

# ENERGY AND RESOURCES GROUP

COMMENCEMENT | SPRING 2021

University of California, Berkeley

## CONGRATULATIONS ERG GRADUATES!



ERG Master's Degree Graduates 2021

**Doctors of Philosophy:** Gordon Bauer, Yoshika Crider, Adam D. Orford, Julia Szinai

**Master's Degrees:** Oluwagbemisola Deborah Akinsipe ("Gbemi"), Cristina Crespo Montanes, Karina French, Annelise Gill-Wiehl, Hilary Henry, Oliver James, Jessica Kersey, Julia Longmate, Margaret McCall, Sangcheol Moon, Clayton Munnings, Hikari Murayama, Reem Rayef, Michelle Sims, Edem Yevo, Anna Marie Yip

**Energy and Resources Undergraduate Minor** - Avery Byrne, Matthew Chill, Darby Dayton, Tyler Holybee, Elliot Dorow Hovland, Zoe Husted, Emily Kline, Kelia Liang, Michael Quiroz, Ved Rajgarhia, Julia Sherman, Sarah Stickles, Ivy So, Patrick Wallace, Katie Wimsatt, Justin Wong, Cameron Wright, Sebrina Zu

**Sustainability Minor** - Emily Xilone Gutierrez Carmona, Jackie Copfer, Jules Jarvis Fogarty, Vicente Gonzalez-Barrios, Jazz Van Horn, AnnMarie Joan Lewer, Michael Visco, Jenny Wong

**Sustainability Certificate** - Xinzhou Du, Kevin Ho, Anna Kulow, Klemens Vogel

# ERG PHD RECIPIENTS

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## GORDON BAUER

DISSERTATION: ELECTRIFICATION OF MOBILITY ON-DEMAND VEHICLE SERVICES: INFRASTRUCTURE AND FLEET DESIGN, OPERATIONS, AND POLICY RECOMMENDATIONS

**O**ne Trump presidency and 14 months of global pandemic later, it's hard to believe my time at ERG is over. My graduate school experience was challenging in ways I never expected, but I am very grateful for all I have learned and all the ways I've grown intellectually, professionally, and as a human being. My profound thanks to the members of my dissertation committee, my co-authors, collaborators, and cohort-mates for all of their support over the years. I would also like to thank all of the mentors and teachers throughout my multi-decade education who taught me how to think critically, and for believing in me when I had no idea what I was doing. Finally, many thanks to my family and friends for providing unconditional love, guidance, affirmation and support, not least during these unprecedented times.

## YOSHIKA CRIDER

DISSERTATION: PATHWAYS FOR PROGRESS TOWARD UNIVERSAL ACCESS TO SAFE DRINKING WATER

**T**he first time I met Isha (in 2014!), she told me the PhD is a journey. And as with any journey, it has been made by the people I've met and the places I've seen. Thank you to: Isha, a role model of an adviser in both research and character (as others have said, you are stuck with us forever!); Jack, who has been a cheerleader for my epidemiology training and career; Amy, who first introduced me to water research; my mentors who have guided me down the right paths; my students and mentees, who have taught me so much; my colleagues around the world; my writing accountability buddies (Chris, Vero, Helen, Catherine, Carrie, and Lina), who have gently pushed me onward; to the members of the WG+ community, past and present, for the most kind and supportive research family; my cohort and the ERG community, who helped me when I needed it most; and my parents, my sisters, and Gabe, who provide endless support for everything I do. Finally, many thanks to all who have provided me with opportunities to travel to new places and begin to understand the daily experiences of the people who share our incredible planet. What a privilege it has been!



In the fall, I'll be starting a position as a Postdoctoral Fellow at the Stanford King Center for Global Development. But Berkeley, and ERG, will always be my research home.

# ERG PHD RECIPIENTS

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## ADAM D. ORFORD

DISSERTATION: THE CREATION OF ENEMIES: INVESTIGATING CONSERVATIVE ENVIRONMENTAL POLARIZATION, 1945-1981

"Spirital rejuvenation through graduate school." That's what ERG ended up being to me. I came here looking for direction and found myself instead. It wasn't always easy to figure out what my next step would be, but that ended up being the most valuable part of the journey. I've learned so much from so many people along the way, it's not possible to name them here, but ERG's faculty, staff, students (especially the 2015 and 2016 cohorts), and many members of ERG's extended family of affiliates and alumni are among them. People all across Berkeley recognize that ERG is amazing. I continually feel lucky to be a part of it. Oh quanto è corto il dire e come fioco al mio concetto! e questo, a quel ch'i' vidi, è tanto, che non basta a dicer 'poco'.



# ERGIES



# ERGIES



# ERG MASTER'S DEGREES

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## OLUWAGBEMISOLA DEBORAH AKINSIPE (“GBEMI”)

PROJECT: RESIDENTIAL ENERGY PATHWAYS FOR MARGINALIZED COMMUNITIES IN CALIFORNIA

**T**hese past two years have been challenging yet rewarding in the best way. I have learnt so much about myself and the topics I am passionate about. Beyond gaining technical knowledge, I have learnt a lot about trusting my instincts, advocating for myself and others, connecting with people and knowing what I am capable of. I am grateful to God, my family, my cohort, my student mentors (Samira and Elif), my advisors, Kay! And ERG for the invaluable support throughout the program.



## CRISTINA CRESPO MONTAÑÉS

PROJECT: UNDERSTANDING ENERGY INSECURITIES IN CALIFORNIA: DISCOURSE, DIMENSIONS AND DISTRIBUTION

**I**t is with a heavy heart that I see some of my fellow cohort members leave after two years of mostly virtual interactions. We had to transform camping trips into socially-distanced encounters on doorsteps, kitchen get-togethers into a Slack channel, and very many hugs into Zoom emojis. And yet, I am deeply grateful that we carved out spaces for one another, that we reached out to both uplift each other in rough times and to jointly celebrate our successes. I am inspired by each and every one of you.

The past two years at ERG have made me confront and recalibrate how I understand my work within the confines of academia and beyond. In courses, talks and projects I have been awed by the thoughtful intellectual work that ERG produces, a feeling I can best describe as a “fizziness” in my brain. I look forward to nurturing this curiosity in the years to come, as a proud member of the ERG community.

# ERG MASTER'S DEGREES

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## KARINA FRENCH

PROJECT: CLIMATE-CONSTRICTED HOUSING: SEA LEVEL RISE, COASTAL FLOODING AND EXCLUSIONARY ZONING IN THE SAN FRANCISCO BAY AREA

I am deeply proud of my fellow cohort for navigating what has been, for all of us, an unexpected and challenging year. I have seen your resolve, resilience, and empathy while we have worked through graduate school in isolation. You all are curious and brilliant, and I am lucky to have you as colleagues and friends. Thanks to your encouragement, conversations, and collaboration, I am leaving ERG a stronger analytical thinker and researcher.

Thank you to ERG, especially David Anthoff and Kay Burns for helping me navigate things big and small. I am fortunate to have benefited from an ecosystem of graduate students and researchers in the broader UC Berkeley community, including my team at the Othering & Belonging Institute, that have sharpened my focus on racial justice and quantitative analysis. I am very grateful for my family, and my little covid pod, for their love and support.



## ANNELISE GILL-WIEHL

PROJECT: IS CLEAN COOKING AFFORDABLE? A REVIEW

A few days before I received the call from Dr. Kammen that I had been accepted, I said to my friend, “If I do not get into ERG, I may not choose any of the other schools, and just keep re-applying; there is just something about it that feels like home.” It has been an honor to be a part of such a loving and thoughtful community here at the Energy & Resources Group. My mentors and colleagues have shaped me into a budding young researcher, and I am so very excited to continue learning and growing here. With the utmost of gratitude, I would like to thank my advisers: Dr. Daniel Kammen and Dr. Isha Ray. I am so lucky to have both of you, experts in your fields, for guidance, mentorship, and support. Our conversations have shaped my skill set as a researcher and informed the type of researcher I want to become. I also would like to acknowledge Kay Burns for her unwavering support of me and all ERG students. We are so lucky to have her.

There are no words to describe my appreciation for my mother and sister, without whose unconditional love and investment in my education this master’s project would not be possible. I’d also like to thank all the ERGies and other Berkeley students who have helped me along the way: Isa Ferrall, Jonny Lee, Jess Carney, Jess Kersey, Aubrey Condor, Morgan Seidler, Kristin Andrejko, Yoshika Crider, Veronica Jacome, and so many more.

# ERG MASTER'S DEGREES

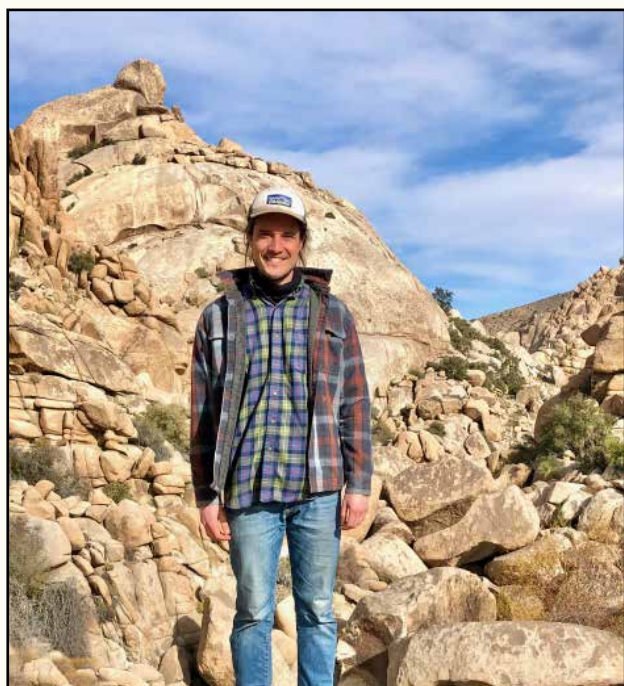
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## HILARY HENRY

PROJECT: EXCLUSION AND THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT

**M**y time as a graduate student has been marked by exceptional challenge - in the world, in the US, in California, and in my own life as I have waded through it all. I am so thankful that I listened to my gut on visit day four years ago and chose ERG because of the warmth of the community I found in the Barrows kitchen. This thoughtful and compassionate community has been the most welcome of (virtual) respites in the uneasiness of the past year. ERG has trusted me to grow and taught me that the gift of exploration is knowing how to better return home to ourselves each time we venture out.

My immense gratitude to Lara for mentorship and support throughout my many phases as an ERGie; to Isha for welcoming me into WG+ and insightful guidance; to Kay for the many hours spent advocating on my behalf and deep kindness; to Tom Powell and Ruth Langridge for introducing me to the worlds of plant physiology and groundwater, respectively; to my cohort for the friendship that has made ERG feel like home, whether I was in a brand-new city or halfway across the country; to Mom, Dad, and Zach for a lifetime of unconditional love and support; and to Hank and Jimbo for bringing me joy every day ... thank you, thank you, thank you.



## OLIVER JAMES

PROJECT: LINKING GROUNDWATER RECHARGE AND WETLAND HABITAT CREATION IN THE SAN JOAQUIN VALLEY, POST-SGMA: CHALLENGES AND OPPORTUNITIES

**A**bove all else, I am incredibly proud of the ERG Master's Cohort of 2021 for persevering and accomplishing tremendous individual achievements despite the unprecedented challenges of the past year! My huge congratulations to everyone. I am continually inspired by my own cohort's, and all of ERG's, brilliance and creativity. Though I wish we could all get the time back spent remotely, I'll remember my time at ERG for the camaraderie and support I felt from my peers and the exciting and challenging growth I experienced as an interdisciplinary researcher. Thank you especially to Lara and all the ERG "elders" for the mentorship and deep expertise I benefited from. I am proud to be part of the ERG family and can't wait to see the heights that everyone will rise to in the future.



# ERG MASTER'S DEGREES

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## JESSICA KERSEY

PROJECT: THE NEED TO MOVE BEYOND THE RURAL-URBAN BINARY  
IN ENERGY ACCESS RESEARCH: EVIDENCE FROM KENYA'S MULTI-TIER  
FRAMEWORK SURVEY

**F**rom the lows of an ACL tear and a worldwide pandemic to the highs of seeing Lake Tahoe for the first time with my cohort and winning an NSF fellowship, these past two years have been, for me like for most, intense. I am incredibly grateful to my cohort, the ERG student and alumni community, and the amazing ERG staff and faculty who have helped me weather the rough spots and celebrate the successes. I look looking forward to deepening my ties with the ERG community in the Bay and the Reiner Lemoine Institut in Berlin as I work towards my PhD (and doing so in person as much as possible!).



## JULIA MEIHUA LONGMATE

PROJECT BIASES IN TEMPERATURE AND PRECIPITATION OVER THE CONTERMINOUS US (CONUS)  
IN CMIP6 HISTORICAL SIMULATION ENSEMBLE MEMBERS

**I** have a huge amount of admiration for our cohort's resilience and persistent support of each other through this long, dark, isolating year. It's tough to reflect on our time at ERG without wishing we'd had more time together. But despite spending the majority of it physically located in our respective homes rather than in Barrows, we've accomplished a great deal and I'm immensely proud of this group of people. Congratulations to the ERGies heading out into the world! And I look forward to spending many more and fruitful years among those who are staying.

I want to thank Lara for her perceptive guidance and support. Thank you to my fellow Master's Seminar Taskforce members, Nancy, Phillippe, Hikari, Hilary, and Seigi, for all of your thoughtful work and for being the most thorough ice-breakers I know. Thank you to my housemates Cris and Gina for being the best coworkers and corporeal support system. And I want to thank my parents, as always, for their loving support and inspiration.

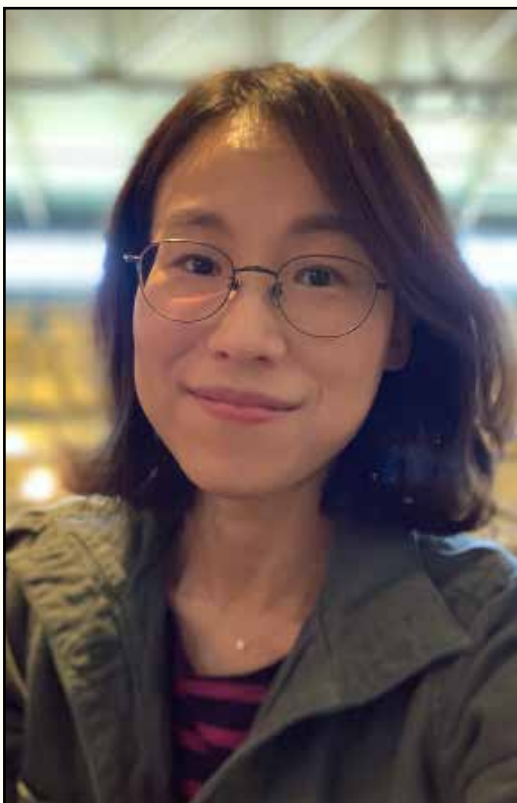
# ERG MASTER'S DEGREES

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## MARGARET MCCALL

PROJECT: EQUITY CONSIDERATIONS IN HEAVY-DUTY TRUCK ELECTRIFICATION IN CALIFORNIA

I have mixed feelings about going back out into the world -- I know that the whole point of getting a master's is to graduate and use it, but I'll really miss grad school. ERG (+ GSPP... so just Berkeley, I guess) has been so great. I've scratched so many nerdy itches that I didn't even know I had: data science! Predictive modeling! Geospatial mapping! It's been a truly transformative experience. And don't even get me started on the people...I love them and I will miss them so much. It remains to be seen if I can escape the gravitational pull of trying to come back for a PhD. Thanks for everything, ERG.



## SANGCHEOL MOON

PROJECT: DO CORPORATE CARBON MANAGEMENT PRACTICES DRIVE BETTER CARBON PERFORMANCE?

Well. I thought that I was done with introspection when I finalized my personal essay for the ERG application. Once again, I thought I was really done when I finished my PhD application. Somehow graduation is already here amidst an unprecedented pandemic, and I am looking back once again to appreciate what ERG means to me. The past 2 years were not quite what I had expected when I flew all the way from Seoul: I barely know any local spots around here, I hardly remember what an active Berkeley campus looks like, and for the first time in my life I'm cutting my own hair. Although my California experience wasn't quite what I expected, the ERG program has profoundly influenced my worldview and my life as a whole. I've been continuously surprised to see how welcoming and kind the ERG community has been to me. Thank you all again for allowing me to be part of this amazing community. Thank you, Kay, for being just who you are and being there for us. Words can't express my appreciation for my incredibly mature and conscientious cohorts.

# ERG MASTER'S DEGREES

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## CLAYTON MUNNINGS

PROJECT: IDENTIFYING HIGH-QUALITY OFFSETS FROM THE VOLUNTARY CARBON OFFSET MARKET.

**E**RG is a special place. I can't imagine pursuing my graduate studies anywhere else. And I can't wait until I reunite with you all in person.



## HIKARI MURAYAMA

PROJECT: COVID-19 SHELTER-IN-PLACE AMPLIFIES INEQUALITIES IN URBAN POLLUTION BURDENS IN CALIFORNIA

**G**rowing up in Berkeley and finding myself on the east coast starting in college, I wasn't sure when I'd have the opportunity to move home. When I got the news of my admission offer, I was both elated and nervous to come back to a place I had been longing to come back to and join such a wonderful and inspiring place like ERG. My experience here has been an incredible journey thus far—and I am so amazed by all my colleagues who have continued their missions despite the craziness this past year has brought. ERG has given me the freedom to explore and reach new heights. Beyond academics and research, ERG has granted me the opportunity to think critically about the world whilst also helped me to dream about (and do some!) positive impact. I'm so grateful for my 2018 Newbie cohort, faculty and staff, the Master's Series Task Force, and my mentors and mentees. And of course, thank you to my family for putting up with me being back home in Berkeley.

# ERG MASTER'S DEGREES

## REEM RAYEF

PROJECT: THE COST OF COMPLIANCE WITH CALIFORNIA'S INNOVATIVE CLEAN TRANSIT REGULATION: A BAY AREA STUDY OF TRANSIT DECARBONIZATION PATHWAYS

A few weeks ago, in yet another creative effort to avoid working on my Masters Project, I opened up my application to ERG. Totally foreign, and somewhat humiliating. In the 2+ years since I wrote that statement of purpose and research objective, my academic interests have shifted, and my future aspirations completely transformed. If I were to rewrite it all reflecting the true direction of my work, I could salvage nothing but my name and social security number from that 2018 application. In a dreaded disciplinary program, I might have gotten into some trouble for this. But not at ERG. This program welcomes wandering minds, forgives changes of heart, and encourages a healthy bit of meandering (as long as you don't try to get out of taking 102). For this freedom to meander, I am so grateful.

Grad school can sometimes feel like a uniquely selfish time, a break from the world, to focus on your own growth, learning, professional development, quant skills, network, et cetera forever. Gratitude to the ERGies (hi SACE!!) who pulled me out of that selfishness, and modeled what it means to be scholar activists and caring members of a community -- even during a pandemic, even during finals, even under orange skies.

Thank you to Dan for being a relentless cheerleader all throughout my time at Berkeley, despite being the busiest man on earth. Big love and hugs to my sweet, inspiring, and resilient cohort -- and especially to my quarantine compatriots, Karina and Oliver, without whom I would have truly perished. And finally, shukran to my family -- Mama, Baba, Aloosh, Yaseeno -- who nourished my body and heart from near and from afar.

Now for a big nap.



## MICHELLE SIMS

PROJECT: BIODIVERSITY CONSERVATION IN DYNAMIC LANDSCAPES: MODELING HABITAT CONNECTIVITY IN THE NORTHERN COAST OF HONDURAS

I came into ERG thinking I knew exactly the path I would take in my graduate education. In classic ERG fashion, I meandered into new realms, became intrigued with new methods, and in so doing, discovered new passions. At this moment, rather than feeling like I'm wrapping up, I instead feel like I'm just getting started. But I take comfort in knowing that my education will certainly not end here, at graduation; and as I continue learning, I feel grateful to be a part of this incredible community.

This journey was not easy, to say the least. I certainly never thought I would complete over half of my Master's degree in my room, in the midst of a global pandemic. But alongside the more difficult moments came inspiration, kindness from unexpected places, and support when I needed it the most. Ultimately, I'm leaving ERG feeling more empowered as a researcher and thinker.



I give my most whole-hearted thanks to my cohort: I am so grateful to have had such an inspiring, bright, hilarious, supportive, and truly incredible group of people by my side throughout this journey. I am so very proud to call you my friends and my colleagues. Thank you to the broader ERG student community for offering guidance, support, and advice. Thank you to all the people who I have learned from throughout this journey: faculty both in and outside of ERG, the Pottslab group, and classmates. A special thanks to Kay Burns for her support.

Finally, thank you to my partner, Brendan, for his endless support and patience, and always making me laugh. And thank you to my family, who always believe in me and enthusiastically support me in all my endeavors.

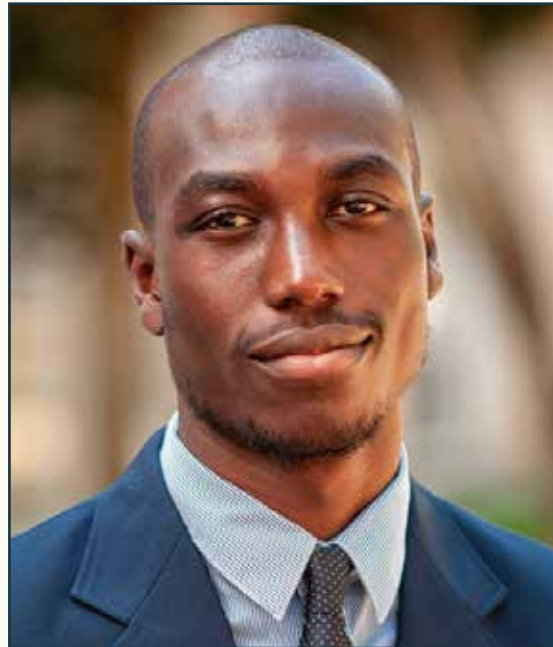
# ERG MASTER'S DEGREES

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## EDEM YEVOO

PROJECT: ASSESSING RENEWABLE ENERGY POTENTIAL IN GHANA

It's been quite a journey at ERG with many opportunities, challenges, and lessons learned. Thank you to my parents (Florence and Nicholas), my sisters (Priscilla and Mawuena), and the Village squad for supporting me from the beginning to this concluding chapter. To my community at ERG (especially the 2019 cohort) and beyond (Sophia), I appreciate the welcome two years ago and look forward to the outcomes of your continued dedication and perseverance.



## ANNA MARIE YIP

PROJECT: PLASTIC TO PARKAS: ASSESSING THE IMPACTS OF A RECYCLED POLYESTER PROGRAM

I usually like to think that when life doesn't go as planned, we are given an opportunity to grow and shine in all new shades of light. Admittedly, I had to remind myself of this quite a few times throughout these past two years. Maybe it was when the air quality index surpassed 300, or when the sun \*literally\* could not shine through the smoke, or when a global pandemic threw us all into a semi-permanent state of uncertainty, isolation, and sweatpants (although maybe we can all agree; the switch to sweatpants has turned out to be a good thing). We have all had our fair share of challenges and unexpected changes throughout these past two years. But thankfully, at least in my case, alongside has come a lifetime of memories, experiences, and relationships that I wouldn't trade for the world (plus, a degree to boot!).

It has truly been a privilege to find my own new shade of light amongst such a bright and colorful group of individuals.

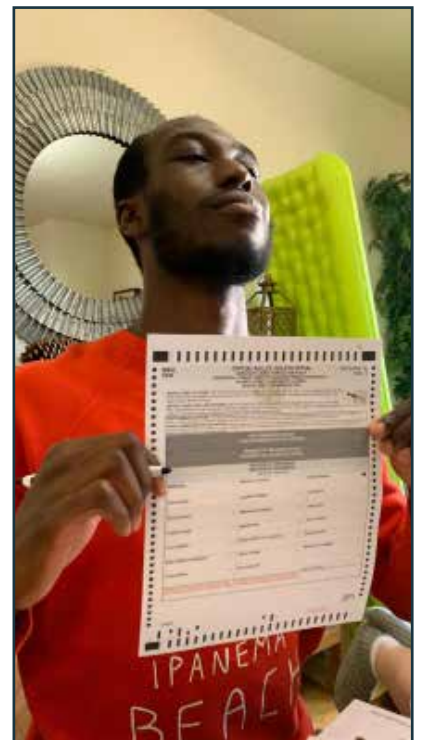
A huge thank you to David Anthoff, Dave Rochlin and Kay Burns for guiding and supporting me through this process. Thank you to my cohort for making me feel welcome and wanted during a time of such loneliness, to Micah for being the best partner one could ask for, to my dad for inspiring me to be a better person every day, to my sister Emma for the never-ending supply of gut laughs, and to Fay for always listening when Dad and Emma couldn't pretend to care anymore. And thank you to my mama – all of my life successes will forever and always be dedicated to you.

# ERGIES

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# ERGIES



# AWARDS & FELLOWSHIPS

Alex Farrell Memorial Fund

Esther Shears, Anna Brockway

American Association of University Women Scholarship

Joyceline Marealle

Association for Computing Machines/Intel SIGHPC Fellowship

Valeri Vasquez

Berkeley Institute for Data Science Fellowship

Valeri Vasquez

Deutscher Akademischer Austauschdienst (DAAD)

Jess Kersey

Environmental Research & Education Foundation

Anna Yip

Facebook Fellowship

Gauthami Penakalapati

Ford Foundation Dissertation Fellowship

Isa Ferrall (Honorable Mention)

Fulbright Foundation

Cristina Crespo Montanes

Gates Millenium Scholar

Hilary Yu

GEM Fellowship

Nia Jones

Hellman Fellowship

Yoshika Crider

Fulbright Foundation Fellowship

Cristina Crespo, Seigi Karasaki

Hildebrand Research Fellowship

Sophie Major

John F. Kennedy Presidential Library Theodore C. Sorensen Fellowship

Adam Orford

Link Foundation Energy Fellowship

Will Gorman

Maser Family Fund (RCNR)

Sean Kelly

Mastercard Foundation Fellowship

Joyceline Marealle

Microsoft Research Fellowship

Valeri Vasquez

NASA National Aeronautics and Space Administration Fellowship

Adam Hanbury Brown

National Science and Engineering Research Council

Salma Elmallah

National Science Foundation (NSF)

Graduate Research Fellowship Program

Kelsey Alford-Jones, Gordon Bauer, Ella Belfer, Anna Brockway,

John Dees, Nancy Freitas, Elias Lazarus, Jonathan Lee, Jenny Rempel,

Samira Siddique, Jess Kersey

National Science Foundation Innovation at the Nexus of Food, Energy and Water Systems (InFEWS)

Dennis Best, Kate Cullen, Nick Depsky, Sam Miles, Tzipora Wagner

Ned Birdsall Memorial Fund

Ian Bolliger, Veronica Jacome, Jess Kersey, Elias Lazarus,

Marshall Worsham

Outstanding GSI

Teaching Effectiveness Award

Jessica Katz

Peter Lyman Graduate Fellowship

Anushah Hossain

Siebel Scholars Foundation

Jose Daniel Lara

Subir Chowdhury Fellowship

Anushah Hossain

Swift Foundation Graduate Fellowship (RCNR)

Edem Yevo

UC Berkeley / ERG Parent Grants

Dennis Best, Jack Chang, Sean Kelly,

Eli Lazarus, Sangcheol Moon

UC Berkeley Graduate Opportunity Program

Nia Jones

UC Berkeley Graduate Remote Instruction Innovation Fellowship

Adam Orford, Isa Ferrall

UC Berkeley Mentored Research Fellowship

Dennis Best

UC Chancellor's Fellowship

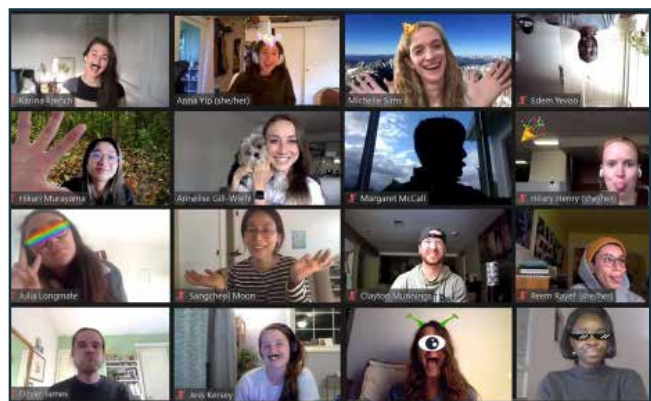
Sam Miles

UC Dissertation-Year Fellowship

Isa Ferrall

Zaffaroni Family Fund (RAEL)

Jack Chang





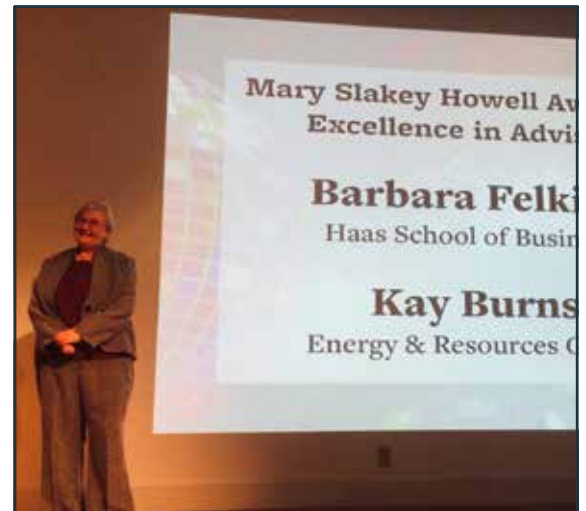
# CELEBRATING KAY BURNS

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**K**ay Burns, ERG's Graduate Student Affairs Officer for 10 years, will be retiring at the end of June 2021. She has helped hundreds of students navigate their time in ERG, from their initial admissions inquiries to post-graduate life. She has made herself available on short notice, evenings, and weekends to discuss academics, careers, families, finances, and countless challenges, unique as every student. A box of tissues was always next to her desk. Many alumni continue to stay in touch with her, a life-long bond formed at a pivotal time in their lives.

In 2018 Kay was nominated by ERG students, faculty, and staff to receive the Mary Slakey Howell Advising Award and won. This award for advising excellence is UC Berkeley's highest advising award and recognizes visionary leadership, exceptional contributions, and dedication to the advising community. It was wonderful for ERG to see her achievements acknowledged campus-wide.

Kay's powerful advocacy for students, broad knowledge, editorial skills, and sardonic humor will be missed around the office. The ERG community wishes her every happiness in retirement.



# ERG ALUMNI NEWS 2020-21

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**C**ongratulations ERG graduates 2021!

We are excited to welcome our new alumni into the ERG Alumni Network (ERGAN). ERGAN is an alumni association that aids ERGies in professional networking and intellectual engagement through in-person gatherings, web and social media resources, alumni featurettes, and more. For example, last year we launched Where ERGies Work, a webinar series that boosts cultural understanding of workplaces among ERG alums. Each session focuses on a specific economic sector and encourages ERGies to share experiences, identify common themes about their work lives, and provide insight about career navigation. We will continue to offer the series this upcoming year.

We were thrilled that ~100 ERGAN members joined us for our online reunion on April 16th. (This abbreviated, virtual reunion was dubbed the “Little Event” as a humorous comparison to the Big Event in 2015, which serves as the template for how we hope to help ERGies reunite.) The Little Event provided ERGies with the opportunity to hear from some of their favorite professors in stimulating faculty-alumni-led discussion sessions and to connect with alumni from across the world and across ERG’s four decades. Eight groups also hosted individual cohort gatherings.

Looking ahead, we hope to start seeing each other in person again. Look out for sign-ups for a socially-distanced hike over the summer. We are also launching a diversity and inclusion working group to determine what role ERGAN can play in ensuring that we create an inclusive atmosphere for all members and a more just future for the environmental movement. We hope you will join us in this effort. You can continue staying in touch through our newsletter, the ERGies.org website, LinkedIn, Facebook, and by following our Twitter list.

Thanks for your engagement and support. We’re looking forward to a great year ahead with all of you!

-- The ERGAN Board

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ALUMNI PROFILES CAN BE FOUND AT [ERG.BERKELEY.EDU](http://ERG.BERKELEY.EDU) AND [ERGIES.ORG](http://ERGIES.ORG)  
ALUMNI SOCIAL MEDIA: [WWW.FACEBOOK.COM/GROUPS/ERGalumninetwork/](http://WWW.FACEBOOK.COM/GROUPS/ERGalumninetwork/)  
AND [WWW.LINKEDIN.COM/GROUPS/13613627/](http://WWW.LINKEDIN.COM/GROUPS/13613627/)

# LETTER FROM THE ERG CHAIR



Daniel Kammen  
Professor and Chair, Energy and Resources Group  
Professor, Goldman School of Public Policy  
Professor, Department of Nuclear Engineering  
Director, Renewable and Appropriate Energy Laboratory

345 Giannini Hall #3050  
510.642.1640 (Office)  
kammen@berkeley.edu  
<http://rael.berkeley.edu>  
Twitter: @dan\_kammen

Dear ERG Community,

As we come to 'virtual graduation 2021', we can both look back on an unusual year, and at the same time eye a Summer/Fall return to in-person on campus activities. We have muddled through, 2020-21, but the impact on student research, new ways to teach, mentorship, and exploring life after ERG are all likely changed forever, and hopefully largely for the better!

The highlight of ERG graduation for many is the unique 'surprise' introductions of one masters student by another. We think, and hope the virtual version is not too poor a substitute – and are looking forward to your viewing these online introductions, and welcome comments and feedback.

In ERG-wide news, this has been an eventful year on several fronts. This year we completed a unique 'cluster hire' of scholars in climate and environmental justice. This became an 'all hands on deck' activity as campus hosted 25 separate candidate visits that overlapped with end of fall semester activities, final exams, and winter break. We emerged from this firehose of talent with some wonderful outcomes. Megan Mills-Novoa, a development-water-land-use-justice scholar from the University of Arizona will be joining ERG and ESPM in a joint position this summer, and second senior level hire in energy justice is underway.

These hires will be joining last years' new additions, Assistant Professors Youjin Chung and Andrew Jones (LBNL/ERG Adjunct) in what is now a significantly augmented ERG core faculty. At the same time, Professor Catherine Koshland has taken on yet another massive campus role: Interim Executive Vice Chancellor and Provost.

There are no easy ways to measure the impact of ERG, or to know how COVID has impacted our opportunities and resources. On simplistic metrics, however, things look fairly good. In part due to ERG, UC Berkeley is again ranked #1 globally in environmental science (we are the only public university in the top 5), and also in part due to ERG, UC Berkeley is top 3 nationally in energy innovation and research.

Throughout the 2020-21 complexities, the work of ERG's student, staff, faculty and alumni teams focused on diversity and equity, admissions, curriculum, and governance have remained active, including the networking efforts of ERGAN, and the administrative work of our amazing front office crew.

One note of sadness is that Kay Burns, our remarkable and invaluable Director of Student Affairs is retiring next month. We are not sure how ERG will survive without her, but will try as we also congratulate and thank Kay!

In closing, a huge congratulations to our Masters and PhD graduates (and their friends, family and advisors).

Congratulations graduates!

A handwritten signature in black ink that reads "Daniel M. Kammen".

Professor Dan Kammen, Chair  
Energy and Resources Group

# ERG FACULTY NEWS 2020-21

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## DAVID ANTHOFF ASSISTANT PROFESSOR

During the last year, David Anthoff once again taught a course on the Economics of Climate Change, a PhD level course on Computational Methods in Economics and the ERG Master Seminar. His research focuses on climate policy, and how the tools of economics can be used to design climate policy design. He builds integrated assessment models of climate change, and asks how distributional equity considerations can be incorporated into cost-benefit analysis of climate policies. His lab continues to grow and is now comprised of a healthy number of ERG Master's and PhD students and postdocs.

## DUNCAN CALLAWAY ASSOCIATE PROFESSOR

Duncan Callaway spent a year feeling amazed that society didn't completely disintegrate under the weight of a global pandemic. He also found ways to enjoy remote teaching, jumped at the chance to bring the first year master's students back in-person, and did his best to keep advising his incredible graduate students in two dimensions. He's working on a new research project to keep the grid stable when all the gas and coal fired generators go away, and another to support new ways for people to keep their lights on when wildfire risk is high. A highlight -- finding ERG PhD graduate Ian Bolliger (in foreground) in the mountains, with 100 mph winds to keep the COVID away.



## YOUJIN CHUNG ASSISTANT PROFESSOR



Youjin Chung moved to the East Bay during the pandemic and wildfires to start her joint appointment at ERG and ESPM. She had a successful first semester of teaching at Cal, an undergraduate course on Gender and Environment. She presented her work at various (virtual) events throughout the year, including the launch of the Routledge Handbook on Gender and Agriculture to which she contributed a chapter; a Cornell conference on the Plantationocene; the Berkeley Geography colloquium; and the UC Africanist Workshop. She has been working away on her book manuscript, *Sweet Deal, Bitter Landscape*, a feminist ethnography of a stalled large-scale agricultural land deal in Tanzania, which she will submit to Cornell University Press in June. She is also co-editing a special issue in *African Studies Review* on 'Land Deals in Limbo in Africa,' which is scheduled for publication late summer/early Fall.

## JOHN HARTE PROFESSOR OF THE GRADUATE SCHOOL

I sorely missed going to RMBL and to the Santa Fe institute, hugging my grandkids, and walking to campus and back every week day, but will make up for all that this coming year. My students, a postdoc, and I showed how to combine information theory with explicit mechanisms causing disturbance to formulate a new theory of far-from-steady-state ecosystems. The approach should be applicable to other complex, dynamic systems. I wrote lots of journal articles and book chapters, and gave lots of Zoom talks at conferences and other universities. I hiked lots of trails at Pt. Reyes National Seashore and saw a very rare bird (eye-browed thrush). I have been working, with some other alums to get Harvard to divest completely from fossil fuels... progress is slow. I did an invited presentation at a 60th (imagine that) reunion event that persuaded my classmates, even if not the President and Board of 'Overseers' (yes, that's what they call themselves!).



# ERG FACULTY NEWS 2020-21

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## ANDY JONES ASSISSTANT ADJUNCT PROFESSOR

Andrew Jones spent the last year refining his juggling skills. A few of the things that he managed to keep in the air include: guiding his son through a year of zoom-based kindergarten, stepping into the role of adjunct faculty in ERG, and launching a new project with the CA Energy Commission to engage stakeholders in the design of data analysis tools for climate adaptation and resilience planning. By far his favorite item to juggle was teaching the inaugural semester of his Climate Science and Society class that covered such topics as decision-making in the face of uncertainty and the role of cognitive biases in shaping how we understand and act on scientific information. He also planted dozens of drought tolerant native plants in his yard and has been observing how they attract insects, grow, and change through the seasons without the interruption of travel. Andrew is a climate scientist who studies human-Earth interactions. He leads the Earth Systems and Society program domain at Berkeley Lab.



## DAN KAMMEN PROFESSOR AND CHAIR

During the 'year of COVID', Dan's Rael laboratory developed partnerships on off-grid energy and community-centered social justice with projects to build and link networks of mini-grids in Rwanda, the Democratic Republic of the Congo, and separately in Malaysia and Laos. An NGO spin-off from Rael, Energy Peace Partners was recognized with multiple international awards for creating the "Peace Renewable Energy Credit" funding vehicle that has now been used to build the largest off-grid energy projects in Africa, in both the Congo and more recently in South Sudan (each > 1 MW). In California, Dan co-directs projects on innovation in long-duration energy storage (with UC Merced), and on 100% clean energy community solutions in partnership with the California Energy Commission. With colleagues Tom Steyer, Leah Stokes, Manuel Pastor, David Pellow, Teenie Matlock and Veerabhadran Ramanathan Dan developed a pathway to an 80% decarbonized California by 2030 that attracted attention and has moved to the full California Senate for deliberation as SB 449 and SB 582 (Stern).

Working with Isa Ferrall, Dan taught a new course, Envres 160, "Climate Justice" to 80 students this semester a multi-modal format of lectures, discussions, and engagements with local environmental justice organizations, and via recorded interviews with national and international leaders in this space. Dan chairs a new campus-wide Roundtable on Climate and Environmental Justice. Dan joined the board of directors of Native Renewables (Flagstaff, Arizona). Two Rael doctoral students won NSF awards this year.

## CATHY KOSHLAND INTERIM EXECUTIVE VICE CHANCELLOR AND PROVOST

As Vice Chancellor for Undergraduate Education, Cathy has led the campus efforts for innovation and change to implement the vision for a discovery based undergraduate experience. She convenes the Council of College Deans and works closely with many other units to implement the vision. Other dimensions of her work include guiding new ventures for campus through Summer Sessions, Study Abroad, OLLI; and working to integrate technology into teaching with RTL (research teaching and learning through technology and faculty development) supporting advising initiatives and this year leading efforts to plan for both remote instruction and the return to campus (finally). She welcomes the chance to mentor ERG students and thoroughly enjoys her work with Bodie, Anushah and Jess. Cathy is delighted to have her eight grandchildren in the Bay Area, and loves spending time on the Open Field Farm in Petaluma - an organic biodynamic on-farm pickup CSA - that her daughter Sarah (Cal '99) runs with her husband, Seth. Maggie (Cal '02) and Will (Cal '02) live in San Mateo; Maggie works for IDEO. Jake (Cal MBA '19) works at Clorox and he and Claire recently moved to Mill Valley. Cathy's husband Jim is completing two years as Chair of the UC Berkeley Foundation. In July, Cathy will take on the role of interim Executive Vice Chancellor and Provost - the first time that two women will lead the campus.

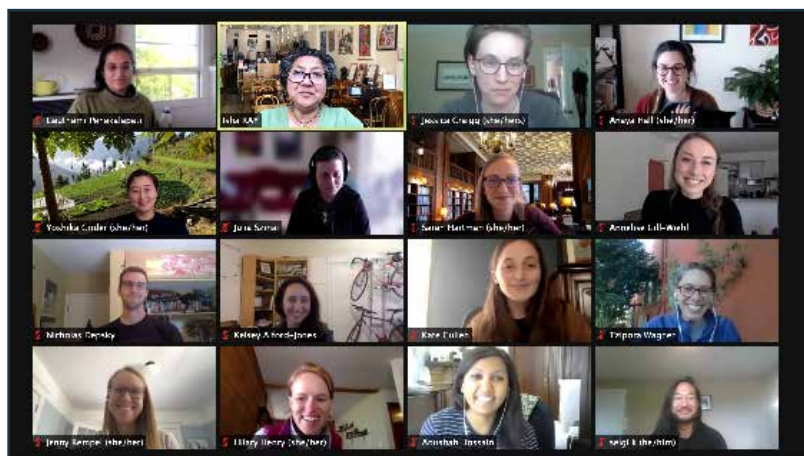


# ERG FACULTY NEWS 2020-21

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## LARA KUEPPERS ASSOCIATE PROFESSOR

Lara Kueppers taught ER102 entirely remotely in spring 2021. She fears that the return to in person classes will feel very slow for students since many play recorded lectures at 2x. Lara's research continues to focus on ecosystem responses and feedbacks to climate change primarily in forests, with increasing emphasis on disturbances such as fires, cyclones and droughts. She managed to send a small team to Colorado for a few weeks in 2020, and thanks to more widely available vaccinations, is planning a more significant field season in 2021 to measure the effects of the snow drought in subalpine forests. Adventures this year were largely close to home while political donations went far and wide.



## ISHA RAY RCNR ASSOCIATE DEAN OF EQUITY AND INCLUSION

COVID-19 prevented Isha Ray or her students from conducting new fieldwork in India, China or California's Central Valley this past year. Nonetheless, the year was not entirely uneventful. Isha started her tenure as the Associate Dean for Equity and Inclusion for the Rausser College of Natural Resources (<https://nature.berkeley.edu/diversity-equity-and-inclusion>). She was also appointed as a lead writer for the Gender Working Group of UNESCO's World Water Assessment Programme.

## MARGARET TORN ADJUNCT PROFESSOR



Margaret Torn studies the global carbon cycle and how climate change affects land ecosystems. She usually spends the summer above the Arctic circle in Alaska, measuring greenhouse gas ( $\text{CO}_2$ ,  $\text{CH}_4$ ) emissions from thawing permafrost. This past year she started an ecosystem-warming experiment closer to home in Point Reyes National Seashore, and published an article showing how the U.S. can reach zero net  $\text{CO}_2$  emissions to the atmosphere from energy and industry by 2050 at reasonable cost. At ERG, Margaret taught the Master's Seminar for the graduating class—who are all doing rigorous and inspiring work. Margaret is also a Senior Scientist at Berkeley Lab where she heads the Biosphere-Atmosphere Interactions program and serves as lead for the AmeriFlux network of 500 sites measuring ecosystem fluxes across the Americas. For 2021-2022, she is President of the Biogeosciences section of the American Geophysical Union.

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# ERGIES

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## Make a Gift to ERG!

Please consider making a donation to ERG's research, teaching, policy influence, and scholar-activism for a sustainable environment and just society. Donations make a huge difference in our students' ability to bring their research to a world much in need of it. To give, contact our office, visit our website, or do it from your chair by typing this address into your browser now:

[goo.gl/Ypwv0wf](https://goo.gl/Ypwv0wf)

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Energy and Resources Group | University of California, Berkeley  
345 Giannini Hall | Berkeley, CA 94720-3050 | 510.642.1640 | [ergdesk@berkeley.edu](mailto:ergdesk@berkeley.edu)  
[ERG.berkeley.edu](http://ERG.berkeley.edu)