

# REED Alumni College

## Warming Signs: Emergency, Adaptation, and Innovation in Climate Change

June 4–6, 2021 (all event times PDT and subject to change)

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Updated 06.02.21

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### Friday, June 4

#### **9–10:30 a.m.**

Protecting the Planet through Climate Science, Policy, and Law

[Chet Koblinsky](#) '71, Former Climate Director at NOAA, retired; Federal research in NASA and NOAA on climate change

[Susan Smith](#) '76, Professor and Director of Certificate Program in Sustainability, Willamette University

In the mid-1960s following the discovery of a rising trend in atmospheric carbon dioxide from fossil fuel emissions that could lead to a warming of the planet, Roger Revelle from the Scripps Institution of Oceanography visited President Lyndon Johnson in the White House to alert him to this looming crisis. Today, the world continues to warm and climate change impacts are becoming ubiquitous, but government response in terms of policy and laws has been deficient because of a divisive political environment. Chet Koblinsky '71 and Susan Smith '76 will kick off Alumni College by walking through key steps in the history of climate science, policy, and law leading up to the aggressive new proposed policies of the Biden Administration.

#### **11 a.m.–12:30 p.m.**

Hot, Wet, and Racist: Why your neighborhood looks the way it does, what that means for the climate crisis, and what you can (and should) do about it

[Cate Mingoya](#) '08, Director of Capacity Building, Groundwork USA

In this discussion, you'll learn about the relationship between historical, race-based housing segregation and modern day vulnerability to extreme heat and precipitation. Cate Mingoya '08 leads the Climate Safe Neighborhoods partnership, a 9-city initiative that uses Landsat satellite imagery from NASA and NOAA to compile detailed maps of cities across the nation that track a host of variables such as temperature, tree cover, impermeable surfaces, and propensity for flooding. These maps line up almost exactly with infamous “redlining” maps drawn up in the 1930s by the federal Home Owners’ Loan Corporation that perpetuated

segregation for decades. Understand why your neighborhood looks the way it does, what Cate's team is doing to effect change, and how you can help make your neighborhoods cooler, drier and more equitable.

"The maps have really transformed the minds of people who were skeptical of both structural racism and the climate crisis," Cate says. "It gives you energy and momentum to talk about changes in the future. Once you see it on the map, you can't unsee it."

**2–3:30 p.m.**

Dwelling in the Anthropocene: Designing a world for coastal adaptation

[Nikhil Anand](#) '98, Professor of Anthropology, University of Pennsylvania; Environmental Anthropology

[Rennie Meyers](#) '15, House Transportation and Infrastructure Committee, US House of Representatives (former research scientist at NOAA)

Nowhere are the human impacts of climate change more clear than on our coasts. Sites of inequity and vulnerability, coastal communities are already compelled to respond to imminent and present hazards presented by designed and planned exposures to risk. Nikhil Anand '98 and Rennie Meyers '15 will explore how the Anthropocene—the era during which human activity has been the dominant influence on climate and the environment—shapes and is shaped by the built environment. In particular, the conversation will focus on how human settlements can respond and adapt to the critical challenges posed by rising sea levels and climate change, and how community-based knowledge and expert practices might address the exposures and vulnerabilities that have been generated by modern urban planning.

Rennie devises ocean and coastal policy and programs, specializing in offshore wind advocacy and critical ethnographies of coral restoration and coastal infrastructure. Nikhil recently wrapped up an interdisciplinary project, *Inhabited Sea*, drawing together scholars and researchers working in anthropology, architecture, ecology, film, oceanography and planning, to rethink the practices of urban habitation with and in Mumbai's rising seas.

**4–5 p.m.**

Friday Attendee Open Discussion

**Saturday, June 5**

**9–10:30 a.m.**

Polar Regions and Climate Change

[Dr. Kelly Falkner](#) '83, Director, National Science Foundation Office of Polar Programs; Arctic and Antarctic research

Dr. Kelly Falkner '83 will share the top ten things you need to know about the role polar regions play in climate change. Dr. Falkner explored the seas and icecaps of polar regions for three decades as an oceanographer, seeing firsthand through her research the dramatic changes in the Arctic and Antarctic resulting from climate change. She and her team executed state-of-the-art chemical measurements to investigate a wide array of environmental topics, the results of which are presented in over 60 peer-reviewed journal articles and book chapters. She was the founding Program Director of the Antarctic Integrated System Science in the Antarctic Science Division of the National Science Foundation (NSF) Office of Polar Programs, and has been Director of NSF's Office of Polar Programs (OPP) since 2012. She is the namesake for the Falkner Glacier in Victoria Land, Antarctica.

**11 a.m.–12:30 p.m.**

Sustainable Innovation and Startups: Effecting change through what we consume

[Ben Rankin](#) '87 Principal, Human Capital Investments; Making paper from straw  
[Ron Shigeta](#) '89, Chief Science Officer; Whole Earth Incorporated; Synthetic Protein

In order to tackle the challenges of climate change, we not only need to develop innovations—we also need to deploy them into markets through incubators and startup businesses, and by pushing conservative industries to adopt new practices. How do you take a great idea, test it, refine it, scale it, and launch it? How do you get novel products to appeal to consumers and be adopted across different cultures with entrenched preferences? What project structures and benefits convince manufacturers to change how they make their goods?

We'll hear insights from Ron Shigeta '89, serial entrepreneur & startup biotech pioneer who started his career in biochemistry research and transitioned into biotech startups from genetics to synthetic food proteins. Ron will tell us some of the science behind his startup innovations, how he has shepherded 80+ high potential biotech startups, and the great potential for global carbon reductions and social change through animal protein substitutes synthesized from plants. Industrialized animal agriculture is one of the major sources of global GHGs, and we must find ways to feed people nutritious, satisfying foods that have smaller carbon footprints. Ron will even give us a cooking demo of some of the food products developed by his startups!

Ben Rankin '87, a principal in Human Capital Investments, develops industrial projects focused on waste and energy recovery, as well as affordable housing and other ventures. Ben will share his experience as a project developer for several innovative ventures, including his recent work on waste heat recovery in the cement industry as well as the use of wheat straw, normally an agricultural waste product, as pulp for making paper at a new mill in Eastern Washington.

**2–3:30 p.m.**

## Forests and Wildfires

[Erin Belval](#) '08, Research Associate, Forestry, Colorado State University

[Daniel Mathews](#) '70, Science Writer (author of *Trees in Trouble*), Editor, Raven Editions

In this session, Daniel Mathews '70, science writer and author of *Trees in Trouble*, and Erin Belval '08, a scientist with expertise in wildland fire suppression, will discuss one of the most prominent and devastating symptoms of climate change: wildfires. Last August and September, Portland and much of the West Coast and Mountain West experienced horrific forest fires, smoke blanketing areas for weeks and resulting in some of the worst air quality indexes in the world. While fires are a natural part of healthy forest cycles, wildfires around the world have escalated and intensified at an alarming rate due to climate change and other anthropogenic factors. How can we mitigate and adapt to fire seasons that now happen year round? What do the data and research tell us are better forestry and fire suppression practices in the long term?

**4–5 p.m.**

Saturday Attendee Open Discussion

## **Sunday, June 6**

**9–10:30 a.m.**

The Solar Panel: Bright ideas for powering our energy future

[Chris Greacen](#) '91, Senior Mini Grid Consultant, World Bank

[Zak Holman](#) '05, Professor of Engineering, Arizona State; photovoltaic cell research

[Peter Lilienthal](#) '78, Global Microgrid Lead, HOMER Energy by UL

Solar electricity has been growing exponentially for decades. With each doubling of cumulative installed capacity, costs have been dropping steadily. Currently new solar electricity plants are competitive with existing power plants that burn coal. In this session, Zachary Holman '05 will share his expertise in cutting edge solar cell research further increasing efficiencies and lowering costs. Peter Lilienthal '78 will explore new applications that radical drops in solar costs are enabling, and Chris Greacen '91 will discuss the scaling of deployment of village-scale solar mini grids electrifying rural communities in Sub-Saharan Africa and Southeast Asia.

**11 a.m.–12:30 p.m.**

Financing the Transformation of our Energy System

[Reid Capalino](#) '07, Senior Vice President for Business Development, LS Power; Energy Infrastructure and Investment

[Govind Nair](#) '83, Moderator

Reid Capalino '07, Senior Vice President for Business Development at LS Power, majored in economics at Reed and wrote his thesis on energy intensity trends in North America with Professor Noelwah Netusil. Reid is a Senior Vice President for Business Development with LS Power, an investment and operating company focused on power generation, electric transmission and energy infrastructure. Previously Reid served as a Managing Director with Aligned Climate Capital and Principal with Aligned Intermediary, both investment platforms focused on deploying capital into clean energy and related areas.

In this talk, Reid will discuss how renewable power technology and infrastructure are supported by finance and investment from dedicated clean energy investment funds, as well as more traditional generalist energy and power investors. Transitioning from carbon-intensive fossil fuel-based power generation and distribution systems to new models that meet GHG emission reduction targets will require major and sustained shifts in business and utility investments. Reid will describe how the commitments and activities needed to accelerate deployment of clean energy. Govind Nair '83, former Lead Economist at the World Bank, presently Adjunct Professor (economics) at The George Washington University, and Reed Career Alliance (RCA) Co-Chair, will introduce Reid and moderate the discussion and Q&A.

### **2–3:30 p.m.**

#### **Change and Adaptation in the Developing World**

[Kirsten Mandala](#) '11, Disaster Risk Reduction and Climate Change Program Manager, Mercy Corps

Kirsten Mandala '11 will discuss change and adaptation in the developing world as seen through an exploration of Timor-Leste, a relatively young country located between Indonesia and Australia. Timor has been designated a small island developing state (SIDS) and Least Developed Country (LDC) and is considered especially vulnerable to the impact of climate change. Kirsten will provide an overview as to how changing climate conditions are shaping the current realities for both rural and urban Timorese, and discuss her experience working with Mercy Corps to build climate resilience for communities and households and collaborate with government institutions to better prepare for future shocks and stresses.

### **4–5 p.m.**

#### **Closing Panel**

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