



Message from Department Chair, Mike Poellot

Greetings!

As we prepare for the start of another academic year, Atmospheric Sciences faculty and staff are excited about welcoming new students and continuing to work with those already making progress toward completion. Although we are facing some challenges due to state budget issues, we know there will be many opportunities for new adventures this coming year. Faculty members are pursuing a number of new research initiatives and students have been participating in internship and work opportunities around the world.

I would like to highlight some of the accomplishments and events that occurred since our last newsletter. Most of these are described within this letter and include a number of awards for both faculty and students. Some additional items include a promotion to the rank of Professor for Jianglong Zhang, in recognition of his outstanding work in research and teaching. Also, Gretchen Mullendore will be on developmental leave (sabbatical) this coming year and will be working in Texas with colleagues at Texas A&M and in Australia with colleagues at the University of Melbourne.

In response to the departure last year of Xiquan Dong, we initiated a search for a new faculty member last fall. Unfortunately, state budget issues forced us to suspend the search; a request is in to resume this and move toward hiring a new faculty member in the near future.

Our friend and colleague, Leon Osborne, continues to teach, perform research, and direct our graduate program despite a significant struggle with cancer. His spirit is truly amazing. I know that he always greatly appreciates hearing from former members of our program, so do not hesitate to contact him.

One final note: in October 2016 the UND Citation aircraft was sold to Weather Modification Inc. (WMI) in Fargo, ND. This marked the end of four decades of atmospheric research flight operations at UND. The transfer occurred as a public-private partnership to help increase use of this platform for research. An agreement has been set up between WMI and UND to make the aircraft available to UND faculty and students for research and educational opportunities.

I am continually amazed by the diverse career opportunities that our graduates have found – we would like to hear more stories that we can share. Many thanks to those alumni who have contributed to this letter and to Wanda Seyler for putting this all together.

Mike

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American Geophysical Union (AGU) Annual Meeting

The 48th Annual Fall Meeting of the American Geophysical Union (AGU) was held December 12 – 16, 2016 in San Francisco, California. Those attending from UND were Dr. David Delene, Dr. Gretchen Mullendore and Dr. Jianglong Zhang; Ricardo Alfaro-Contreras, Emily Maddox, MS Graduate Student, and Mariusz Starzec, PhD Graduate Student.

Posters or talks were presented by the following people: **Emily Maddox** presented a poster titled “Sensitivity of Cross-Tropopause Convective Transport to Tropopause Definition”, **Mariusz Starzec’s** talk was titled “Retrievals of Convec-

tive Mass Detrainment Altitudes from Radar Observations”, **Ricardo Alfaro-Contreras** presented a talk titled “A Study of the shortwave aerosol direct forcing trends using MODIS and CERES”, **Dr. David Delene** presented a talk titled “Clustering of Cloud Particles Observed with In-situ Probes”, **Dr. Gretchen Mullendore** presented a poster titled “Impact of Tropopause Structures on Deep Convective Transport Observed during MACPEX” and **Dr. Jianglong Zhang** presented a poster titled “An evaluation of the impact of biomass burning smoke aerosol particles on near surface temperature forecasts”.

Atmospheric Sciences Alumni Dinner at AMS in Seattle on January 22, 2017



Back row L-R: Joel Siegel, Aaron Scott, Blake Sorenson, Clint Leeper, Mitchell Kern, Travis Toth, Janelle Hakala, Corey Amiot, Matt Saari, Johnathan Metz, Kurtis Pinkney, Mac Simms, Brady Mueller, Matt Eckoff and Tim Logan

2nd row L-R: Paul Kucera, Jared Marquis, Mike Poellot, Gretchen Mullendore, Xiquan Dong, Wenjun Cui, Zhe Feng, Yingxi Shi, Yiyi Huang, Jonathan Rosencrans, Lance Wilson, Kaela Lucke, Melissa Becker Dye, Kathryn Newman, Andy Newman

3rd row L-R: Joe O’Brien, Nikki Carson, Erica Dolinar, Katelyn Barber, Ryan Patnaude, Alex Butland, Ben Lott, Nick Gapp, Brooke Hagenhoff, Rosa Brothman, Tyrus Skaer

Front row L-R; Ben Hershey, Wanda Seyler, Nick Anderson, Cory Wolff, Jamie Wolff, Jeff Kuntz, Dan Aadriaansen, Becca Anderson and Grant Gutierrez

** current students in bold type

97TH AMERICAN METEOROLOGICAL SOCIETY ANNUAL MEETING, STUDENT CONFERENCE AND CAREER FAIR

The 97th Annual Meeting of the American Meteorological Society was held January 20 - 27, 2017 in Seattle, WA. The Atmospheric Sciences department had a table at the Career Fair, which is intended to facilitate the networking process for both applicants and recruiters. Those attending from UND were: Faculty members Dr. Gretchen Mullendore and Mike Poellot; Staff member Wanda Seyler; Graduate Students Aaron Scott, Ben Lott, Brooke Hagenhoff, Erica Dolinar, Grant Gutierrez, Jared Marquis, Joe O'Brien, Katelyn Barber, Matt Eickoff, Nick Gapp, Nikki Carson, Rosa Brothman, Tim See, Travis Toth, Tyrus Skaer; Undergraduates Blake Sorenson (UND student chapter AMS president), Janelle Hakela, Jonathan Rosencrans, Kaela Lucke, Lance Wilson, Becca Anderson and Bailey Mueller.

The following presented posters at the AMS Student Conference: **Aaron Scott**, MS Graduate Student, titled "Modeling Boundary Crossing Super-cells", **Erica Dolinar**, PhD Graduate Student titled "A climatology of single-layer cirrus clouds and associated heating rates from NASA satellite observations and RTM calculations", **Janelle Hakala**, BS Student, titled "Leveraging Climate Prediction in Water Supply Forecasts", **Joe O'Brien**, PhD Graduate Student, titled "Sensitivity of Optical Array Probe (OAP) Derived Parameters with Respect to Particle Orientation", **Ben Lott**, MS Graduate Student, titled "Validation of Satellite Snowfall Measurements in CONUS", and **David Goines**, MS Graduate Student, titled "Precipitation Properties in a Multi-Year Database of Convection-Allowing WRF Simulations".

Those giving oral presentations were **Dr. Gretchen Mullendore** titled "Mistakes Will Happen", **Travis Toth**, PhD Graduate Student titled "Evaluating Lower Threshold Sensitivities of Level 2 CALIOP AOT", **Katelyn Barber**, PhD Graduate Student, titled "Regional Observations of Convectively-Induced Turbulence from Varied

Resolution Full-Physics Models", **Brooke Hagenhoff**, MS Graduate Student, titled "A Regime Based Climatological Assessment of WRF Simulated Deep Convection and Associated Precipitation", **Tim See**, MS Graduate Student, titled "Improving Model Accessibility for Undergraduate Students", **Rosa Brothman**, MS Graduate Student, titled "Planetary Boundary Layer (PBL) Structure Influences on the Functionality of Airborne Sense and Avoid (ABSAA) and Ground Based Sense and Avoid (GBSAA) Systems for Small Unmanned Aircraft Systems (sUASs)" and **Jared Marquis**, PhD Graduate Student, titled "Applying Lidar Observations for Decoupling Aerosol Contamination of Hyperspectral Radiance Retrievals during Data Assimilation".

UND Atmospheric Sciences Alumni that joined current undergraduate and graduate students, faculty and staff for dinner at the Gordon Biersch Brewery Restaurant were: **Corey Amiot**, BS Graduate; **Nick Anderson**, MS Graduate; **Dan Aadriaansen**, MS Graduate; **Alex Butland**, BS Graduate; **Wenjun Cui**, MS Graduate; **Xiquan Dong**, adjunct faculty member; **Melissa Becker Dye**, former BS Student; **Zhe Feng**, MS & PhD graduate; **Yiyi Huang**, former MS Student; **Ben Hershey**, MS Graduate; **Mitchell Kern**, BS Graduate; **Paul Kucera**, BS Graduate; **Jeff Kuntz**, MS Graduate; **Clint Leeper**, BS Graduate; **Tim Logan**, MS & PhD graduate; **Johnathan Metz**, BS Graduate; **Kathryn (Crosby) Newman**, MS Graduate; **Andy Newman** MS Graduate; **Kurtis Pinkney**, BS Graduate; **Ryan Patnaude**, BS Graduate; **Joel Siegel**, MS Graduate; **Matt Saari**, BS Graduate; **Mac Simms**, BS Graduate; **Yingxi Shi**, MS & PhD graduate; **Cory Wolff**, BS Graduate; **Jamie (Vogt) Wolff**, BS Graduate.

It was a fun evening of reminiscing with current and past students.

28th Annual Awards & Scholarship Banquet

The 28th Annual Awards & Scholarship Banquet was held on April 7, 2017 at the Memorial Union on the campus of UND. The guest speaker was James Scarlett, Meteorologist-in-Charge at the Aberdeen, SD National Weather Service office. Special guests were UND President Mark Kennedy and his wife, Debbie; Aerospace Dean Paul Lindseth, MIC at the Grand Forks NWS office Ryan Knutsvig and his wife, Stephanie.

The UND AMS Student Chapter presented the following awards to the faculty: *Best Freshman & Sophomore Professor* – **Al Borho**; *Best Junior & Senior Professor* – **Jianglong Zhang**; *Best Academic Advisor* – **Mike Poellot**; *Golden Reamer Award* – **Mark Askelson**; *7-Eleven / Most Available Professor* – **Fred Remer**; *Department Powerhouse Award* – Sue McWilliams and **Wanda Seyler**.

The following awards were presented to the following undergraduates: *Outstanding Undergraduate Teaching Assistant* – **BreAnna Shore**; *Outstanding*

Undergraduate Student Researcher – **Michaela Heeren**; *Outstanding Student Broadcaster* – **Max Mueller**; *Outstanding Sophomore* – **John D. Odegard Aerospace Sciences Scholarship** – **Alexa Otto**; *Outstanding Junior* – **John D. Odegard Aerospace Sciences Scholarship** – **Blake Sorenson**; *Outstanding Freshman* – **Evan Rys** and **Katherine Byers**; *Outstanding Graduating Senior* – **Janelle Hakala**; *Outstanding Service to the Department* – **Rebecca Anderson**.

The *Science Engineering Associates Scholarship* was presented to **Joel Braxton Aldridge** and **Lance Wilson**; the *Carlton Bjerkaas Atmospheric Sciences Scholarship* was presented to **Jonathan Rosencrans** and **Kaela Lucke** and the *Bavendick Scholarship* was presented to **Krista Carrothers**.

The “Faculty Award” to the *Outstanding Undergraduate* was presented to B.S. senior **Janelle Hakala** at the AtSc end of semester potluck in December 2016. This included a scholarship to be used for her last semester at UND.



2017-2018 AMS OFFICERS



Left to Right: Al Borho, AMS Advisor; Alexa Otto, Jonathan Rosencrans, Tessa Philpott, Kaela Lucke, Blake Sorenson, Lance Wilson, Harrison Rademacher,

University of North Dakota Founders Day 2017

The 134th Anniversary of Founders Day was held on February 23, 2017 at the Memorial Union on the UND Campus.

Atmospheric Sciences scored a “Hat Trick” of awards for the evening.

Congratulations to **Gretchen Mullendore** for winning the *UND Foundation/B.C. Gamble Faculty Award for Excellence in Teaching, Research or Creative Activity, and Service Award*.

Congratulations to **Fred Remer** for winning the *UND Foundation/Karleen Home Rosaen Award for Excellence in Academic Advising*.

Congratulations to the **Department of Atmospheric Sciences** for winning the *UND Award for Departmental Excellence in Service*.

Mary Ann Gregoire was recognized as a retiring staff member but was unable to attend the dinner.



From left to right: Laura Block, Alumni; Mike Poellot, Gretchen Mullendore, Leon Osborne, Fred Remer, Aaron Kennedy, Matt Gilmore, Al Borho and Provost Tom DiLorenzo

UND-AMS Officers 2017—2018

President - Blake Sorenson
Vice President - Jonathan Rosencrans
Secretary - Tessa Philpott
Treasurer - Alexa Otto
Historian - Kaela Lucke and Harrison Rademacher
Liaison to Undergraduate Curriculum Committee - Lance Wilson

“A Lifetime of Impact: Leon Osborne”

The Atmospheric Sciences Graduate Student Association has put together a hard copy version of the book titled "A Lifetime of Impact: Leon Osborne". To view this product follow the link to Shutterfly and set up an account. From Shutterfly you will be able to purchase a copy of this book.

<https://share.shutterfly.com/action/welcome?sid=sAbOWrhy2as2Lyw&cid=SM-PBAPP>

~ ~ ~ Faculty Spotlight ~ ~ ~

Fred Remer



Fred Remer grew up in Matawan, NJ which is on the New Jersey Bayshore.

His hometown is only 25 miles from midtown Manhattan as the crow flies and we spent many family outings in NYC. He grew up only miles from the beach and it goes without saying

that the beach and ocean were significant parts of his early life. Fred started taking flying lessons in high school and soloed when he was 16 years old.

Fred studied meteorology at the University of Oklahoma as an undergraduate between 1977 and 1981. While he was there he was employed by the National Severe Storms Lab as an undergraduate research aid in which he wrote programs that unfolded radar data (punch cards!) and he also took Polaroid pictures of the Doppler radar display during chase activities. Fred earned his flight certificates (commercial, instrument, flight instructor) while at OU and worked part-time as a flight instructor during his junior and senior years.

Fred flew as a flight instructor and charter pilot for a year in Trenton, NJ before he decided to return to college to further his education.

He attended the University of Wyoming to earn a Master of Atmospheric Sciences, graduating in 1990. While a graduate student he analyzed airborne data obtained from the UW King Air research airplane and also continued to provide flight instruction and mountain flying check outs.

During the summer of 1987 he participated in the Greek Hail Suppression Project where he was employed as a radar meteorologist based in Larissa, Greece. He lived on the beach and worked only when it rained!

Fred came to UND in 1989 at the suggestion of his UW professor Wayne Sand. He was hired as a lecturer in the Atmospheric Sciences Department to teach contract airline pilots basic weather theory. He continued flying at UND as a part-time flight instructor and stage check pilot.

He was promoted to assistant professor in the Aviation Department in 1994 and developed electronic media for the aerodynamics and multi-engine courses.

In the spring of 1997 Fred was hired as the chief meteorologist at Weather Modification, Inc. in Fargo, ND. He managed all domestic weather modification projects for WMI and wrote proposals for many international projects. As a 'fringe benefit' he delivered and shuttled many cloud seeding airplanes from Fargo to their US project bases. He left WMI in 1999 to become a weekend broadcast meteorologist at KXJB TV4 in Fargo, ND.

In 2000 Fred returned to UND as an assistant professor and the Undergraduate Program Coordinator in the Atmospheric Sciences Department. He continued to provide fill-in broadcast meteorologist duties on KXJB and KVLV during the summer and weekends between 2000 and 2007.

Fred married his wife, Donna, in 1993 in Grand Forks on the Dakota Queen river boat. She is a life-long Grand Forks resident and owns her own accounting firm. They have two daughters. Their oldest daughter Tori is 22 years old and recently graduated from Kansas University. She is living in Minneapolis. Their youngest daughter Madi is 19 and a Junior at Indiana University. She just completed a summer internship in Singapore.

He doesn't have much time for hobbies but an avocation that he is passionate about is aviation. Fred is one-third owner of a 1977 Mooney 201 which is a fast and economical four-place sin-

2017 GRAD

Graduate Research Achievement Day was held on March 2, 2017 at the Memorial Union at UND.

The School of Graduate Studies invited all UND graduate students to participate in **GRAD**, a one-day celebration of graduate research, scholarship and creative activities. This was a new event that takes the place of the Scholarly Forum.

All Graduate students, full time or part time, from ALL disciplines and ALL colleges who are engaged in research, scholarship and creative works through theses, dissertations, non-thesis projects and independent studies or who have conducted substantial research as part of coursework were encouraged to present their work at **GRAD**, no matter what point they are at in their graduate program.

The Atmospheric Sciences Graduate Students that participated in GRAD day were: **Rosa Brothman**, MS Student, "*Planetary Boundary Layer (PBL) Structure influences on Sense and Avoid (SAA) Systems for Small Unmanned Aircraft Systems (sUASs)*"; **Samantha Carr**, MS Student, "*Comparison of Data from Orthogonally-Mounted High Volume Precipitation Spectrometer (HVPS-3) Optical Array Probes (OAPs)*"; **Nick Gapp**, MS Student, "*Radar and Aircraft Reflectivity*

Comparisons of Florida Thunderstorm Cirrus Clouds."; **Brooke Hagenhoff**, MS Student, "*A Regime Based Climatological Assessment of WRF Simulated Deep Convection and Associated Precipitation*"; **Austin King**, MS Student, "*Severe Weather Environments in Atmospheric Reanalyses*"; **Brianna Kump**, MS Student, "*Forecasted Refractive Errors for EM-Based Detect and Avoid Systems and Impacts on Small Unmanned Aircraft System Safety*"; **Ben Lott**, MS Student, "*Validation of Satellite Snowfall Measurements in Contiguous United States (CONUS)*"; **Emily Maddox**, MS Student, "*Sensitivity of Cross-Tropopause Convective Transport to Tropopause Definition*"; **Aaron Scott**, MS Student, "*Simulating Boundary Crossing Supercells Using a Non-Hydrostatic Cloud Model*"; **Tim See**, MS Student, "*Application of Docker Containerizing Software in Undergraduate Education to Increase Model Understanding*"; **Ron Stenz**, PhD Student, "*The Impacts of Hydrometeor Centrifuging on Tornado Dynamics*"; **Travis Toth**, PhD Student, "*Impact of Data Quality and Surface-to-Column Representativeness on the PM_{2.5}/Satellite AOD Relationship for the Continental United States*".

B.S. Student **Blake Sorenson** also presented his poster titled "*Development of Digital Thermo-sonde Instrument for Quantification of Relative Cn2 Estimation Error between NWP Analysis and Thermo-sonde Measurements.*"

Faculty Spotlight continued...

gle engine airplane. One of his proudest and most satisfying achievements is that he taught his daughter to fly two years ago. Fred is also a 2nd Lt. in the Civil Air Patrol. He enjoys working on his 1974 VW Super Beetle Convertible when he can find the time!

Fred's research interests are in aviation weather hazards which include icing and wind shear. He also holds an operator's certificate issued by the Weather Modification Association.



Department News

AtSc M.S. graduate student **Brooke Hagenhoff** won first prize for her oral presentation, “*A Regime Based Climatological Assessment of WRF Simulated Convection and Associated Precipitation*” at the 7th Transition of Research to Operations (7R2O) Conference at the 2017 American Meteorological Society Annual meeting. Winning in a field of high quality and professional presentations, the honor comes with a \$200 award and a certificate of appreciation.



Her work investigated how precipitation biases in a popular weather model varied with the underlying weather conditions. To do so, Hagenhoff implemented an automated procedure known as a neural network to objectively classify weather patterns. This information was then used to segregate simulated and observed precipitation events across multiple regions of the United States. Brooke’s advisor is Dr. Aaron Kennedy.

She received an honorable mention for her poster at the UND GRAD research day. Brooke has been hammering away on neural networks to objectively classify meteorological patterns to investigate model biases, so the accolades are well deserved!

Brooke also competed with 24 other UND students in the 1st Three Minute Thesis (3MT®) competition held at UND this past spring. She won first place.

“It’s essential to be able to explain your work not only to the people around you but to the general public so they can understand what you do and why it’s so important,” said Hagenhoff, a Jefferson City, Mo., student whose winning presentation was titled “When Do Weather Models Misbehave?”

Congratulations Brooke on all your achievements this year!

Rebecca Anderson, 2017 B.S. Atmospheric Sciences graduate submitted a winning essay to the University Corporation for Atmospheric Research (UCAR) Capitol Hill Visits Essay Contest – 2017. She was one of six undergrads or graduate students to accompany UCAR leadership to Washington D.C. May 9–11, 2017. Members of the UCAR Board of Trustees and the UCAR President’ Advisory Committee on University Relations were hosts and guides for the unique opportunity. In Washington, Rebecca had the chance to visit Capitol Hill and meet members of Congress and their staffs and attend a special briefing by Hill staffers on how Congress works. She sat in on briefings from senior leadership in areas of weather, water, and climate. UCAR covered round-trip travel expenses.

Incoming Graduate Students

Fall 2017 will bring in five new graduate students. They are: **Natalie Midzak**, Philadelphia, PA, a 2017 B.S. graduate of Millersville University of Pennsylvania; **Nicole Stevens**, Eagan, MN, a 2017 B.S. graduate of UND Atmospheric Sciences; **Taylor Trask**, Newfield, NY, a 2017 B.S. graduate of Plymouth State University; **Matthew Tuftedal**, Delton, MI, a 2017 B.S. graduate of Central Michigan University and **Shawn Wagner**, Bottineau, ND, a 2016 B.S. graduate of UND Atmospheric Sciences.

Recent AtSc Graduates

May 2016 B.S. Graduates

Brendan Farmer
 Nick Gapp
 Mitch Kern
 Clint Leeper
 Celine Marx
 Brittany Tague
 Shawn Wagner

August 2016 B.S. Graduate

Stephanie Waldref

August 2016 M.S. Graduates

Wenjun Cui
 David Goines
 Jared Marquis
 Joe O'Brien

December 2016 B.S. Graduates

Alex Butland
 Ryan Patnaude

December 2016 M.S. Graduates

William Mokry
 Brittany (Konradi) Peterson

December 2016 Ph.D. Graduate

Andrea Neumann

May 2017 B.S. Graduates

Rebecca Anderson
 Mark Bresnahan
 Janelle Hakala
 Michaela Heeren
 Kyle Magnuson
 Brian Riemers
 Lucas Sterzinger
 Nicole Stevens
 Scott Wolff

May 2017 M.S. Graduate

Akila Sampath

August 2017 M.S. Graduates

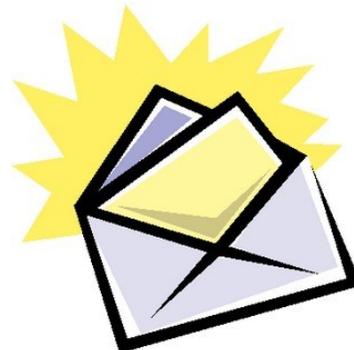
Jamie Ekness
 Brooke Hagenhoff
 Kurt Hibert
 Ben Lott
 Emily Maddox
 Josh Markel

August 2017 Ph.D. Graduate

Ryan Stanfield

Congratulations Graduates!!

If you received a copy of this newsletter in the mail and would prefer to receive it via email, please drop Wanda an email at seyler@atmos.und.edu and I will get you added to the email list.



Alumni News



Corey Amiot, AtSc B.S. 2014, was selected as a co-winner of the 2017 ARAM Best Student Paper award from the student contributions to the 2017 Conference on Aviation, Range, and Aerospace Meteorology (ARAM), with his entry “Using C-band Dual-

Polarization Radar Signatures to Improve Convective Wind Forecasting at Cape Canaveral Air Force Station and NASA Kennedy Space Center” at the AMS Annual Meeting in Seattle.

Katie Giannecchini, M.S., 2012, has been employed as a meteorologist for San Diego Gas & Electric (SDG&E) since April 2013. SDG&E is a



regulated public utility that provides service to 3.6 million consumers through 1.4 million electric meters and 873,000 natural gas meters in San Diego and southern Orange Counties. The meteorology team is responsible for providing daily operational and fire weather support to the company to aid in the safe and reliable delivery of electricity and natural gas. Katie is also involved in initiatives aimed at improving the resilience of the electric and natural gas systems in the face of a changing climate and supports research and development using WRF ensembles idealized for the greater San Diego region.

Outside of work, Katie can be found hiking backcountry trails, experimenting with new recipes, traveling to see family and friends, and (of course) keeping up with UND hockey.



Kyle Hilburn grew-up in Fairmont, Minnesota where he was inspired to study the weather. He attended The University of North Dakota, obtaining a B.S. in Atmospheric Science in 2000. His advisor was Leon Osborne, and Kyle was a member of the Studio One Weather

Team. He also worked with Michael Poellot analyzing cloud microphysical data collected by the Citation aircraft.

After UND, Kyle received a M.S. in Meteorology from Florida State University (2002). His advisors were James O’Brien and Mark Bourassa, and his research used ocean surface vector winds measured by the QuikSCAT scatterometer to derive surface pressure fields.

Kyle’s interest in satellite meteorology led him to the private company, Remote Sensing Systems in Santa Rosa, California, where he worked from 2002-2015 as a Scientist and Lead Software Developer. His work initially focused on improving QuikSCAT wind retrievals in raining scenes, but this evolved into a broader interest in precipitation retrievals from passive microwave imagers.

In 2016, his interest in precipitation led him to The Cooperative Institute for Research in the Atmosphere (CIRA/CSU) where he works as a Research Associate with supervisor Chris Kummerow. Currently he is analyzing data from the new GOES-16 satellite from both the imager (ABI) and the lightning mapper (GLM), and developing new initialization techniques for the HRRR model.

Kyle’s parents still reside in Fairmont. His younger sister works as a fashion designer in Los Angeles. In 2015, Kyle married his partner of 10 years, Raul. Kyle’s hobbies include playing the violin, watching the weather, and riding his bicycle.



Damon Grabow graduated from the UND Atmospheric Science department in 2004. After completing the graduate program, he was a Research Assistant at the Regional Weather Information Center with a focus on GIS and hydro-meteorology. With encouragement from Leon Osborne and his family,

he obtained a degree in Civil Engineering to expand on GIS/Hydrology.

Currently, he is a GIS/Water Resources Engineer with the ND State Water Commission in Bismarck, ND where he develops GIS tools for hydrology and hydraulic models.

Damon is married to Allison and they have two sons; Connor (11) and Miles (9). In his free time, he enjoys hiking and hunting the Badlands, coaching youth baseball, growing giant pumpkins, and writing children's stories.



September 2014 ~ 268 lb. pumpkin

Dr. Ryan Zerr graduated with a Atmospheric Sciences B.S. in 1996, he pursued graduate work in mathematics, earning a Ph.D. from Iowa State University in 2003. He was then fortunate enough to receive an offer for a



tenure-track position in the Mathematics Department at UND, and thus made a return to Grand Forks – where he's been ever since. Ryan is currently a professor of mathematics and the director of UND's Essential Studies Program.

Ryan and his wife Jessica have two sons, Eli (10) and Caleb (7), and find themselves with a steady supply of activities – baseball, tennis, soccer, music, along with others. The family enjoys traveling, with a recent trip to China being a highlight for parents and children alike.

One of the interesting things about the return to UND concerned the way one-time professors have become fellow faculty members. Valued teachers in the Atmospheric Sciences Department have since become valued colleagues, serving as mentors in both capacities. Ryan considers himself fortunate to have had an extended opportunity to work with the department, and looks forward to many additional years of interactions with his Atmospheric Sciences colleagues, as well as teaching Atmospheric Sciences students who happen to take one of his calculus or differential equations courses.

ALUMNI NEWS WANTED

We are looking for news about you to share with other alumni in our upcoming newsletters (information about your current position, significant achievements, family activities, etc.). Also if you could please send us your current e-mail address and address changes it would be appreciated. If you have any ideas or comments about the newsletter, please send them to Wanda at: seyler@atmos.und.edu.

DEPARTMENT OF ATMOSPHERIC SCIENCES

As you can see in this newsletter there is a lot going on in the Department of Atmospheric Sciences and we have been able to celebrate many successes. We would not have been able to accomplish much of what we do without the support we have enjoyed from the University and from the Dean's Office in the Odegard School. Still, we have ongoing needs to further help our students and programs thrive. To improve the educational opportunities for our students, we have determined two specific priorities that would greatly benefit from additional funding support: student scholarships and academic equipment.

We all know that most students struggle to meet the financial obligations associated with obtaining a college degree. Our goal is to establish an Alumni Scholarship fund that would provide assistance to qualifying students. The hope is to build up an endowment of \$25,000 that would generate an annual scholarship award.

Alternatively, we are asking his friends and colleagues to join in cementing his legacy by establishing a scholarship endowment in his honor. The Leon F. Osborne Science and Society Award endowment will provide scholarships to students enrolled in Atmospheric Sciences within the Odegard School. The Award will target students who have demonstrated an understanding of the importance of atmospheric science to society and who are pursuing a career that would provide a direct benefit to the needs of society by promoting enhanced applications of the atmospheric sciences to address societal issues.

The other goal I would like to highlight is to upgrade several hardware and software components of our Doppler weather radar. This system, dubbed the "NorthPol" radar, was last upgraded in 2004 so some parts are at the end of their useful life. Students use NorthPol in their weather radar coursework and for collecting data for Senior Project research. We want our students to have the opportunity to work with state-of-the-art tools to adequately prepare them for entry into the work force.

If you are able to help with these priorities, please contact myself or Josh Christianson. Our contact information is listed below. Your support is greatly appreciated.

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