

Industry Advisory Board Meeting: April 25-26, 2019

Thursday, April 25: Plenary Session Pauley Ballroom at UC Berkeley, 2495 Bancroft Way

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 Welcome and Director's message

9:10 am Announcements and introductions

9:40 am RESEARCH PRESENTATIONS AND DISCUSSION

- 1. Radiant Systems Research Program (Fred Bauman)
 Final results and key findings from a four-year, \$3M project.
- 2. Development of an Ultrasonic Velocity Sensor (Ali Ghahramani)
 Performance results and industry applications.
- 3. Acoustics in the Open Office (Lindsay Graham)
 How individual differences (i.e., personality, age, gender, status) play a role in employee experience and overcoming acoustic challenges.

10:40 am Morning Break

11:00 am RESEARCH PRESENTATIONS AND DISCUSSION (CONTINUED)

- **4.** Resilience of Buildings During Forest Fires in California (*Jovan Pantelic*)
 A comparison of air quality in two naturally and mechanically ventilated buildings.
- 5. Controlling High Thermal Mass Radiant Systems (Paul Raftery and Carlos Duarte)
 New publicly available control sequences implemented in two California buildings.

11:50 am LIGHTNING SESSIONS (FIVE-MINUTE PROJECT UPDATES AND SUMMARY RESULTS)

- 6. Fans First: Staging Ceiling Fans and Air Conditioning for Energy Efficient Cooling (Dana Miller)
 Updates from retrofit installation of 100 fans in offices and multifamily housing.
- 7. A Proposed Framework for Assessing View Quality (Won Hee Ko)
 Development of an index for view attributes and context.

12:00 pm NEW PARTNER PRESENTATION: Rudolph and Sletten

12:10 pm Lunch

1:10 pm KEYNOTE: Paul Torcellini, Principal Engineer for the Commercial Buildings Research Group at the National Renewable Energy Laboratory (NREL)

2:10 pm BREAKOUT SESSION: Roundtable Research Discussions

CBE team members and industry partners will moderate roundtable discussions on research topics for feedback and discussion of potential resources and collaborations.

3:10 pm Afternoon Break

3:30 pm RESEARCH PRESENTATIONS AND DISCUSSION (CONTINUED)

8. Stories from Radiant Buildings (Megan Dawe)
Learning from designers, operators and occupants.

9. Ceiling Fan Integrated Air Conditioning (Hui Zhang and Ed Arens) Lab testing of an innovative ductless design approach.

10. Designing for the Effects of Solar Radiation on Indoor Thermal Comfort (Andrea Zani, Visiting Scholar from Eckersley O'Callaghan Engineers)
Integrating CBE's SolarCal and Thermal Comfort tools into simulation workflow.

4:40 pm LIGHTNING SESSIONS (FIVE-MINUTE PROJECT UPDATES AND SUMMARY RESULTS)

11. Optimizing Retrofit Design for Future Climate (*Arfa Aijazi*)

Using computational optimization in conjunction with future weather files.

12. How People's Comfort Requirements Vary (Maohui Luo) Mining the Global Thermal Comfort Database.

13. Continuous Monitoring for Long-term Comfort Compliance (*Tom Parkinson*) Demonstrating advantages of continuous monitoring in 24 office buildings.

5:00 pm ADJOURN PLENARY SESSION

5:30 pm HAPPY HOUR AND DINNER: Pauley Ballroom, 2495 Bancroft Way

Friday, April 26: 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 and partner impressions

9:00 am Director's Report: Edward Arens

9:15 am ADVISORY BOARD MEETING

Moderators: CBE Partner Chair, Gwelen Paliaga; and CBE Partner Vice Chair,

Andrew Reilman

Review new research proposals for FY 2019-20

10:30 am Break

10:45 am ADVISORY BOARD MEETING CONTINUED

Review new research proposals for FY 2019-20 (continued)

Partner discussion

11:45 am Confirm next Industry Advisory Board Conference: October 23-25, 2019

Closing comments

12:00 pm ADJOURN EXECUTIVE SESSION