# 3rd *Atmospheric River Tracking Method Intercomparison Project* Workshop

## AGENDA
Lawrence Berkeley National Laboratory
Shi Wang Building 59-3101
One Cyclotron Road, Berkeley, CA 94720

### DAY ONE – Wednesday, October 16, 2019

9:00-9:15am    Welcome and Introduction    *Renu Joseph*

### SESSION I

9:15 – 9:40 am    Atmospheric Rivers and Impacts on the Western US    *Jon Rutz*
9:40 – 10:05am    Atmospheric Rivers on the Iberian Peninsula    *Alexandre Ramos*
10:05-10:30am    Importance of Atmospheric Rivers for the Cryosphere *Irina Gorodetskaya*

*10:30-10:45am – Group Discussion, AR Importance – refreshments will be served*

10:45 – 11:10am Atmospheric Rivers and MJO    *Yang Zhou*
11:10 – 11:35am Summary of Previous ARTMIP Workshops    *Christine Shields*
11:35 – 12:00pm Tier 1 Status and Summary    *Jon Rutz*

*12:00-1:30pm – LUNCH – no host, please return to Wang Hall by ~1:25pm*

1:30 – 1:45pm    Tier 2 C20C+ Experiment Overview and Status    *Ashley Payne*
1:45 – 3:00pm    Discussion and Results from Tier 2 C20C+    *Ashley Payne, moderating*

*3:00-3:15pm – Group Discussion, Tier 2 C20C+ – refreshments will be served*

3:15 – 3:45pm    Tier 2 C20C+ Priming Discussion    *Ashley Payne, moderating*
3:45 – 4:00pm    Tier 2 CMIP5/6 Experiment Overview and Status    *Travis, O'Brien*
4:00 – 4:30pm    CMIP6 Update/Discussion    *Michael Wehner, Sasha Gershunov*
4:30 – 5:00pm    Tier 2 CMIP5/6 Experiment Priming Discussion    *Travis O'Brien, moderating*

*5:30–6:30pm    POSTER SESSION / Mixer – refreshments will be served*

### SESSION II – POSTERS

II-a:    Vector-valued spectral analysis of complex flows    *Joanna Swalinska*

II-b:    Influences of Pacific Ocean domain extent on the western US hydroclimatology in variable-resolution CESM    *Alan Rhoades*

II-c:    Western U.S. Hydroclimate Variability    *Christina Patricola*

II-d:    Topological Data Analysis and Machine Learning for AR detection    *Karthik Kashinath*

II-e:    A Bayesian AR Detector for Quantifying Tracking Method Uncertainty    *Travis O'Brien*

II-f:    Impact of Distinct Origin Locations on the Life Cycles of Landfalling Atmospheric Rivers over the U.S. West Coast    *Yang Zhou*

II-g:    Uncertainty in AR contributions to the Iberian Peninsula precipitation    *Alexandre Ramos*

II-h:    Tracking Atmospheric Rivers Globally: Spatial Distributions and Temporal Evolution of Life Cycle Characteristics    *Bin Guan*

II-i:     Creation of AR indices customized for studying surface hydrometeorological impacts     *Chen Zhang*

II-j:     Heat Transport by Atmospheric Rivers                                    *Christine Shields*

II-k:     Atmospheric River CONNECT-Lifecycle AR detection for object-based analysis     *Eric Shearer*

II-l:     Characterizing the size, lagrangian properties, and coherent structures of ARs   *Héctor Inda Díaz*

II-m:    Atmospheric river climatology in Polar Regions: algorithm comparison ipsum lorem
                                                                                *Irina Gorodetskaya*

II-n:     Machine learning techniques for tracking of atmospheric phenomena: supervised and unsupervised approaches     *Mikhail Krinitsky*

II-o:     Changes to the frequency of meteorological patterns associated with atmospheric rivers ipsum lorem     *Naomi Goldenson*

II-p:     Divide and Recombine Analysis of Atmospheric Rivers                      *Wen-wen Tung*


## DAY TWO – Thursday, October 17, 2019

### SESSION III
9:00 – 9:45am      Tier 2 C20C+ Discussion Revisited     *Christine Shields, moderating*
9:45 – 10:10am    Tier 2 C20C+ Paper Planning           *Ashley Payne, moderating*

*10:10-10:17am – Group Discussion, Tier 2 CMIP5/6 – refreshments will be served*

10:17 – 10:45am  Great Shakeout Earthquake Drill
10:45 – 11:15am  Tier 2 CMIP 5/6 Discussion Revisited   *Michael Wehner, moderating*
10:45 – 11:15pm  Tier 2 CMIP 5/6 Paper Planning          *Travis O'Brien, moderating*

*12:00-1:30pm – LUNCH – no host, please return to Wang Hall by ~1:25pm*

1:30 – 2:15pm     Tier 2 Reanalysis Paper Discussion     *Bin Guan, Allie Collow, moderating*
2:15 – 3:00pm     Tier 2 Cryosphere Paper Discussion     *Irina Gorodetskaya, moderating*

*3:00-3:15pm – Group Discussion, Tier 2 Reanalysis – refreshments will be served*

3:15-3:30pm       Tier XX Multi-Resolution MPAS          *Allison Michaelis*
3:30-3:45pm       Tier XX Paleo ARTMIP                   *Juan Lora*
3:45 – 4:45pm     Knowledge Gaps and Prospects for Progress     *Alexandre Ramos*
4:45 – 5:30pm     ARTMIP Going Forward                   *Jon Rutz, moderating*

*5:30–6:30pm  SYNTHESIS BREAKOUT GROUPS / Mixer – refreshments served 59-3101*

*Group I:     59-3049:Impact of uncertainty on our scientific understanding*
*Group II:    59-3104 Dealing with uncertainty*
*Group III:   59-3054 Sources of, and prospects for reducing, uncertainty*
*Group IV:    59-4101 Potential for synergy with non-AR tracking efforts*


## DAY THREE – Friday, October 18, 2016

9:00 – 10:30am     AR Labeling Tutorial and Working Session     *Karthik Kashinath*

*10:30-10:45am – MORNING BREAK – refreshments will be served*

10:45 – 12:15pm  Labeling Working Session 2              *Karthik Kashinath*
12:15 – 12:30pm  Closing Remarks and Next Steps          *Travis O'Brien*

## ATTENDEES

Arriaga, Sarahi (UC Davis / LBNL)
Castellano, Christopher (CW3E, Scripps, UCSD)
Cleveland, William (Purdue)
Collins, Bill (LBNL/ UC Berkeley)
Goldenson, Naomi (UCLA)
Guan, Bin (UCLA)
Huang, Huanping (LBNL)
Inda-Diaz, Héctor (LNBL - UC Davis)
Kashinath, Karthik (LBNL (NERSC))
Kawzenuk, Brian (CW3E, Scripps, UCSD)
Kim, Sol (UC Berkeley)
Lora Gonzalez, Juan (Yale)
Mahesh, Ankur (ClimateAi)
Michaelis, Allison (CW3E, Scripps, UCSD)
McClenny, Beth (UC Davis)
O'Brien, Travis (LBNL)
O'Brien, J.P. (UC Santa Cruz)
Paciorek, Chris (UC Berkeley)
Patricola, Christina (LBNL)
Payne, Ashley (University of Michigan)
Poulsen, Cody (CW3E, Scripps, UCSD)
Ramos, Alexandre (Instituto Dom Luiz, University of Lisbon)
Rhoades, Alan (LBNL)
Rutz, Jon (National Weather Service)
Shearer, Eric (UC Irvine)
Shields, Christine (NCAR)
Slawinska, Joanna (U Wisconsin, Madison)
Tung, Wen-wen (Purdue)
Ullrich, Paul (UC Davis)
Wehner, Michael (LBNL)
Zhang, Chen (Purdue)
Zhang, Rudong (PNNL)
Zhang, Zhenhai (CW3E, Scripps, UCSD)
Zhou, Yang (LBNL)

## VIRTUAL PARTICIPANTS

Brands, Swen  (MeteoGalicia - Meteorological Instiute of the Galician Government)
Collow, Allison (USRA/NASA GMAO)
DeFlorio, Mike (CW3E, Scripps, UCSD)
Gorodetskaya, Irina (University of Aveiro, Centre for Marine and Env. Studies)
Griffith, Helen (University of Reading)
Krinitskiy, Mikhail (Shirshov Institute of Oceanology, Russian Academy of Sciences)
Massoud, Elias (NASA)
Risser, Mark (LBNL)
Viceto, Carolina (CESAM, University of Aveiro, Portugal)
Wille, Jonathan (Université Grenoble Alpes)