CW3E Annual Meeting
June 6 - 8, 2022
The Ida and Cecil Green Faculty Club
UCSD Campus, La Jolla

Monday, June 6th

12:30 - 1:00   Check-in / Register

1:00 - 2:00   CW3E Eight Years On - and Beyond, *Marty Ralph*

2:00 - 2:30   Introductions of new CW3E Staff

2:30 - 2:50   ***BREAK***

2:50 - 4:50   CW3E Observations and Data Assimilation Efforts and Partnerships
Moderator(s): Anna Wilson & Minghua Zheng

2:50 - 3:05   Session Introduction: Overview and Highlights, *Anna Wilson, CW3E*

3:05 - 3:25   Impacts of AR Recon Dropsondes on the Forecasts of Landfalling Atmospheric Rivers in Numerical Weather Models, *Minghua Zheng, CW3E*

3:25 - 3:45   Overview of Ensemble-Based Sensitivity for Atmospheric River Applications, *Ryan Torn, University of Albany*

3:45 - 4:05   Air Force National Winter Season Operations Plan (Atmospheric River) Recap and Way Forward, *Lt. Col. Ryan Rickert, US Air Force Reserves 53rd Weather Reconnaissance Squadron*

4:05 - 4:25   Land-based Observations: Water Year 2021/2022 Highlights and Look-Ahead, *Ava Cooper, CW3E*

4:25 - 4:50   Discussion and Areas for Follow-up

4:50 - 5:00   Poster Lightning Session (brief teasers by poster presenters)

5:00 - 7:00   Poster Session / Reception

Tuesday, June 7th

9:00 - 9:10   Remarks by SIO Director, Dr. Margaret Leinen

9:10 - 10:25   Climate Science
Moderator: Julie Kalansky

9:10 - 9:30   Seasonal and Storm Total Precipitation Reconstructions in California from Tree Rings, *Dave Stahle and Ian Howard, University of Arkansas*

Tuesday, June 7th

9:30 - 9:50   Extreme Precipitation and Future Projections, *Dan Cayan, UCSD/SIO*

9:50 - 10:10   Assessing Vulnerability and Adaptive Management Under   Climate Change

Scenarios: Lessons from California's Largest Reservoir, *Mike Sierks, CW3E*

10:10 - 10:25   Discussion and Areas for Follow-up

10:25 - 10:45   *BREAK*

10:45 - 12:00   Intersections and Transitions Between the Research and Operations Components of CW3E - Leads: *Rob Hartman and Arleen O'Donnell*

12:00 - 1:00   *LUNCH*

1:00 - 3:00   Forecasting, NRT, Verification
Moderators: Rachel Weihs and Luca Delle Monache

1:00 - 1:20   Weather Prediction Center QPF and PQPF: Operations and R2O, *Jim Nelson, Weather Prediction Center*

1:20 - 1:40   2021-2022 West-WRF NRT Update, *Dan Steinhoff, CW3E*

1:40 - 2:00   Near Real-Time AR Forecast Verification, *Rachel Weihs, CW3E*

2:00 - 2:20   Sub-kilometer Numerical Weather Predictions over San Diego County, *Matthew Simpson, CW3E*

2:20 - 2:40   Forecast Perspectives on the Late January 2021 Atmospheric River, *Chad Hecht, CW3E*

2:40 - 3:00   Discussion and Areas for Follow-up

3:00 - 3:20   *BREAK*

3:20 - 5:10   AR Science, GeoHazards
Moderators: Jay Cordeira, Nina Oakley

3:20 - 3:25   Session Introduction: *Jay Cordeira, Nina Oakley*

3:25 - 3:45   Analysis of the Synoptic Settings and Predictability of Atmospheric Rivers using Self-Organizing Maps and Potential Vorticity, *Greta Easthorn and Gary Lackmann, NC State*

3:45 - 4:05   Dynamics and Evolution of the Longest-Lasting Persistent Ridge Regime over Western North America, *Tyler Leicht, University of Albany*

4:05 - 4:25   Global Application of the Atmospheric River Scale, *Bin Guan, NASA JPL*

4:25 - 4:45   From Rainfall to Runout: A Model for Rapid Assessments of Post-wildfire Debris Flow Inundation, *Luke McGuire, Univ. of Arizona*

4:45 - 5:00   Discussion and Areas for Follow-up

5:00 - 5:10   Wrap-Up and Look Ahead

Wednesday, June 8th

9:00 - 10:40   Hydrology, FIRO
            Moderator: Duncan Axisa

9:00 - 9:20   From Weather to Water: a Summary on CW3E Hydrology Team Research and Development, *Ming Pan, CW3E*

9:20 - 9:40   The Role of Soil Moisture in Spring Runoff Predictability in a Warming Climate, *Dennis Lettenmaier, UCLA*

9:40 - 10:00   Water Forecasts to Reservoir Operations, *Chris Delaney, CW3E*

10:00 - 10:20   Recent Enhancements on CNRFC Forecast Systems HEFS and CHPS, *Brett Whitin, CNRFC*

10:20 - 10:40   Discussion and Areas for Follow-up

10:40 - 11:00   *BREAK*

11:00 - 12:00 / S2S Forecasting to Include Bulletin 120 (B-120)
1:00 - 2:00   *Moderator: Mike DeFlorio*

11:00 - 11:20   Highlights of CW3E S2S Research, Scientific Community Engagements/Activities, and Experimental Forecast Product Development, *Mike DeFlorio, CW3E*

11:20 - 11:40   A Statistical-Dynamical Hybrid Approach for Predicting Impactful California Weather on Extended Range Timescales, *Kristen Guirguis, CW3E*

11:40 - 12:00   CW3E Efforts to Improve S2S Water Supply Forecasts, *Ming Pan, CW3E*

12:00 - 1:00   *LUNCH*

1:00 - 1:20   MJO Impacts on Precipitation Extremes over the Western U.S.: Seasonality and QBO Modulation, *Jiabao Wang, CW3E*

1:20 - 1:40   Development of a Statistical Forecast Tool to Predict Atmospheric River Activity and Precipitation in California on Subseasonal Time Scales, *Chris Castellano, CW3E*

1:40 - 2:00   Discussion and Areas for Follow-up

2:00 - 3:35   Emerging Technologies: High Performance Computing (COMET), Dynamical Modeling, Observations, and Machine Learning
            Moderators: Agniv Sengupta, Luca Delle Monache

2:00 - 2:20   Recent Advances in Airborne Radio Occultation, *Jennifer Haase, UCSD/SIO*

2:20 - 2:40   Evolution of Machine Learning Algorithms for Satellite Precipitation Estimation over Three Decades and Their Applications, *Soroosh Sorooshian, UC Irvine*

Wednesday, June 8th

 2:40 - 3:00   COMET: Petascale Computing to Support Research and Development for Western Weather and Water Extremes, *Luca Delle Monache, CW3E*

3:00 - 3:20   Highlights of CW3E ML Research and Accomplishments, *Agniv Sengupta, CW3E*

3:20 - 3:35   Discussion and Areas for Follow-up

3:35 - 3:50   ***BREAK***

3:50 - 4:45   **Looking Ahead: CW3E's Next 5 Year Strategic Plan: 2024 - 2029**
                   Leads: *Julie Kalansky, Arleen O'Donnell*

4:45 - 5:00   **Meeting Wrap-up,** *Marty Ralph*

5:30-7:30   **Scripps Surfside Beach Party**