



Power Systems Engineering Research Center

Industry Advisory Board Meeting Highlights May 29-31, 2024



Cornell University

The Industry Advisory Board (IAB) meeting this May took place on the Cornell University campus. The meeting venue was Phillips Hall.

The meeting was attended by 79 people:

- 20 industry members representing 14 industries
- 25 university faculty and staff from 11 universities
- 32 students
- 2 invited guests

Our host during the 3-day long meeting was Prof. Lang Tong, PSERC site director at Cornell. We thank him and the ECE staff for taking care of the many logistical and catering arrangements needed for such a complex undertaking.

Wednesday, May 29th

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*

Presentations:

- Clyde Loutan, CAISO
- Tongxin Zheng, ISO-NE
- JP Carvallo, DOE

Systems:

- Venkataramana Ajjarapu, Iowa State, *Chair*
- Bo Gong, SRP, *Vice Chair*

Presentations:

- ~~Name~~ Sudipta Dutta, EPRI
- Fred Huang, ERCOT

T&D:

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

Presentations:

- Patrick Panciatichi, RTE
- Venkat Banunarayanan, NRECA
- Fred Huang, ERCOT
- Sudipta Dutta, EPRI

Thursday, May 30th

After breakfast, the day began with an organizational update by Dr. Kory Hedman, PSERC Director.

To start the Thursday session, attendees had the opportunity to listen to presentations of projects ending in 2024. The presentations were:

- **S-98G (Systems):** *Model reduction and translation for coordinated expansion planning studies*
Project Leader: James McCalley (Iowa State)
Team Members: Ali Jahanbani Ardakani (Iowa State)
- **S-99 (Systems):** *Incorporating climate impacts into electricity system planning models: review and case study*
Project Leader: Ana Dyreson (Michigan Tech)

Team Members: Line Roald (Univ. of Wisconsin-Madison), Thomas Overbye (Texas A&M), and Hao Zhu (Univ. of Texas)

- **S-100 (Systems):** *Detection, Characterization, and Mitigation of Disruptive Events (DECODE) by Combining Machine Learning/Artificial Intelligence on Synchrophasors and Physics-based Analysis*
Project Leader: Mladen Kezunovic (Texas A&M)
Team Members: Vijay Vittal (Arizona State), Vaithianathan (Mani) Venkatasubramanian (Washington State), and Anamitra Pal (Arizona State)
- **S-101G (Systems):** *Comparison of Positive-Sequence Simulation Versus Three-Phase Simulation of IVRs and Rotating Loads in Time Domain Simulation*
Project Leader: Vijay Vittal (Arizona State)
Team Member: Mojdeh Khorsand (Arizona State)
*presented by: Giritharan Vijay Iswaran (Arizona State)
- **S-102G (Systems):** *Second Stage in Feasibility Assessment of Synchronous Operations of the North American Eastern and Western Interconnections*
Project Leader: Thomas Overbye (Texas A&M)
Team Members: Farnaz Safdarian (Texas A&M) and Jonathan Snodgrass (Texas A&M)
- **S-103G (Systems):** *Oscillation Analysis with SCADA using Inferential Statistics (OASIS)*
Project Leader: Vaithianathan (Mani) Venkatasubramanian (Washington State)
- **M-43 (Markets):** *Integrating RTO and utility processes in planning and cost allocation*
Project Leader: James McCalley (Iowa State)
Team Members: Jacob Mays (Cornell) and Lizhi Wang (Iowa State)
- **T-66 (T&D):** *Modeling, Characterization and Suppression of Temporary Overvoltages in Power Grids with High Share of Inverter-Based Resources*
Project Leader: Saeed Lotfifard (Washington State)
Team Members: Sakis Meliopoulos (Georgia Tech)

Later in the afternoon students, faculty, and industry members participated in a poster session that featured 23 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.

The day ended with a dinner that provided an opportunity to relax and network. During dinner, Dennis Ray, previous PSERC Deputy Director, shared a few words about the PSERC community, organization, and history.

Friday, May 31st

At the beginning of the session, Lang Tong announced the winner of the Student Poster Competition: S-105-Syed Sohail Feroz Syed Afroz. We would like to express our gratitude to the industry members who participated in the posters' evaluation.

Following Lang's announcements, Tongxin Zheng presented a summary of the main outcomes of the closed IAB meeting.

After the summary from Tongxin, the Friday morning session continued with presentations and a panel on AI. The panel was led by Lang Tong (Cornell) and Le Xie (Texas A&M) with invited speakers Pradip Kumar (NYISO), Venkata Tirupati (ERCOT), and Hendrik Hamann (IBM).

The meeting adjourned at 11:30 a.m. We would like to express a special thanks to our host Cornell University, our attendees, and invited guests.