

12th International Precipitation Conference (IPC12) and the Soroosh Sorooshian Hydrometeorology Symposium

The Beckman Center of the National Academies of Sciences and Engineering
100 Academy Way, Irvine, CA 92617

University of California Irvine
June 19 - 21, 2019 (Beckman Center)
Pre-Conference Workshops: June 18, 2019 (UCI)

Tuesday June 18, 2019 - Pre-Conference Workshops

Pre-Conference Workshops will be held in Colloquia Room (Engineering Hall, Room 2430) on UCI Campus. Google Maps link: <https://goo.gl/maps/3h34LFLXX122H5Zv7>

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|---------------|---|
| 8:30-9:00am | Working Breakfast – Introductions and Scope of Workshops
Amir AghaKouchak (UCI) |
| 9:00-11:00am | Quantitative Precipitation Estimation (QPE): observations from radar, gauges and satellites for flood prediction ∞
Pierre Kirstetter (NOAA) |
| 11:00-11:30am | Coffee Break and Group Discussions |
| 11:30-12:30pm | CHRS PERSIANN: algorithms, data products and applications ∞
Kuolin Hsu & Phu Nguyen (UCI) |
| 12:30-1:30pm | Working Lunch – Upcoming Tutorial Opportunities |
| 1:30-3:30pm | Hands-on workshop on Extreme Value Analysis ∞
Amir AghaKouchak (UCI), Charlotte Love (UCI) & Mojtaba Sadegh (BSU) |
| 3:30-4:00pm | Coffee Break and Group Discussions |
| 4:00-6:00pm | A deep dive into the configuration and features of the National Water Model ∞
David Gochis (NCAR) |
| 6:00pm | Dinner on your own |

Sponsors:

National Science Foundation (NSF), National Aeronautics and Space Administration (NASA), University of California Irvine (UCI), and Center for Hydrometeorology and Remote Sensing (CHRS)



WEDNESDAY JUNE 19, 2019

- 8:00-9:00 am Registration and Breakfast
- 9:00-9:15 am Opening Remarks and Welcome [∞](#)
Efi Foufoula-Georgiou

Session 1: Remote Sensing of Precipitation

Moderator: Taikan Oki

- 9:15-9:45am NASA's Studies of Earth's Water Cycle [∞](#)
(invited) Jack Kaye, Gail Skrofonick-Jackson, Jared Entin, Bradley Doorn
- 9:45-10:00am Research Highlights from the International Precipitation Working Group (IPWG) [∞](#)
Viviana Maggioni, Philippe Chambon, Ziad Haddad, Dong-Bin Shin, Vincenzo Levizzani, Ralph Ferraro
- 10:00-10:15am IMERG V06: The Role of IR Precipitation [∞](#)
Jackson Tan, George Huffman, David Bolvin, Eric Nelkin
- 10:15-10:30am Questions and Group Discussion
- 10:30-11:00am Coffee Break and Research Introductions

Session 2: Hydrologic Applications

Moderator: Witold Krajewski

- 11:00-11:30am Strange Floods: The Upper Tail of Flood Peaks in the US [∞](#)
(invited) Jim Smith, Mary Lynn Baeck
- 11:30-11:45am Insight into the Changing Characteristics of Global Snow Droughts [∞](#)
Laurie Huning, Amir AghaKouchak
- 11:45am-12pm Forecast Verification Applications at the Australian Bureau of Meteorology [∞](#)
Thomas Pagano
- 12:00-12:15pm Data Driven Distributionally Robust Modeling of Extremes [∞](#)
Bitá Analui, Kuolin Hsu, Soroosh Sorooshian
- 12:15-12:30pm Questions and Group Discussion
- 12:30-1:30pm Working Lunch – Subgroup Discussion on the Conference Themes

Session 3: Water Cycle Dynamics

Moderator: Joseph Turk

- 1:30-2:00pm Atmospheric Rivers: Recent Developments in Science and Applications [∞](#)
(invited) **Marty Ralph**
- 2:00-2:15pm Process-oriented Diagnostics Framework and Stochastic Process Models for Precipitation [∞](#)
J. David Neelin, Yi-Hung Kuo, Fiaz Ahmed, Cristian Martinez-Villalobos, Xianan Jiang, Eric Maloney, Allison Wing, Andrew Gettelman, Yi Ming, John Krasting
- 2:15-2:30pm Convective/stratiform classification from passive microwave imagers: Implications for improved precipitation retrieval and understanding of the water and energy cycles
Svetla Hristova-Veleva, Eun-Kyoung Seo, Ziad Haddad, Sahra Kacimi, Ousmane Sy, Jeffrey Steward
- 2:30-2:45pm Ensemble-based Simultaneous State and Parameter Estimation for Hydrological Modeling and Beyond
Fuqing Zhang
- 2:45-3:00pm Questions and Group Discussion
- 3:00-3:30pm Coffee Break and Research Introductions

Session 4: Hydrologic Applications

Moderator: Amir AghaKouchak

- 3:30-4:00pm The Role of Satellite-Based Precipitation in Monitoring and Predicting Drought for the Famine Early Warning Systems Network (FEWS NET) [∞](#)
(invited) **Christa Peters-Lidard, Amy McNally, Chris Funk, Shraddhanand Shukla, Kristi Arsenault, Pete Peterson, Jossy Jacob, Augusto Getirana, Abheera Hazra, Greg Husak**
- 4:00-4:15pm The Importance of Precipitation Information for the Water-Energy-Food (W-E-F) Nexus Sustainability [∞](#)
Richard Lawford
- 4:15-4:30pm Spatiotemporal Analysis of Compound Hot and Dry Years Across the United States [∞](#)
Mojtaba Sadegh, Mohammad Reza Alizadeh
- 4:30-4:45pm Embracing Uncertainty: A Risk-based Approach to Incorporation of Future Projections of Extreme Rainfall into Engineering Design [∞](#)
Ali Nazemi, Uttam Puri Goswami
- 4:45-5:00pm Questions and Group Discussion
- 5:00-7:30pm Reception and Poster Session Presentations
- 7:30pm Transportation to Hotels

THURSDAY JUNE 20, 2019

The Soroosh Sorooshian Hydrometeorology Symposium

8:00-9:00am Registration and Breakfast

Session 5: Soroosh Sorooshian Tribute

Moderator: Efi Foufoula-Georgiou

- 9:00-9:30am Contributions of Professor Soroosh Sorooshian to Four Decades of Advances in Hydrometeorology [∞](#)
(invited) Steven Burges
- 9:30-9:45am Automatic model calibration of numerical weather prediction models to improve short range precipitation forecasting [∞](#)
Qingyun Duan
- 9:45-10:00am Today's Earth - A Global Monitoring System of Hydrological Cycles based on Earth Observation from Satellites and a Terrestrial Modeling System [∞](#)
Taikan Oki, Kenshi Hibino, Kei Yoshimura, Hyungjun Kim, Dai Yamazaki, Akira Takeshima, Misako Kachi, Riko Oki, Kosuke Yamamoto, Yuta Ishitsuka
- 10:00-10:15am Regional Implication of Extremes for Water Demand in Food and Energy Systems [∞](#)
Ghassem Asrar, Mohamad Hejazi, Sean Turner, Yiyun Cui
- 10:15-10:30am Utilizing Remote Sensing and in situ Observations for Improved Quantification of Hydrologic Partitioning in Post-fire Watersheds in the Western U.S. [∞](#)
Terri S. Hogue
- 10:30-11:00am Coffee Break and Research Introductions

Session 6: Remote Sensing of Precipitation

Moderator: Remko Uijlenhoet

- 11:00-11:30am Earth's Water Reservoirs in a Changing Climate [∞](#)
(invited) Graeme Stephens
- 11:30-11:45am Insights on Precipitation Estimation and Hydrologic Simulations in Cold Mountainous Basins Using Diverse Remote Sensing Observations [∞](#)
Ali Behrangi
- 11:45am-12pm Recent Developments of Satellite Precipitation Products and Data Systems at UCI CHRS [∞](#)
Phu Nguyen, Kuolin Hsu, Dan Braithwaite, Soroosh Sorooshian
- 12:00-12:15pm A Look at Typhoons Using Satellite-based Precipitation from NASA and NOAA [∞](#)
Jessica Sutton, Kathryn Lanyon, Venkat Lakshmi
- 12:15-12:30pm Questions and Group Discussion
- 12:30-1:30pm Working Lunch – Subgroup Discussion on the Conference Themes

Session 7: Water Cycle Dynamics

Moderator: Christa Peters-Lidard

- 1:30-2:00pm (invited) Land Water, Energy and Carbon Cycles Coupling Diagnosed From Remotely Sensed Global Observations [∞](#)
Dara Entekhabi
- 2:00-2:15pm Integrated Satellite-based Data Assimilation Systems for Monitoring and Predicting Water Cycle [∞](#)
Toshio Koike, Mohamed Rasmy, Hiroyuki Tsutsui, Katsunori Tamakawa, Rie Seto, Yohei Sawada
- 2:15-2:30pm It's Raining Bits: Trends in the Information Content of Daily Rainfall Persistence Across the U.S. [∞](#)
Allison Goodwell, Praveen Kumar
- 2:30-2:45pm On the Role of Montane Forests as Gatekeepers of Clouds and Precipitation in the Tropical Andes [∞](#)
Ana Barros
- 2:45-3:00pm Questions and Group Discussion
- 3:00-3:30pm Coffee Break and Research Introductions

Session 8: Hydrologic Applications

Moderator: Terri Hogue

- 3:30-4:00pm (invited) Human and Climate Impacts on Hydrologic Change in an Agricultural Landscape [∞](#)
Kristie Franz, David Dziubanski
- 4:00-4:15pm Hydrologic Investigations of Propagation of Errors in Rainfall to Hydrographs [∞](#)
Ganesh Ghimire, Witold Krajewski, Radoslaw Goska
- 4:15-4:30pm The Continued Importance of Global Climate Processes Monitoring: A GEWEX Perspective on Precipitation [∞](#)
Peter J. van Oevelen
- 4:30-5:00pm Perspectives in Hydrometeorology and A Life in Science [∞](#)**
Soroosh Sorooshian
- 5:00-6:00pm Poster Session Presentations
- 6:30-8:00pm **Conference Dinner and the Soroosh Sorooshian Hydrometeorology Symposium**
Moderator: Antonio Busalacchi
- 8:00pm Transportation to Hotels

FRIDAY JUNE 21, 2019

8:00-9:00am Registration and Breakfast

Session 9: Remote Sensing of Precipitation

Moderator: Vincenzo Levizzani

9:00-9:30am GPM Mission Status and NASA Decadal Survey Activities Related to Precipitation [∞](#)
(invited) **Scott Braun**

9:30-9:45am Atmospheric River Precipitation Characteristics Revealed by NASA GPM Ground Validation
Observations in Complex Terrain [∞](#)
Stephanie Wingo, Walter Petersen

9:45-10:00am Evaluating the Skill of GPM-IMERG Satellite Precipitation Estimation Over the Mountains of
Central Chile [∞](#)
Yazmina Rojas, Justin Minder

10:00-10:15am Enhancing GPM Constellation Retrievals Over Land with Dynamic Surface Information [∞](#)
Sarah Ringerud, Christa Peters-Lidard, Yalei You, S. Joe Munchak

10:15-10:30am Questions and Group Discussion

10:30-11:00am Coffee Break and Research Introductions

Session 10: Hydrologic Applications

Moderator: Ana Barros

11:00-11:15am The Challenge and Opportunity of Global Hydrology: Integrating
Multi-source Observations for Multi-scale Hydrology Study [∞](#)
Yang Hong, Jonathan Gourley

11:15-11:30am Study of Global River Basins for Hydrological Extremes Using Satellite Data and Model
Outputs [∞](#)
Venkataraman Lakshmi, John Bolten

11:30-11:45am Remotely Sensed Data Assimilation for Extreme Events [∞](#)
Hamid Moradkhani

11:45-12:00pm Hydrological Cycle in the Heihe River Basin and Its Implication for Water Resource
Management in Endorheic Basins [∞](#)
Xin Li

12:00-12:15pm North American Land Data Assimilation System Version 2.5: Real-time Evaluation,
Operational Implementation, and Drought Monitoring at NCEP [∞](#)
**Youlong Xia, Jack Kain, Jesse Meng, Helin Wei, Mike Ek, David Mocko, Christa Peters-
Lidard, L. Gwen Chen, Muthuvel Chelliah**

12:15-12:30pm Questions and Group Discussion

12:30-1:30pm Working Lunch – Subgroup Discussions on the Conference Themes

Session 11: Remote Sensing of Precipitation

Moderator: Sara Ringerud

- 1:30-2:00pm (invited) IMPACTS: A NASA Earth-Venture Suborbital-3 airborne Field Campaign to Investigate U.S. East Coast Snowstorms and Improve Remote Sensing of Snow
Lynn McMurdie, Gerald Heymsfield, Scott Braun, John Yorks
- 2:00-2:15pm Evaluating the Streamflow Simulation Capability of PERSIANN-CDR Daily Rainfall Products in Two River Basins on the Tibetan Plateau [∞](#)
Tiantian Yang, Xiaomang Liu
- 2:15-2:30pm Opportunistic Sensing of Rainfall Using Microwave Links from Cellular Communication Networks in Africa and Asia [∞](#)
Thomas Van Leth, Aart Overeem, Jenny Prosser, Daniele Tricarico, Hidde Leijnse, Remko Uijlenhoet
- 2:30-2:45pm When Radar Calibration by in-situ Networks Becomes Misleading [∞](#)
Ioulia Tchiguirinskaia, Abdellah Ichiba, Igor Paz, Auguste Gires, Elektra Skouri-Plakali, Daniel Schertzer
- 2:45-3:00pm Questions and Group Discussion
- 3-3:30pm Coffee Break and Research Introductions

Session 12: Remote Sensing of Precipitation

Moderator: Pierre Kirstetter

- 3:30-3:45pm What on Earth is the Space/Time Structure of Rainfall Uncertainty? [∞](#)
Christian Kummerow, Alfonso Jimenez Alcazar, Francisco Tapiador
- 3:45-4:00pm Multi-Satellite Global Satellite Mapping of Precipitation - Design and Products [∞](#)
Tomoo Ushio, Tomoaki Mega, Takuji Kubota
- 4:00-4:15pm Validation of Second Generation Pole-to-Pole CMORPH [∞](#)
Robert Joyce, Pingping Xie, Shaorong Wu, Bert Katz
- 4:15-4:30pm Questions and Group Discussion
- 4:30-4:45pm Closing Remarks and Plans for IPC13
- 5:00pm Transportation to Hotels

Poster Program

Poster Session 1, Wednesday June 19, 2019 [∞](#)

5:00-7:30pm

- 1.01 Cell-tracking for analysis of simulated Alpine thunderstorms
Timothy Raupach, Andrey Martynov, Luca Nisi, Yannick Barton, Alessandro Hering, Olivia Martius
- 1.02 A Random Forest-based Algorithm to Downscale Precipitation for Hyper-Resolution Hydrology
Yiwen Mei, Viviana Maggioni, Paul Houser, Yuan Xue
- 1.03 Statistical Characterization of Annual and Seasonal Daily Precipitation Extremes in Central Arizona
Giuseppe Mascaro
- 1.04 An evaluation of rainfall characteristics associated with hydro-disaster occurrences in the Lake Kyoga basin, using PERSIANN-CDR data
Jamiat Nanteza
- 1.05 Extreme Heat Events in a Semi-Arid Region Heighten Soil Respiration
Hassan Anjileli, Laurie S. Huning, Amir AghaKouchak, Hamed Moftakhari, Hamid Norouzi
- 1.06 Changing Characteristics of Aridity over Pakistan in the Twentieth Century
Kamal Ahmed, Nadeem Nawaz, Shamsuddin Shahid
- 1.07 High-resolution characterization of rainfall patterns during heavy precipitation events in the eastern Mediterranean
Moshe Armon, Francesco Marra, Yehouda Enzel, Efrat Morin
- 1.08 Regional extreme analysis from radar-based estimates
Edouard Goudenhoofdt, Laurent Delobbe, Patrick Willems
- 1.09 On the suitability of clustering techniques to classify meteorological drought
Arash Modaresi Rad, Mojtaba Sadegh, Davar Khalili
- 1.10 Extreme value analysis based on satellite multi-sensor precipitation products
Enrico Zorretto, Marco Marani
- 1.11 Explore Forecast skill of HRRR on extreme events across CONUS
Haowen Yue, Mekonnen Gebremichael
- 1.12 Hydrometeorological extremes and their impacts in Kerala
Shadananan Nair Krishnapillai
- 1.13 Impact of the data assimilation of airborne cloud-profiling radar data on the prediction of heavy-precipitation events
Mary Borderies, Olivier Caumont, Julien Delanoe, Veronique Ducrocq, Nadia Fourrie, Pascal Marquet
- 1.14 Extreme rainfall from multiple event types and the Metastatistical Extreme Value distribution
Arianna Miniussi, Gabriele Villarini, Marco Marani
- 1.15 Spatial analysis of sub-daily rainfall time structure variability
Marek Kaspar, Vojtech Bliznak, Filip Hulec, Miloslav Muller
- 1.16 Extreme rainfall in spatial precipitation clusters: observations and a simple stochastic prototype
Fiaz Ahmed, J. David Neelin
- 1.17 Why daily precipitation intensities tend to follow Gamma distributions — theory and applications
Cristian Martinez-Villalobos, J. David Neelin, Angeline G. Pendergrass

- 1.18 The importance of warm rain processes in orographic enhancement of precipitation during atmospheric river conditions
Joseph Zagrodnik, Lynn McMurdie
- 1.19 Climate Projections and Drought: A Study of the Colorado River Basin
Noe Santos, Thomas Piechota, Sajjad Ahmad
- 1.20 Evaluation of precipitation extremes with respect to the size of the affected area
Miloslav Muller, Blanka Gvozdikova, Marek Kaa;par, Petr Zacharov
- 1.21 Space-time Structure of Subseasonal Indian Monsoon Droughts
Venugopal V., Pritam Borah, Jai Sukhatme, B. N. Goswami
- 1.22 A Contribution-weighted Rainrate View of Indian Monsoon Extremes
Vaibhav Bathri, Venugopal V.
- 1.23 Applying the adjusted CFSR to predict Rainfall data
Mohamed Mokhtar, Abdin Salih, Adil Elkhider, Salih Hamid
- 1.24 Forest fires impact and processes of desertification analysis with remote sensing data in semi arid lands in Algeria
Ahmed Zegrar, Nadjla Bentekhici
- 1.25 Polarimetric Radar Observations over the Tropical Oceans
Steven Rutledge, V Chandrasekar
- 1.26 Evaluation Of Ground-Based Precipitation With Satellite-Based Model Observations Over West Africa
Samuel Akande, Olajomoke Jejelola
- 1.27 The NCEP's Climatology-Calibrated Precipitation Analysis (CCPA) Product and Its Applications
Yan Luo, Ying Lin, Jason Levit, Yuejian Zhu, Dingchen Hou
- 1.28 Detecting Convective Class to Enhance PMW Satellite Precipitation Estimates
Veljko Petkovic, Marko Orescanin, Pierre Kirstetter, Christian Kummerow, Ralph Ferraro
- 1.29 Applying the adjusted CFSR to predict Rainfall data
Mohamed Mokhtar, Abdin Salih, Adil Osman, Salih Hamid
- 1.30 Error Modeling of Passive Microwave Precipitation Products over Complex Terrain
Yagmur Derin, Emmanouil Anagnostou, Ehsan Bhuiyan, Marios Anagnostou, John Kalogiros
- 1.31 Intercomparison of radar rainfall nowcasting techniques for the Netherlands
Ruben Imhoff, Claudia Brauer, Aart Overeem, Albrecht Weerts, Remko Uijlenhoet
- 1.32 Estimating raindrop size distributions using microwave link measurements
Thomas Van Leth, Hidde Leijnse, Aart Overeem, Remko Uijlenhoet
- 1.33 Bias adjustment of satellite-based precipitation over Thailand
Piyatida Ruangrassamee, Teerawat Ram-Indra, Narongthat Thanyawet
- 1.34 Radar Remote Sensing of Rain/Snow in High Mountains: Melting Layer Climatology in the French Alps
Anil Kumar Khanal, Guy Delrieu, Frederic Cazenave, Brice Boudevillain
- 1.35 Merging multi-source precipitation products or merging their simulated hydrological flows to improve streamflow simulation
Qian Zhu
- 1.36 Rainfall variability and trends over East Africa
Elsa Cattani, Andres Merino, Vincenzo Levizzani

- 1.37 Improving quantitative precipitation estimation in complex terrain over the San Francisco Bay Area using gap-filling radar network
Robert Cifelli, Haonan Chen, V. Chandrasekar
- 1.38 1-year evaluation of fuzzy logic non-meteorological echo removal for two C-band radars
Aart Overeem, Hidde Leijnse, Remko Uijlenhoet
- 1.39 Validation of Global Precipitation and Evapotranspiration Datasets from a Water and Energy Balance Perspective
Sarfraz Alam, Akash Koppa, Mekonnen Gebrimichael
- 1.40 Systematic biases associated with cloud types in satellite precipitation estimations
Hyungjun Kim, Nobuyuki Utsumi
- 1.41 Improving Overland Precipitation Retrieval with Brightness Temperature Temporal Variation
Yalei You, Christa Peters-Lidard, Nai-Yu Wang, Joseph Turk, Sarah Ringerud, Song Yang, Ralph Ferraro
- 1.42 Radar Data Quality Control Using a Random Forest Model Based on Polarimetric Observations and GOES-16 Data
Munsung Keem, Bong-Chul Seo, Witold F. Krajewski
- 1.43 Using vertical rain profile information to improve satellite-based sub-hourly surface rain estimates
Nobuyuki Utsumi, Hyungjun Kim, F. Joseph Turk, Ziad S. Haddad
- 1.44 Investigating weather radar quantitative estimations for a record of precipitation event in Turkey
Kurtulus Ozturk, Alper Cubuk
- 1.45 Dense crowdsourced rainfall observations from personal weather stations: proposed real-time quality control methodology
Lotte de Vos, Hidde Leijnse, Aart Overeem, Remko Uijlenhoet
- 1.46 Hydrologic Evaluation of Polarimetric Quantitative Precipitation Estimates over Iowa
Bong-Chul Seo, Witold Krajewski, Felipe Quintero, Munsung Keem, Alexander Ryzhkov
- 1.47 The role of the free tropospheric moisture for convective onset from radio occultation vs climate models
Yi-Hung Kuo, Ramon Padullés, Joe Turk, Manuel de la Torre, Chi Chi Ao, J. David Neelin
- 1.48 Precipitation Estimation based on Specific Differential Phase using the MZZU radar
Neil Fox, Guang Wen
- 1.49 Real-time precipitation maps from satellite broadcast signals
Alberto Ortolani, Samantha Melani, Andrea Antonini, Alessandro Mazza, Francesca Caparrini, Filippo Giannetti, Luca Facheris, Luca Baldini, Attilio Vaccaro
- 1.50 Understanding Global Precipitation Particle Sizes with the GPM Satellite
Mei Han, Scott Braun
- 1.51 Toward a Generalized GPM DPR Rainfall Retrieval Error Diagnostics and Correction Framework in Mountain Regions
Malarvizhi Arulraj, Ana Barros
- 1.52 Impacts of Aerosols on Snowfall and its Melting Process over Sierra Nevada Glaciers in California
Thomas Piechota, Wenzhao Li, Hesham El-Askary, Jingjing Li
- 1.53 Harmonic and Correlative Analysis of the Relationship Among Precipitation Vegetation and Soil Moisture in the MENA Region
Wenzhao Li, Hesham El-Askary, Jet Li, Mohamed Qurban, Mohamed Allali, K. P. Manikandan, Thomas Piechota
- 1.54 Validation of satellite rainfall estimates in the Blue Nile Basin
Fekadu Habteyohannes

- 1.55 Quantifying Evaporation of Rain using a Microrain Radar
Neil Fox, Jon Bongard, Patrick Market
- 1.56 Opportunistic sensing of rainfall using microwave links from cellular communication networks in Africa and Asia
Thomas Van Leth, Aart Overeem, Jenny Prosser, Daniele Tricarico, Hidde Leijnse, Remko Uijlenhoet
- 1.57 Accounting for Satellite Precipitation Uncertainty in a Landslide Hazard Model
Samantha Hartke, Daniel Wright, Dalia Kirschbaum, Thomas Stanley, Zhe Li
- 1.58 Societal response and human resilience to water cycle pollution and extreme weather events along Nigeria Coast
Olajumoke Jejelola, Samuel Akande
- 1.59 Spatio-Temporal Changes in Non-Extreme Precipitation Variability Over North America
Susana Roque-Malo, Praveen Kumar
- 1.60 On Changes of Global Wet-bulb Temperature and Snowfall Regimes
Sagar Tamang, Ardeshir Ebtehaj
- 1.61 Analysis of snow measurement data for estimation of quantitative snow water equivalent (SWE) data
Yonghun Ro, Joo-Wan Cha, Ki-Ho Chang, Gunhui Chung, Jong-Cheol Ha
- 1.62 Precipitation in extratropical cyclones: a GCM evaluation
Catherine Naud, James Booth
- 1.63 Future changes of the most extreme atmospheric river-driven storms over California and its hydrologic impacts
Xingying Huang, Alex Hall, Daniel Swain
- 1.64 Investigating the precipitation microphysical variability induced by orographic enhancement in Northern California
Haonan Chen, Robert Cifelli
- 1.65 Revisiting the intensity distribution of rain rates in global climate models and its simulated change under climate warming
Eric Wilcox
- 1.66 Looking behind the curtain of advanced snowpack estimation in the Sierra Nevada, CA
Kayden Haleakala, Steve Margulis, Mekonnen Gebremichael
- 1.67 Life Cycle of Vertical Scale Invariance Structure of Wind and Moisture Fields during Cold Air Intrusions with Implications for the Predictability of Orographic Precipitation Extremes in the Andes
Masih Eghdami, Ana Barros
- 1.68 Multi-sensor and Modeling Assessment of Vegetation and Precipitation Changes Influenced by ENSO Events in Saudi Arabia
Hesham El-Askary, Wenzhao Li, Mohamed Qurban, Mohammad H. Makkawi Ashri, Thomas Piechota
- 1.69 Satellite-based Estimates of Groundwater Depletion in Basin of Sinai Peninsula, Red Sea, East Coast and Western Desert and Delta in Egypt
Jet Li, Wenzhao Li, Thomas Piechota, Hesham El-Askary
- 1.70 Estimating Tropical Cyclone Precipitation Risk in North America from Observations and Models
Laiyin Zhu
- 1.71 Impact of Climate Variability on Ecohydrology of Upper Alaknanda Basin Western Himalaya, India
Bindhy Wasini, Pandey Suman, Saurabh Abhay, Shankar Prasad
- 1.72 Stationarity considerations in stochastic-dynamic hydrometeorological models
Alin-Andrei Carsteanu, Cesar Aguilar Flores

- 1.73 Evaluating fire-induced hydrologic responses with a dynamic vegetation model
Lauren Lowman, Ana Barros
- 1.74 Simulating Precipitation Using a Climate-Informed k-NN Algorithm
Saman Armal, Naresh Devineni, Nir Krakauer, Reza Khanbilvardi

Poster Session 2, Thursday June 20, 2019 [∞](#)

5:00-6:00pm

- 2.01 Rainfall and Flood Frequency Analysis using Stochastic Storm Transposition and Precipitation Remote Sensing
Daniel Wright, Guo Yo
- 2.02 The Simplified Metastatistical Extreme Value formulation (S-MEV): modeling extreme precipitation emerging from multiple synoptic conditions
Francesco Marra, Davide Zoccatelli, Moshe Armon, Efrat Morin
- 2.03 Exploring the relationship between cyclone-related precipitation and stability
Katherine Towey, James Booth, Catherine Nau
- 2.04 Spatial Extreme Precipitation Modeling Using Satellite Information and Bayesian Hierarchical Models
Mohammad Faridzad, Tiantian Yang, Kuolin Hsu, Soroosh Sorooshian
- 2.05 Analysis of changes in precipitation characteristics over the contiguous USA in recent decades
Iman Mallakpour, Mojtaba Sadeghi, Hamidreza Mosaffa, Mojtaba Sadegh, Amir AghaKouchak
- 2.06 Atmospheric River-CONNECT (ARC): Lifecycle AR detection with machine learning
Eric Shearer, Phu Nguyen, Soroosh Sorooshian, Kuo-lin Hsu, Scott Sellars, Brian Kawzenuk
- 2.07 DiPMaC: Disaggregation Preserving Marginals and Correlations
Simon Michael Papalexiou, Yannis Markonis, Federico Lombardo, Amir AghaKouchak, Efi Foufoula-Georgiou
- 2.08 Studying Extreme Land Surface Temperature Records of the Hottest Place on Earth
Marzi Azarderakhsh, Amir AghaKouchak, Satya Prakash
- 2.09 An Advanced Deep Learning framework for Near-real-time Precipitation Estimation from New Generation of Geostationary Multispectral Satellite Imageries - Application of the conditional Generative Adversarial Networks (cGANs)
Negin Hayatbini, Bailey Kong, Kuolin Hsu, Phu Nguyen, Soroosh Sorooshian
- 2.10 A review of global precipitation datasets: data sources, estimation, and intercomparisons
Chiyuan Miao
- 2.11 The Ongoing Challenge of Retrieving the Fine-scale Spatial and Temporal Variability of Precipitation from Satellite
Clement Guilloteau, Efi Foufoula-Georgiou
- 2.12 Probabilistic Quantitative Precipitation Estimation
Pierre Kirstetter, Shruti Upadhyaya, Micheal Simpson
- 2.13 The role of X-band radars in rainfall estimation for urban and complex terrain applications
Chandra V Chandrasekar
- 2.14 Precipitation Estimation from Remotely Sensed Information Using Deep Neural Networks
Mojtaba Sadeghi, Ata Akbari Asanjan, Phu Dinh Nguyen, Mohammad Faridzad, Kuolin Hsu, Soroosh Sorooshian
- 2.15 On the Evaluation of Micro Rain Radar: A comparative study with Disdrometers and S-band Polarimetric Radar.
Elisa Adirosi, Luca Baldini, and Ali Tokay

- 2.16 Application of Recurrent Neural Networks in spatiotemporal precipitation forecasts
Ata Akbari Asanjan, Tiantian Yang, Kuolin Hsu, Soroosh Sorooshian
- 2.17 Translating the Physics of Snowfall to Radar-Based Validation of GPM
Walter Petersen, Claire Pettersen, Pierre Kirstetter, Dmitri Moisseev, Annakaisa von Lerber, Mark Kulie, David Marks, Ali Tokay, David Wolff, Hudak David
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