

14th NOAA Climate and Global Change Postdoctoral Fellowship Summer Institute
Steamboat Grand Hotel, Steamboat, CO
July 14 - 18, 2019

Sunday, July 14

7:00 - 8:30pm Welcome Networking Session - Mountain View Foyer

Monday, July 15

8:00am Breakfast - *Mountain View Foyer*

8:30am Welcome; Logistics; Introduction; Ground Rules - *Spring Creek I*
Melanie Russ, UCAR/CPAESS Manager
Kendra Greb, UCAR/CPAESS C&GC Program Administrator
David Battisti and Liz Moyer, Summer Institute Leads
Jin Huang, NOAA Climate Program Office

9:00 – 10:15am Low to High Latitude Climate Change (*Chair: Sarah Larson*)

9:00 - 9:25am **Emily Newsom (Class 26)**: Low Latitude Controls on the Global Ocean
Overturning Circulation

9:25 - 9:50am **Chris Horvat (Class 27)**: The New Arctic

9:50 - 10:15am **Malte Stuecker (Class 26)**: Polar Amplification Dominated by Local
Forcing and Feedbacks

10:15– 10:45am Discussion

10:45 – 11:00am Break

11:00am – 12:15pm Ecology, Life and Climate (*Chair: Oliver Watt-Meyer*)

11:00 - 11:25am **Leander Anderegg Love (Class 27)**: The Discretization Challenge:
Representing Plant Diversity Using Evolutionary Lineages to Improve
Carbon Cycle Predictions

11:25 - 11:50am **Adam Pellegrini (Class 26)**: How Ecosystems Respond to Changes in Fire
Regimes

11:50 - 12:15am **Scott Saleska (Invited Speaker)**: Does Darwinian Evolution Matter for
Feedbacks to Climate Change?

12:15 – 12:45pm Discussion

12:45pm Adjourn Until Evening Discussion

6:30pm Informal Dinner - *Mountain View Foyer*

7:00 – 9:00pm Panel & Discussion - *Spring Creek I*

Panelists: Liz Moyer, Morgan O’Neill, Martin Visbeck

Topic: **How will climate science change, in a world where the signal becomes visible above the noise?**

- *What new approaches will become relevant, given observational evidence?*
- *How will climate modeling respond to observed changes? Will climate projections continue to be useful, for fundamental or applied science?*
- *How can climate science contribute to impacts analysis, if simulations are not able to reproduce local-scale changes?*

Tuesday, July 16

8:30am Breakfast - *Mountain View Foyer*

9:00 – 10:15am From the Boundary Layer to Synoptically Organized Convection - *Spring Creek I*
(Chair: *Emily Newsom*)

9:00 - 9:25am **Scott Powell (Class 26):** Interactions of Shallow Tropical Convection with Large-Scale Dynamics

9:25 - 9:50am **Brandon Wolding (Class 28):** Convective Coupling of Equatorial Waves

9:50 - 10:15am **Greg Wagner (Class 26):** Optimization of Boundary Layer Turbulence Parameterizations for Climate Modeling

10:15– 10:45am Discussion

10:45 – 11:00am Break

11:00 – 11:50am Processes of Climate Change I (Chair: *Kelvin Bates*)

11:00 - 11:25am **Casey Wall (Class 28):** Cloud-Climate Feedbacks and Tropical Convection

11:25 - 11:50am **Oliver Watt-Meyer (Class 26):** Tropical Controls on the Hadley Cell and Storm Track Response to Warming

11:50am – 12:10pm Discussion

12:10 - 12:40pm **Jin Huang (Invited Speaker):** NOAA’s Modeling Activities Across Timescales and Issues/Opportunities

12:40 - 12:50pm Discussion
12:50pm Pick-up Box Lunches - *Hallway*
1:30pm Storm Peak Lab Tour - *Meet in Hotel Lobby*

Wednesday, July 17

8:30am Breakfast - *Mountain View Foyer*
9:00 – 10:45am Panel and Discussion - *Spring Creek I*
Panelists: David Battisti, Inez Fung, Eric DeWeaver
Topic: **Finding a Balance Between Fundamental and Applied Science**

- *Is there a future for fundamental climate science research?*
- *Is applied science in conflict with basic research?*
- *How can we ensure that model results are used appropriately and constructively?*

10:45 – 11:00am Break
11:00 – 11:50am Processes of Climate Change II (*Chair: Leander Anderegg*)

- 11:00 - 11:25am **Sarah Larson (Class 26):** A Process-based Model Hierarchy to Decompose Climate Drivers
- 11:25 - 11:50am **Kelvin Bates (Class 27):** The Effects of Isoprene on Tropospheric Chemistry

11:50am – 12:10pm Discussion
12:10pm Pick-up Box Lunches and Adjourn Until Evening Dinner - *Mountain View Foyer*
6:30pm Informal Dinner - *Mountain View Foyer*
7:00 – 9:00pm Panel and Discussion - *Spring Creek I*
Panelists: Scott Saleska, Kirsten Engel, David Weisbach
Topic: **Climate and the law: what climate-related laws or policies may be coming?**

- *How are attempts at climate mitigation likely to be implemented as laws or regulations?*
- *How can scientists best contribute to providing input?*
- *What other legal issues may be on the horizon, e.g. climate damage claims or geoengineering treaties?*

Thursday, July 18

- 8:30am Breakfast - *Mountain View Foyer*
- 9:00 – 10:15am Alumni and Guest Speaker Presentations (*Chair: Chris Horvat*) - *Spring Creek I*
- 9:00 - 9:25am **David Lund (Class 16)**: The Role of the Atlantic Meridional Overturning Circulation in glacial terminations: A View from the South Atlantic
- 9:25 - 9:50am **Aaron Donohoe (Class 21)**: The Near Invariance of Meridional Heat Transport from the Last Glacial Maximum to CO₂ Quadrupling
- 9:50 - 10:15am **Bryan Shuman (Class 11)**: Interactions of Temperature Change, Drought, and Wildfire in Colorado
- 10:15 – 10:45am Discussion
- 10:45 – 11:00am Break
- 11:00 – 11:50am Alumni and Guest Speaker Presentations Continued (*Chair: Malte Stuecker*)
- 11:00 - 11:25am **Eric Maloney (Class 10)**: Recent Progress on Tropical-Extratropical Interactions: Current and Future Climate
- 11:25 - 11:50am **Morgan O’Neill (Invited Speaker)**: Waves in Hurricanes
- 11:50am – 12:10pm Discussion
- 12:10 – 1:30pm Lunch - *Mountain View Foyer*
- 1:30 – 2:30pm Discussion - 2019 Climate Change Survey Results
- 2:30 - 3:15pm Wrap up
- 3:15pm End of Program
- 5:10pm Drive to Banquet Dinner - *Meet in Hotel Lobby*
- 5:30 - 7:30pm Banquet Dinner at Aurum Food & Wine - [Driving Map](#)
811 Yampa Street

THE STEAMBOAT & GRAND

CONFERENCE & MEETING SPACE

