

**US CLIVAR/NCAR ASP Researcher Colloquium**  
**Statistical Assessment of Extreme Weather Phenomena under Climate Change**  
**NCAR Foothills Lab, Boulder, Colorado, USA**  
**June 13-17, 2011**

**Agenda**

**13 June 2011: Monday**

5:30pm	CU Bus Pick-up from Golden Buff to NCAR Mesa Lab
6:00-6:45pm	Keynote Presentation in Main Seminar Room: <i>A New Optimum Big Rain Index</i> – Jim O'Brien (Florida State University)
6:45-8:00pm	Icebreaker Reception following on the Tree Plaza
8:00pm	CU Bus Pick-up to Golden Buff

**14 June 2011: Tuesday**

07:45	CU Bus Pick-up from Golden Buff
08:00	Colloquium Check-in and Breakfast
08:30	<i>Welcome</i> – Chris Davis (National Center for Atmospheric Research) <i>Workshop Introduction and Objectives</i> – Rajagapolan Balaji (University of Colorado)
	<b>Extremes from Global Climate Models – what can they provide, how reliable are they at various space and time scales Extremes from Regional Climate Models – can they add value?</b>
09:00	<i>Extremes from Climate Models: An Overview of AR4 and AR5</i> – Michael Wehner (Lawrence Berkeley National Laboratory)
09:30	<i>Precipitation Volatility and its Causes</i> – Alexander Gershunov (Scripps Institution of Oceanography)
10:00	<i>Using Models to Explore the Influence of Anthropogenic Climate Change on Hurricanes</i> – Tom Knutson (NOAA Geophysical Fluid Dynamics Laboratory)
10:30	Coffee Break
10:45	<i>Projected Sea Level Extremes and Uncertainties in the 21st Century</i> – Tad Pfeffer (University of Colorado)
11:15	<i>Physics of Extreme Climate Events: Illustration via Attribution of Two Cases</i> – Marty Hoerling (NOAA Environmental Sciences Research Laboratory)
11:45	<i>Simulations of Floods and Droughts in the Western U.S. under Climate Change</i> – Ruby Leung (Pacific Northwest National Laboratory)
12:15	Catered Lunch – Foothills Cafeteria Atrium
13:15	<i>Hurricane Information from Regional Climate Models</i> – James Done (National Center for Atmospheric Research)
13:45	<i>Physical and Practical Requirements in Downscaling for Hydrologic Assessment and Prediction</i> – Andy Wood (NOAA Colorado Basin River Forecast Center)
	<b>Statistical Modeling of Extremes</b>
14:15	<i>Extreme Value Analysis for Statistical Assessment of Extreme Weather Phenomenon under Climate Change</i> – Rick Katz (National Center for Atmospheric Research)
14:45	<i>Measuring and Modeling Dependence for Multivariate Extremes</i> - Dan Cooley (Colorado State University)
15:15	Coffee Break
15:30	<i>Grand Challenges in Modeling Storm-Related Extreme Events</i> - David Stephenson (University of Exeter)
16:00	<i>An Introduction to Multivariate Extreme Value Theory</i> – Philippe Naveau (CNRS Laboratoire des Sciences du Climat et l'Environnement)
16:30	<b>Panel Discussion #1 - Objectives 2-4 (Modeling and Statistical Analyses of Extremes)</b>
18:00	End of Day 1
18:15	CU Bus Pick-up to Golden Buff

**15 June 2011 : Wednesday**

08:00	CU Bus Pick-up from Golden Buff
08:30	Breakfast
	<b>Sectoral Applications of Climate Extremes – Information needed, tools/techniques, management/decision making</b>
09:00	<i>Extremes in Floods for Dam Safety and Water Resources at the Bureau of Reclamation</i> – John England (US Bureau of Reclamation)
09:30	<i>Use of Information on Climate Extremes: US Army Corps of Engineers Perspective</i> - Beth Faber (USACE Hydrologic Engineering Center)
10:00	<i>Extremes of Precipitation, Temperature and Sea Level in a Changing Climate: Implications for Water Resources Management</i> – Jayantha Obeysekara (South Florida Water Management District)
10:30	Coffee Break
10:45	<i>Impacts of Climate Extremes on Water Quality Management and Regulations</i> - Rajagopalan Balaji (University of Colorado)
11:15	<b>Panel Discussion #2 – Objectives 1-2 (Water Management)</b>
12:30	Catered Lunch – Foothills Cafeteria Atrium
13:30	<i>Impacts of Climate Change on the Transportation Sector: Design and Operations Implications</i> – Mike Meyer (Georgia Institute of Technology)
14:00	<i>Searching for Practical and Flexible Definitions of Extreme Events under a Changing Climate: Energy Sector</i> – Guido Franco (California Energy Commission)
14:30	<i>Climate Impacts on Extreme Air Pollution Events in California</i> – Mike Kleeman (University of California, Davis)
15:00	<i>Extreme Event Analyses for Urban Adaptation Planning</i> – Radley Horton (NASA Goddard Institute for Space Studies)
15:30	Coffee Break
15:45	<i>A Global Flood Risk Initiative: Climate Informed Dynamic Risk Measures</i> – Upmanu Lall (Columbia University)
16:15	<i>Extreme Events and Reinsurance</i> – Rick Murnane (Bermuda Institute for Ocean Sciences)
16:45	<b>Panel Discussion #3 Objectives 1-2 (Infrastructure Planning)</b>
18:00	End of Day 2
18:15	CU Bus Pick-up to Golden Buff

**16 June 2011 : Thursday**

08:00	CU Bus Pick-up from Golden Buff
08:30	Breakfast
09:00	<i>Weather and Climate Extremes on Irrigated and Specialty Agriculture</i> – Richard Grotjahn (University of California, Davis)
09:30	<i>Vulnerability of US Non-Irrigated Commodity Crops to Extremes of Weather and Climate</i> – Gene Takle (Iowa State University)
10:00	<i>Applications to Agriculture and Other Sectors</i> – Jerry Skees (University of Kentucky)
10:30	Coffee Break
10:45	<i>Western US Climate and Fire Extremes: Issues in Scale, Uncertainty, Systems Interactions and Thresholds</i> – Tony Westerling (University of California, Merced)
11:15	<b>Panel Discussion #4 – Objectives 1-2 (Agriculture/Forestry Management)</b>
12:30	End of Day 3 (Lunch on your own)
1:00	CU Bus Pick-up to Golden Buff
5:15	CU Bus Pick-up to Golden Buff

**Thursday afternoon open (writing session for panelists, moderators and rapporteurs)**

**17 June 2011 : Friday**

08:00	CU Bus Pick-up from Golden Buff
08:30	Breakfast
09:00	Input from Funding Agencies / US CLIVAR
10:00	Report from Panel Discussion #1
10:15	Report from Panel Discussion #2
10:30	Report from Panel Discussion #3
10:45	Report from Panel Discussion #4
11:00	Synthesis of Panel Discussions to Address Objectives 1-5 (especially 5), Next Steps, Meeting Report
12:15	Adjourn Researcher Colloquium
1:00	CU Bus Pick-up to Golden Buff
5:15	CU Bus Pick-up to Golden Buff