



Power Systems Engineering Research Center

Industry Advisory Board Meeting Highlights May 18-20, 2022



Electrical and Computer Engineering building (west side)

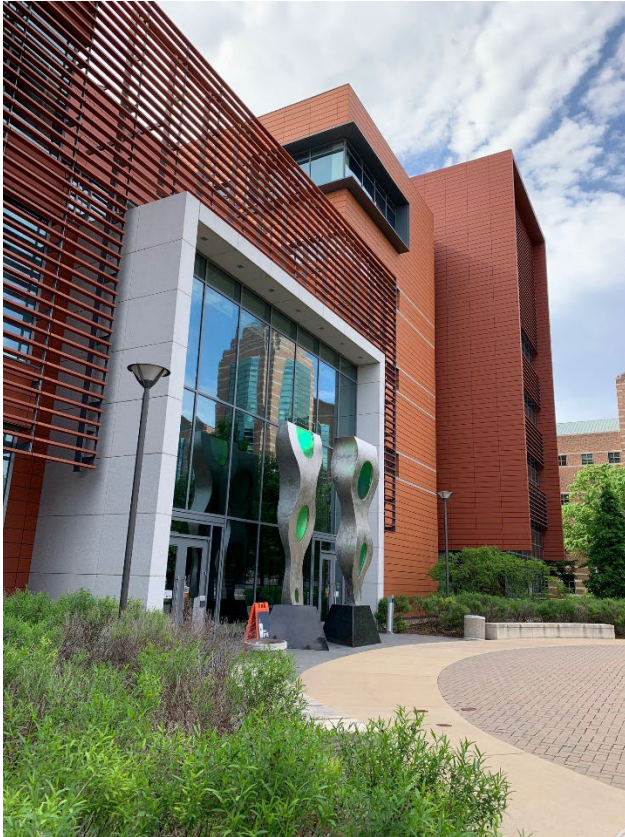
The Industry Advisory Board (IAB) meeting this May took place on the University of Illinois – Urbana-Champaign campus and was held in the Electrical and Computer Engineering building.

The meeting was attended by 89 people:

- 21 industry members representing 16 industries
- 39 university faculty and staff from 10 universities

- 28 students
- 1 invited guest

Our host during the 3-day long meeting was Alejandro Dominguez-Garcia, PSERC site director at UIUC. We thank him, Robin Smith, and Joyce Mast for taking care of the many logistical and catering arrangements needed for such a complex undertaking. Additionally, we would like to acknowledge the administrative support provided by Taylor Leavitt from the PSERC office in Arizona.



Electrical and Computer Engineering building (east side)



North side of the Engineering plaza

Wednesday, May 18

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

Markets:

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

Systems:

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

T&D:

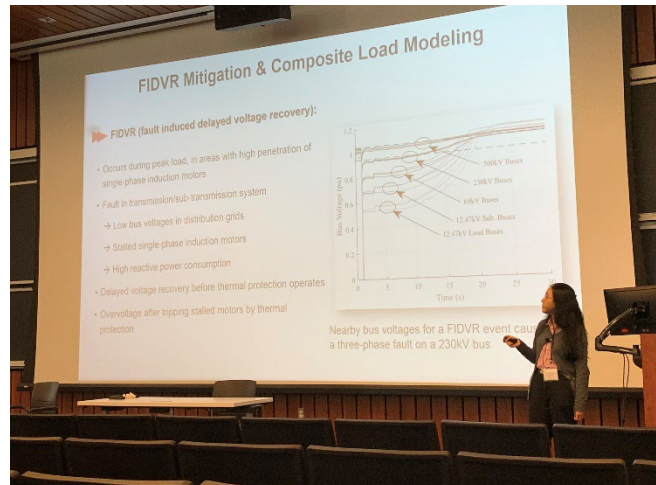
Sakis Meliopoulos, Georgia Tech, *Chair*, Alan Engelmann, Exelon, *Vice Chair*

Thursday, May 19

After some breakfast, the day began with a warm welcome from Rashid Bashir, Dean of the College of Engineering at the University of Illinois-UC followed by an organizational update by Kory Hedman, PSERC's director.

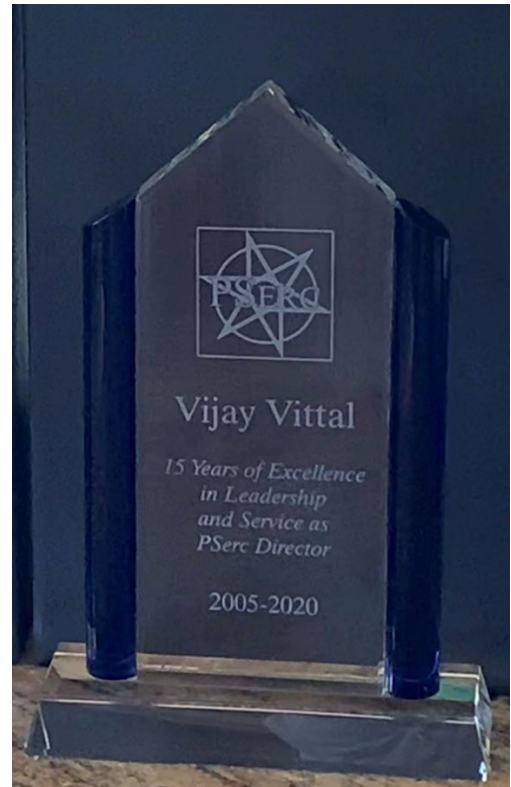
Throughout the morning and the early afternoon, attendees had the opportunity to listen to presentations ending in 2022. The presentations were:

- **M-42: Modeling and Coordinating Distributed Energy Resources in Power Systems and Markets**
Project Leader: Meng Wu (Arizona State)
Team Member: Vijay Vittal (Arizona State), Alejandro Dominguez-Garcia (Univ. of Illinois-UC)
- **S-91: Generating Value from Detailed, Realistic Synthetic Electric Grids**
Project Leader: Tom Overbye (Texas A&M)
Team Members: Kate Davis (Texas A&M), Bernie Lesieutre (Univ. of Wisconsin-Madison), Line Roald (Univ. of Wisconsin-Madison)
- **S-94G: Explore the Efficacy of Machine Learning Based Preventive and Corrective Control to Prevent Cascading Failures Following Large Disturbances**
Project Leader: Vijay Vittal (Arizona State)
Team Members: None
- **T-64: Who controls the DERs? Increasing DER hosting capacity through targeted modeling, sensing, and control**
Project Leader: Line Roald (Univ. of Wisconsin-Madison)
Team Members: Daniel Molzahn (Georgia Tech), Mojdeh Hedman (Arizona State)



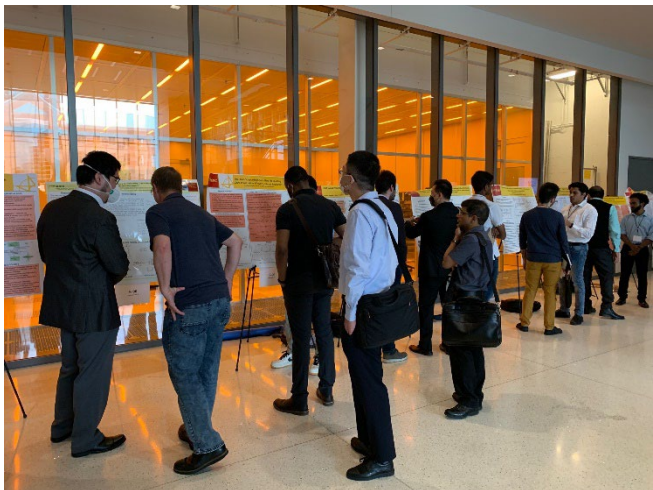
Kory Hedman presenting the Director's report (left) and Meng Wu presenting the final report for project M-42(right)

During lunch, a special crystal gift was presented to Vijay Vittal in recognition of his 15 years of leadership of PSERC. He received a standing ovation from the people present and made some personal remarks about PSERC and its continued success.



*Recognition of Vijay Vittal's 15 years as PSERC director
(from right to left: Kory Hedman, Vijay Vittal, Anna Rosa Lampis)*

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 in the annual *Best Poster* competition evaluated by PSERC industry members.



Student poster session

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.



Thursday dinner

Friday, May 20

At the beginning of the session the IAB chair, Mike Swider, NYISO presented a summary of the main outcomes of the closed IAB meeting.

After the summary, Kory Hedman, announced the winner of the best student poster competition. The winning poster was the one for project S-95: Reliable Fault Ride-through and Protection of Converter-Dominated Power Systems Under Unbalanced Conditions. The poster was presented by Prajwal Bhagwat from the University of Wisconsin-Madison.

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

The Friday morning session continued with two presentations:

- WECC Models for Representing Inverter Interfaced Generation in Transient Stability Analysis, by Vijay Vittal, Arizona State University
- Development and Testing of Microgrid Control Technologies, by Olaoluwapo Ajala, University of Illinois-UC

Both presentations were very well received and provided many stimulating idea exchanges.

The meeting adjourned at 11:00 a.m. with an optional tour of the Development and Testing Microgrid Control Technologies at the University of Illinois-UC.