

Heldfest Symposium Program

Location: Frick Chemistry Lab/Taylor Auditorium

Day 1: Monday October 29, 2018

Time	Topic	Speakers
8:10	Shuttle to leave Hyatt for venue	
8:30-9:00	Breakfast	
9:00-9:05	Welcome & Outline of the Symposium Themes	David Neelin, Sarah Kang, Tapio Schneider and Stephan Fueglistaler
9:05-9:20	An appreciation Session Chair– David Neelin	V. Ramaswamy
9:20-9:50	The Internal Dynamics of Hadley Cells	Brian Hoskins
9:50-10:10	The Role of Teleconnections and Wave Breaking in Climate Change	Steven Feldstein
10:10-10:30	Understanding the Zonal Circulation Response to Climate Forcing Using Feedback Analysis	Gang Chen
10:30-11:00	Break Session Chair – Anand Gnanadesikan	
11:00-11:30	Eddy Momentum flux, eddy-driven jet-scale overturning circulations and their impact on deep mixed layer formation in the Southern Ocean	Sukyoung Lee
11:30-11:50	Using the Moist Static Energy Budget to Understand the Seasonality of Storm Tracks	Tiffany Shaw
11:50-12:10	Large-scale Tropical Eddy Momentum Transport	Pablo Zurita-Gotor
12:10-12:30	Mechanism of Future Spring Drying in the Southwest U.S. in CMIP5 Models	Mingfang Ting
12:30-1:30	Lunch Session Chair – Lee Panetta	
1:30-1:45	[An appreciation from NOAA]	Gary Matlock
1:45-2:15	Atmospheric Circulation as a Source of Uncertainty in Climate-Change Projections	Ted Shepherd
2:15-2:35	Modeled and Observed Multidecadal Variability in the North Atlantic Jet Stream and its Connection to Sea Surface Temperatures	Isla Simpson
2:35-2:55	Oversensitivity of Climate Models to External Forcing	Prashant Sardeshmukh
2:55-3:20	Break Session Chair – Max Suarez	
3:20-3:40	Mechanisms Linking Polar Warming with Midlatitude Jet-Streams	Elizabeth Barnes
3:40-4:00	Toward Understanding Regional Hydroclimate Change: Insights from Moist Static (MSE) Budget Analysis	Yi Ming
4:00-4:20	Tropical Climate Response to One-Hemisphere Subpolar Thermal Forcing	Sarah Kang
4:20-4:40	Wetter Subtropics in a Warmer World: Contrasting Past and Future Hydrological Cycles	Natalie Burls
4:40-5:10	The Dynamical Response of Clouds to Aerosol Forcing	Brian Soden
5:30-	Shuttle to leave venue for Hyatt	
6:00-10:00	Symposium Reception and Dinner at Hyatt	

Day 2: Tuesday, October 30

Time	Topic	Speakers
8:10	Shuttle to leave Hyatt for venue	
8:30-9:00	Breakfast	
	Session Chair– Gabriel Vecchi	
9:00-9:30	The Madden-Julian Oscillation	Kerry Emanuel
9:30-9:50	A Study of Convective Clouds in Radiative Convective Equilibrium Simulated by GFDL FV3 Based Cloud Resolving Model	Ming Zhao
9:50-10:20	Tropical cyclones and global warming	Adam Sobel
10:20-10:50	Break	
	Session Chair – S. George Philander	
10:50-11:10	Stochastic Model Hierarchies for Moist Processes	David Neelin
11:10-11:30	Radiative-Convective Equilibrium with Varied Surface Wetness (Expanding our Model Hierarchy for Convection and Climate)	Tim Cronin
11:30-11:50	Secular Change over Continental and Polar Regions: The Mechanics of Surface Warming	Sumant Nigam
11:50-12:10	Interactions between Clouds and Circulation in the Tropics and Extratropics	Dargan Frierson
12:10-12:30	Water vapor and tropical-extratropical interactions in warm climates	Olivier Pauluis
12:30-1:30	Lunch	
	Session Chair – Noboru Nakamura	
1:30-2:00	Hadley Cells in Various Regimes	Geoff Vallis
2:00-2:20	An observational perspective of the tropical radiative-convective equilibrium in a changing climate	Stephan Fueglistaler
2:20-2:40	Fast and slow components of the extratropical atmospheric circulation response to CO2 forcing	Paulo Ceppi
2:40-3:00	Stratocumulus Surprises in Warm Climates	Tapio Schneider
3:00-3:30	Break	
	Session Chair – James Carton	
3:30-3:50	Sensitivity of Tropical Cyclones to the Treatment of Radiative Transfer in GCM Simulations with Uniform Thermal Forcing	Tim Merlis
3:50-4:10	Using Machine Learning to Parameterize Moist Convection: Potential for Simulations of Climate, Climate Change, and Extreme Events	Paul O’Gorman
4:10-4:30	Climate Sensitivity and the Ocean: Solving a CM4 Puzzle	Michael Winton
4:30-4:50	Understanding Deep Ocean Circulation Changes Between the Present and the Last Glacial Maximum through a Model Hierarchy	Malte Jansen
4:50-5:20	Pre-Poster session 1 min. madness	Poster presenters
5:30-7:30	Reception and poster session	
7:45-	Shuttle to leave venue for Hyatt	

Day 3: Wednesday, October 31

Time	Topic	Speakers
8:10	Shuttle to leave Hyatt for venue	
8:30-9:00	Breakfast	
	Session Chair – Steve Klein	
9:00-9:30	Tropical Convective Clouds and Climate	Dennis Hartmann
9:30-9:50	Equatorial wave dynamics and the general circulation of tide-locked exoplanets (remote presentation)	Ray Pierrehumbert
9:50-10:10	On the Complications of Simplified Models	Ramalingam Saravanan
10:10-10:30	Touring the Landscape of Earth System Model Development	Paul Kushner
10:30-11:00	Break	
	Session Chair – Brian Mapes	
11:00-11:30	Self-aggregation of shallow moist convection	Chris Bretherton
11:30-12:00	A theory for some robust properties of marine boundary layers and their response to forcing	Bjorn Stevens
12:00-1:00	Lunch	
	Moderator – Tapio Schneider	
1:00-1:30	The tension between climate dynamics and model development	Isaac Held
1:30-2:15	Discussion	Led by Isaac Held
2:15-2:20	Thanks and closing	