

# 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 Cost-Effective Decarbonization of HVAC Hot Water Systems

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.)

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



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 Regional-Scale Building Performance Modeling

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

Carlos Duarte, Assistant Professional Researcher

This new tool provides fast and easy carbon emission information from 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.* 



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

12:00 pm Lunch

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



1:00 pm Keynote Presentation: Daniel Kammen

Prof. Kammen is the James & Katherine Lau Distinguished Professor of Sustainability, with appointments in the Energy and Resources Group, the Goldman School of Public Policy and the Dept. of Nuclear Engineering at UC Berkeley. bio

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1:50 pm New Partner Presentations

2:00 pm Networking Break (20 min.)

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



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.



Tobias Kramer, Postdoctoral Researcher

Presenting a framework for integration of comfort diversity in building design and operation.





3:05 pm Age, Sex and Themal Comfort

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

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

Charlie Huizenga, Research Specialist

Literature review and preliminary simulation results from research that will quide

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** 

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

## 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)

**Continental Breakfast** 8:30 am

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

9:30 am **Advisory Board Meeting** 

Moderated by CBE Partner Chair, Andrew Reilman. Faculty and research staff will seek feedback

on a portfolio of research projects for CBE's FY '24-'25.

10:30 am **Break** 

11:00 am **Advisory Board Meeting, continued** 

Continue discussion regarding recent progress and additional topics for the future.

12:00 pm **Conclude Executive Session** 

**Optional Lunch in Downtown Berkeley**