



Northeast Regional Operations Workshop (NROW) XXV

Conference Agenda



Day 1: Wednesday November 13 2024

7:30 AM - 8:30 AM: Conference Check-in
Coffee & Refreshments sold by the University at Albany Capital Region AMS Chapter

8:30 AM - 8:35 AM: Opening Remarks

Christina Speciale, NROW Chair, NOAA/NWS/WFO Albany, New York

Christopher Gitro, Meteorologist-in-Charge, NOAA/NWS/WFO Albany, New York

8:35 AM - 8:45 AM: Student Map Discussion

Alex Kramer, Department of Atmospheric and Environmental Sciences

University at Albany, State University of New York

Session A: Celebrating CSTAR (Collaborative Science, Technology, and Applied Research) and the 25-Year Partnership Between the NWS and Academia

(8:45 AM - 10:40 AM)

8:45 AM - 8:55 AM: 25 Years of CSTAR - Operations and Research Collaborations Saves Lives

Jeff Waldstreicher

NOAA/NWS Scientific Services Division, Eastern Region Headquarters, Bohemia, NY

8:55 AM - 9:05 AM: CSTAR at UAlbany: How Gene Auciello and Daniel Keyser Conspired to Create this Collaborative UAlbany-NWS Research Program that is Overseen by Professor Kristen Corbosiero

Lance Bosart

Department of Atmospheric and Environmental Sciences

University at Albany, State University of New York

9:05 AM - 9:20 AM: The UAlbany-NWS CSTAR Partnership 2014-2024: High-impact Weather in Complex Terrain

Kristen Corbosiero

Department of Atmospheric and Environmental Sciences

University at Albany, State University of New York



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9:20 AM - 9:35 AM: **Stony Brook CSTAR Efforts: From Ensemble Tools to Stakeholder Communication**

Brian Colle
 School of Marine and Atmospheric Sciences
 Stony Brook University, Stony Brook, New York

9:35 AM - 9:55 AM: **The UAibany-NWS CSTAR Collaborative Partnership 2001-2024**

Thomas A. Wasula, Neil A. Stuart, and Michael S. Evans
 NOAA/NWS/WFO Albany, New York
 STM Weather Cropseyville, New York

Perspective from Past CSTAR Graduate Students (9:55 AM - 10:30 AM)

<p><u>In-Person</u> (9:55 AM - 10:15 AM) Alicia Wasula, Ph. D, CCM STM Weather COMET Student (Master's 1998-2001, Ph.D 2001-2005)</p> <p>Daniel Thompson NOAA/NWS/WFO Marquette, MI CSTAR Student (2010–2012)</p> <p>Matt Vaughan 16th Weather Squadron, U.S. Air Force CSTAR Student (2013-2015)</p> <p>Brian Filipiak Department of Civil and Environmental Engineering University of Connecticut CSTAR Student (2020-2022)</p>	<p><u>Virtual Attendees</u> (10:15 AM - 10:30 AM) Tomer Burg NOAA/WPC/CIRES CSTAR Student (2016-2019)</p> <p>Heather Archambault Citadel CSTAR Student (2002–2005)</p> <p>Dr. David Novak NOAA/NWS Weather Prediction Center CSTAR Student (2000-2002)</p>
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Q & A for Session A (10:30 AM - 10:40 AM)

All presenters plus Dr. Daniel Keyser (Department of Environmental and Atmospheric Science, University at Albany, State University of New York) and Warren Snyder (Retired ALY SOO - virtual)



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10:40 AM - 10:55 AM: Break

Coffee and Refreshments sold by the UAlbany Capital Region AMS Chapter

Session B: NROW XXIV Keynote Presentation (10:55 AM - 11:45 AM)

Mic Runner: Christina Speciale

Introduction: Christopher Gitro

Meteorologist-in-Charge

NOAA/NWS/WFO Albany, New York

National Weather Service Transformation Update

Keynote Speaker: Ken Harding

Chief Operating Officer

NOAA/NWS Headquarters, Silver Spring, Maryland

Q & A for Keynote Speaker (11:35 AM - 11:45 AM)

**11:45 AM - 1:00 PM: Lunch Sponsored by UAlbany Auxiliary Services and the
New York State Mesonet**

Pre-Function Space Outside Shared Training Room 149/151

Open to all NROW XXV Attendees



AUXILIARY
SERVICES



[Area Restaurant Documents](#) for Other Lunch Recommendations



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Day 1: Wednesday November 13, 2024

Session C: 1:00 PM - 2:30 PM: The National Weather Association (NWA) Research to Operations Nexus (RON) at NROW

All In-Person NROW XXV Attendees Welcome to Participate
Pre-Function Space Outside Shared Training Room 149/151

Group 1: Academia & National Weather Service Partnership

Subject Matter Experts: Dr. Lance Bosart¹, Dr. Kristen Corbosiero¹, Dr. Daniel Keyser¹, Gene Auciello²

Department of Atmospheric and Environmental Sciences
University at Albany, State University of New York¹

Retired NOAA/NWS/WFO Albany, New York²

Note Taker: Thomas A. Wasula NOAA/NWS/WFO Albany, New York

Group 2: Weather and Decision Making

Subject Matter Experts: Jonathan Pease¹, Peter Cichetti², Melissa Nussbaum²,
Madison McGuire²

National Grid¹, NYS Division of Homeland Security and Emergency Services²

Note Taker: Peter Speck, NOAA/NWS/WFO Albany, New York

Group 3: AI/Machine Learning

Subject Matter Experts: Dr. Christopher Thorncroft
Atmospheric Sciences Research Center

University at Albany, State University of New York

Note Taker: Neil Stuart, NOAA/NWS/WFO Albany, New York

Group 4: Reaching Underserved & Vulnerable Communities

Subject Matter Experts: Leticia Williams, Jarrod Loerzel
NOAA/NWS Office of Science, Technology, and Integration

Social, Behavioral, Economic Science

Note Taker: Abigail Gant, NOAA/NWS/WFO Albany, New York

Session D: Winter Weather I (2:30 PM - 3:50 PM)

2:30 PM - 2:45 PM: **The Evolution of Snow Squall Science and Forecasting**

Greg DeVoir

NOAA/NWS/WFO State College, Pennsylvania



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2:45 PM - 3:00 PM: **Decades of Snow Squall Research Leads to Successful Warnings at WFO Mount Holly**

Michael Lee and Cameron Wunderlin (Virtual)
NOAA/NWS/WFO Mount Holly, New Jersey

3:00 PM - 3:15 PM: **Applications of Winter Mesoanalysis: Lessons Learned From The February 16-17, 2024 Winter Storm**

Paul Fitzsimmons (Virtual)
NOAA/NWS/WFO Mount Holly, New Jersey


3:15 PM - 3:30 PM: **Evolving The Weather Prediction Center's Winter Weather Desk**

Tony Fracasso
NOAA/NWS Weather Prediction Center, College Park, Maryland

3:30 PM - 3:45PM: **Snow-to-Liquid Ratio Prediction Over the Northeast United States Using Machine Learning**

Michael Pletcher (Virtual)
University of Utah

Q & A for Session D (3:45 PM - 3:50 PM)

 3:50 PM - 4:05 PM: **Break Session** 

Coffee and Refreshments sold by the UAlbany Capital Region AMS Chapter

Session E: Severe Weather, Heat, and Fire Weather (4:05 PM - 5:25 PM)

4:05 PM - 4:20 PM: **The 16 July 2024 Significant Severe and Tornadoic Event across New York and New England Part I: Synoptic and Mesoscale Overview**

Thomas A. Wasula
NOAA/NWS/WFO Albany, New York

4:20 PM - 4:35 PM: **The 16 July 2024 Significant Severe and Tornadoic Event across New York and New England Part II: Radar Analysis, Warnings, and IDSS**

Thomas A. Wasula
NOAA/NWS/WFO Albany, New York



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4:35 PM - 4:50 PM: **A Probabilistic Look at Forecasting the June 2024 Northeast Heat Wave**

Todd Foisy

NOAA/NWS/WFO Caribou, Maine

4:50 PM - 5:05 PM: **Fire Weather in New York and New England**

Robert Fovell

Department of Atmospheric and Environmental Sciences

University at Albany, State University of New York

5:05 PM - 5:20 PM: **New York State Mesonet-Based Fire Danger Rating System**

DJ McGuinness

New York State Mesonet

Q & A for Session E (5:20 PM - 5:25 PM)

5:25 PM - 5:30 PM: Closing Remarks/Adjourn

Christina Speciale, NROW Chair

NOAA/NWS/WFO Albany, New York

Meeting Adjourned



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Day 2: Thursday November 14 2024

7:30 AM - 8:30 AM: Conference Check-in.
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8:30 AM - 8:35 AM: Opening Remarks

Christina Speciale, NROW Chair, NOAA/NWS/WFO Albany, New York

Session F: Flooding & Improved Hydrologic Forecasting Tools/Services (8:35 AM - 10:10 AM)

8:35 AM - 8:50 AM: The Influence of Atmospheric Rivers on the Northeast United States

Evan Belkin

NOAA/NWS Northeast River Forecast Center

University at Albany, State University of New York

8:50 AM - 9:05 AM: Factors Contributing to Catastrophic Flash Flooding in Vermont's Northeast Kingdom on 30 July 2024

Peter Banacos

NOAA/NWS/WFO Burlington, Vermont

9:05 AM - 9:20 AM: Heavy Precipitation Object Tracking and Forecast Tools

Matthew Green

NOAA/NWS Weather Prediction Center & Cooperative Institute for Research in Environmental Science

9:20 AM - 9:35 AM: Flood Inundation Mapping (FIM) & National Water Prediction Service (NWPS): Training & Outreach

Greg DeVoir

NOAA/NWS/WFO State College, Pennsylvania

9:35 AM - 9:50 AM: How NWS Flood Inundation Mapping (FIM) Performed During the April 2024 Ohio Valley Floods

Alicia Miller (Virtual)

NOAA/NWS/WFO Pittsburgh, Pennsylvania



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Day 2: Thursday November 14, 2024



9:50 AM - 10:05 AM: **A Summary National Precipitation Forecast Skill and the National Forecast Informed Reservoir Operations Expansion Pathfinder Effort**

Jason Cordeira

Center for Western Weather and Water Extremes

University of California, San Diego

Q & A for Session F (10:05 AM - 10:10 AM)

 10:10 AM - 10:25 AM: **Break & Poster Session** 

Coffee and Refreshments sold by the UAlbany Capital Region AMS Chapter

Session G: Decision Support Services & Improving Communication/Messaging

(10:25 AM - 12:00 PM)

10:25 AM - 10:40 AM: **Impact-Based Decision Support Services by NWS Baltimore/Washington Following the Collapse of the Francis Scott Key Bridge in Baltimore, Maryland**

Kevin Rodriguez (Virtual)

NOAA/NWS/WFO Sterling, Virginia

10:40 AM - 10:55 AM: **Improving Operational Decision-Making with Insights from Weather Partners**

Peter Cichetti

New York State Division of Homeland Security and Emergency Services

10:55 AM - 11:10 AM: **Clear Communication, Safer Communities: Refining Heat Messaging in the Northeast**

Micki Olson and Bruce Pollock

College of Emergency Preparedness, Homeland Security, and Cybersecurity

University at Albany, State University of New York

11:10 AM - 11:25 AM: **Challenges Communicating Severe Weather Risk in Spanish**

Jase Bernhardt

Hofstra University

11:25 AM - 11:40 AM: **Snowed Under by Jargon: Erie County Residents' Views on Cold Weather Terms**

Savannah Olivas

College of Emergency Preparedness, Homeland Security, and Cybersecurity

University at Albany, State University of New York



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Day 2: Thursday November 14, 2024

11:40 AM - 11:55 AM: Riding Through a Floodscape: Studying the Intersection of Buses and Rainfall in Queens

Nicholas Lucchetto
Hofstra University

Q & A for Session G (11:55 AM - 12:00 PM)

12:00 PM - 1:15 PM: Lunch Break

See [Area Restaurant Documents](#) for Lunch Recommendations

Session I: New York Mesonet Applications I (1:15 PM - 2:50 PM)

1:15 PM - 1:30 PM: Characterizing the Impacts of 2024 Total Solar Eclipse Using New York State Mesonet Data

June Wang
New York State Mesonet

1:30 PM - 1:45 PM: Creating Convolutional Neural Networks to Monitor New York State Mesonet Daytime Precipitation from Camera Images

Brian Horan
Atmospheric Science Research Center
University at Albany, State University of New York

1:45 PM - 2:00 PM: Surface Energy Balance Across the 18-site New York State Mesonet Flux Network

Anna Glodzik
Atmospheric Science Research Center
University at Albany, State University of New York

2:00 PM - 2:15 PM: A 200-year-old database for climate change study from archives of the New York Academy System, New York State's (and the World's) first mesonet, 1826-1872

Anna Duhon and Anton Seimon
Bard College

2:15 PM - 2:30 PM: Exploring Autumnal Heatwaves in Buffalo, NY using NYS Mesonet Data

Hannah Attard
Daemen University



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Day 2: Thursday November 14, 2024

2:30 PM - 2:45 PM: Systematic evaluation of assimilating ground-based remote-sensing profiling observations of the New York State Mesonet for forecasting of convection initiation events in New York State

Junkyung Kay

NSF NCAR/Earth Observing Laboratory

Q & A for Session I (2:45 PM - 2:50 PM)

 **2:50 PM - 3:05 PM: Break & Poster Session** 

Coffee and Refreshments sold by the UAlbany Capital Region AMS Chapter

Session J: Winter Weather II (3:05 PM - 4:40 PM)

3:05 PM - 3:20 PM: Leaning Into Partnerships for Future Snow Squall Innovations

Greg DeVoir

NOAA/NWS/WFO State College, Pennsylvania

3:20 PM - 3:35 PM: Improving the Understanding of Risk Perception and Communication in the New York City Area Through Surveys, New Partnerships, and Workshops

Josef Moses

Stony Brook University

3:35 PM - 3:50 PM: The 22-23 March 2024 Snow and Ice Storm across the NWS Albany County Warning Area

Lee Picard

NOAA/NWS/WFO Albany, New York

3:50 PM - 4:05 PM: National Grid – Planning Preparation, and Response to Icing Events

Jonathan Pease

National Grid

4:05 PM - 4:20 PM: Evaluating Tools for Diagnosis and Nowcasting Precipitation Type and Freezing Rain: Results from the 3–4 February 2022 Winter Storm in the Hudson Valley

Justin Minder

University at Albany, State University of New York



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4:20 PM - 4:35 PM: **Climatology of Precipitation Features within the Cyclone Comma Head and Some Comparisons with WRF**

Phillip Yeh

Stony Brook University

Q & A for Session J (4:35 PM - 4:40 PM)

4:40 PM - 4:45 PM: **Closing Remarks/Adjourn**

Christina Speciale, NROW Chair

NOAA/NWS/WFO Albany, New York



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Day 3: Friday November 15, 2024

7:00 AM - 7:45 AM: Conference Check-in (**Report to ETEC Basement Room B010**)

7:45 AM - 7:50 AM: Opening Remarks

Christina Speciale, NROW Chair, NOAA/NWS/WFO Albany, New York

Session K: NYS Mesonet Applications II (7:50 AM - 9:10 PM)

7:50 AM - 8:05 AM: Evaluation of WRF precipitation simulations for Storm Ida Over NYC Using NY/NJ Mesonet

Jorge Bravo

Stevens Institute of Technology

8:05 AM - 8:20 AM: Improving the Quality of the NYS Mesonet Microwave Radiometer Data with a Novel Bias Correction Scheme

Chau-Lam (Chris) Yu

New York State Mesonet

8:20 AM - 8:35 AM: The Southern Ontario Lidar (SOLID) Mesonet: Impacts on Aviation and Severe Weather Nowcasting

Zen Mariani (Virtual)

Environment and Climate Change Canada

8:35 AM - 8:50 AM: Combining Low-Cost Air Quality Sensors with the New York State Mesonet for Fine-Scale Monitoring in New York City

Ellie Hojeily

Atmospheric Science Research Center



University at Albany, State University of New York

8:50 AM - 9:05 AM: Improving Mesoscale Model Forecasts for Daily Weather Analysis in New York City

Madhusmita Swain

University at Albany, State University of New York

Q & A for Session K (9:05 AM - 9:10 AM)

 9:10 AM - 9:20 AM: **Break** 



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Day 3: Friday November 15, 2024

Session L: Artificial Intelligence and Social Science (9:20 AM - 10:25 AM)

9:20 AM - 9:35 AM: Innovative Geospatial Tools and Technologies To Empower NWS Service Equity Success

Jarrold Loerzel

NOAA/NWS Office of Science, Technology, and Integration
Social, Behavioral, Economic Science

9:35 AM - 9:50 AM: Language Program in the NWS: How It Started and Where It Is Going

Krizia Negrón (Virtual)

NOAA/NWS Office of Science, Technology, and Integration
Social, Behavioral, Economic Science

9:50 AM - 10:05 AM: Weather in More Languages: The NWS Translation Project at WFO New York, NY

Faye Morrone



NOAA/NWS/WFO New York, New York

10:05 AM - 10:20 AM: The Potential to Improve Efficiency in Operational Meteorology With Generative AI

David Radell

NOAA/NWS/WFO New York, New York

Q & A for Session L (10:20 AM - 10:25 AM)

 10:25 AM - 10:35 AM: **Break Session** 

Session M: Severe/Tropical Weather & Hydrology (10:35 AM - 11:55 AM)

10:35 AM - 10:50 AM: Understanding Frequent Lightning Environments over the NWS Albany, NY County Warning Area

Amari Woods and John Farash

Department of Atmospheric and Environmental Sciences
University at Albany, State University of New York



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10:50 AM - 11:05 AM: Multiple Tropical Cyclone-Baroclinic Trough Interactions over the North Atlantic Ocean during September 2023

Lance Bosart

Department of Atmospheric and Environmental Sciences

University at Albany, State University of New York

11:05 AM - 11:20 AM: An Evaluation of Precipitation Estimates Associated with Ida in the Northern Mid-Atlantic for a Forensic Case

Michael Evans

STM Weather

11:20 AM - 11:35 AM: The Destructive Flooding Events of August 18-19th, 2024

Matthew Wunsch

NOAA/NWS/WFO New York, New York

11:35 AM - 11:50 AM: Model Review of the Historic Flash Flood Events of August 18-19, 2024

David Stark

NOAA/NWS/WFO New York, New York

Q & A for Session M (11:50 AM - 11:55 AM)

11:55 AM - 12:00 PM: Closing Remarks/Adjourn

Christina Speciale, NROW Chair

NOAA/NWS/WFO Albany, New York

**Meeting Adjourned
NROW XXVI - November 2025**