

NCWCP-UMD Mini-Conference
Earth System Science Interdisciplinary Center
College Park, MD
February 27-29, 2024

Schedule At A Glance:

Tuesday 2/27 - Afternoon, in-person at ESSIC

1:00 pm - 2:30 pm Session 1 (6 presentations)
2:30 - 3:30 pm [Poster Session](#) & Break
3:30 pm - 5:00 pm Session 2 (6 presentations)

Wednesday 2/28 - Morning, in-person at ESSIC

8:30 am - 9:30 am Session 3 (4 presentations)
9:30 am - 10:00 am Break
10:00 am - 11:30 am Session 4 (6 presentations)
11:30 am - 12:00 pm Break
12:00 pm - 1:00 pm Session 5 (4 presentations)

Thursday 2/29 - Morning, online only

8:30 am - 10:00 am Session 5 (6 presentations)
10:15 am - 11:30 am Session 6 (5 presentations)

Meeting Website

The most up-to-date agenda is available on the website:
<https://vlab.noaa.gov/web/ncwcp-umd-mini-conference/public-home>

Wi-Fi

Public guest Wi-Fi will be available through the umd-guest network. The username and password will be posted in the conference room.

Hybrid Meeting

Thursday's sessions will be offered entirely online using Google Meet:
Video call link: <https://meet.google.com/jtt-ofjz-uhu>
Or dial: (US) +1 575-425-0106 PIN: 682 663 657#

There is no online option for the in-person sessions on Tuesday and Wednesday.

Questions?

Contact Conference Organizer Peter.Beierle@umd.edu for assistance.

Tuesday 2/27 1:00 pm - 5:00 pm

Session Chairs: Jun Du (NCEP/EMC), Logan Dawson (NCEP/OPC), and Howard Diamond (ARL)

Time	Presenter	Affiliation	Title	Presentation #	Email Address
1:00 PM			Welcome	1.0	
1:00 PM	Jun Wang	NCEP/EMC	Developing Data Driven Machine Learning Weather Prediction Models at EMC	1.1	jun.wang@noaa.gov
1:15 PM	Sho Yokota	NCEP/EMC	Suitable Background Error Covariances for Radar Reflectivity Direct Assimilation in the Rapid Refresh Forecast System (RRFS)	1.2	sho.yokota@noaa.gov
1:30 PM	Xingren Wu	NCEP/EMC	The Atmospheric River Reconnaissance Dropsonde Data Impact on GFS Forecasts	1.3	xingren.wu@noaa.gov
1:45 PM	Murali Malasala	NCEP/EMC	Calibration on GEFSv12 Reforecast Products for Predicting Atmospheric Rivers and Associated Precipitation on Sub-Seasonal Scale over the U.S. West Coast	1.4	murali.n.malasala@noaa.gov
2:00 PM	Chris Smith	ESSIC/CISESS	Enterprise Proving Ground at NCWCP	1.5	christopher.l.smith@noaa.gov
2:15 PM	Dave Roth	NCEP/WPC	Monthly Sea Level Pressure Records: Their Use in Messaging	1.6	david.roth@noaa.gov
2:30 PM			Poster Session and Break	.	
2:45 PM			Poster Session and Break	.	
3:00 PM			Poster Session and Break	.	
3:15 PM			Poster Session and Break	.	
3:30 PM	Ariel Stein	ARL	NOAA's Air Resources Laboratory—75 Years of Research Linking Earth and Sky: A Historical Perspective	2.7	ariel.stein@noaa.gov

3:45 PM	Alice Crawford	ARL	The HYSPLIT Model - Tracing its Evolution and Path to Success	2.8	alice.crawford@noaa.gov
4:00 PM	Bavand Sadeghi	CISESS - UMD	Enhancing Volcanic Emission Forecasting Through Data Fusion and Trajectory Analysis: A Case Study of 2022 Hunga Tonga Eruption	2.9	bavand.sadeghi@noaa.gov
4:15 PM	Miguel Cahuich	CISESS - UMD	Synthetic Data Experiments of a Measurement-Modeling Greenhouse Gas Emissions Estimation System for the Washington, DC and Baltimore, MD Metropolitan Area	2.10	miguel.cahuich@noaa.gov
4:30 PM	Tianfeng Chai	ARL	HYSPLIT Nuclear Applications and Emergence Response	2.11	tianfeng.chai@noaa.gov
4:45 PM	Howard Diamond	ARL	The U.S. Climate Reference Network: Two Decades of Climate Observation and Validation	2.12	howard.diamond@noaa.gov
5:00 PM			Adjourn		

Wednesday 2/28 8:30 am - 1:00 pm

Session Chairs: TBD (STAR), Peter Beierle (ESSIC/CISESS), Tim Canty (AOSC)

Time	Presenter	Affiliation	Title	Presentation #	Email Address
8:30 AM	Casey Shoup	STAR	An Online Platform for Near-Real-Time Visualization of Tropical Cyclone Aircraft Flight Data	3.16	Casey.Shoup@noaa.gov
8:45 AM	Heather Roman-Stork	STAR	Utilizing Multiparameter Mesoscale Eddy Tracking to Monitor Coral Reef Resiliency	3.17	heather.roman-stork@noaa.gov
9:00 AM	Ken Pryor	STAR	High-Impact Squall Line Events of 2023 in the Greater Washington, D.C. CSA	3.18	ken.pryor@noaa.gov
9:15 AM	Deirdre Byrne	STAR	Assessing Tropical Cyclone Intensity Forecasts in the North Atlantic Using the NOAA Next-Generation Enterprise Ocean Heat Content Algorithm	3.19	deirdre.byrne@noaa.gov
9:30 AM			Break	.	
9:45 AM			Break	.	
10:00 AM	Jing Wei	ESSIC/CISESS	Wildfire emissions disrupt PM2.5, BC, and mortality burden trends across the continental US	4.20	weijing@umd.edu
10:15 AM	Jicheng Liu	ESSIC/CISESS	Inter-Sensor Calibration of Microwave Brightness Temperature Between AMSR-E and AMSR2	4.21	jliu1220@umd.edu
10:30 AM	Isaac Moradi	ESSIC/CISESS	Assimilation of all-sky microwave and radar observations in the NWO model	4.22	imoradi@umd.edu
10:45 AM	Augustin Vintzileos	ESSIC/CISESS	A new class of metrics for quantifying the intensity of heat waves based on relative entropy	4.23	avintzil@umd.edu
11:00 AM	Bailing Li	ESSIC/CISESS	How Hydrological extremes have changed according to GRACE/GRACE FO data	4.24	bli123@umd.edu
11:15 AM	Yongzhen Fan	ESSIC/CISESS	Machine Learning Enhanced Snowfall Retrievals from Passive Microwave Sensors	4.25	yfan1236@umd.edu

11:30 AM			Break	.	
11:45 AM			Break	.	
12:00 PM	Zhanqing Li	UMD AOSC	ML-based retrieval of global fine-mode aerosols and PM2.5: Variations, driving factors & health impact	5.26	zhanqing@umd.edu
12:15 PM	Akua Asa-Awuku	UMD Chem. Eng.	Aerosols: Atmospheric Catalysts for Clouds and Precipitation	5.27	asaawuku@umd.edu
12:30 PM	Maria Molina	UMD AOSC	When Machine Learning Objectives Compete for Improved Subseasonal Bias Correction, Who Wins?	5.28	mjmolina@umd.edu
12:45 PM	Jhayron Carrasquilla	UMD AOSC	An Earth-system-oriented view of the S2S predictability of Weather Regimes using Machine Learning	5.29	jhayron@umd.edu
1:00 PM			Adjourn	.	

Thursday 2/29 8:30 am - 11:30 am
Session Chairs: Cazzy Medley (ESSIC) & Logan Dawson (NCEP/OPC)

Time	Presenter	Affiliation	Title	Presentation #	Email Address
8:30 AM	Jason Krekeler	NCEP/OPC	Quantifying Extratropical Transitions of West Pacific Typhoons in the OPC Domain	6.30	jason.krekeler@noaa.gov
8:45 AM	Michael Folmer	NCEP/OPC	Forecasting Marine Hazards with Limited Observations and Verification	6.31	michael.folmer@noaa.gov
9:00 AM	Ricardo Campos	CIMAS/AOML & NCEP/OPC	Probabilistic wave forecast for week two and beyond based on the NCEP's Global Ensemble Forecast System	6.32	ricardo.campos@noaa.gov
9:15 AM	William Miller	ESSIC/UMD	Investigating Spire GNSS RO bending angle assimilation impacts on HWRF forecasts of four 2022 Atlantic Hurricanes	6.33	william.miller@noaa.gov
9:30 AM	Malarvizhi Arulraj	ESSIC/UMD	Vertical Structure of the Precipitation Systems: Satellite Passive Microwave Sensor Perspective	6.34	marulraj@umd.edu
9:45 AM	James Beauchamp	ESSIC/UMD	Extending NOAA/MHS Hydrological Bundle Climate Data Record (CDR) by Incorporating ATMS observations	6.35	vajim@umd.edu
10:00 AM			Break	.	
10:15 AM	Tony Reale	STAR	NUCAPS Sounding Observations and Typhoon Mawar	7.36	tony.reale@noaa.gov
10:30 AM	Keqin Wu	NCEP/EMC	Atmospheric River Analysis and Forecast System (AR-AFS): Improving Forecasts of Atmospheric Rivers on the US West Coast	7.37	keqin.wu@noaa.gov
10:45 AM	Catherine Thomas	NCEP/EMC	Data Assimilation Development in GFSv17	7.38	catherine.thomas@noaa.gov
11:00 AM	Murali Malasala	NCEP/EMC	Sensitivity of Data Size vs. Deep-learning Model	7.39	murali.n.malasala

			Performance using GEFSv12 Reforecast Products for Rainfall and Temperatures over CONUS		a@noaa.gov
11:15 AM	Jianping Huang	NCEP/EMC	The UFS-AQM online prediction system: Enhancing predictability of wildfire air quality impacts	7.40	jianping.huang@noaa.gov
11:30 AM			Adjourn	.	

Poster Session
Tuesday 2/27 2:30 pm - 3:30 pm

Poster Number	Presenter	Affiliation	Title	Email address
P1	Joshua Richards	UMBC	20 Years of Ozonesonde Profiles from Beltsville, MD: Data Quality Assurance and Insights into Tropospheric Ozone Pollution	jrichar2@umbc.edu
P2	Kwan-Yin Kong	WPC	Vertical Velocity, Vertical Wind Shear, and Pressure Tendency in a Hydrostatic Atmosphere	kwan-yin.kong@noaa.gov
P3	Gregory Monaghan	NCEP/OPC	Improvements to the Interactive Multisensor Snow and Ice Mapping System: Updated Functionality, Imagery, and Transition to NWS NCEP Central Operations	gregory.monaghan@noaa.gov
P4	Lei Ji	ESSIC/UMD	Assessment of BRDF Effects in Surface Reflectance between GOES-16 and GOES-18	lji121@umd.edu
P5	Veljko Petkovic	ESSIC/UMD	Exploring Common Information Content of Satellite Level-1 Products: Precipitation Retrieval Applications	veljko@umd.edu
P6	Liz Ehrbar	NCEP/OPC	An Assessment of Hurricane Force Extratropical Cyclones over the Eastern Pacific - Impacts to the Mariner	elizabeth.ehrbar@noaa.gov
P7	Ron Vogel	ESSIC/UMD	Satellite Chlorophyll for Chesapeake Bay Fisheries Management	vogelr@umd.edu
P8	Lenetta Mallory	NCEP/OPC	Integrating High Resolution AMSR-2 Imagery to Improve Large Scale Sea Ice Situational Awareness	lenetta.mallory@noaa.gov
P9	Xingren Wu	NCEP/EMC	The WindBorne Data Impact on GFS Forecasts	xingren.wu@noaa.gov
P10	Gwen Chen	NCEP/EMC	Prediction of Areas Susceptible to Flash Drought Development over the Contiguous United States	lichuan.chen@noaa.gov

P11	Sho Yokota	NCEP/EMC	Toward Faster Computation of Horizontal Localization in EnVar by Multigrid Beta Filter	sho.yokota@noaa.gov
P12	Neil Barton	NCEP/EMC	Including sea ice and ocean models in GEFS	neil.barton@noaa.gov
P13	Ivan Sloan	Howard University	Microphysical Process Variability within Taiwan's Meiyu and Non-Meiyu Storms	ivan.sloan@bison.howard.edu
P14	Nahin Ferdousi-Rokib	UMD	The Analysis of Four Factors for Hygroscopicity Parameterization - Surface Activity, Solubility, LLPS and O/C	nferdou1@umd.edu
P15	Esther Olonimoyo	UMD	HPLC-PDA Method Development, Optimization, and Validation for The Quantification of Organic Acids	estherao@umd.edu
P16	Yong Chen	STAR	Advancing Processing Algorithms for Excess Phase and Bending Angle Extraction in Multi-RO Missions at NOAA/STAR	yong.chen@noaa.gov
P17	Xi Shao	STAR	A Method for Predicting Radio Occultation Opportunities and Applications in RO Sensor Inter-calibration and Mission Planning	xi.shao@noaa.gov
P18	Yong Chen	STAR	COSMIC-2 Precise Orbit Determination with Multi-Constellation of Global Navigation Satellite System at NESDIS/STAR	yong.chen@noaa.gov
P20	Xin Jing	STAR	Assessing Retrieved Temperature Profile Quality and Consistency in Spire and COSMIC-2 Radio Occultation via Comparisons with NOAA-20 ATMS and Radiosonde Measurements	xin.jing@noaa.gov
P21	Xi Shao	STAR	Evaluation of VIIRS Thermal Emissive Bands Long-Term Stability and Inter-Sensor Consistency with Radiative Transfer Modeling	xi.shao@noaa.gov
P22	Yuling Liu	ESSIC/UMD	Towards Routine Radiance-Based Validation of VIIRS LST Using GDAS Profiles	yuling.liu@noaa.gov
P23	Donghui Yi/Laurence Connor	STAR	Arctic snow depth and sea ice thickness from combined ICESat-2 and Cryosat-2 freeboard observations	donghui.yi@noaa.gov; laurence.connor@noaa.gov
P24	Michael Pettey	STAR	Fifteen Years Of Collocated Radiosonde And Satellite Observations From The NOAA Products Validation System (NPROVS)	Michael.Pettey@noaa.gov

P25	Bomin Sun	STAR	Withdrawn	Bomin.Sun@noaa.gov
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