Industry Advisory Board Meeting  
May 28 - 30, 2014  
Champaign, IL

The Power Systems Engineering Research Center (PSERC) is a university-industry collaboration focusing on research and education needs in the electric power industry. Its Industry Advisory Board (IAB), composed of PSERC’s industry members, meets twice per year with PSERC researchers and students to conduct Center business, and to engage in discussions about the Center’s research and education activities. This is a stimulating meeting with presentations on research projects, discussions of research ideas, and conversations on current issues facing the electric power industry.

Objectives
The objectives of this IAB meeting are to:
  • Promote interaction among researchers, industry members, and students
  • Communicate the status of current PSERC research projects and education activities
  • Present research results and discuss ideas for new research projects.

Meeting Highlights
Highlights of this meeting include:
  • Presentations on research results for projects that are ending this year
  • Posters on continuing PSERC projects
  • Discussions on current and future research and education activities
  • Stem committee meetings.

Our speakers from industry and academia bring a wealth of experience in the electric power industry. With times for formal and informal discussions, this meeting provides an excellent opportunity for networking as well as for information gathering and dissemination.

Intended Audience
The meeting is for PSERC’s industry and university members, and students at PSERC universities. We invite individuals from organizations that would like to consider PSERC membership to join us. Before registering, such individuals are asked contact Dennis Ray, PSERC Deputy Director, at 608-265-3808 or djray@engr.wisc.edu.

Host
Our local host for the IAB meeting is University of Illinois at Urbana-Champaign.
May 2014 IAB Meeting Agenda

Wednesday, May 28 (I Hotel)

1:30 – 2:00  Registration
2:00 – 2:50  PSERC Orientation Presentation for All Participants
3:00 – 4:00  T&D Technologies Stem Committee Meeting
Ward Jewell, Chair, Wichita State Univ.; Jeff Fleeman, Vice-Chair, AEP
4:00 – 5:00  Markets Stem Committee Meeting
Shmuel Oren, Chair; UC Berkeley; Jim Price, CAISO, Vice-Chair
5:00 – 6:00  Systems Stem Committee Meeting
Peter Sauer, Chair; Jim Gronquist, Vice-Chair, BPA
Presentation: “Why we should transition to a stochastic co-optimization planning and operations framework”
Robert J. Thomas, PSERC Founding Director and Professor Emeritus, Cornell Univ.

6:00 – 7:30  Reception
6:45 – 7:30  Career Conversations
7:30 – 9:00  Executive Committee Meeting

Thursday, May 29 (I Hotel)

7:15 – 8:00  Registration and Breakfast
8:00 – 8:15  Welcome to the University of Illinois at Urbana-Champaign
Speaker: William H. Sanders, Interim Head, Department of Electrical and Computer Engineering

8:15 – 8:45  Director’s Comments and PSERC Update
Vijay Vittal, PSERC Director, Arizona State Univ.

8:45 – 10:15  Presentations
Exploiting Emerging Data for Enhanced Load Modeling (S-49)
Santiago Grijalva, National Renewable Energy Lab (NREL), Georgia Tech (on leave)

Real Time PMU-Based Stability Monitoring (S-50)
Chen-Ching Liu, Washington State Univ.

The Application of Robust Optimization in Power Systems (S-51)
Kory Hedman, Arizona State Univ.

10:15 – 10:30  Break
Thursday, May 29 (continued)

10:30 – 12:00  Presentations
Coordinated Aggregation of Distributed Demand-Side Resources (S-52)
Eilyan Bitar, Cornell Univ.

Seamless Bulk Electric Grid Management (S-53G)
Santiago Grijalva, National Renewable Energy Lab (NREL),
Georgia Tech (on leave)
Anjan Bose, Washington State Univ.

Setting-less Protection: Laboratory Demonstrations (T-52G)
Sakis Meliopoulos, Georgia Tech

12:00 – 1:00  Lunch

1:00 – 2:30  Presentations
Making the Economic Case for Innovative HTLS Overhead Conductors (T-47)
Ravi Gorur, Arizona State Univ.

The Economic Case for Bulk Energy Storage in Transmission Systems with
High Percentages of Renewable Resources (T-48)
Ward Jewell, Wichita State University

The Electricity and Transportation Infrastructure Convergence Using EVs
(T-50G)
Mladen Kezunovic, Texas A&M

2:30 – 3:45  Poster Session with Discussions on On-Going PSERC Projects
3:45 – 5:30  Closed Industry Meeting (IAB members only)
3:45 – 5:00  Conversations about PSERC Membership (guests invited)
5:00 – 6:00  Reception
6:00 – 8:00  Dinner

Friday, May 30 (I Hotel)

7:15 – 8:00  Breakfast
8:00 – 8:15  Feedback from the IAB Business Meeting
8:15 – 9:15  Tutorial: Cybersecurity for Electric Power Systems
Tim Yardley, Information Trust Institute, Trustworthy Cyber Infrastructure for the
Power Grid (TCIPG), Univ. of Illinois at Urbana-Champaign
Kate Davis and Matt Davis, PowerWorld

9:15 – 10:30  Panel: Frontiers of Microgrid Research and Innovation
Sumit Bose, Senior Power Systems Engineer, GE Global Research Center
Brian Johnson, Electrical Engineer, National Renewable Energy Research Lab
Robert Lasseter, Professor Emeritus, Univ. of Wisconsin-Madison
Moderator: Chris DeMarco, Professor, Univ. of Wisconsin-Madison

10:30  Adjourn
Wednesday Evening: Career Conversations between Students and IAB Members

From 6:45-7:30 pm on Wednesday evening, in conjunction with the reception, interested IAB members are invited to engage in conversations with students who may be pursuing potential internships or career opportunities, or just wanting to talk about careers in power and energy engineering. Typically about 40 students from PSERC universities attend IAB meetings.

Poster Session, Thursday afternoon, May 29

Posters will include PSERC project status reports, student research projects, and CERTS project posters. The on-going PSERC projects that will have posters include:

2013 Start
- Towards a Privacy-Aware Information-Sharing Framework for Advanced Metering Infrastructures (S-54)
- Toward Standards for Dynamics in Electric Energy Systems (S-55)
- Stability, Protection and Control of Systems with High Penetration of Converter-Interfaced Generation (S-56)
- Adaptive and Intelligent PMUs for Smarter Applications (S-57)
- Systematic Integration of Large Data Sets for Improved Decision-Making (T-51)
- Setting-less Protection Methods: Laboratory Demonstrations (T-52G)
- Constraint Relaxations: Analyzing the Impacts on System Reliability, Dynamics, and Markets (M-29)
- A Framework for Transmission Planning Under Uncertainty (M-30)

Information for Planning Your Attendance at the IAB Meeting

Registration (Click here to register. Early bird rate ends May 7.)

Before May 7, the early bird registration fee is:
- $200 for all attendees
- No charge for students (eligible students - only from PSERC universities).

After May 7, the registration fees are:
- $275 for all attendees
- $50 for students.

Additional charges:
- $20 charge for students to attend the Thursday night dinner
- $40 charge for dinner companions of all attendees including students

The fee covers your meals, breaks, receptions, and materials.

Meeting Location

All sessions will be at the I Hotel and Conference Center, 1902 S. First Street, Champaign, IL 61820. The hotel is located in the Research Park at the University of Illinois at Urbana-Champaign, minutes from the campus. Free parking is available.
Hotel Reservations

There are three options for hotels.

1. **Cut-off date: April 27.** Accommodations are available at the I Hotel and Conference Center. The room rate is $129 per night for a standard room. To register, you can contact the hotel on-line or by phone (217-819-5000). Make your on-line reservation by:
   (1) navigating to the [hotel website](http://www.ihotel.org)
   (2) clicking on the orange "Attendee Code" button
   (3) entering the Group Code “APSE14”
   (4) clicking on “Attendee Login”
   (5) completing the reservation form.

   Use the same Group Code (APSE14) when making your reservation by phone. The hotel provides a complimentary shuttle service. Call the hotel front desk (217-819-5000) in advance to reserve a shuttle. Directions to the hotel are available on the hotel's website.

2. **Cut-off date: April 30.** Rooms are also available at the Hawthorn Suites by Wyndham Champaign, 101 Trade Center Drive, Champaign, IL 61820. This hotel is 0.6 miles from the I Hotel where the meeting is being held. To register call 217-398-3400 (no on-line registration available for our meeting rate) and use the group name “PSERC.” The room rates are $99.99 per night for a king bed and $104.99 for double queen beds. There is free parking and a free hot breakfast. Available maps and directions: (1) [to Hawthorn Suites](http://www.hawthorn.com) and (2) [from I Hotel to Hawthorn Suites](http://www.ihg.com). There is a free shuttle from the airport (call the number above or use the phone at the hotel kiosk).

3. **Cut-off date: April 27.** The final option for rooms is Hilton Garden Inn Champaign/Urbana, 1501 S. Neil Street, Champaign, Illinois, 61820. This hotel is 0.7 miles from the I Hotel. You can use the Group Code “PSERC” to make a reservation on-line. You can also call 217-352-9970 or 877-STAYHGI. The room rates are $141 for a king and for double queen beds. There is free parking. Available maps and directions: (1) [to Hilton Garden Inn](http://www.hilton.com) and (2) [from I Hotel to Hilton Garden Inn](http://www.ihg.com). There is a free shuttle from the airport (call the number above or use the phone at the hotel kiosk).

Airports

The local airport is the Willard Airport (CMI). The hotel is about a 2 ½ hour drive (depending upon Chicago traffic) from O'Hare Airport (ORD) and two hours from the Indianapolis International Airport (IND).

Meeting Attire and Wi-Fi

Meeting attire is business casual. Wireless internet service will be available.

Information

If you have questions about logistics, contact Robin Smith at rsmth@illinois.edu or 217-333-6592. For questions about registration and payment, contact Theresa Herr at Theresa.Herr@asu.edu or 480-965-1643. For information about the meeting agenda or PSERC, please contact Dennis Ray, PSERC Deputy Director at djray@engr.wisc.edu or 608-265-3808.