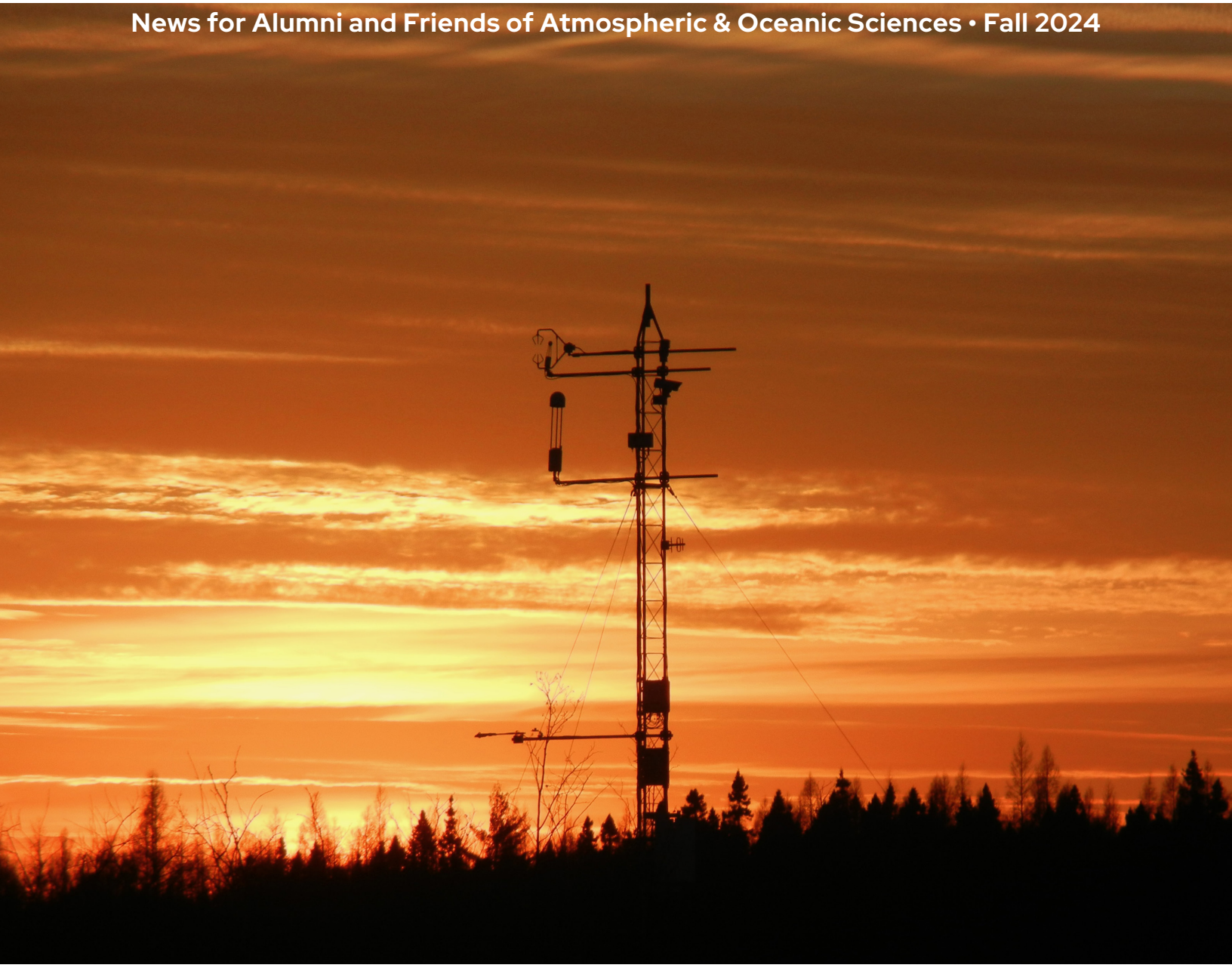
Atmospheric & Oceanic Sciences
UNIVERSITY OF WISCONSIN–MADISON

Making Waves

News for Alumni and Friends of Atmospheric & Oceanic Sciences • Fall 2024



Meet the AOS Research Scientists

Peer behind the scenes and learn more about the people who are part of the world-class climate, weather, and water research happening in AOS

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Letter from the Chair

Ankur Desai, Department Chair

Four fleet vans booked! Check. Field station lodging invoice paid! Check. Field safety plan finalized! Check. Students, bright and early (ok, mostly groggy), tools and instruments in hand, ready to hit the road! Away we go!

This fall, I taught one of my favorite classes, AOS 404: Meteorological Measurements. Every time I or my colleagues run this class, we try to find a field research site or experiment where AOS students can directly apply their learning about the atmosphere and ocean on the ground through testing hypotheses they collectively design. These experiments happen locally in Madison, as it did last spring to study microclimatic impacts of a solar farm, and across the country.

This year, we partnered with a group at Michigan Technological University on a project about Lake Superior lake breezes, air pollution recirculation, and impacts of biomass burning emissions on the Keweenaw Bay Indian community. Through support from NSF and the department, I was able to take 14 undergraduate senior majors and 1st year graduate students, along with Prof. Mayra Oyola-Merced, to the Upper Peninsula. Part of this experiment also involves deploying state-of-the-art surface remote sensing with the SSEC Portable Atmospheric Research Center (SPARC). Students will have access the best possible observations to study this phenomenon!

Next spring, Prof. Angela Rowe is planning to run her version of AOS 404. This time, she's hoping to take seven students to Storm Peak Lab in Steamboat Springs, Colorado. Here, Prof. Rowe is co-leading (along with AOS alumnus Claire Pettersen) an exciting field experiment called Snow Sensitivity to Clouds in a Mountain Environment (S2noCliME), which you can read more about on page 4. Students will get to directly engage and work with high-tech instruments deployed throughout the mountain. Many of you may remember Prof. Emeritus Greg Tripoli's frequent student trips to this lab or ones run by Prof. Emeritus Grant Petty or myself. So, I'm thrilled to see an opportunity to return come up again – it's been too long.

I am proud that we can offer these and many other "experiential" learning experiences to our majors and graduate students. Doing so requires resources, most of which comes from alumni. With our Ned P Smith instrumentation fund, we are able to refresh instruments, as we are this year with a new weather balloon sounding system for thermodynamics courses (Skew-T love!) and a water profiling CTD for Lake Mendota cruises with oceanography courses. Alumni annual giving allows us to pay for the tools, the rental vehicles, the shared meals, and even rolls of duct tape. Please consider how your annual giving to our discretionary funds can continue to support future students.

This support is needed more than ever as we had one of the largest entering graduate classes in recent history. Our now nearly 70 undergraduate majors, not to mention over 200 majors in the Environmental Sciences program we administer, are the largest we've had in decades. This growth comes partly from the evolving programs of our many recent faculty hires. And though we said a farewell to now retired and Prof. Emeritus Grant Petty, we also welcomed this fall two more faculty members, Andrea Lopez Lang (an undergraduate and graduate alumnus of our program) and David Henderson. You can learn more about them in these pages. We also have new and returning research staff, who form the backbone of much of our research enterprise. Profiles of some of these staff are also found within these pages.

Meanwhile, campus is making investments to raise its profile, such as the chancellor promoting a new initiative in growing UW's strength in multiple areas through the RISE Initiative. One of these is Sustainability (RISE-EARTH) and AOS is in line to recruit another leader in this area, focused on climate solutions, weather risk, and/or modeling and AI tools. The future is bright!

I suspect for many of you, trips like the courses I wrote about above, whether in a class, through research, or just a group of your friends, maybe chasing a storm, are some of your fondest memories of your time in AOS. As an instructor of these, I see so much student growth that comes from learning to work together, seeing the real atmosphere behave or misbehave with respect to the theories learned in earlier classes, and solving problems with creativity, through programming and data analysis, through writing and presenting their experiments, and yes, lots of duct tape! Recently, I learned that giving through the Wisconsin Foundation and Alumni Association (WFAA) and revenue from the Wisconsin Alumni Research Foundation (WARF) now exceed total state support from Wisconsin taxpayers. With a growing student body and faculty numbers in AOS, now is the time to give back. Help us sustain this growth so we can continue to grow our status as a world-class leading atmospheric and oceanic science program! On, Wisconsin!

-Ankur

New Faculty at AOS

Scott Dyke, Communications Specialist

Andrea Lopez Lang
Associate Professor

Lopez Lang joins us from the University at Albany, SUNY, where she was an associate professor leading a research group interested in understanding the scale interactions in our atmosphere and their impacts on extratropical weather extremes. Her group approaches this research from both basic and applied research perspectives, where they examine extratropical weather extremes by considering the dynamics and predictability in the troposphere and stratosphere on timescales of days to weeks.

Her expertise led to roles as a co-lead for the NOAA Climate Program Office Subseasonal-to-Seasonal Prediction Task Force, the chair of the American Meteorological Society's Board on Enterprise Economic Development, and a member of the National Academies Board of Atmospheric Science and Climate. Andrea is returning to Madison after receiving her PhD from UW-Madison in 2011. While at UW-Madison as an undergrad, she was captain of the Women's Track and Field Team and is looking forward to fully reconnecting with Badger sports!

"As an alum of AOS, the evolution and exciting growth in the department since I graduated a decade and a half ago were wonderful to watch from afar," says Lopez Lang. "As I transition to rejoining AOS, this time as faculty, I'm truly invigorated by the changes. I'm enthusiastic about joining a world-class program and collaborating with the lively community of AOS."

David Henderson
Assistant Professor

Henderson grew up near Cleveland, Ohio, experiencing a variety of weather ranging from thunderstorms to lake-effect snow storms and blizzards, which sparked his interest in pursuing a career in atmospheric sciences. He obtained his PhD from Colorado State University in 2017 and then served as a Research Scientist at the Space Sciences and Engineering Center (SSEC) at UW–Madison for six years. Along with enjoying the seasonal weather in Wisconsin, he plays a wide variety of music as a drummer, and is an avid cook, constantly experimenting with new recipes. He also loves traveling and exploring around the lakes of Wisconsin with his family.

Henderson's research focuses on integrating data from satellite remote sensing platforms and numerical weather prediction to investigate the impacts of changes in clouds and precipitation on weather patterns. Throughout his career, he has led the development and application of satellite retrievals to enhance understanding of clouds and precipitation on the Earth's energy and water balance. He is also integrating modeling and satellite data for local field campaigns in the United States, with the goal of advancing our understanding of thunderstorm development.

Henderson says he's "thrilled to join AOS to continue pushing the boundaries of satellite data research in collaboration with SSEC and CIMSS. I look forward to continuing working with and mentoring students as they grow in their careers and professional development. The AOSS building is full of fantastic people and scientists, and I can't wait to contribute to the exceptional research and teaching conducted here."

A Tradition of Excellence

The additions of Lopez Lang and Henderson continue AOS' legacy of world-class faculty, both in the field and the classroom.

As Department Chair Ankur Desai notes, "Andrea and Dave are top-notch scientists, and we are absolutely ecstatic that they have joined our faculty and can't wait to see all the great work, leadership, and student mentoring they each bring to our team."

Please join us in giving them a warm Wisconsin welcome! And stay tuned for more faculty news as we're currently hiring for an assistant/associate professor as part of campus' RISE-EARTH initiative.

Andrea Lopez Lang

David Henderson

S2noCliME to Study Snow Processes at Storm Peak Laboratory

Scott Dyke, Communications Specialist

The U.S. Mountain West is becoming warmer and has seen declines in overall snowpack, low-elevation snow cover, and an increase in rain-on-snow events. Yet projections of precipitation in the region remain highly variable. A new National Science Foundation (NSF)-funded field campaign, Snow Sensitivity to Clouds in a Mountain Environment (S2noCliME), aims to improve understanding of cloud and precipitation processes and forecasting in mountainous regions.

Angela Rowe, AOS assistant professor, is one of the Principal Investigators of the study. Claire Pettersen, climate and space sciences and engineering assitant professor at the University of Michigan and AOS alumnus (MS 2014 and PhD 2017), is the lead Principal Investigator. Other participating institutions include Colorado State University, Stony Brook University, the University of Utah, and the University of Washington. Rowe's expertise is in cloud microphysics, mountain meteorology, and radar meteorology, and she brings extensive field experience to the campaign.

"I'm excited to be a part of this project and experienced team collecting a unique season-long dataset," says Rowe. "With snowpack-related water availability becoming an increasingly important topic, being able to observe the variability of snow processes across the whole winter in an interior mountain range will provide a new understanding of large- and local-scale controls on snowfall rates and improve our ability to infer properties of the falling snow from weather radars."

Angela Rowe

Over the upcoming 2024-25 winter season, the team will deploy a combination of ground-based, remote sensing, and in situ (in cloud) instruments at Storm Peak Laboratory near Steamboat Springs, Colorado. The lab's location on top of Mt. Werner provides a unique opportunity for data collection.

As Rowe notes, "Historically, most of this type of work has used aircraft outfitted with cloud probing instrumentation to sample clouds, which is very expensive. The Storm Peak Laboratory provides instrumentation at a location often shrouded in clouds that serves as a stationary in situ measurement facility, allowing for longer periods of observations and thus rare statistics on these relationships between what is happening in the cloud and the characteristics of snow falling and accumulating on the ground."

Joining Rowe from the UW–Madison team is Marian Mateling, AOS research scientist (learn more about Marian on page 6), and Sarah Phillips, AOS graduate student. Mateling looks forward to returning to field work, albeit in a new environment. She says, "I'm excited to be able to collaborate with so many incredible researchers and work in the field again. My research includes finding connections between cloud and precipitation properties (phase, intensity, etc.) and the broader weather patterns in which they exist. Having only looked at 'flat' terrain previously, I look forward to investigating these processes in mountainous regions."

The project is another chapter of AOS' history at Storm Peak Lab. Before the pandemic, faculty and students would visit the lab for class projects and field experience. Rowe hopes to bring that tradition back – she visited the lab as a student herself at Colorado State University – and it's another reason why S2noCliME has created such a buzz in the department.

Ankur Desai, AOS department chair, says, "Angela is a maverick when it comes to creative advances of studying precipitation processes in the atmosphere with radars and models. I look forward to seeing what her team, likely incorporating many of our students in AOS, learns about snowfall in this exciting new study."

The project officially starts on December 1, 2024. More coverage to come, including updates from the field and research findings.

Storm Peak Laboratory
Photo: Melissa Dobbins

Wisconsin Climate Recap

Steve Vavrus, State Climatology Office Director

It's been another eventful year of weather in Wisconsin, with various broken records for temperature and rainfall. "Warm, wet, and stormy" is a fairly accurate summary of conditions through the first nine months of 2024, which have been the second-warmest January-September period on record statewide (since 1895). Fortunately, this year's exceptional warmth was not accompanied by excessively hot weather, as Wisconsin experienced fewer 90-degree days than normal and avoided any 100 degree readings (statewide maximum was 98 degrees).

The year began on the heels of Wisconsin's warmest December on record, and the unusual temperatures continued for the most part through February to produce the state's warmest meteorological winter (Dec.-Feb.) since official records began in 1895. Aided by a strong El Niño, the entire Upper Midwest experienced a "lost winter," as some described it, that often resembled a prolonged autumn with temperatures more than 10 degrees above normal in much of the state (Figure a). The season included Wisconsin's highest-ever observed winter temperature (77 degrees in Kenosha on February 27) and the first documented February tornadoes in our state's history. The two twisters that struck the Evansville area on February 8 were strong enough (intensities of EF-1 and EF-2) to cause considerable structural damage. The unusual winter warmth was paired with a snow drought for most of the season, especially in northern Wisconsin. Madison's Lake Mendota was only closed for 44 days (January 15-February 28)—the second shortest coverage in 172 years of observations! For cold-weather devotees, the season wasn't a complete loss, however. Wisconsin did experience a two-week long stretch of winter conditions during mid-January, complete with a couple of snowstorms and sub-zero cold, but the warmth quickly returned and remained in control through the rest of the season

The other big weather news that ushered in 2024 was the lingering drought, which spilled over from last year. The unusual winter warmth and meager snow cover promoted even more soil drying, leading to enhancement of the drought and numerous wildfires by early March. But once the spring rains arrived later that month, we couldn't turn off the spigot. The pattern continued into early summer and quickly turned our drought worries into flooding concerns. In fact, Wisconsin slogged through its wettest May-June period on record, in complete contrast to last year's arid May-June, which was the state's third driest (see comparison in Figures b and c).

Our rains this year have often come from intense bursts during thunderstorms, some of which were severe and spawned an unusual number of tornadoes. Wisconsin endured its second-most May tornadoes since complete records began in 1950, and 45 twisters have been recorded for the year-to-date, which is the third highest documented total. The most dramatic outbreak occurred on May 21, when a swath of severe storms raced from Iowa through southern Wisconsin and caused extensive damage. Madison suffered its most widespread power outage since the infamous 1976 ice storm nearly 50 years ago. Even thunderstorms that weren't severe have produced some prodigious rainfall amounts. On July 14 the Dane County Airport recorded its highest hourly accumulation (2.23 ins) since such records began in 1948. Two months later, the same site reported a whopping daily total of 3.97. in on September 22, which represents Madison's wettest September day since local records began in 1869 and the city's 5th wettest day of all.

At the time of this writing, Wisconsin has recently flipped back to another dry spell with moderate-to-severe drought emerging in much of the state. So, our eventful year of weather is showing no signs of abating.

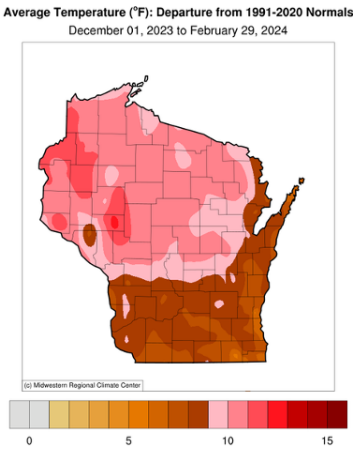


Figure a

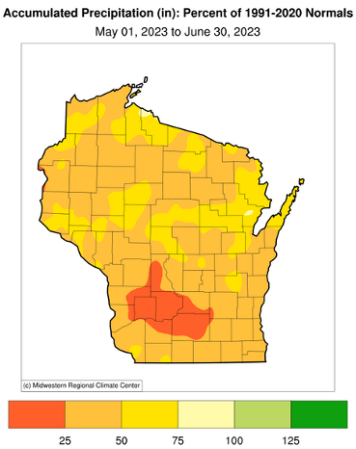


Figure b

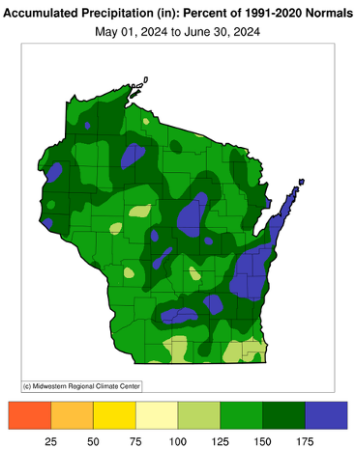


Figure c

AOS Research Scientist Spotlight

Q&A with Marian Mateling, Victor Mayta, Shellie Rowe, and Jonathan Thom

Marian Mateling

What is your role and research focus at AOS?

I've been a researcher in the department since 2018 working in Professor Tristan L'Ecuyer's research group. I am also part of the S2noCLiME field campaign this upcoming winter, with Professor Angela Rowe. My general research interest is high-latitude precipitation and clouds, and I use both satellite and ground-based data products for my work.

What was a formative experience that shaped your career path?

From Dec. 2017 to Feb. 2018, I deployed to Antarctica with the Antarctic Meteorological Research and Data Center (SSEC) to assist with the annual maintenance of the automatic weather station network. Beyond the physical and mental challenges, I learned more about ground-based measurements in general, broadening my knowledge of how we obtain data for research.

What do you enjoy most about your work?

I enjoy collaborating with many different scientists throughout AOSS and across the country. And in this "post"-covid era, improved Zoom technology has made collaborating even easier.

What advice would you give to students?

Find your work-life balance and be sure to prioritize your mental health. Speak up and ask questions. Learn to be resourceful, and don't try to reinvent the wheel (unless it's for a class assignment).

What are some interests/hobbies you enjoy in your spare time?

Outside of work, I enjoy reading, doing yoga, knitting, and watching Real Housewives. And I love to travel, of course.

Victor Mayta

What is your role and research focus at AOS?

As an AOS researcher with expertise in tropical meteorology, I'm interested in the dynamics of moisture modes, particularly the westward-propagating moisture modes over the tropics, which I explored in my recent papers. These studies highlight the intricate interactions between moisture, convection, radiation, and circulation, underscoring their importance in advancing our understanding of tropical meteorology.

What was a formative experience that shaped your career path?

I was drawn to tropical meteorology by the complexity and beauty of tropical weather systems. The challenge of unraveling these systems and their impact on global weather patterns continues to inspire me.

What do you enjoy most about your work?

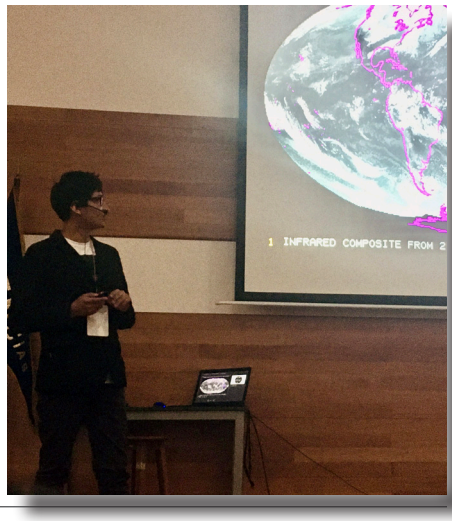
What I enjoy most about my work is the opportunity to contribute to scientific understanding and collaborate with talented colleagues in the field.

What advice would you give to students?

Stay curious and open-minded. Embrace collaboration and seek diverse perspectives, as they often lead to innovative solutions and deeper insights.

What are some interests/hobbies you enjoy in your spare time?

In my free time, I enjoy exploring the outdoors, reading about different cultures, and spending quality time with friends.



Shellie Rowe

What is your role and research focus at AOS?

I investigate the phenomenology of mesoscale vorticity variability in the troposphere and in the upper troposphere / lower stratosphere associated with severe weather events. I evaluate how positive and negative vorticity anomalies enhance and interact with midlatitude jets, poleward momentum surges, hurricane convective cycles, derechos, and extreme Midwest flooding.

What was a formative experience that shaped your career path?

I was captivated by the physical world with that incipient glimpse of emerald trees swaying in the foreground of a turbulent pewter sky. Visualizing the tangible and the intangible is the primary reason for my circuitous journey into this field of study.

What do you enjoy most about your work?

The most satisfying aspect of my work is to improve the understanding of hazardous weather events which may accelerate storm prediction and communication for the betterment of humanity.

What advice would you give to students?

I encourage students to explore their interests through internships and employment opportunities and refine diagnostic, computing, and interpersonal skills.

What are some interests/hobbies you enjoy in your spare time?

I am captivated by the aesthetics of the natural environment while biking, cross country-skiing, and listening to Brewers baseball.

Jonathan Thom

What is your role and research focus at AOS?

I've worked at SSEC for 26 years, in CIMSS, the Antarctic Automatic Weather station group, and most recently with AOS Professor and Chair Ankur Desai maintaining his calibration lab and field sites. I'm a lab manager, field technician, and jack of all trades. I'm most interested in meteorological (environmental monitoring) instrumentation.

What was a formative experience that shaped your career path?

Working with Prof. Chuck Stearns for my master's degree was formative for me. My MS looked at snow temperature profile from a station installed at the summit of Greenland. As I recall, I was exploring the heat fluxes through the snow and how it impacted the snow. I had heard this from another professor I had, but Chuck really cemented the ideas of Barry Commoner's laws of ecology into my thinking.

What do you enjoy most about your work?

The job has a good mix of inside and outside work. The work needs quite a bit of creativity to keep the instrumentation working and the data flowing. This can be frustrating, but it does keep the job interesting (most of the time).

What advice would you give to students?

Take every opportunity to explore opportunities even if you think you may not be interested.

What are some interests/hobbies you enjoy in your spare time?

I like to spend time outdoors. I mountain bike, road bike, run, hike, and take the dog for walks. I also like to cook and bake. I make quite a bit of sourdough bread.

CAREER Years

The National Science Foundation Faculty Early Career Development Program (CAREER) is a distinguished grant that supports faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization. In the past two years, AOS has had three faculty receive CAREER Awards – a notable achievement and a reflection of the strength of the department.

Ángel Francisco Adames Corraliza
AOS Associate Professor

Understanding How Moist Processes Shape Tropical Motions in Observations and General Circulation Models

Elizabeth Maroon
AOS Assistant Professor

Signals from the Deep: The Influence of the Mid-Atlantic Ridge on the Ocean and Climate (*Save the date! Earth Signals concert at Hamel Music Center, April 21, 2025)*

Till Wagner
AOS Assistant Professor

Constraining Iceberg Size Distributions and Their Climate Impacts in Models

2024 Award Winners

Departmental Student Awards

Paige Bartels:
Sunkel Scholarship Award

Poushali Ghosh
Wahl Award for Outstanding Teaching Assistant

Poushali Ghosh & Rudra Thaker
Lettau Award for Excellent MS Thesis

Jacob Lewandowski & Cara Scalpone
First-Year Graduate Student Award

Emily Mather
Student Service Award

Hamish Prince
Bretherton Scholarship Award

Nicolas Sartore
Ettenheim Scholarship Award

Liam Schiffer
Lettau-Wahl Scholarship Award

Ziyi Xu
Lyle Horn Scholarship Award

Faculty Awards

Tristan L'Ecuyer
American Meteorological Society Fellow

Elizabeth Maroon
National Science Foundation CAREER Award

Till Wagner
National Science Foundation CAREER Award

Hannah Zanowski
Provost's Exceptional Service Award

Alumni Awards

John Knox
Felton Jenkins Jr. Hall of Fame Faculty, University of Georgia

Bill Line
NOAA David S. Johnson Award

Tim Schmit
NOAA Special Award

The 2024 AOS Alumni Award for Oustanding Achievement and the 2024 AOS Early Career Alumni Award will be announced soon on our website – stay tuned! Both awards will be presented at the 2025 AOS Robock Alumni Reception at the AMS Annual Meeting in New Orleans.

**We apologize for any errors or omissions. If you have been missed, please email communications@aos.wisc.edu*

STORM-y Summer

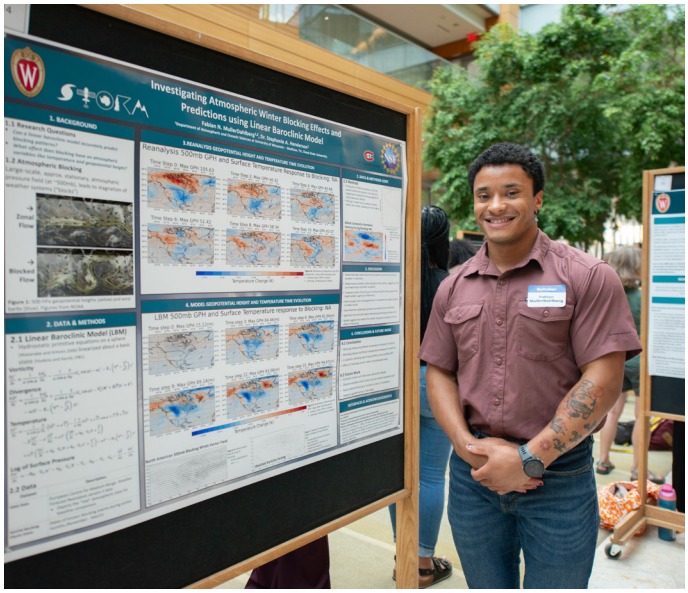
STORM – Student Training in Oceanography, Remote Sensing, and Meteorology – is a National Science Foundation Research Experience for Undergraduates program led by AOS Assistant Professor Hannah Zanowski.

The STORM REU finished its second summer this past August and was again a resounding success. Ten students came from all over the country to do research with AOS faculty and SSEC scientists, partake in personal and professional development activities, and get to know each other and the Madison area.

Highlights included a thrice-delayed (thanks to bad weather and presidential visits) rooftop weather balloon launch and a field trip to the NWS-Milwaukee/Sullivan office. At the end of the summer, students presented their work at the Wisconsin Institute for Discovery for a capstone event with the freshwater@UW REU.

STORM will be taking a break this coming summer, but we'll be back in summer 2026!

Photos: Yingshun Sun and Dan Vimont



Graduate Student Association

Rudra Thaker, GSA Facilitator

The Graduate Student Association (GSA) has had a productive and exciting year! As the group representing the interests of graduate students in the AOS department, we've made sure our voices are heard and helped foster a strong sense of community among our peers. This fall, we welcomed new graduate students with our annual outing to Devil's Lake State Park, along with the AOS Welcome Picnic. We also organized trips to Shuster's Farm for pumpkin picking and a corn maze adventure.

One of GSA's key roles is assisting with the department's faculty recruitment process. Last year, we were actively involved in helping recruit two new faculty members—Dr. Andrea Lopez Lang and Dr. David Henderson. As the department looks to hire one more faculty member this year, GSA will once again be playing an important part in that process. We've also been working on advocating for graduate students. Last year, after reaching out to department leadership, the graduate student stipend was increased by 14%, which has helped improve student life in AOS.

GSA has also been involved in mentoring students through the AOS Mentorship Program (AMP), which supports both undergraduate and graduate students in the department. This year, we're introducing a new mentorship initiative aimed at helping prospective students from outside the department with the graduate school application process.

On the science outreach front, we've sent representatives to several outreach events, including the AOSS open house, UW Science Expeditions, and Wisconsin Science Fest, where we shared our passion for atmospheric science with the public. We continue to host the AOS Department Seminar, where we've seen 14 student presentations so far this year, 10 of which were Master's presentations, and we have more scheduled. GSA also hosted talks involving career panels, department faculty, scientists from SSEC and CIMMS, and graduate students to share research updates, helping keep our community engaged with the latest developments in our field.

Last but not least, each year GSA creates and sells the AOS department calendar. Keep an eye out for this year's calendar sale, coming in early December! Congratulations are also in order for Dr. Elizabeth Maroon, who received the GSA Teaching Award this year, an honor voted on by our members.

To learn more about GSA's activities or get involved, check out our website at https://aos.wisc.edu/~gsa/index.html or reach out to me at thaker2@wisc.edu.

Research Master's/PhD Program

Dee Van Ruyven, Graduate Program Manager

This fall, we welcomed our largest incoming class in recent years, with 18 new MS and PhD students joining our research program. These students were selected from over 110 applications, a testament to the department's strong reputation and global reach, attracting applicants from Asia, Africa, Europe, and the Americas.

Following last year's curriculum retreat, we have introduced three new 900-level seminars to enhance professional development for graduate students. The sequence includes courses on professional principles, ethics, and development (AOS 901), writing and oral communication (AOS 902), and the evolution of atmospheric and oceanic science ideas (AOS 903).

Our students continue to achieve impressive recognition, with four receiving the prestigious National Defense Science and Engineering Graduate (NDSEG) fellowship and another earning the NASA FINESST fellowship.

We have also had significant academic achievements this year. Six students have successfully completed their MS, while three PhD candidates have defended their theses (listed below) showcasing the breadth of our research programs:

Maggie Bruckner: "Impact of Tropical and Boreal Biomass Burning on Atmospheric Composition."
(Advisor: Brad Pierce)

Alicia Hoffman: "Modeling and Assessing the Impact of Nocturnal NOx Chemistry on Air Quality."
(Advisor: Tracey Holloway)

Stephanie Ortland: "Developing and Understanding the Limitations of an Artificial Intelligence Framework for Nowcasting Thunderstorms in the United States."
(Advisor: Grant Petty)

AMS Student Chapter

Paige Bartels, AMS President

The 2024 academic year has been an exciting and eventful one for the American Meteorological Society (AMS) student chapter at UW–Madison! We kicked off the year in January by sending ten students to the AMS Student Conference in Baltimore. Participants attended sessions such as science communication, career panels, graduate student panels, programming workshops, and more! We plan to send another ten students to the 2025 AMS Student Conference in New Orleans this January.

February brought with it one of our chapter's most anticipated events—the annual Solstice Party. Faculty, staff, graduate students, and undergraduates gathered at Union South for an evening of fun, laughter, and community. The event featured a delicious dinner, entertaining skits, and live music from The Sundogs. After months of planning and hard work, it was great to see the department come together and enjoy an evening of fun.

As the weather warmed up, we hosted our lively fundraiser, Pie the Meteorologist, alongside our science demonstrations for the UW–Madison Science Expeditions! Outside AOSS, we encouraged passersby to participate by "pie-ing" AMS members and AOS faculty in the face. The event not only brought laughs but also raised funds for the chapter while engaging the broader community in the spirit of fun and science.

We are especially proud to announce that our AMS chapter has been recognized with the 2024 Local Chapter Outstanding Efforts in Diversity, Equity, and Inclusion (DEI) Award. This prestigious honor reflects our chapter's strong commitment to fostering inclusivity within the atmospheric sciences. A major milestone in this effort was our introduction of the BRAID Officer (Building Respect and Inclusion for Diversity)—a first for any AMS student chapter. This new leadership role focuses on promoting a welcoming environment within our chapter, ensuring that DEI is at the forefront of every event, discussion, and initiative.

Our chapter is eager to expand our connections with AOS alumni. If you would like to connect with and possibly speak to our undergraduates, we would love to hear from you! Please reach out to Abby Heiser, our vice president/secretary, at apheiser@wisc.edu to learn more.

We look forward to the exciting opportunities and growth that the next year will bring!

Professional Master's Program

Kaitlyn Heinlein, Prof. MS Program Manager

We are excited to welcome another wonderful cohort for the 2024-2025 academic year! Our ten students come to us from all across the country, and as far as Indonesia too, bringing diverse backgrounds and career aspirations to our program. Several students have their eyes set on careers within operational forecasting, some even with sub-focuses in aviation, incident meteorology, and air quality. Meanwhile, others are interested in (re)insurance, commodity trading, weather/climate risk analytics, and research. We are actively seeking summer 2025 internships and jobs in these areas, so if you know of any openings, please reach out to us (profms@aos.wisc.edu). For insights into the career paths of our alumni, including their past internship experiences and initial/current job placements, visit our Professional MS Alumni Profiles page (https://www.aos.wisc.edu/profms-profiles).

Finally, as always, the AOS graduate program will be attending the AMS Annual Meeting in January 2025. Feel free to stop by our booth at the Career Resource and Graduate School Fair and/or say hi to us at the Robock Alumni Reception! Until then, continue to help us spread the word about our outstanding graduate program. Applications for Fall 2025 enrollment are now open, so please encourage any prospective students you know to apply soon.

Making Waves is the alumni newsletter of the Department of Atmospheric & Oceanic Sciences at the University of Wisconsin-Madison

Atmospheric & Oceanic Sciences
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Madison, WI 53706

Design: Scott Dyke
On the cover: Flux tower in Northern Highland American Legion State Forest
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