

## BERKELEY CLIMATE MAP — EXTREME HEAT - SEPT 2024

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
Ed	<a href="#">Arens</a>	CED - CEDR, CBE	Director, <a href="#">Center for the Built Environment</a> at the College of Environmental Design.  CBE is an industry/university cooperative research center focusing on commercial/institutional buildings.	Arens has been principal investigator for a large number of state, federal, and industry grants addressing building energy performance, indoor environmental quality criteria, field monitoring procedures, and architectural aerodynamics.
Max	<a href="#">Auffhammer</a>	Agricultural & Resource Economics	Environmental and resource economics, energy economics and applied econometrics.	<a href="#">Heat in the Heartland – crop yields along the Mississippi</a>
Dennis	<a href="#">Baldocchi</a>	ESPM	How ecosystems function in a warmer world. How the terrestrial biosphere ‘breathes’; plants and microbes exchange trace gases, in and out of the atmosphere, in their quest to acquire the energy needed to support their metabolism.	<a href="#">The Biosphere - ESPM 2 001 - LEC 001 (FALL2023)</a>  Ecosystem Ecology, ESPM 111, Spring 2024  Biometeorology, ESPM 129, Fall 2024
	<a href="#">Berkeley Institute for People, Parks and Biodiversity</a>	RCNR	<a href="#">Patrick Gonzalez, Executive Director</a> . Steven Beissinger, Co-Faculty Director. Holly Doremus, Co-Faculty Director. Advances	2023 UCOP Proposal: Restoring wildfire resilience and forest carbon stocks under climate change in Yosemite, California

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
			science and solutions to halt climate change, conserve biodiversity, and improve the experience of nature for all.	
William	<a href="#">Boos</a>	Earth and Planetary Science	Large-scale climate dynamics. How atmospheric circulations, ocean interactions, radiative transfer, and land surface processes control regional and global climate.  Academic Senate Committee on Climate	<a href="#">Mechanical forcing of the North American monsoon by orography</a> (2021)
Gail	<a href="#">Brager</a>	CED - Architecture, CBE	Director, <a href="#">Center for Environmental Design Research</a> supporting 3 centers including Center for the Built Environment.	<a href="#">Mixed Mode Building Research</a> – hybrid space conditioning – comfort with less energy use
Federico	<a href="#">Castillo</a>	ESPM	Socio-economic impacts of extreme events associated with climate change. The economic aspects of protected areas and migration.	<a href="#">Extreme Heat and COVID-19: A Dual Burden for Farmworkers</a> (2022)  Key research: hurricane impact; Afro-Latinx and Latinx migration; FEMA expenditures; heat waves-COVID joint impacts on farm workers.  Current research on hurricane Harvey impacts on Afro-Latinx and Latinx community and FEMA expenditures
	<a href="#">Center for Cities and Schools</a>	CED - IURD	Jeffrey Vincent, Co-Founder & Director the <a href="#">Center for Cities &amp; Schools (CC&amp;S)</a> . Interdisciplinary, action-research center, linking the fields of city planning and K-12 education.	UCOP \$100M Climate Action LOI lead - Building Adaptive Capacity of California's Climate Vulnerable TK-12 Schools -- Seed (Decline)

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
				<a href="#">Virtual Policy Forum on Climate Resilient California Schools</a> (2023)
	<a href="#">Center for Law, Energy and Environment</a>	Law	<a href="#">Daniel Farber</a> , Faculty Director <a href="#">Louise Bedsworth</a> , Executive Director Solving our most pressing environmental challenges through actionable research, training, and engagement to accelerate the implementation of solutions.	Bay Area Heat Health Climate Project  Bay Area 5 <sup>th</sup> Assessment Regional Report
	<a href="#">Center for the Built Environment</a>	CED - CEDR	<a href="#">Ed Arens</a> , Director. Academic-Industry partnership to improve the performance of buildings.	<a href="#">HVAC systems</a> <a href="#">California Safe Indoor Temperature Policy Study</a> <a href="#">Decarbonizing Large Commercial Buildings through Heat Recovery and Storage</a>
	<a href="#">CITRIS and the Banatao Institute</a>	Berkeley, Davis, Santa Cruz, Merced	<a href="#">Alexandre Bayen</a> , Director <a href="#">Camille Crittenden</a> , Executive Director. Creating IT solutions that generate social and economic benefits for everyone.	<a href="#">Preparing for a warming world: CITRIS at the vanguard of climate tech research</a>  <a href="#">CITRIS Seed Grants awarded Dec 2023 – includes projects on soil carbon and resilient building materials to address heat</a>
Stephen	<a href="#">Collier</a>	CED - City and Regional Planning	City planning and urban governance.	Teaching: CYPLAN 214 – Climate Planning and Urban Systems SPRING 2023
	<a href="#">Disaster Lab (D-Lab)</a>	Engineering	Thomas Azwell, Director. Develops and Validates Practical Innovations for Disaster Preparation, Response, and Recovery	Course: ENGIN 183C: THE DISASTER CHALLENGE LAB

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
				Working on remote sensing and vegetation management for wildfire prevention
Carlos	<a href="#">Duarte</a>	CED - CEDR, CBE	Radiant heating and cooling, occupant behavior impact on building energy consumption, and the development of tools that help building stakeholders.	<a href="#">Optimizing radiant systems for energy efficiency and comfort</a> <a href="#">Tool for high thermal mass radiant systems</a>
Ethan	<a href="#">Elkind</a>	<a href="#">Center for Law, Energy and Environment</a>	Director, <a href="#">CLEE Climate Program</a> (Berkeley Law)	The <a href="#">Climate Change &amp; Business Research Initiative</a> engages business, nonprofit and government leaders in a collaborative project to achieve economic and environmental benefits from California's climate policies and program. The series includes over 20 reports spanning seven sectors of the economy, all of which are available at <a href="#">climatepolicysolutions.org</a>
	<a href="#">Geospatial Innovation Facility</a>	ESPM	<a href="#">Nancy Thomas, Executive Director</a> . Provides leadership and training across a broad array of integrated mapping technologies.	<a href="#">Cal Adapt</a> site- climate projections to areas of interest and gives tools to plan for changes
	<a href="#">Green Building Resource Center (GBRC)</a>	CED - CEDR	<a href="#">Edward Arens</a> , Co-Director <a href="#">David Lehrer</a> , Co-Director Advances and promotes sustainable building design and operation on the campus and provides resources to other universities in similar efforts across California.	
Rohini	<a href="#">Haar</a>	Human Rights Center (Law)	Emergency physician. Health and human rights. Protection of human rights in times of complex humanitarian crisis and conflict.	Course: PH211 Health and Human Rights

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
Zoe	<a href="#">Hamstead</a>	CED - City and Regional Planning	Policy, Buildings. Climate Equity/Environmental Justice	Teaching: CYPLAN 290 - Topics in City and Metropolitan Planning: Climate Justice Seminar SPRING 2022
Tianzhen	<a href="#">Hong</a>	LBNL - Building Technologies and Urban Systems Division	Deputy Head of the Building Technologies Department at LBNL.	<a href="#">Anthropogenic heat from buildings in Los Angeles County: A simulation framework and assessment</a>
Charlie	<a href="#">Huizenga</a>	CED - CBE	Personal comfort systems for energy efficiency and heat stress reduction	<p><a href="#">Establishing Maximum Thermal Conditions for California Residential Dwellings</a></p> <p>Policy Recommendations (developed with the UCB Center for the Built Environment) were delivered to the CA Legislature Feb 2025</p> <p>Recommends 82°F as the maximum safe indoor air temperature for CA residential buildings</p> <p>Recognizes the importance of air movement (e.g., fans) in allowing higher air temperatures</p> <p>Proposes consideration of new building standards, incentivizing passive and low-energy cooling strategies, and using future weather models for energy analysis</p>

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
	<a href="#">Human Rights Center</a>	Law	Betsy Popken, Executive Director. Our Climate Justice program addresses the human impacts of climate change. Our research results in recommendations to create new laws and policies, and other actions to protect the human rights of people in affected communities.	Co-Director, Climate-Induced Displacement and Migration in CA – project for CA 5 <sup>th</sup> Climate Assessment
Carly	<a href="#">Hyland</a>	SPH - Environmental Health Services	Cooperative Extension Professor in EHS -- Interventions and research translation to mitigate the health impacts of climate change among agricultural and food systems workers, with a focus on heat, wildfire smoke, and pesticides.	Interventions and research translation to mitigate the health impacts of climate change among agricultural and food systems workers, with a focus on heat, wildfire smoke, and pesticides.  <a href="#">Examining Farmworker Experiences with Heat and Climate Change in Idaho</a>
	<a href="#">Institute for Urban Infrastructure and Development (IURD)</a>	CED - City and Regional Planning	Kristina Hill, Director. Interdisciplinary academic and research unit dedicated to prioritizing justice in initiatives to understand, mitigate, and adapt to climate change.	
Andy	<a href="#">Jones</a>	LBNL - Climate and Ecosystem Sciences Division	Jones leads the <a href="#">Earth Systems and Society Program Domain</a> at LBNL.	
Tom	<a href="#">Kirchstetter</a>	LBNL - Energy Analysis & Environmental Impacts Division	Director, <a href="#">Energy Analysis &amp; Environmental Impacts Division</a> at LBNL	

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
Layla	<a href="#">Kwong</a>	SPH - Environmental Health Sciences	Identifying pathways of disease transmission; developing products and services to reduce exposure to climate change, air pollution, pathogens, and irritants; and evaluating intervention impacts on child health.	<p>Quantifying exposure to heat stress and the impact of heat stress on children, pregnant women, rickshaw pullers, and older individuals.</p> <p>Developing interventions to reduce exposure to indoor heat stress. Global environmental health — Bangladesh, India, China, Mongolia, Fiji, Indonesia, Peru, Uganda, and Mali in urban, rural, and humanitarian settings.</p> <p><a href="#">Climate Equity Environmental Justice Core Faculty</a></p>
Zachary	<a href="#">Lamb</a>	CED - City and Regional Planning	Urban spatial politics, ecological design, and uneven vulnerability to environmental hazards, particularly hazards associated with climate change	UCOP \$100M Climate Action LOI lead – January 2023 - Manufacturing Climate Equity: Equitable Climate Action in California’s Manufactured Home Parks -- Seed (Decline)
Ronnen	<a href="#">Levinson</a>	LBNL - Building Technologies and Urban Systems Division	Leader of the <a href="#">Heat Island Group</a> at LBNL.	<a href="#">Heat Island Group</a>
Elizabeth	<a href="#">Noth</a>	SPH - Industrial Hygiene	Director, Industrial Hygiene Program at the Northern California NIOSH Education and Research Center.	2023 UCOP Proposal: Heat and Wildfire Smoke Impacts on Prison Residents and Workers

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
	<a href="#">Office of Sustainability and Carbon Solutions</a>		Director position currently being filled through outside search.	Heat issues for campus buildings that are not AC-equipped.
Ajay	<a href="#">Pillaresetti</a>	SPH - Environmental Health Sciences	Measuring and modeling health, climate, and economic impacts of air pollution, with a focus on household energy use and related behaviors in low- and middle-income countries.	<a href="#">Clean cooking and SDGs</a>
Justin	<a href="#">Remais</a>	SPH - Environmental Health Sciences	Chair of the Division of Environmental Health Sciences at SPH. How the transmission of environmental pathogens responds to rapid environmental change.	NIH R01 - <a href="#">Climate change and the epidemiology of Valley fever in California</a> (2019-2026; \$4.2mil);  NIH R01 - <a href="#">Climate change and the expansion of fungal diseases in the U.S.</a> (2023-2028; \$3.9mil)
Daniel	<a href="#">Rodriguez</a>	CED - City and Regional Planning	Director, Institute for Transportation Studies. How mortality will change as heat events increase under global emissions scenarios for the midcentury.	With funding from the NIH, Drexel Climate Change and Urban Health Research Center, where among others we are conducting a comparative study of the neighborhood effect modifiers of the heat-mortality relationship in several US and Latin American cities.  <a href="#">Research brief on Green spaces and climate change -- strategies for adaptation and mitigation for Latin American cities</a> (2022)



First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
David	<a href="#">Romps</a>	Earth and Planetary Sciences	Atmospheric dynamics including cloud dynamics, microphysics, and the interaction of clouds with Earth's climate.	<a href="#">2023 UCOP Proposal: Ranking California's climate-intensified heat waves using downscaled metrics of heat stress</a>
Anne	<a href="#">Rosenthal</a>	UC Center for Climate, Health and Equity (UCSF+)	Associate Director, CARE Program	<a href="#">Heat and social impacts of California wildfires and the deficiency in current recovery resources</a>
Stefano	<a href="#">Schiavon</a>	CED - Architecture, CEDR, Civil and Environmental Engineering	Ways to reduce energy consumption in buildings while improving occupant health, well-being and productivity.	<a href="#">Heat Exposure, Activity and Sleep project (HEATS)</a> – Tech and behavioral strategies to improve sleeping in high heat environments
Cara	Schulte	SPH	SPH doc student working on heat + human rights	Climate Change as a Labor Rights Issue: Documenting the Health and Human Rights Impacts of Extreme Heat on Workers in Dhaka, Bangladesh
	<a href="#">Socio-Spatial Climate Collaborative</a>	Sociology	Daniel Aldana Cohen, Director. Hub for critical social science research on the climate emergency.	
Jonathon	<a href="#">Stillman</a>	Integrative Biology	The effects of climate change and human impacts on marine and aquatic organisms in response to warming,	INTEGBI 230 – Marine Ecosystems and Global Change SPRING 2022
Elizabeth	<a href="#">Stuart</a>	LBNL	Financial vehicles and providers that can contribute to mitigating the effects of extreme heat on humans	

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
Jason	<a href="#">Su</a>	Environmental Health Sciences	Developing machine learning land use regression modeling algorithms that incorporate multiple types of measurements into a single modeling frame.	<p><a href="#">Impact of Air Pollution Exposure on Metabolic Outcomes for California Residents</a></p> <p>Impacts of Air Pollution on Life Expectancy across Multiple Generations: Race, Ethnicity, and</p> <p>Preterm Birth, Term Low Birth Weight, Childhood Autism, Parkinson's, and Alzheimer's Disease and Air Pollution – California Studies</p> <p>Impacts of Train and Port Pollution and Air Toxics on Respiratory Symptoms and ED Visits Within Vulnerable Communities in Southern California.</p> <p>Participatory design of effective risk communication about wildfire smoke for hard-to-reach populations</p> <p>Sources of on-road vehicle emissions and their impacts on respiratory disease symptoms in California</p> <p>A Scenario Tool for Assessing the Health Benefits of Conserving, Restoring and Managing Natural and Working Lands in California</p>

First Name	Last Name	Affiliation (primary)	Short Summary	Projects/Reports/Classes
	<a href="#">UC Center for Climate Health and Equity</a>	UCSF+	<a href="#">Arianne Teherani</a> , Founding Co-Director <a href="#">Sheri Weiser</a> , Founding Co-Director Sapna Thottathil, Managing Director. Drives climate action that safeguards health through four pillars - research, education, health system sustainability, and policy:	<a href="#">Wildfires and health education hub</a>
Pouya	<a href="#">Vahmani</a>	LBNL - Climate and Ecosystem Sciences Division	Flood risk management and ground water recharge in cities, extreme heat and energy demand in cities, municipal water conservation and heat mitigation, and heat mitigation and climate adaptation in urban areas	Urban heat island modeling and analysis for the Bay Area
Michael	<a href="#">Wehner</a>	LBNL - Computational Research Division	Extreme weather events in a changing climate, especially heat waves, intense precipitation, drought and tropical cyclones	Heat and mortality studies in Mexico
Max	<a href="#">Wei</a>	LBNL - Energy Analysis and Environmental Impacts Division	Energy Efficiency Standards Group, and the Sustainable Energy Systems Group at LBNL. Heat Project in Fresno.	Wei and LBL have developed CAL-THRIVES – <a href="#">A California Toolkit for Heat Resilience in Underserved Environments</a> .
Hui	<a href="#">Zhang</a>	CED - CEDR, CBE	Thermal comfort in complex environments, and comfort modeling. How to reduce heat stress in extreme conditions using fans and evaporative cooling.	<ul style="list-style-type: none"> <li>Working with Ronnen L at LBNL on DOE-funded “Resilient Cooling” project</li> <li>Fans for resilient cooling (can be used higher than recommended temp limit)</li> </ul>