

8th GEWEX Open Science Conference: *Extremes and Water on the Edge*

Draft Program

Pre-Conference Events and Side Meetings

Thursday 3 May 2018–Saturday 5 May 2018

Time	Event
	<p>Joint YESS-YHS Early Career Researcher (ECR) Workshop 2018: Towards Regional Information to Improve Our Understanding on Weather, Water, and Climate Extreme Events (By Invitation) <i>Orchid Room and Cougar-Grizzly Room</i></p> <p>The Young Earth System Scientists (YESS) and Young Hydrologic Society (YHS) are holding a Joint YESS-YHS Early Career Researcher (ECR) Workshop prior to the 2018 GEWEX Open Science Conference. Selected participants will have an interdisciplinary discussion on enhancing the generation of usable regional information on different spatial and temporal scales and the utility of that information by users, decision makers, and other stakeholders. Details are available at https://www.gewexevents.org/events/2018conference/ecr/.</p>

Thursday 3 May 2018–Friday 4 May 2018

Time	Event
	<p>2018 GLASS Meeting (By Invitation) <i>Wolverine Room</i></p> <p>The Global Land/Atmosphere System Study (GLASS), one of the core GEWEX Panels, is a volunteer-based research coordination board focusing on land surface model development and evaluation in three core areas: benchmarking, land-atmosphere coupling and model-data fusion. This year's annual meeting will review progress of the GLASS working groups and projects, as well as those with similar related research interests.</p>

Saturday 5 May 2018

Time	Event
0900-1200	GLASS Side Event: PLUMBER-2 Planning Meeting (By invitation) Discuss the design, metrics, model output protocol, data sets and range of experiments planned to follow on from the PLUMBER land surface model benchmarking experiment
1830-2100	Community Event with GEWEX Scientists <i>Canmore Collegiate High School Theatre and Lobby</i> Community members and students are invited to listen to three climate and water scientists speak about leading edge studies on climate change and its impact on extreme events and changes to the water cycle. A panel discussion with questions from the audience will follow.
1830	Reception and refreshments
1900	Welcome by MLA Westhead and Mayor Borrowman
1910	Presentation by Kevin Trenberth (NCAR)
1930	Presentation by Martyn Clark (NCAR)
1950	Presentation by John Pomeroy (USASK)
2010	Panel discussion and question period
2100	Summary and end of event

Sunday 6 May 2018

Time	Event
0630-1730	Columbia Icefields Tour A trip down the Icefield Parkway, one of the most scenic highways in the world, takes you to the Columbia Icefield, where you will explore the surface of the Athabasca Glacier in a unique, specially designed Ice Explorer. Cost per person: 195 CAD. Sign up at https://www.gewexevents.org/events/2018conference/program/icefields-tour/ .
0630	Departure from Canmore
0945	Arrival at the Columbia Icefield Discovery Centre
1000	Private Ice Explorer Tour Bus #1 departure
1015	Private Ice Explorer Tour Bus #2 departure
1145-1215	Staggered Departure from the Columbia Icefield Discovery Centre
1245	Staggered arrival for picnic lunch (provided) at Mt. Coleman

1315	ETD from Picnic grounds for sight-seeing stops dependent on seasonal conditions: Peyto Lake, Bow Lake, Lake Louise
1730	Estimated arrival in Canmore
0900-1700	CLIVAR/GEWEX Monsoon Panel Meeting (by invitation) <i>Wapiti Room</i>
1700-1930	Check-In and Badge Pick-Up
1900	Reception

Conference Program

**Breakfast and lunch are provided to Conference attendees as part of the registration package from Monday 7 May through Friday 11 May*

Monday 7 May 2018

Time	Title	Speaker (Affiliation)
0730-0930	Check-In and Badge Pick-Up	
0830-1005	Opening Plenary (Chair: TBD)	
0830	Opening & Introduction	Peter van Oevelen/John Pomeroy
0835	Welcome	Dr. Stephen Lucas, Deputy Minister of Environment and Climate Change Canada
0845	Welcome	Honorable Shannon Phillips, Minister of Environment and Parks, Government of Alberta
0855	Welcome	John Borrowman, Mayor of Canmore
	Invited Talks	
0905	The Changing Cold Regions Network - Integrating Disciplines across Regions to Deliver New GEWEX Science	Howard Wheeler (USASK)
0925	Global Water Futures Programme and its Science Contributions to GEWEX	John Pomeroy (USASK)
0945	Extremes and water on the edge: Including the human footprint	Sonia Seneviratne (ETHZ)
1005	Lightning Talks	
1035	Break	
1100-1230	Morning Parallel Sessions	
	S1. Open Session on Water and Extremes Research	
1100	What is driving observed trends in intense convective systems over tropical North Africa?	Christopher Taylor (CEH)
1115	Atmospheric Rivers: Water Extremes that Shape Our Global Weather and Climate	Duane Waliser (NASA-JPL)

1130	Subseasonal prediction of South American monsoon rainfall: active and break episodes, extremes and the contribution of MJO	Alice Grimm (UFPR)
1145	Emerging results from the 2016 INCOMPASS field campaign of Indian monsoon	Andrew Turner (RDG)
1200	Global evaluation of apparent trends in terrestrial water storage observed by GRACE	Matthew Rodell (NASA)
1215	Water Cycle Science Coordination Among U.S. Federal Agencies to Advance Predictive Understanding of Water Cycle Extremes and Their Impacts	Jennifer Arrigo (USGCRP)
S23A. Land-Atmosphere Interactions and Climate Predictability, Including Subseasonal to Seasonal Prediction (Continued on Tuesday Morning)		
1100	Impact of Soil Moisture Initial Conditions Derived from Models and Observations on Short-Term Weather Prediction	Joseph Santanello (NASA)
1115	On the Soil Moisture Memory and Its Impacts on Seasonal Forecasts over Australia: A coupled model study	Huqiang Zhang (BOM)
1130	The high relevance of the biogeophysical impacts of land use change in low emission scenarios	Benoit Guillod (ETHZ)
1145	The Land-Atmosphere Feedback Experiment (LAFE)	Joe Santanello (NASA)
1200	Revisiting mechanisms and regimes of soil moisture influence on convective initiation	Ian Williams (LBL)
1215	Investigating a possible contribution of land surface processes on extreme hot event in Northeast Eurasia in recent summer	Tomonori Sato (Hokudai)
S9. Energy and Water Budget Closure and Advances in Assessment Techniques		
1100	Top-of-Atmosphere Earth Radiation Budget and Cloud Changes During the 2014-2016 El Nino Event	Norman Loeb (NASA)
1115	Estimating North Atlantic Ocean heat budget and its variability from VOS observations	Sergey Gulev (MSK)
1130	Inverse modeling of the Earth's energy and water budgets	Keith Haines (Reading)
1145	Global, Terrestrial Energy Budget Validation and Closure using Remotely-Sensed Satellite Data	Eric Wood (Princeton)
1200	Revisited sea level budget over 2005-2015 indicates a large Earth energy imbalance	Benoit Meyssignac (LEGOS)
1215	Temporal Variability of Atmospheric Column Energy	Seiji Kato (NASA)

	Balance Residual	
1230-1445	Lunch provided in the Concourse and Poster Session 1	
1445-1645	Afternoon Parallel Sessions	
	S25: High-Resolution Modeling and Resolved/Permitted Convection	
1445	Representation of heavy precipitation and its future change in convection-permitting models	Elizabeth Kendon (UCAR)
1500	Systematic Assessment of Mesoscale Convective Systems in MPAS Variable Resolution Climate Simulations over North America	Ruby Leung (PNNL)
1515	The effect of permitted versus parameterized convection on the simulation of tropical extra-tropical interactions over Southern Africa	Neil Hart (Oxford U)
1530	Tropical Precipitation Variability In the FGOALS-F2 High-resolution Coupled Climate Model	Qing Bao (IAP)
1545	Convective precipitation initiation over the eastern foothills of the Canadian Rockies under historical and future climate conditions	Lucia Scaff (UASK)
1600	Global high-resolution observational rainfall data set for convection-permitting model evaluation	Hayley Fowler (NCL)
1615	Novel Seasonal Latitude-Belt Simulation from 60 N to 60 S with 3 km Resolution	Thomas Schwitalla (U of Hohenheim)
1630	Rediscovery of the doldrums in storm-resolving simulations over the tropical Atlantic	Daniel Klocke (DWD)
	S16. Heat Waves and Heat Extremes in the Past, Present, and Future Climate	
1445	Future amplification of hot extremes due to land-atmosphere interactions: Understanding and reducing the model uncertainties	Markus Donat (UNSW)
1500	What the IPSL climate reconstruction teach us on the realism of the simulated heat waves?	Frederique Cheruy (LMD)
1515	Influence of blocking on heat waves in large model ensembles	Jana Sillman (CICERO)
1530	Exploring the contribution of land-atmosphere feedbacks to hot extremes in CMIP5 models	Anna Ukkola (UNSW)
1545	Attribution of heat wave-induced urban boundary layer warming	Dan Li (Boston U)
1600	Extremely hot or not? Divergent projections for precipitation in Central Europe explain uncertainties in extreme temperatures	Martha Vogel (ETHZ)

1615	Impacts of snow darkening effects by light absorbing aerosols on hydroclimate of Eurasia during boreal spring and summer	William Lau (UMD)
1630	Characteristics of extreme temperatures and persistent heat waves over East China from ground station observations and numerical modeling	Nicolas Freychet (U Edinburgh)
S14. The Mountain Water Cycle		
1445	Retrospective and Realtime Snow Analysis of the National Water Model Using In-Situ and Remotely Sensed Observations	Logan Karsten (NCAR)
1500	High-resolution hydrological forecasting of the June 2013 flood in the Canadian Rockies	Vincent Vionnet (USASK)
1515	Applying hybrid downscaling to simulate change in California's Sierra Nevada	Alex Hall (UCLA)
1530	A new climatology of North American mountain snow water storage and impacts on river basin-scale water budgets	Melissa Wrzesien (OSU)
1545	Evaluation and application of satellite-based precipitation measurements for hydroclimate studies over mountainous regions: case studies from the Tibetan Plateau	Soroosh Sorooshian (UCI)
1600	Advancing precipitation estimation and hydrologic simulations in cold mountainous basins using recent satellite observations	Ali Behrangi (NASA)
1615	Impacts of snowpack accumulation and summer weather extremes on alpine glacier hydrology	Caroline Aubry-Wake (USASK)
1630	Snowpack change from 1982-2016 over Continental United States	Xubin Zeng (U of Arizona)
1645	Break	
1715-1815 Plenary – Extreme Weather in a Changing Climate		
1715	Understanding and Predicting Water and Extremes	Jin Huang (NOAA/CPO)
1735	A value chain approach to Extreme Earth	Paolo Ruti (WMO/WWRD)
1755	Attributing human induced changes in extreme weather	Michael Wehner (LBNL)
1815	End of day	

Tuesday 8 May 2018

Time	Title	Speaker (Affiliation)
0830-1000	Plenary on Extremes (Chair: TBD)	
0830	The World Climate Research Programme Grand Challenge on Weather and Climate Extremes	Lisa Alexander (UNSW)
0900	How much information is required to well-constrain local estimates of future precipitation extremes?	Francis Zwiers (Pacific Climate Impacts Consortium)
0930	Exploiting the climate archives for meaningful events	Bart van den Hurk (KNMI)
1000	Lightning Talks	
1030	Break	

1100-1230	Morning Parallel Sessions	
	S19. Detection and Attribution of Climate Extremes	
1100	A new normal for streamflow over northern California: Less moderates, more extremes	Iman Mallakpour (UCI)
1115	The 100-year flood seems to be changing. Can we really tell?	Chris Forest (PSU)
1130	Anthropogenic Influences on the Intensity and Rainfall of Major Tropical Cyclone Events	Christina Patricola (LBL)
1145	Attribution of extreme wildfire risk in western Canada	Megan Kirchmeier-Young (UVIC)
1200	Contribution of atmospheric river to extreme snowfall events across British Columbia, Canada	Aseem Sharma (UNBC)
1215	The 1930s Dust Bowl heat waves: Were they Atlantic forced, and did anthropogenic climate change play a role?	Tim Cowan (U Edinburgh)
	S23B. Land-Atmosphere Interactions and Climate Predictability, Including Subseasonal to Seasonal Prediction (Continued from Monday)	
1100	Local soil moisture-rainfall correlation at varying spatial scale	Chiara Holgate (ANU)
1115	Convective clouds and soil moisture: Investigation using ground-based observations at US Southern	Yunyan Zhang (LLNL)

	Great Plains	
1130	Impact of climate and associated land cover changes on the hydrology of the Mackenzie River Basin	Mohamed Elshamy (USASK)
1145	Effects of Snow on Seasonal Predictability of the Indian Summer Monsoon Rainfall	Subodh Saha (Tropmet)
1200	Benefits of explicit urban parameterization in regional climate modeling to study climate and city interactions	Aude Lemonsu (Météo-France)
1215	Potential Impact of vegetation on the land-atmosphere within an NWP framework	Souhail Bousetta (ECMWF)
S7. Cold Regions Earth System Changes, Including Precipitation Occurring Near 0°C		
1100	An Assessment of Near 0°C Temperature and Precipitation Characteristics Across Canada	Ronald Stewart (U Manitoba)
1115	Observed and projected trends in seasonal terrestrial snow cover from observational and climate model ensembles	Chris Derksen (ECCC)
1130	Characterization of weather conditions associated with freezing precipitation and changes of the frequency of its occurrence	Pavel Groisman (UCAR)
1145	Climatic, Cryospheric, Ecological, and Hydrological Change in the Interior of Western Canada: The Changing Cold Regions Network and its activities as a GEWEX RHP	Chris DeBeer (USASK)
1200	Trends of water budget components and river discharge extremes in Arctic basins	Matthieu Guimberteau (IPSL)
1215	Snow Water Equivalent Response to Hydrometeorological Variability, Climate Change, and Extreme Winter Storms Across the Western United States	Laurie Huning (UCI)
1230-1445	Lunch provided in the Concourse and Poster Session 2	
1445-1645	CLIVAR/GEWEX Monsoon Panel Meeting (by invitation) <i>Wapiti Room</i>	
1445-1645	Afternoon Parallel Sessions	
S18. Addressing the Challenge of Compound Events and S26. Documenting Extremes		

1445	Multi-hazard Modeling in Coastal Systems	Hamed Moftakhari Rostamkhani (UCI)
1500	Assessment of the performance of the top-down approach to study compound events on the example of the Role of Atmospheric Rivers in compound events along the Dutch coast	Nina Ridder (KNMI)
1515	Intensified departures from natural variability in coupled climate variables	Colin Mahony (UCI)
1530	Accelerated Warming of Temperatures during Droughts	Felicia Chiang (UCI)
1545	The uneven nature of daily precipitation and its change	Angeline Pendergrass (UCAR)
1600	Recent trends in precipitation, temperature and stream flow extremes - from gauges to reanalysis to climate models - impact of spatial scale	Francois Brissette (ETSMTL)
1615	Quantification of changes in observed precipitation distributions globally using a new land-based gridded data set of daily precipitation with coverage back to 1950	Steefan Contractor (UNSW)
1630	Assessment of Observational Uncertainty in Extreme Precipitation Events over the Continental United States	Emily Slinskey (PDX)
S17. Storms and High Impact Weather		
1445	HI Weather: the challenge of predicting disasters	Brian Golding (UK Met Office)
1500	The role of the lake-land breeze circulation in the formation and propagation of storms over Lake Victoria	Beth Woodhams (University of Leeds)
1515	Contributions of different time scale variations to tropical cyclogenesis over the western North Pacific	Xi Cao (IAP)
1530	Hail frequency estimation based on geostationary satellite detection	Heinz Jürgen Punge (KIT)
1545	Tropical cyclone prediction skill and MJO dependence in the S2S data set	Suzana Camargo (Columbia U)
1600	Aerosol vs. Greenhouse Gas Influences on Tropical Cyclone Potential Intensity and the Hydrologic Cycle	Adam Sobel (Columbia U)
1615	Future Changes in Moisture Transport towards the Alps	Regula Mülchi (UNIBE)
1630	Process-Oriented Diagnostics of Tropical Cyclones in Global Climate Models	Yumin Moon (U Washington)

S10. Global Energy and Water Cycles, Clouds and Radiation		
1445	Global Cloud Type Distributions and Their Roles in Coupling the Global Water and Energy Cycles	Zhien Wang (U Wyoming)
1500	Process-based versus energy-based constraints on cloud microphysics: Implication for aerosol-cloud interactions	Kentaroh Suzuki (U Tokyo)
1515	The GEWEX water vapor assessment (G-VAP): final results from first phase and the future of G-VAP	Marc Schroeder (DWD)
1530	Radiative contribution to the North-American cold air outbreaks in a Lagrangian perspective	Natalia Bliankinshtein (McGill U)
1545	Water Cycle Variability over the Global Oceans: Wet-get-Wetter, Dry-get-Drier Regimes in Reanalyses and Observations	Franklin Robertson (NASA)
1600	El Nino Coupled Tropical Land Surface Hydrologic Response	Michael Bosilovich (NASA)
1615	Anthropogenic Forcing of Hemispheric Rainfall Shifts	Brian Soden (U Miami)
1630	Tropical-Extra-tropical Interactions Associated with the Asia-Australian Monsoon	Aurel Moise (BOM)
1645	Break	
1715-1815	Plenary – Water and Extremes from Space	
1715	Studying Extremes with Satellite Observations: Before, During and After	Jared Entin (NASA)
1735	ESA EO Program and Opportunities for GEWEX	Diego Fernandez (ESA)
1755	JAXA EO Program and Opportunities for GEWEX	Riko Oki (JAXA)
1815	End of day	

Wednesday 9 May 2018

Time	Title	Speaker (Affiliation)
0830-1000	Plenary on Water (Chair: TBD)	
0830	Climate Change and Mountain Hydrology: Results from the Global Energy and Water Exchange	Roy Rasmussen (NCAR)
0900	Integrating human water management into land surface models	Jan Polcher (LMD)
0930	Challenges in process-based hydrologic modeling	Martyn Clark (NCAR)
1000	Lightning Talks	
1030	Break	

1100-1230	Morning Parallel Sessions	
	S5. Irrigation Hydrology and S11. Water Cycle Over the Breadbaskets	
1100	Modeling the Land Use and Land Cover Changes in the Upper Euphrates and Tigris Basin: How Does It Affect the Regional Water Budget and Energy Balance Under A Changing Climate?	Yeliz Yilmaz (ITU)
1115	Climatic and human induced changes in freshwater availability and use in the American Southwest	Yadu Pokhrel (MSU)
1130	Mapping irrigated cropland over the contiguous United States by combining satellite and modeled soil moisture data	Felix Zaussinger (TU Wien)
1145	AgMIP integrated agro-climatic impact analysis for food security and trade	Alex Ruane (NASA)
1200	The Role of the Global Energy and Water Cycle Information in the Water-Energy-Food Nexus	Richard Lawford (U Morgan)
1215	Water footprint analysis of barley production in Alberta: implications for water use and yields to 2064	Mohammad Masud (U Alberta)
	S21. Climate Extremes, Ecosystems and Society: Impacts, Feedbacks and Emergency Risks	
1100	Risks from climate extremes change differently from 1.5°C to 2.0°C depending on rarity	Xuebin Zhang (ECCC)
1115	Exploring plant mortality and ecosystem recovery from	Jennifer Holm

	unprecedented climate extremes: Unifying hypotheses to guide modeling and experimental studies	(LBL)
1130	The southern African climate under 1.5° and 2°C of global warming as simulated by CORDEX models	Genito Maure (Eduardo Mondlane)
1145	Impacts of climate Extremes over selected African Coastal Cities under 1.5 degrees and 2 degrees C global warming	Victor Indasi (CSAG)
1200	Climate extremes in the key wheat producing regions of the world	Andrea Toreti (European Commission, JRC)
1215	Heat stress and fire risk: opposing effects of climate model biases on risk uncertainty	Jakob Zscheischler (ETHZ)
S15A. Land-Atmosphere Interactions and Water Cycle over the Third Pole Region (Continued on Thursday)		
1100	Pan-Third Pole Environment (Pan-TPE)	Tandong Yao (ITPCAS)
1115	Tibetan-Iranian Plateau- the elevated driver of water and energy cycle in Asia	Guoxiong Wu (LASG)
1130	Modeling interactions between land surface processes and climate in Tibetan Plateau	Yongkang Xue (UCLA)
1145	Remotely sensed albedo and surface temperature of snow and ice: A contribution to estimation of the energy balance of snow and glaciers	Jeff Dozier (UCSB)
1200	Characterizing the spatiotemporal distribution of snow in the high mountain Asia and its impact on runoff	Yeosang Yoon (NASA)
1215	An ground experiment of active and passive microwave remote sensing of snow and frozen soil	Jiancheng Shi (RADI)
1230-1445 Lunch provided in the Concourse and <u>Poster Session 3</u>		
1445-1645 Afternoon Parallel Sessions		
S20. Droughts in Present and Future Climate		
1445	Drought Persistence Errors in Global Climate Models	Heewon Moon (ETHZ)
1500	The Impact of Land-Atmosphere Coupling on the Development of Flash Droughts	Joshua Roundy (U Kansas)
1515	Do plants follow a profit maximization approach during drought?	Manon Sabot (UNSW)

1530	Climate change will redefine soil drought in Europe	Stephan Thober (UFZ)
1545	Global patterns of teleconnection between climate forcings and regional hydrologic cycles	Xiaoya Zhang (U Tokyo)
1600	Seasonal scale drought forecasting in Africa and the Middle East	Kristi Arsenault (NASA)
1615	A 2000 year drought data set for present-day and 2K temperature increase	Niko Wanders (Utrecht U)
1630	An Overview of Current Research using In Situ, Modeled, and Remotely Sensed Data to Identify and Monitor Flash Drought Events	Jason Otkin (U Wisconsin)
<p>S4. Sub-daily Rainfall Extremes and S6. Changes in Rainfall Intensity and Distribution</p>		
1445	Climatology and extreme value analysis of a high-resolution blended Radar and rain gauge sub-daily precipitation data set for Switzerland	Olivia Martius (U Bern)
1500	The Long-term Changes in Extreme Hourly Precipitation and Its Possible Link to Urbanization in Coastal South China during 1971-2016	Yali Luo (CMA)
1515	Projected intensification of sub-daily rainfall extremes in convection-permitting climate model simulations over North America: Historical evaluation and implications for future Intensity-duration-frequency curves	Alex Cannon (ECCC)
1530	Creating a global sub-daily precipitation data set	Elizabeth Lewis (NCL)
1545	Regional scale soil-moisture feedbacks in a convection permitting simulation over Africa.	Sonja Folwell (CEH)
1600	Stochastic simulation of mesoscale convective systems to assess the evolution of hydrological extremes in the West African Sahel.	Théo Vischel (U Grenoble Alpes)
1615	New Insights into Increased Seasonal to Interannual Water Cycle Variability Across the Great Plains	Jeffrey Basara (U Oklahoma)
1630	Convective and stratiform processes in a convection permitting model over the Maritime Continent	Claire Vincent (U Melbourne)
<p>S2. Regional Hydroclimate Projects</p>		
1445	Integrated Earth System Modeling for the Baltic Sea Region	Markus Meier (Leibniz-IOW)
1500	Estimation of the surface energy budget components in the region of the PannEx RHP	Monika Lakatos (OMSZ)

1515	Winter very long dry spell over the Mediterranean Basin	Philippe Drobinski (LMD/IPSL)
1530	Baltic Earth - Extending the knowledge of the regional Earth system in the Baltic Sea region	Marcus Reckermann (HZG)
1545	Estimating riverine fresh water flux into the Mediterranean Sea	Fuxing Wang (LMD)
1600	Impacts of climatic oscillations on Mediterranean hydrology	Wouter Dorigo (TU Wien)
1615	High-resolution hydrological seasonal forecasting for water resources management over Europe	Ming Pan (Princeton U)
1630	Towards establishment of the science plan of the post-MAHASRI RHP	Toru Terao (Kagawa U)
1645	Break	
1715-1815	Plenary – Land and Water Use in a Changing Climate	
1715	The NEXUS of Land, Food, Energy and Water: Water Management in Global Models	Richard Harding (CEH)
1735	Title TBA	David Lawrence (UCAR)
1755	Climate-Informed Decision Making under Deep Uncertainty	Anil Mishra (UNESCO)
1815	Conference proceedings end for the day	
1930	Conference Dinner (Keynote: Alan Betts on “The Challenges Ahead”) Screening of documentary on the Changing Cold Regions Network	

Thursday 10 May 2018

Time	Title	Speaker (Affiliation)
0830-1000	Plenary on GEWEX Panels (Chair: TBD)	
0830	GEWEX Hydroclimatology Panel (GHP)	Jason Evans (UNSW)/Joan Cuxart (UIB)
0850	GEWEX Data and Analysis Panel (GDAP)	Rémy Roca (OMP/LEGOS)/Tristan L'Ecuyer (UW-Madison)
0910	Global Land/Atmosphere System Study (GLASS)	Gab Abramowitz (UNSW)/Michael Ek (NCAR)
0930	Global Atmospheric System Studies (GASS)	Xubin Zeng (U. Arizona)/Daniel Klocke (DWD)
0950	Discussion	
1000	Lightning Talks	
1030	Break	

1100-1230	Morning Parallel Sessions	
	S24. Benchmarking and Metrics	
1100	What could be the impact of neglecting surface momentum flux evaluation?	Graham Weedon (UK Met Office)
1115	Probabilistically constrained climate projections of water availability over land	Ryan Padron (ETHZ)
1130	Why do rainfall projections from GCMs and RCMs differ? A synoptic circulation method approach over southern Africa	Izidine Pinto (CSAG)
1145	Challenging models with data from a multi-factor carbon dioxide and warming experiment	Martin De Kauwe (UNSW)
1200	Similarity Assessment of Land Surface Model Outputs in the North American Land Data	Sujay Kumar (NASA)

	Assimilation System (NLDAS)	
1215	The role of planetary boundary layer height in coupled model benchmarking	Craig Ferguson (U at Albany-SUNY)
1230-1245	Evaluation of drydown processes in global land surface and hydrological models using flux tower evapotranspiration data	Alberto Martinez (CEH)
S3. Evapotranspiration Determination and S22. Soils in Water and Climate Models		
1100	Assessing the role of sub-grid landscape features in setting land surface-atmosphere exchange	Ian Harman (CSIRO)
1115	Derived Optimal Linear Combination Evapotranspiration (DOLCE): a global gridded synthesis ET estimate	Gab Abramowitz (UNSW)
1130	Developing a combined vertical root distribution and satellite-derived model to estimate evapotranspiration in Mediterranean climate zone	Jiahua Zhang (RADI/CAS)
1145	Quantifying vertical soil heterogeneity and its impact on modeled event and seasonal-scale runoff	Geng Xia (U Albany)
1200	Controls on surface soil drying rates observed by SMAP and simulated by the Noah land surface model	Peter Shellito (ESSIC, UMD)
1215	Simulating the Diurnal Cycle in Semiarid Regions	John Edwards (UK Met Office)
S15B. Land-Atmosphere Interactions in the Third Pole Region (Continued from Wednesday)		
1100	Land-Atmosphere Interactions on the Tibetan Plateau – In Situ Observation, Remote Sensing and Modeling	Bob Su (U Twente)
1115	Challenges and progress towards understanding the energy and water exchanges in high mountain Asia by remote sensing	Li Jia (RADI)
1130	Monitoring and modeling the water-cryosphere-atmosphere-biosphere multi-sphere interactions over the Third Pole Region	Yaoming Ma (ITP/CAS)
1145	Closing water balance at basin scale in an endorheic river basin in the Pan Third Pole Region	Xin Li
1200	Observation and modeling of water vapor crossing over the central Himalaya	Kun Yang (Tsinghua U)
1215	Multi-sphere hydrological modeling over the Third	Lei Wang

	Pole Region	(ITP/CAS)
1230-1445	Lunch provided in the Concourse and Poster Session 4	
1445-1645	Compound Events Side Meeting (by invitation) <i>Wapiti Room</i>	
1445-1645	Afternoon Parallel Sessions	
	S8. Modeling for Extremes	
1445	Can the spread in simulated regional-scale hydrologic cycle change be constrained?	Alex Hall (UCLA)
1500	Changes in climate extremes for distinct warming levels in observations as well as fully coupled and prescribed SST simulations	Erich Fischer (ETHZ)
1515	Modeling future changes in Mesoscale Convective Systems: why end-of-century floods might be more severe than expected	Andreas Prein (UCAR)
1530	Observed and simulated rainfall at multiple scales: how do extremes from the Canadian CRCM5 Large-Ensemble scale in space and time in historical and future climate?	Silvia Innocenti (INRS)
1545	Mean and extreme precipitation over European river basins better simulated in a 25km AGCM	Reinhard Schiemann (U Reading)
1600	Modeling of variability and mechanisms of mega droughts over the eastern China during the last millennium	Liang Ning (Nanjing Normal U & U Mass)
1615	Can High Resolution Climate Models Reproduce Rainfall Extremes Associated with Tropical Cyclones?	Cheng-Ta Chen (NTNU)
1630	Investigating the influence of non-Gaussian short cold tails on future model projections of cold extremes	Paul Loikith (PDX)
	S12. Satellite Observations for Extremes, Water Cycle Processes and Land-Atmosphere Interactions	
1445	Observational evidence for soil moisture patterns affecting deep convection in mature mesoscale convective systems	Cornelia Klein (CEH)
1500	Limits on the influence of hydrology on ocean mass variability based on 15 years of GRACE observations	John Reager (NASA)

1515	Global to regional consistency analysis of the water cycle from recently derived satellite products	Ernesto Berbery (UMD)
1530	Hydrological Balance Associated with Pre-monsoon Drought in India	W. Timothy Liu (NASA)
1545	Surface soil moisture dry-down in a land-atmosphere hotspot observed by SMOS and AMSRE/2 and modeled by ORCHIDEE	Romina Ruscica (CIMA)
1600	Precipitation Intensity Trends and Changes in the Tropics from GPCP Observations and Climate Models	Robert Adler (UMD)
1615	Impacts of climate variability on vegetation dynamics as observed from microwave observations	Mariette Vreugdenhil (Tu Wein)
1630	Overview of Long-term Observations of the Global Water Cycle by the Advanced Microwave Scanning Radiometer (AMSR) Series	Misako Kachi (JAXA)
S13. The Human–Climate-Water Nexus, Climate Change and Water Security		
1445	The impact of human activities on flood and drought severity	Justin Sheffield (Princeton)
1500	Monitoring and Forecasting Water Availability in Food Insecure Regions	Christa Peters-Lidard (NASA)
1515	Global assessment of water management challenges under uncertainty in water scarcity projections	Peter Greve (LIASA)
1530	Emerging Trends In Freshwater Availability As Viewed From Space: Implications for Water, Food and Human Security	Jay Famiglietti (NASA)
1545	Water-energy nexus studies by coupling the H08 global hydrological model and the AIM/CGE integrated assessment model	Naota Hanasaki (NIES)
1600	The global hydrological and water resources model PCR-GLOBWB 2: evaluation and example applications	Marc Bierkens (Utrecht U)
1615	Future projections of water resources over North Africa	Aaron Boone (CNRM)
1630	Pan-European changes in water availability due to decadal climate and land use change evaluated using a Budyko-framework	Ryan Teuling (Wageningen U)
1645	Break	
1715-1815	Plenary – Land-Based Predictability	

1715	Next generation land models: Resolving the terrestrial contribution to climate extremes	Andy Pitman (UNSW)
1735	On the relevance of diurnal cycle model improvements to represent climate extremes	Gianpaolo Balsamo (ECMWF)
1755	Confronting forecast models, reanalyses and land surface models with global remote sensing estimates of land-atmosphere coupling	Paul Dirmeyer (GMU)
1815	End of day	

Friday 11 May 2018

Time	Title	Speaker (Affiliation)
0830-1000	Plenary on Early Career Researchers (Chair: TBD)	
0830	Why tracking Earth's energy imbalance is an imperative	Kevin Trenberth (NCAR)
0900	Results from Early Career Researcher (ECR) Workshop and ECR Competition Prizes	YESS/YHS
	Details TBA	
1015	New Activities in GEWEX	
1015	A comparison between functional descriptions used to estimate hydraulic and thermal properties in Land Surface Models: Implications for the energy-and water balance	Anne Verhoef (U. Reading)
1030	ANDEX, A Hydroclimate Research Program for the Andes and a Prospective GEWEX Regional Hydroclimate Project (RHP)	German Poveda (UNAL)
1045	Break	
1115-1245	Closing Plenary	
1115	Interactions between the water and carbon cycles	Eleanor Blyth (CEH)
1145	Future strategic directions for WCRP	Guy Brasseur (WCRP)
1215	Title TBA	Peter van Oevelen (IGPO)
1230	The ever increasing importance of international research collaboration in climate sciences	Graeme Stephens (NASA)
1245	Conference adjourns	
1245-1430	Lunch provided in the Concourse	
1430-1730	Side Events	
1430-1730	Knowledge Action Network on Extremes (open to all)	
1430-1730	Water for the Food Baskets and Regional Hydroclimate Projects for the Americas (open to all)	