



Power Systems Engineering Research Center

Industrial Advisory Board Meeting

December 7-9, 2005
Raleigh, NC

The Power Systems Engineering Research Center (PSERC) is a university-industry collaboration focusing on research and education needs in the electric power industry. Its Industrial 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 and education activities, discussions of research ideas, and conversations on current issues facing the electric power industry.

Objectives

The objectives of this IAB meeting are to:

- Recommend new research projects beginning in 2005
- Facilitate interaction among researchers, industry members, and students
- Learn about the status of current PSERC research projects and education activities.

Attendees

The IAB meeting is attended by university researchers (including Center management from each university and project leaders), industrial members of PSERC, students, and invited guests.

Meeting Highlights

Highlights of this meeting include:

- Presentations, posters, and discussions on current and proposed research projects
- Presentations on final project reports and a tutorial
- An orientation session for new representatives to the IAB meeting and for guests.

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

Orientation Session

Everyone is invited to attend the PSERC orientation session on Wednesday afternoon, December 7. Our invited guests will have the opportunity to meet one-on-one with a university researcher after the poster session on Thursday afternoon to learn more about PSERC.

Host

Our local host for the IAB meeting is: **ABB**

Agenda

Wednesday, Dec. 7 (Marriott)

- 2:00 - 3:00 A Wide Area Measurement Vision for the Future - ABB
Danny Julian, PE - Principal Consulting R&D Engineer, ABB US Corporate Research Center (This is the same tutorial as the one on Friday.)
- 3:00 - 3:45 PSERC Orientation
- 3:45 - 5:00 Markets Stem Committee Meeting
- 5:00 - 6:15 Systems Stem Committee Meeting
- 6:00 - 7:30 Reception
- 7:15 - 8:30 T&D Technologies Stem Committee Meeting

Thursday, Dec. 8 (Marriott)

- 7:30 - 8:00 Registration and Continental Breakfast
- 8:00 - 8:10 Welcome and Introductions - Vijay Vittal, Director
- 8:10 - 8:35 Welcome from ABB
Goeran Lind - Senior Vice President, ABB Power Systems North America
Bernhard Eschermann - Senior VP and Manager, ABB Global Power Technology Lab
- 8:35 - 9:00 PSERC Update - Vijay Vittal
- 9:00 - 10:00 T&D Stem Report (Mladen Kezunovic) and Project Proposals
Massively Deployed Sensors - Jerry Heydt
Integration of Substation IED Information into EMS Functionality - Mladen Kezunovic
- 10:00 - 10:15 Break
- 10:15 - 11:45 Markets Stem Report (Shmuel Oren) and Project Proposals
Economic Impact Assessment of Transmission Enhancement Projects - Shmuel Oren
Tools for Assessment of Bidding into Electricity Auctions - Steve Puller
Integrating Electric System Planning with Efficient Markets to Provide Adequate Investment - Richard Schuler
- 11:45 - 12:45 Lunch
- 12:45 - 1:45 Systems Stem Report (Jim McCalley) and Project Proposals
Reactive Power Planning against Voltage Collapse with respect to Undesirable Component Protection - Venkataramana Ajarapu
Detection, Prevention and Mitigation of Cascading Events: Prototype Implementations - Mani Venkatasubramanian
- 1:45 - 3:30 Poster Session with Discussions on Present and Proposed Projects
- 3:30 - 5:30 Closed IAB Meeting
- 6:00 - 7:00 Reception (NC Art Museum)
- 7:00 - 8:30 Dinner (NC Art Museum)

Friday, Dec. 9 (Marriott)

- 7:30 - 8:00 Continental Breakfast
- 8:00 - 8:15 Feedback from the IAB Business Meeting
- 8:15 - 8:45 Market Redesign: Incorporating the Lessons Learned for Enhancing Market Design - Shmuel Oren, project leader
- 8:45 - 9:15 New System Control Methodologies to Accommodate Alternative Scenarios for Competitive Markets - Chris DeMarco, project leader
- 9:15 - 9:45 Software Agents for Market Design and Analysis - Sarosh Talukdar, project leader
- 9:45 - 10:00 Break
- 10:00 - 11:00 A Wide Area Measurement Vision for the Future - ABB
Danny Julian, PE - Principal Consulting R&D Engineer, ABB US Corporate Research Center
What is currently available in Wide Area Measurement technology? What could be the future for Wide Area Measurements? This presentation will address the process of collecting synchrophasor data, present what type of applications are possible with today's technology, and provide an overview of current research topics which may be implemented in the future. Utility feedback regarding this approach is welcome during the presentation, including their own experiences and visions of wide area measurement applications. The presentation is based on R&D by ABB Corporate Research and experiences from ABB customers.
- 11:00 a.m. IAB Meeting Adjourns
- 11:30 - 1:00 Executive Committee Meeting

Information for Planning Your Attendance at the IAB Meeting

Hotel

The meeting will be held at the Marriott Raleigh Crabtree Valley, 4500 Marriott Drive, Raleigh, NC, 27612, 919-781-7000. The room rate is \$119 for singles and doubles. Reservations can be made by calling Marriott reservations at 800-228-9290 or 919-781-7000. Ask for the PSERC-IAB Meeting rate. You can also book on-line. (Note: A code is required for on-line booking. The code is "ABDABDA".) Hotel information, maps, and transportation information is available on the [Marriott Raleigh Crabtree Valley's web page](#). The deadline for making your room reservation is November 22.

Dinner on Thursday

Thursday's dinner will be at the [North Carolina Museum of Art](#). Dinner will be served in the [Egyptian Gallery](#). Transportation will be provided for those attendees needing it. Please indicate on the registration form if you will require a ride to the museum.

Airport Transportation

The hotel is approximately fourteen miles from the Raleigh-Durham Airport. The hotel has a courtesy shuttle available from 6 a.m. to 10 p.m. A map with driving instructions is also available on the [Marriott Raleigh Crabtree Valley's web page](#).

Registration

The registration fee is \$160 for all IAB members, faculty, staff and invited attendees. The fee is waived for students. The fee covers the continental breakfasts, breaks, receptions, dinner, and materials. There is a \$45 charge for your dinner guest on Thursday night. You can pay by check or by credit card. See the [on-line registration](#) or the [registration form](#) for details. A receipt will be available at the IAB meeting. Please register by November 22.

Additional Information

For logistical questions and requests, contact Jim Stoupis at 919-856-2417 or james.stoupis@us.abb.com. If you have general questions about registration, the meeting agenda or PSERC, please contact Dennis Ray, PSERC Executive Director, at 608-265-3808 or pserc@engr.wisc.edu.