



Industry Advisory Board Conference, May 4-5, 2017

Thursday, May 4: Plenary Session

David Brower Center, 2150 Allston Way, Berkeley

Open to Industry Partners (seven per supporting firm or team; three for small business partners), Invited Research Affiliates, and Guests

- 8:30 am** Continental breakfast and registration
- 9:00 am** Announcements and introductions
- 9:25 am** Director's Message: **Celebrating 20 Years of Collaborative Research Successes**
- 9:40 am** **RESEARCH PRESENTATIONS AND DISCUSSION**
- 1. Innovative Low-Energy Occupant-Responsive HVAC Controls and Systems:** The concluding project presentation to introduce key findings (details to follow in the afternoon panel).
 - 2. Current Practices for Radiant System Design:** Summary of interviews with radiant systems designers, offering insight and guidance.
 - 3. Balancing Thermal and Daylight Autonomy:** A novel approach to visualize and assess both thermal and luminous autonomy for human-centered passive design.
- 10:20 am** Morning Break
- 10:40 am** **RESEARCH PRESENTATIONS AND DISCUSSION CONTINUED**
- 4. Psychology of Space:** Survey updates, new collaborations and research directions, with explorations of recent worker productivity research.
 - 5. Designing ZNE and Low-Energy Buildings with Ceiling Fans:** Simulation results, tool development for fan placement, and discussion of standards development.
- 11:30 am** **LIGHTNING SESSIONS FIVE-MINUTE PROJECT UPDATES AND SUMMARY RESULTS**
- 6. UC Berkeley's "Hamilton" Platform:** Affordable and high-density sensing of indoor environments for advanced building control.
 - 7. Criteria for Daylight and View Evaluation:** Using CBE's occupant survey database to shed light on visual comfort in LEED, and other rating systems.
- 11:40 am** **NEW PARTNER PRESENTATIONS:** Introductions from Aclima and Genentech.
- 12:00 pm** **LUNCH**

- 1:00 pm** **KEYNOTE Talk: What’s Next? Predictions and ‘Inevitables’ for the Built Environment**
 Dr. Chris Luebke, Arup Fellow and Director for Global Foresight, Research and Innovation, leads a team tasked with ensuring that his company is still in business twenty years from now. He will share insights from projects and travels around the globe, touching on far-ranging ideas such as voting buildings, networks of networks, artificial intelligence, automation, demographics, jobs likely to remain in the future (and those we don’t know about yet), along with additional stories from the field.
- 2:15 pm** **CONCURRENT PANEL SESSIONS**
- Technologies that Enhance Occupant Experience**
Panelists: Lindsay Baker, Comfy; Chris Pyke, Aclima; Ethan Salter, Charles M. Salter Associates; Moderator: David Lehrer
 New building technologies offer opportunities to better support occupants, giving them greater control of their environment in order to meet their preferences for air, light, sound and comfort. Panelists will present products and innovations concerning occupant feedback, advanced IEQ sensing, acoustical performance, and more. Participants and panelists will discuss benefits, successes and lessons learned from implementing such technologies.
- Innovative Low-Energy HVAC Control Strategies**
Gwelen Paliaga, TRC; Paul Raftery, CBE; Moderator: Fred Bauman
 CBE recently concluded an important three-year study: “Changing the Rules: Innovative Low-Energy Occupant-Responsive HVAC Controls and Systems.” In this session we will focus on new findings from VAV control concepts, such as cost-based reset and optimized airflow strategies. We will also solicit feedback on ideas for future pilots, advocacy and ways to advance the adoption of these results.
- 3:30 pm** Afternoon Break
- 3:50 pm** **RESEARCH PRESENTATIONS AND DISCUSSION** CONTINUED
8. **Innovations in Thermal Comfort Research and Technology:** Results from a global meta-analysis on comfort and natural ventilation, also updates on personal comfort device prototyping and laboratory testing.
 9. **Comparison of Cooling Rates for Radiant and All-Air Systems:** Multi-day experiments reveal responses to cyclic heat inputs, and how radiant cooling influences envelope heat transfer.
- 4:45 pm** **LIGHTNING SESSIONS** FIVE-MINUTE PROJECT UPDATES AND SUMMARY RESULTS
10. **ARTIC Radiant Case Study:** Field study results from a high-performing radiant floor transit center in Southern California.
 11. **LEED v4 Daylight Metrics:** Preliminary results assessing annual sunlight exposure (ASE) as a proxy for glare, from a field study at a ZNE office in San Francisco.
- 5:00 pm** **ADJOURN PLENARY SESSION**
- 5:30 pm** **HAPPY HOUR AND DINNER:** Revival Bar & Kitchen, 2102 Shattuck Avenue

Friday, May 5: Executive Session
David Brower Center, 2150 Allston Way, Berkeley

Open to Primary Industry Partner Representatives
(Two per supporting firm or team; one for small business partners)

- 8:00 am** Continental breakfast
- 8:15 am** Introductions & partner impressions
- 9:00 am** Director's report: Edward Arens
- 9:15 am** Advisory board meeting
Moderator: CBE Partner Chair, Gwelen Paliaga
Review proposed research topics for FY 2017-18
Partner discussion
- 11:30 am** Review of evaluation forms
Confirm next Industry Advisory Board Conference: October 25-27, 2017
- 12:00 pm** Adjourn executive session