

Industry Advisory Board Meeting Spring 2024

Industry Partner Happy Hour: Wednesday, April 17, 5-7 pm PDT

Join us for networking and tours of our research facilities at 390 Wurster Hall, UC Berkeley Open to Industry Partners and Invited Guests. Drinks and appetizers will be served.

Plenary Session: Thursday, April 18, 8:15 am-5:50 pm PDT

Pauley Ballroom East, UC Berkeley at 2495 Bancroft Way [Hybrid sessions also via Zoom] Open to Industry Partners, Invited Research Affiliates and Guests

8:15 am **Registration and Breakfast**

9:00 am **Morning Session 1: Building Decarbonization [begin Zoom webinar]**



9:00 am **Welcome and Participant Introductions**

9:20 am **Demonstrating How to Reduce Natural Gas Consumption in Existing Large Buildings**

Paul Raftery, Professional Researcher

A field study in large commercial buildings showed natural gas savings of approximately 70% through boiler retrofits and controls updates.

9:40 am **Examining Office Building HVAC Operational Carbon Emissions** Aoyu Zou, PhD Student in Building Science, Technology and Sustainability A novel method to leverage an emerging metadata schema to reduce operational

carbon emissions.

10:00 am The California Carbon Report: Analyzing the Embodied and Operational **Carbon Impacts of 30 Buildings**

Matt Roberts, Postdoctoral Researcher

Results from data collection and analysis conducted in collaboration with industry practitioners and the Carbon Leadership Forum.

10:25 am Networking Break (25 min.)

Morning Session 2: Building Analytics and Tool Development [Hybrid] 10:50 am



10:55 am Dynamic Ventilation in Multifamily Residential Buildings

Riwayat Katia, MS Student in Building Science, Technology and Sustainability We evaluated new control methods for load shifting in multifamily buildings to maximize energy, cost or peak demand savings.



11:15 am Quantifying Overheating Resilience of California Housing to Future Climate Scenarios

Yan Wang, Postdoctoral Researcher

We are conducting large-scale building performance simulations to investigate overheating risk under climate change.

11:35 am **Lightning Presentations [Hybrid]**



My Carbon on the Margin

Ben Trefry, Student Researcher in Computer Science This new tool provides fast and easy carbon emission information from

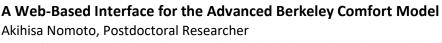
The Impact of Window Views on Cognitive Performance

residential electricity consumption using Green Button Data.

Sun Woo Chang, PhD Student in Building Science, Technology and Sustainability Preliminary field test results on the impact of visual connections to outdoors as assessed by student exam scores.

Occupant Behavior and Perception with Dynamic Glazing

Alessandra Luna Navarro, Visiting Scholar, Technische Universiteit Delft This study used a unique mobile lab and multi-domain approach to understand how people react to changing window transparency.



New efforts to enable broad usage of Berkeley's thermal comfort model, which can simulate transient and non-uniform conditions.

12:00 pm Lunch

Keynote and New Partner Presentations [Hybrid] 1:00 pm



1:00 pm **Keynote Presentation: Dr. Rebecca Dell**

Senior Director, Industry Program, ClimateWorks Foundation bio

1:50 pm **New Partner Presentations:** McKinstry, M Moser Associates

2:00 pm **Networking Break** (20 min.)

Afternoon Session: Health and Comfort in Indoor Environments [Hybrid] 2:20 pm



2:25 pm Impact of Ceiling Fans on the Risk of Infectious Aerosol Transmission Jiayu Li, Postdoctoral Researcher

> We used experimental data to create a decision-making tool to assess the suitability of ceiling fan usage in various scenarios.



2:45 pm **Personal and Spatial Diversity of Thermal Comfort**

Tobias Kramer, Postdoctoral Researcher

Presenting a framework for integration of comfort diversity in building design

and operation.

3:05 pm Age, Sex and Thermal Comfort

> Hui Zhang, Professional Researcher; Ingrid Chaires, Senior Consultant, Arup New findings from a human subject laboratory test that reveal key differences.

3:20 pm **Establishing a Maximum Safe Temperature for California Residences**

Charlie Huizenga, Research Specialist

Literature review and preliminary simulation results from research to guide future

housing policy directions.

3:40 pm Closing Remarks for Zoom Participants [Conclude Zoom webinar]

and Break (20 min)

Breakout Sessions 4:00 pm

4:00 pm **Breakout Table Topics**

CBE staff and partners will lead roundtable discussions with in-person participants, focusing on

current topics of concern to research and industry. (Topics will be made available soon.)

4:50 pm **Conclude Plenary Session**

5:00 pm Cocktail Hour and Dinner, Cal Alumni House, UC Berkeley Campus

Executive Session: Friday, April 18, 8:30 am-12:00 pm PDT

The Magnes Collection, 2121 Allston Way, Berkeley, CA [Hybrid sessions also via Zoom] Open to Industry Partner Representatives (two per supporting firm or membership team)

8:30 am **Continental Breakfast**

9:00 am Introductions and Director's Message [begin Zoom webinar]

9:30 am **Advisory Board Meeting**

> Moderated by CBE Partner Chair Andrew Reilman and Vice Chair Shruti Kasarekar. Faculty and research staff will seek feedback and ideas for collaboration related to CBE's FY 2024-2025

research portfolio.

10:30 am **Break**

11:00 am **Breakout Discussion**

To advance interaction we will break into smaller groups centered around related topical areas.

12:00 pm **Conclude Executive Session**

Optional Lunch in Downtown Berkeley