proposal #10 (Systems):** *Integration of Protection and Control Systems in Dynamic Security Assessment Methods*  
Project Leader: A. P. Meliopoulos (Georgia Tech)  
Team Members: Mojdeh Khorsand Hedman (Arizona State)
- **Proposal #11 (Markets):** *Dynamics of Price Formation under Uncertainty and Non-Convexity*  
Project Leader: Jacob Mays (Cornell)  
Team Members: Lindsay Anderson (Cornell) and Pascal van Hentenryck (Georgia Tech)

- **Proposal #13 (Markets):** *Toward Large-Scale DER Aggregation: Competitive Aggregation, Operation Support, and ISO-Aggregator-Utility Coordination*  
Project Leader: Lang Tong (Cornell)  
Team Members: Tim Mount (Cornell), Subhonmesh Bose (Illinois), and Meng Wu (Arizona State)
- **Proposal #15 (T&D):** *Smart Meter-Driven Distribution Grid Visibility and Control*  
Project Leader: Daniel Molzahn (Georgia Tech)  
Team Members: Line Roald (Wisconsin) and Dan Fuhrmann (Michigan Tech)
- **Proposal #16 (T&D):** *Towards Effective and Efficient Power System Operations with Predictive Integrated Distribution Networks Collaborating*  
Project Leader: Chengzong Pang (Wichita State)  
Team Members: Geunyeong Byeon (Arizona State) and Visvakumar Aravinthan (Wichita State)

Later in the afternoon students, faculty, and industry members participated in a poster session that featured 15 posters based on ongoing PSERC research projects. The posters presented by the students were entered into the annual *Best Poster* competition evaluated by PSERC industry members.

Following the poster session, the IAB members participated in a closed industry meeting. The day ended with a dinner that provided an opportunity to relax and network.

### **Friday, December 9<sup>th</sup>**

At the beginning of the session the IAB chair, Anthony Giacomoni presented a summary of the main outcomes of the closed IAB meeting.

After the summary, Dr. Kory Hedman, PSERC's Director, announced the best student poster, competition winner. The winning poster was the one for the project S-96: *Data Driven Control of DERs & Hybrid PV Plants for Enhancing Voltage Stability with TSO-DSO Interactions Over Multiple Timescales*. Presented by Muhammad Sarwar from Iowa State University.

We very much appreciate all the industry members who participated in the posters' evaluation.

The Friday morning session continued with a Panel on Grid at the Edge led by Dr. Mladen Kezunovic from Texas A&M. The presentation was very well received and provided many stimulating idea exchanges.

The meeting adjourned at 11:00 a.m., followed by an optional tour of the TAMU Center for Infrastructure Renewal (CIR) organized by Tom Overbye.