



Industry Advisory Board Meeting, October 26-27, 2017

Thursday, October 26: Plenary Session

Pauley Ballroom, UC 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
- 9:30 am** Director's Message
- 9:45 am** **RESEARCH PRESENTATIONS AND DISCUSSION**
- 1. Radiant Systems Research Program:** Update on the EPIC radiant project, including energy performance reports of 23 radiant buildings and updates from ongoing field studies.
 - 2. Radiant vs. All-Air Buildings:** Comparing thermal comfort and acoustic satisfaction results from surveys in 60 buildings.
 - 3. Using Wearable Sensors to Create Personal Comfort Models:** Results from a study focused on assessing wearable solutions with the aim to predict personal thermal preference.
- 10:35 am** Morning Break
- 11:00 am** **RESEARCH PRESENTATIONS AND DISCUSSION CONTINUED**
- 4. Human Comfort Research Program:** Update on comfort and air movement research programs, including wirelessly powered PCS devices and the anemometer project.
- 11:25 am** **LIGHTNING SESSIONS FIVE-MINUTE PROJECT UPDATES AND SUMMARY RESULTS**
- 5. How High Can You Go?:** Determining the highest supply water temperature for high thermal mass radiant cooling systems in California.
 - 6. Pulsed Flow Control for High Thermal Mass Radiant Systems:** Results from a simulation and laboratory experiment-based comparison of three different valve control strategies for radiant systems: pulsed flow, variable flow, and variable temperature.
- 11:40 am** **NEW PARTNER PRESENTATIONS:** Introductions from our newest industry partners Interface Engineering and Wells Fargo.
- 12:00 pm** **LUNCH**

1:10 pm **KEYNOTE Talk: Mary Davidge**
Director, Campus Design, Real Estate and Workplace Services, Google

2:20 pm **CONCURRENT PANEL SESSIONS**

Early Phase Energy Simulation: Tools and Best Practices (Pauley East Room)

Panelists: Molly Eagen, HGA Architects & Engineers; Anica Landreneau, HOK; and Michael Tillou, Atelier Ten. Moderator: David Lehrer, CBE.

Decisions made early in the design process, including in competition phases, have long-lasting implications on building energy and comfort. At the Building Simulation 2017 Conference, a debate was held on whether architects should conduct energy simulation, or whether this is best left to specialists. In this session, experts and participants will dig further into this question, and discuss tools, best practices and challenges of early design phase simulation.

Innovations in Sensing Technologies for Indoor Environments (Pauley West Room)

Panelists: Ming Jin, UC Berkeley Dept. of Electrical Engineering and Computer Science; Jovan Pantelic, CBE; and Matt Vannucci, CBE. Moderator: Stefano Schiavon, CBE.

Researchers at CBE and affiliated centers are prototyping and testing innovate platforms for advanced sensing of the indoor environment, with the goal of tailoring and improving indoor conditions. Panelists will present and/or demonstrate devices and results, including robotic and wearable devices. Time will be reserved for discussion and feedback.

3:20 pm Afternoon Break

3:40 pm **RESEARCH PRESENTATIONS AND DISCUSSION** CONTINUED

7. **Psychology of Space:** Occupant survey updates and mapping building certifications.
8. **Tapping into the Internet of Things to Advance Thermal Comfort Analytics:** A closer look at how occupants interact with devices, and how to improve comfort predictions.
9. **The CBERD Project:** Studying comfort and climate responsive buildings in India.

5:00 pm **ADJOURN PLENARY SESSION**

5:30 pm **HAPPY HOUR AND DINNER:** Pauley Ballroom, UC Berkeley

Friday, October 27: 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
Moderators: CBE Partner Chair, Gwelen Paliaga; CBE Partner Vice Chair, Andrew Reilman
Review new research ideas for FY 2018-19
- 10:15 am** Break
- 10:30 am** Review new research ideas for FY 2018-19 (continued)
Partner discussion
- 11:45 am** Confirm next Industry Advisory Board Conference: April 18-20, 2018
Closing comments
- 12:00 pm** Adjourn executive session