

MILLERSVILLE METEOROLOGY

NEWSLETTER

Fall 2025



New Meteorology Faculty

The Department of Earth Sciences and the Meteorology Program are excited to introduce the two newest Meteorology Faculty. Dr. Greg Blumberg and Dr. Eleanor Casas.

Dr. Greg Blumberg joined the Meteorology program in the fall of 2022 coming to MU after completing a post-doctoral fellow program at NASA. Dr. Blumberg has a Ph.D. in Meteorology from the University of Oklahoma. His areas of research interest include atmospheric retrievals, severe weather prediction and analysis, diurnal boundary layer transitions, mesoscale heterogeneity and launch range safety.



Dr. Eleanor (Ellie) Casas joined the Meteorology program in the fall of 2023 after completing a post-doctoral Research Faculty Associate at the Naval Research Laboratory. She earned her Ph.D. in Atmospheric Sciences from Colorado State University. Dr. Casas' research interests are in the areas of tropical cyclones and general tropical meteorology, air-sea interaction, boundary layer impacts on severe weather, mesoscale dynamics, remote sensing, atmospheric science machine learning application and numerical weather prediction.



Student Experience Spotlight

Rebecca Butterfield's research experiences at the National Weather Center focused on precipitation whiplash at specific National Parks. Her research was part of a larger effort to help National Parks adapt to future extreme events. Through collaboration with her three University of Oklahoma mentors, she created multiple presentations on her research—including a conference presentation and a research manuscript for publication. Melanie Jones' research experience through the National Weather Center worked with two mentors from the National Severe Storms Laboratory (NSSL) on a significant freezing rain event, resulting in a scientific paper on her research findings. In addition, she attended several workshops to help broaden her knowledge of scientific research, writing skills, and the essentials of Python coding.



Weather Information Center and Campus Weather Service

A trademark of Millersville University's Meteorology program is student participation in the Campus Weather Service (CWS). Regarded as one of the most trusted and reliable sources of weather information in southeastern PA and the Lower Susquehanna Valley, CWS forecasts are produced by our student meteorologists three times a day during the semester. Under the supervision of Weather Information Center Director Kyle Elliot, students learn to apply mathematical and scientific concepts taught in their core classes through a hands-on forecasting perspective. CWS forecasters issue three products: a short-term forecast, brief weather discussion, and 7-day outlook. Students are given the opportunity to create short and medium range on-air-style-forecasts, which provide valuable experience in communicating weather forecasts to the public.

CAMPUS WEATHER SERVICE - HOMEPAGE

Welcome to the new Campus Weather Service homepage!

This web portal is designed exclusively for your use, whether working a CWS shift, making a WxChallenge forecast, or just monitoring the next big event. Use the logo icons below and the links (right) for navigation. Please note that the CWS Forecast Wizard remains restricted web space, so all MET majors need to acquire a login and password from the network administrator in order to update the forecast.



Space Weather

Millersville Meteorology remains quite active in the Space Weather (SW) Community. We are the only program in the U.S. to offer a Graduate Certificate in Space Weather and Environment: Science, Policy, and Communication. Our graduates work in fields from solar physics research to space weather forecasting and occupy leadership positions across public, private, and academic sectors. Space is the place. MU is the launch pad.



Collage of MU students, alumni, and instructors attending the Space Weather Workshop, Boulder, CO 2025



Opportunities with the Climavision® Radar

Thanks to our partnership with Climavision, students in the meteorology program now have access to data and products from an X-band weather surveillance radar, installed on the water tower in June 2023. Faculty and students are using the radar data in the classroom, and for scholarship, publication, and presentation. MU alum Dr. Jim Kurdzo, a radar scientist at MIT's Lincoln Labs, helped design the algorithm that determined that the Lower Susquehanna Valley was one of the top three worst locations in the country. In September 2025, Climavision welcomed MU Meteorology student, Josh Contrucci, Jr. as their newest intern. Josh will be working with Climavision's Radar Science team.

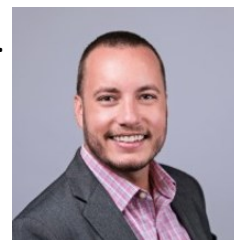


On September 4, 2025, the Climavision X-band radar captured rotation within the thunderstorm that surrounding S-band, Doppler Radars failed to detect. At 9:31 PM EDT, a supercell thunderstorm moving northeastward through southern Lancaster County produced a brief, EF-0 tornado near Quarryville. The EF-0 tornado was confirmed by a National Weather Service (NWS) Storm Survey and credited MU meteorology students for their timely reporting.



Alumni Spotlight

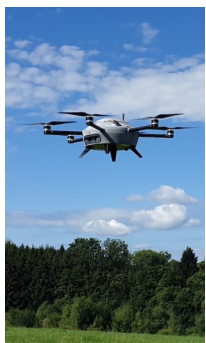
Tim Loftus, an MU Meteorology alum from the Class of 2011, and a graduate of the M.S. in Integrated Scientific Applications with a concentration in Weather Intelligence and Risk Management, has been named a recipient of the 2026 American Meteorological Society (AMS) Award for Outstanding Contribution to the Advance of Applied Meteorology for pioneering AI methods to create value-added meteorological datasets, significantly enhancing business stakeholder decision-making and operational efficiency. Tim will receive the award at the 2026 AMS Annual Meeting in Houston. Ultimately, Applied Meteorology has always been about service: transforming data into decisions that protect life, property and help businesses prosper. Through his position as Director of Data Science at AccuWeather, Tim plays an integral role in that mission.



Tim's journey began over 30 years ago with a childhood fascination with weather and a drive to understand how he could help protect people and property. That passion carried him through his studies as Millersville University and professional career at Esri and AccuWeather. He credits the courses and professors at Millersville for shaping his future career, particularly Dr. Richard Clark and Dr. Sepi Yalda. Tim also credits his incredible colleagues, mentors and friends for shaping and challenging him to grow in the exceptionally complicated and dynamic domain of Applied Meteorology.

Research Instrumentation

The Meteorology program has amassed an impressive array of observational instruments that have been used in various large scale field projects from Maryland to the Mojave, Texas to Tug Hill. The newest additions are five drones, four of which are DJI Mini II's, used for simple surveying and training. The fifth drone is a Vision Aerial Vector, which is a larger industrial grade drone with a 17 lbs. payload capable of carrying multiple instrument packages, such as a Sony A6400 camera for photogrammetry, RedEdge-P multispectral camera for multi-wavelength photogrammetry, and the Blue Halo VP-V3 Weather Payload for in-situ measurement of atmospheric variables and derived parameters. The drones complement other measurement platforms such as balloons (free and tethered), kites, acoustic sodars lidar, tower instruments and a full suite of air chemistry and particulate matter instrumentation, as shown below.



MU Student Chapter of the AMS

Millersville University has an active Student Chapter of the American Meteorological Society (AMS). The Chapter plays an integral role in bringing together students in the meteorology program to enjoy a wide range of events that focus on mentoring, professional development, forecasting, research and building networks, connections and friendships. The Met-Mentoring program pairs incoming 1st year students with more seasoned majors to build camaraderie and foster engagement. Each year the student chapter helps with funding travel to the Annual Meeting of the AMS, where they can attend the Student Conference, build relationships with their peers, present their research, and network with professionals across the academic, public and private sectors at the career fair and other events. This year, students will be attending the 106th Annual AMS Meeting in Houston, TX, which is especially meaningful in that it is the 25th anniversary of the AMS Student Conference. The AMS Chapter has subgroups that focus on Space Weather,



Weather Watch, Millersville Storm Tracking Team (MiST) and the Weather Balloon Launch Team. Since 2009, the students organize and host the Public Weather Awareness Day, which is open to the public.