

DEPARTMENT OF ATMOSPHERIC SCIENCE

December 2016

AMS Alumni Reception

Please join us
for the American
Meteorological
Society Alumni and
Friends Reception
at the 97th Annual
Meeting in Seattle.

Tuesday, Jan. 24

6:30-8:30 p.m.

Sheraton Seattle Hotel

*We hope to see
you there!*

Donate

Please consider supporting the Department of Atmospheric Science. Your gift strengthens CSU through the recruitment and retention of world-class students and faculty. It also ensures that our Department will continue to be a leader in weather, climate, and air quality research. To contribute, please visit this address: advancing.colostate.edu/ATMOS

Greetings, Alumni and Friends!

Welcome to this latest edition of our newsletter. It has been a great year for the department, although it is hard to believe 2016 is already coming to an end.

In the pages to follow you can read about some of this year's achievements and milestones. I would like to draw your attention here to a few.

The department continues to undertake an unprecedented remaking of our faculty. With the recent retirements of Wayne Schubert, Dick Johnson, and Tom Vonder Haar – all remain active as emeritus faculty – we have continued our search for new faculty members to add to our many outstanding recent hires.

This year we are extremely pleased to welcome Associate Professor Michael Bell and Assistant Professor Kristen Rasmussen. Their addition really bolsters the department's expertise in the study of mesoscale and cloud processes, including tropical cyclones. You can read more about Michael and Kristen on p. 2.



**Department Head
Jeff Collett**

We were delighted to welcome another outstanding class of graduate students this year. The department continues to receive 8-10 times more applications than we have openings, making the admissions process extremely

selective.

As you will read in the following pages, our faculty, staff, and students continue to be recognized with numerous awards and fellowships. The Department and CIRA were also pleased this year to once again be designated as a CSU Program of Research and Scholarly Excellence.

Finally, we lost two emeritus faculty members this year: Bill Gray and Elmar Reiter. Many of you had the privilege to study with these two professors who played such key roles in the department's establishment and growth into a world class program. They will be missed.



ATMOSPHERIC SCIENCE
COLORADO STATE UNIVERSITY

FACULTY NEWS

Department Welcomes New Faculty Associate Professor Michael Bell

Michael Bell became interested in the atmosphere and tropical cyclones (TCs) at a young age after experiencing a hurricane landfall in Florida. After obtaining a B.A. degree in Florida, he moved to Colorado to pursue math and meteorology, and worked at the National Center for Atmospheric Research as an airborne radar field support scientist and researcher. He completed his M.S. thesis at Colorado State University on TC intensity theory and was awarded the Herbert Riehl Memorial Award for his graduate work. He completed his Ph.D. dissertation at the Naval Postgraduate School in Monterey, California on air-sea interaction in TCs in 2010. Michael transitioned to a Research Assistant Professor at NPS after graduation, and then moved to the University of Hawaii in 2012 as an Assistant Professor teaching physical and radar meteorology. He joined the faculty at Colorado State University in August as an Associate Professor.



Michael has participated in 10 field experiments and is the recent recipient of NSF CAREER and ONR Young Investigator Awards to study TC intensification and improve physical parameterizations in forecast models. A central focus of his research is studying the mesoscale structure and intensification of tropical cyclones throughout their life cycle from genesis to extratropical transition.

Assistant Professor Kristen Rasmussen

Kristen Rasmussen received a B.S. in Meteorology and Mathematics and a B.A. in Music at the University of Miami in 2007. She completed her M.S. in 2011 and Ph.D. in 2014 from the Department of Atmospheric Sciences at the University of Washington. Her graduate research primarily focused on cloud and mesoscale processes of high-impact weather in South America using the TRMM satellite and flooding in India and Pakistan. Kristen was an Advanced Study Program Postdoctoral Fellow at the National Center for Atmospheric Research and worked with scientists from the Mesoscale and Microscale Meteorology Lab (MMM) and Research Applications Lab (RAL) from 2015 to 2016. She joined the CSU faculty in October.



Kristen's primary research interests include investigating the global population of convective storms from the TRMM and GPM spaceborne precipitation radars, extreme deep convection in South America, flooding in Pakistan and India, mesoscale and cloud dynamics, hydrometeorology, cloud-climate interactions, high-impact weather, and convection-permitting regional climate modeling.

Kristen is enthusiastic about returning to CSU, where her early science career began as a K-12 participant in the Colorado State Science Fair.

Faculty & Staff Milestones (Years of Service)

5 years

Rebecca Bolinger
Nicholas Geyer
Peter Goble
Arsineh Hecobian
Stephen Herbener
Maria Val Martin
Claire Moore

10 years

Mathew Bishop
Katherine Haynes
Ezra Levin
Noah Newman
Heather Packard
Jamie Schmidt
Amy Sullivan

15 years

Philip Klotzbach
Rebecca McKeown
David Thompson

25 years

Sonia Kreidenweis

30 years

David Randel

FACULTY NEWS

Libby Barnes Named Professor of the Year

Congratulations to Assistant Professor Elizabeth Barnes for her selection as 2016 ATS Outstanding Professor of the Year. Libby's selection was announced at the ATS picnic by graduate student representative Peter Marinescu. The Outstanding Professor award, selected by department graduate students, is awarded annually to an ATS faculty member for exemplary classroom teaching.



Thomas Vonder Haar Named AGU Fellow

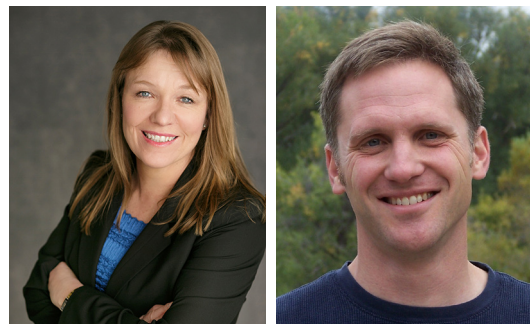
University Distinguished Professor Emeritus Tom Vonder Haar has been selected as a 2016 Fellow of the American Geophysical Union.



This special honor recognizes scientific eminence in the Earth and space sciences and acknowledges Fellows for their remarkable contributions to their research fields, exceptional knowledge, and visionary leadership. Only 0.1% of AGU membership receives this recognition in any given year. Tom will be recognized at the AGU meeting this December in San Francisco. Congratulations, Tom!

Sue van den Heever and Eric Maloney Receive AGU ASCENT Awards

Two CSU ATS faculty members were announced as winners of 2016 ASCENT awards from the Atmospheric Science section of the American Geophysical Union. Monfort Professor Sue van den Heever and Professor Eric Maloney were each selected for this distinguished recognition by AGU. The ASCENT award recognizes exceptional research and professional leadership by mid-career scientists working in the atmospheric and climate sciences. Five ASCENT award winners were named this year: three from the U.S., one from England, and one from Australia. The award announcement was made in EOS: eos.org/agu-news/2016-agu-section-and-focus-group-awardees-and-named-lecturers. Winners will receive their awards at the Atmospheric Science section dinner at the AGU meeting in December.



Congratulations to Sue and Eric on this outstanding achievement!

Charney Award Goes to Wayne Schubert

Emeritus Professor Wayne Schubert was the recipient of the 2016 Jule G. Charney Award for landmark advances in theoretical understanding of convective parameterization, marine stratocumulus, balanced atmospheric flows, and tropical cyclone intensity and structure. The Charney Award is one of the highest awards of the American Meteorological Society (AMS). Wayne received the award at the AMS Annual Meeting in New Orleans in January.



Congratulations Wayne!

FACULTY NEWS

In Memory of Professor Emeritus William M. Gray

William Mason Gray (Bill) passed away peacefully surrounded by his family on April 16, 2016 at the age of 86. With his passing the meteorological community has lost one of its most remarkable members.

Bill was a faculty member in the Department of Atmospheric Science at Colorado State University from 1961 until his retirement in 2005. He remained extremely active as an Emeritus Professor until his death. His research made enormous contributions to the understanding of tropical cyclone structure, intensification, and climatology. During his long academic career Bill



advised 70 masters and Ph.D. students, many of whom have become prominent leaders in the field of tropical meteorology.

In recognition of his pioneering contributions to the understanding and forecasting of tropical cyclones, Bill received many professional awards, including the American Meteorological Society's Jule Charney Award (1994) and

the first Robert and Joanne Simpson Award (2014) from the National Tropical Weather Conference.

You can read Dr. Gray's full obituary at atmos.colostate.edu/research/WilliamGray.php.

Donations to honor Dr. Gray's memory can be made to the "William M. Gray Tropical Meteorology Memorial Fund," which will support graduate studies and research in tropical meteorology in the Department of Atmospheric Science.

To donate, please go to advancing.colostate.edu/DRBILLGRAY.

Alternatively, you can send a check made out to:

CSU Foundation
410 University Services Center
Fort Collins, CO 80523-9100

In the memo line reference "72925" or
"William M. Gray Tropical Meteorology Memorial".

In Memory of Professor Emeritus Dr. Elmar R. Reiter

Professor Elmar R. Reiter, one of the co-founders of the Atmospheric Science Department at CSU, passed away on June 17, 2016 in Peoria, Arizona, at the age of 88. Professor Reiter joined the growing atmospheric science program in the Civil Engineering Department in 1961. He was recruited from the University of Innsbruck, Austria. Professor Reiter served as our second Department Head from 1968 to 1974.



Reiter's research specialties were in areas of the large scale upper tropospheric and lower stratospheric circulation and dynamics. He was an early international leader in these areas, and his pioneering textbook, *Jet Stream Meteorology* was published in 1963 by the University of Chicago Press.

You can read Dr. Reiter's full obituary at atmos.colostate.edu/research/ElmarReiter.php.

Professor Reiter and his family have established the Dr. Elmar R. Reiter Memorial Scholarship at the CSU Foundation to further scientific research. To contribute to the fund, please visit advancing.colostate.edu/DRELMAR-REITER, call (970) 491-7135 between 8 a.m. and 5 p.m. MT, or email csugifts@csuf.colostate.edu.

Alternatively, you can send a check made out to:

CSU Foundation
410 University Services Center
Fort Collins, CO 80523-9100

In the memo line reference "Dr. Elmar Reiter Memorial Scholarship".

New Faces, New Responsibilities at Climate Center

The Colorado Climate Center, first established within the Department of Atmospheric Science in 1974, is adding new but familiar faces to its small staff.

Last year Wendy Ryan, Assistant State Climatologist, took a job with the Wilson Water Group in their Glenwood Springs office. Since then Zach Schwalbe was promoted to take over managing the Center's 75-station weather station network — the Colorado Agricultural Meteorological Network (CoAgMet, coagmet.colostate.edu). Recently Dr. Becky Bolinger (formerly Smith – CSU ATS Ph.D., 2014) was selected to become the new Research and Service Climatologist/Drought Specialist at the Center. She will be assisted in that role by Peter Goble (CSU ATS M.S., 2016).

Climate monitoring continues to be the primary activity of the Center. This includes maintaining the historic Fort Collins CSU Campus Weather Station, managing and expanding CoAgMet, leading the now-international Community Collaborative Rain, Hail and Snow network (CoCoRaHS), and heading up the weekly Climate, Water and Drought assessments.

Current research topics include:

- Improving drought early warning
- Assessing weather and climate data needs and gaps in Colorado in the aftermath of the September 2013 floods
- The potential of expanding Colorado's wine grape vineyards in the face of ongoing climate variability and extremes
- Soil moisture measurement and analysis — applications in drought early warning



- Use of citizen-provided photographs to monitor and assess drought and its impacts (collaborative with University of Oklahoma)
- Identifying and tracking indicators of climate change
- Climate of the Rio Grande National Forest in south central Colorado
- Geographic characteristics and statistical properties of extreme daily precipitation in the U.S.

All CSU faculty staff, students, alumni, and friends are welcome to join the Colorado Climate Center's citizen science outreach efforts. Sign up to be a rain gauge volunteer here: cocorahs.org/application.aspx. To receive weekly climate, water, and drought updates, register here: visitor.r20.constantcontact.com/email.jsp?m=1107257096495. Select "NIDIS Upper Colorado River Basin Drought Early Warning System."

To get the monthly climate summary for the Fort Collins historic weather station, contact zach.schwalbe@colostate.edu.

Late-Breaking Faculty Awards

As this newsletter was headed to press, word was received of three late-breaking faculty awards. University Distinguished Professor Emeritus Tom Vonder Haar was named an Honorary Member of the AMS. He will be recognized at the AMS meeting in January in Seattle. Here at CSU, Assistant Prof. Libby Barnes received the College of Engineering Abell Outstanding Early Career Faculty Award, and Prof. and Dept. Head Jeff Collett received the Abell Outstanding Research Faculty Award. Watch for photos and more complete stories on the website and in next year's newsletter!

Dr. Thomas C. Peterson Receives Distinguished Alumni Award

Dr. Thomas C. Peterson (Tom) received the 2016 CSU Department of Atmospheric Science Distinguished Alumni Award from Department Head Jeff Collett on May 6. This award is presented to an outstanding alumnus or alumna who exemplifies core values revered by the Department including dedication to research, commitment to education, and leadership in the atmospheric sciences. These values were exemplified throughout the course of Tom's distinguished career.

Tom is the President of the World Meteorological Organization's Commission for Climatology. In 2004 Essential Science Indicators ranked him among the top 1% of scientists in the field of Geosciences based on Journal Citation Reports. He was a lead author on the Nobel Peace Prize winning Intergovernmental Panel on Climate Change's Fourth Assessment Report published in 2007. Foreign Policy Magazine named him one of the top 100 Leading Global Thinkers of 2013 for his work on Explaining Extreme Events from a Climate Perspective.

Tom followed a circuitous path to atmospheric science that included a B.S. in Agronomy and years working as a respiratory therapy technician and freelance writer. He started graduate school at the age of 35 and finished his Ph.D. in 1991. In 2015 he retired from his position as Principal Scientist at NOAA's National Centers for Environmental Information, which incorporated his former institution, NOAA's National Climatic Data Center. However, he remains active in the field on a volunteer basis as his second and final term as President of the WMO Commission for Climatology doesn't end until March 2018.

A note from Tom:

What an opportunity to be requested to write a few words for the newsletter with no topic provided. So I'd like to start out by saying how honored I felt to



be recognized as a distinguished CSU Atmospheric Science Department alumnus, though, my feelings were diminished a bit when I noticed that the word "distinguished" appeared 11 times in the previous newsletter.

Since there is a chance that one or two students might read this part of the newsletter, let me pass on a few thoughts worth keeping in mind as they pursue their careers.

- Learn from the mistakes of others as you won't live long enough to make them all yourself,*
- Never assume evil motives for something that can be adequately explained by incompetence, and,*
- Sincerity is the key: When you can fake that you have it made.*

The latter point is not, of course, a recommendation for how you should live your life. But rather it is a cautionary note that you will meet people who do follow that rule.

Continued on page 8

Updates from Alumni

Robert Fischer (M.S., 1969) retired this year after almost 50 years in meteorology. In 1985 he won the American Meteorological Society Charles L. Mitchell Award for an outstanding prediction, and in 1989 he won the National Weather Association Operational Achievement Award. Fischer is the only person in the meteorological community who has won both of these awards in a career.

Jim Fleming (M.S., 1973) received the Department of Atmospheric Science Distinguished Alumnus Award and the Eduard Brückner Prize for excellence in interdisciplinary climate research. He was appointed the Charles A. Dana Professor of Science, Technology, and Society at Colby College. The MIT Press published his book, *Inventing Atmospheric Science*.

George J. Schewe (CCM, 1975, M.S. Atmospheric Science under Dr. Elmar Reiter) worked for NOAA 1975-1980 and for consulting companies performing dispersion modeling ever since. He has taught hands-on dispersion modeling courses the past 25 years for private and university classes, including in Kowloon and Port Elizabeth, South Africa.

Dan Breed (M.S., 1979) recently retired from NCAR after 41 years. He specialized in microphysical field projects.

Ken Dropco (M.S., 1981) has transitioned from an IT Program Manager into retirement, where fishing, crabbing, gardening, cooking and woodworking occupy his time on the Mississippi Gulf Coast.

Daniel E. Wolfe (M.S., 1985) retired from NOAA in 2011 after more than 40 years of federal service. Presently he works half time as a Professional Research Assistant for the Cooperative Institute for Research in Environmental Sciences (CIRES). Current research and activities include participating in the El Nino Rapid Response Project (ENRR: esrl.noaa.gov/psd/enso/rapid_response/index.html) and being part of the team responsible for decommissioning the Boulder Atmospheric Observatory (esrl.noaa.gov/psd/technology/bao) and its 1,000-foot research tower after nearly 38 years of operation.

Ken Harding (M.S., 1991) was selected as Chief Program Officer, NWS Central Region HQ, Kansas City, MO in May 2016. Previously he was the meteorologist in charge at WFO Des Moines.

Scot Rafkin (Ph.D., 1996) is Program Director of the Space Studies Dept. at Southwest Research Institute in Boulder, CO; Project Scientist for the Radiation Assessment Detector and Co-Investigator of the meteorological station on the NASA Mars Science Laboratory Rover Curiosity; NASA Mars Exploration Program Climate Science Chair; Member of NASA Human Mars Exploration Committee; and conducts research in planetary atmospheres and develops instrumentation and missions for planetary exploration.

Lawrence Carey (M.S., 1994; Ph.D., 1999) is an Associate Professor in the Department of Atmospheric Science at the University of Alabama in Huntsville and was recently appointed to the position of Department Chair.

Updates from Alumni

Matt Parker (M.S., 1999; Ph.D., 2002) is now a Full Professor at NC State University and is currently serving as an editor for *Journal of the Atmospheric Sciences*. Lately he has participated on the steering committees for the PECAN and VORTEX-Southeast field programs.

Tiffany Meyer (M.S., 2012) works for University of Oklahoma/CIMMS and National Severe Storm's Laboratory as the Science Transition Coordinator for the Hazardous Weather Testbed. She is currently working on implementing a probability of cloud-to-ground lightning product/warning for the National Weather Service.

Annareli Morales (M.S., 2014) was accepted to the Graduate Visitor Program at NCAR, funded through the Advanced Study Program. In addition, she was awarded the Warner Internship for Scientific Enrichment (WISE) scholarship through the Research Applications Laboratory. WISE offers graduate students opportunities to engage in direct exposure to a broad range of atmospheric research applications and impacts enhancing the student's appreciation for the role of science in service to society, ral.ucar.edu/general/events/wise.

James Ruppert (M.S., 2012; Ph.D., 2015) is a postdoctoral scientist at the Max Planck Institute for Meteorology in Hamburg, Germany.

Ali Boris (Ph.D., 2016) now lives and hikes out of Davis, CA. She is working as a postdoctoral researcher at UC Davis toward improving organic carbon measurements in national air quality monitoring networks.

A Note from Dr. Thomas C. Peterson, continued

Continued from page 6

Wyrd bið ful aræd. *Fate is wholly inexorable. This is an Old English saying which was common about 1,000 years ago recognizing that some things are beyond our control. This includes both good things and bad. So be ready to take advantage of the good opportunities that come your way. For the nerds among us, you can think of this as chaos theory applied to our lives.*

In my own life it meant things like getting a Ph.D. in climate applications of the latest satellite technology and then taking a job creating a global climate data set that started in 1697, which required me to learn far more during my first year on the job than I did during my last year in graduate school. It meant agreeing to take on increasingly challenging international obligations culminating with being elected President of the World Meteorological Organization's Commission

for Climatology, which, as part of the United Nations system, involved voting by representatives of WMO member countries. It meant accepting the difficult task of initiating an annual multi-national paper on event attribution, which resulted in Foreign Policy Magazine naming me one of their top 100 leading global thinkers of 2013.

None of these were planned in advance. None of these were the result of a carefully laid out career path. Call it serendipity. Call it chaos theory. Call it what you will. Just be ready to say yes when opportunity knocks. Oh, and be sure to do the hard work and follow through with your current projects so your front walk stays clear enough for opportunity to reach the door and knock. Or as Gilbert and Sullivan might say, "Polish up the handle so carefully."

In conclusion, enjoy the adventure. I certainly have.

STUDENT AND STAFF NEWS

New Graduate Students

| Name | Degree | Advisor | Previous University | Major |
|-----------------------|--------|---------------------------------|---------------------------------------|--|
| Jennifer Bukowski | PhD | Sue van den Heever | University of Michigan - Ann Arbor | Atmospheric Science, Oceanic, and Space Sciences |
| Ting-yu Cha | MS | Michael Bell | National Taiwan University | Atmospheric Sciences |
| Michael Cheeseman | MS | Scott Denning | Appalachian State University | Environmental Science |
| Kyle Chudler | MS | Steven Rutledge | University of Michigan | Atmospheric Sciences |
| Luke Davis | MS | Thomas Birner / David Thompson | McGill University | Honours Atmospheric Science and Mathematics |
| Eleanor Delap | MS | Michael Bell | University of Hawaii at Manoa | Meteorology |
| Jonathan Martinez | PhD | Michael Bell | University of Hawaii at Manoa | Meteorology |
| Kyle Nardi | MS | Elizabeth Barnes | Temple University | Applied Mathematics |
| Michael Natoli | MS | Eric Maloney | University of Maryland - College Park | Atmospheric and Oceanic Science |
| Katelyn O'Dell | MS | Jeff Pierce / Emily Fischer | College of Charleston | Physics |
| Jungmin "Minnie" Park | PhD | Sue van den Heever | Ewha Women's University | Atmospheric Science and Engineering |
| Emily Ramnarine | MS | Jeff Pierce | University of Washington | Atmospheric Science |
| Naufal Razin | MS | Michael Bell | University of Hawaii at Manoa | Meteorology |
| Bryn Ronalds | PhD | Elizabeth Barnes | McGill University | Atmospheric and Oceanic Science (Thesis) |
| Benjamin Toms | MS | Sue van den Heever | University of Oklahoma | Meteorology and Civil Engineering |
| Benjamin Trabing | MS | Michael Bell | University of Oklahoma | Meteorology |
| Kai-chih Tseng | PhD | Elizabeth Barnes / Eric Maloney | National Taiwan University | Atmospheric Sciences |

New Postdoctoral Fellows

| Name | Research Advisor | Graduate University |
|---------------|-------------------|---|
| Cory Baggett | Elizabeth Barnes | Pennsylvania State University |
| Sarah Petters | Sonia Kreidenweis | North Carolina State University |
| Maria Hakuba | Graeme Stephens | Swiss Federal Institute of Technology in Zurich (ETH) |

STUDENT AND STAFF NEWS

Welcome, New Students!



Back row, from left to right: Michael Cheeseman, Ben Toms, Naufal Razin, Jon Martinez, Bryn Ronalds, Mike Natoli, Kyle Nardi, and Jennie Bukowski
Front row, from left to right: Kai-Chih Tseng, Ting-yu Cha, Ellie Delap, Luke Davis, Emily Ramnarine, Kate O'Dell, Minnie Park, Ben Trabling, and Kyle Chudler

Shannon Irey Receives College of Engineering Award

The recipients of nine College of Engineering awards were announced during the all-college meeting in November 2015.

Department of Atmospheric Science Research Project Manager Shannon Irey received the Outstanding Staff Award, Administrative Professional. Shannon is responsible for two of the largest research programs in our department. She plays a critical role in helping ATS faculty manage budgets, prepare research proposals and submissions, and analyze financial and staffing needs, and much more. Shannon has done superb work in every aspect of her job, catalyzing these successful research programs.

Congratulations, Shannon, on this well-deserved award!



STUDENT AND STAFF NEWS

Congratulations, Atmospheric Science Graduates!

Spring 2016

| | | |
|--------------------|-----|---|
| Melissa Burt Adams | PhD | David Randall |
| Michal Clavner | PhD | Bill Cotton |
| Peter Goble | MS | Russ Schumacher |
| Greg Herman | MS | Russ Schumacher |
| Vandana Jha | PhD | Bill Cotton |
| Andy Manaster | MS | Chris O'Dell / Chris Kummerow |
| Peter Marinescu | MS | Sue van den Heever / Sonia Kreidenweis |
| Erik Nielsen | MS | Russ Schumacher |
| Amanda Sheffield | PhD | Sue van den Heever |
| Doug Stolz | PhD | Steven Rutledge |
| Liz Thompson | PhD | Steven Rutledge |
| Jake Zaragoza | MS | Emily Fischer |

Summer 2016

| | | |
|---------------|-----|---------------|
| Ali Boris | PhD | Jeff Collett |
| Alex Goodman | MS | David Randall |
| Noel Hilliard | MS | Jeff Collett |

Fall 2016

| | | |
|----------------|-----|--------------------------------------|
| Steven Brey | MS | Emily Fischer |
| Brian Crow | MS | David Thompson |
| Aryeh Drager | MS | Sue van den Heever |
| Anna Hodshire | MS | Jeff Pierce |
| Will Lassman | MS | Jeff Pierce |
| Leah Lindsey | MS | David Randall |
| Alex Naegele | MS | David Randall |
| Gavin Roy | PhD | Chris Kummerow |
| Robert Tournay | PhD | Tom Vonder Haar / Russ Schumacher |

MAC Travel Award Winners



From left to right: Aryeh Drager, Veljko Petkovic, Dakota Smith, Bryan Mundhenk, Ali Akherati, Marie McGraw, and Peter Marinescu

The MAC Student Travel Awards are supported by the MAC Foundation in Fort Collins, where ATS Emeritus Professor Thomas McKee serves as a Foundation Trustee. The MAC Foundation provided a generous donation to the ATS department to support student travel to attend and present at conferences and meetings related to atmospheric science.

STUDENT AND STAFF NEWS

Student Fellowships, Awards, and Recognition

| | |
|---|--|
| Alumni Award | Leah Grant |
| American Meteorological Society Graduate Fellowship | Samuel Childs, Sean Freeman, Jakob Lindaas, Karly Reimel, Richard Schulte, Benjamin Toms |
| CIRA American Meteorological Society Fellowship | Karly Reimel |
| CONACYT (Mexican National Council for Science & Technology) Fellowship | Zitely Tzompa |
| CSU Track and Field Scholarship | Karly Reimel |
| CSU University Distinguished Professors Scholarship | Leah Grant |
| David L. Dietrich Award | Steven Brey |
| Engineering Graduate Teaching Fellowship | Ashley Evanoski-Cole, Samantha Wills |
| EPA Star Fellowship | Ashley Evanoski-Cole |
| Forever Green Top Scholar Award (Alumni Association) | Zitely Tzompa |
| Herbert Riehl Memorial Award | Jack Kodros |
| NASA Earth and Space Science Fellowship | Veljko Petkovic |
| National Science Foundation Bridge to the Doctorate | Jonathan Martinez |
| National Science Foundation Graduate Research Fellowship | Samuel Childs, Aryeh Drager, Sean Freeman, Leah Grant, Peter Marinescu, Erik Nielsen |
| National Science Foundation Graduate Research Opportunities Worldwide (GROW) | Leah Grant |
| Outstanding Student Paper Award at the 2015 AGU Fall Meeting | Leah Grant |
| Outstanding Student Platform Presentation Award at the 2016 AMS Annual Meeting | Jakob Lindaas |
| Outstanding Student Presentation Award at the 2016 AMS Annual Meeting | Peter Marinescu |
| Program of Research and Scholarly Excellence (PRSE) | Jennifer Bukowski, Louis Rivoire, Bryn Ronalds, Eric Tseng |
| Rocky Mountain States Section of Air and Waste Management Association Scholarship | Zitely Tzompa |
| Shrake Culler Scholarship | Chengji Liu |
| Sjostrom Family Scholarship | Zitely Tzompa |
| SoGES Global Sustainability Leadership | Brittany Bloodhart, Renee Curry, Ashley Evanoski-Cole, Aaron Pina, Brandon Wolding |

STUDENT AND STAFF NEWS

Jack Kodros and Leah Grant Receive Department Honors

Congratulations to M.S. student Jack Kodros and Ph.D. candidate Leah Grant for receiving distinguished honors at the annual CSU Department of Atmospheric Science Herbert Riehl Memorial Award/Alumni Ceremony held on May 6.



great deal of discussion. Leah is now the third ATS student to be selected for both the Riehl and Alumni student paper awards, following Angela Rowe and Adele Igel.

The 2016 Riehl Award for an outstanding paper based on MS research went to Jack Kodros. Jack, who is advised by Associate Professor Jeff Pierce, won for his *Atmospheric Chemistry and Physics* paper "Uncertainties in global aerosols and climate effects due to biofuel emissions."

The 2016 Alumni Award for an outstanding paper based on Ph.D. research went to Leah Grant. Leah is advised by Monfort Professor Sue van den Heever. She was recognized for her recent *Journal of Geophysical Research* paper "Cold Pool Dissipation." Leah gave a great presentation, which stimulated a

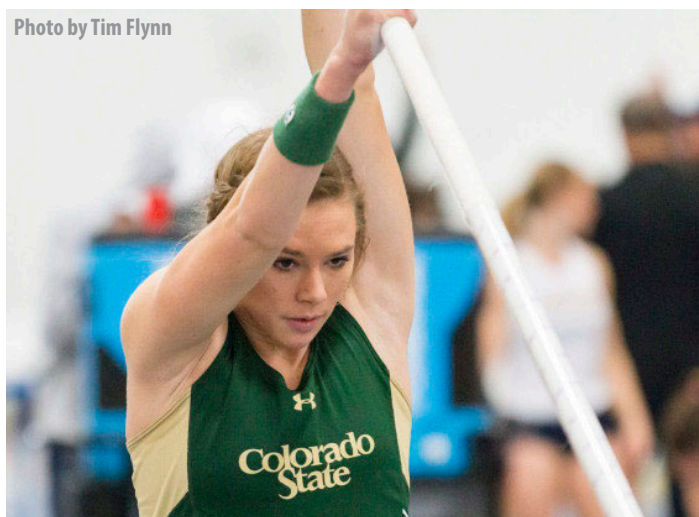
Both of these awards are granted based on faculty nominations and a committee decision. The Herbert Riehl Memorial Award is awarded to a current master's degree candidate or a student in the Ph.D. program for less than one year. The Alumni Award is given to a senior Ph.D. candidate who has passed the preliminary exam and has submitted at least one paper to peer-reviewed literature based on their dissertation work.

The department would like to congratulate Jack and Leah again for their hard work and recognize them for their outstanding achievement.

Karly Reimel Breaks CSU Pole Vault Record — Twice

Karly Reimel, second-year graduate student with Professor Rutledge's group, set a new Colorado State University Women's Track Indoor Pole Vault record — twice! Karly first broke the record on Jan. 23 at the University of Nebraska with 3.93m (12'10.75"). A week later on Jan. 30 at the University of New Mexico, she broke her own record with 4.05m (13'3.5"). Karly, who competed for three seasons at Florida State University, is using her last year of eligibility to compete for CSU. CSU sure likes her being on the team, for obvious reasons!

For her M.S., Karly is researching the relationship between lightning and severe weather in an attempt



to better understand how lightning can be used to predict the onset of severe weather.

Congratulations, Karly!

STUDENT AND STAFF NEWS

Ilana Pollack receives 2016 Inspiring Women in Stem Award

INSIGHT Into Diversity is proud to recognize women who are making a difference in the fields of science, technology, engineering, and mathematics (STEM) with the 2016 Inspiring Women in STEM Award. These women work to inspire and encourage the next generation of young people to pursue STEM education and careers via teaching, mentoring, research, and groundbreaking discoveries and innovations. As scientists, researchers, educators, entrepreneurs, and university presidents and deans, they serve as role models to students and professionals alike, emboldening them to follow in their footsteps.



and mentor undergraduate women in the geosciences through both formal and informal professional and peer mentoring. Via a Web platform she helped create, Ilana ensures that PROGRESS participants have access to a variety of critical online resources: scholarship and research opportunities, information on graduate schools, peer networks, in-person mentors, and more.

Ilana, a CSU ATS Research Scientist, coordinates the PROMoting Geoscience Research, Education, and Success (PROGRESS) program and the Analysis of Women's Advancement, Retention, and Education in Science study — part of a five-year project funded by the National Science Foundation — to recruit

Ilana spearheads the recruitment of undergraduate women from four colleges in Colorado and Wyoming and ensures that each student has access to in-person mentoring with female role models through networking events at each institution. She also makes herself available to answer and address students' and mentors' questions and concerns.

More information is available at insightintodiversity.com/inspiring-women-in-stem-2016.

Atmos Olympics 2016, sponsored by FORTCAST

ATS students, staff, and friends of the department participated in the first ever Atmos Olympics this past summer, an event sponsored by FORTCAST, the local AMS chapter. Team Celsius and Team Fahrenheit competed against each other in basketball, trivia, volleyball, yard games, kickball, and a relay, with Team Fahrenheit ultimately prevailing. A big thank-you to all who participated and to FORTCAST for organizing this fun event!



Team Fahrenheit (above) and Team Celsius (below)



OUTREACH AND CONFERENCES

ESMEI REU Interns update



Front row, left to right: Kevin Zolea (Kean University), Ann Casey Hughes (Wofford College), Rachel Phinney (University of Nebraska Lincoln), Rachael Coons (SUNY Albany); back row, left to right: Maryssa Loehr (Missouri University of Science and Technology), Steven Cavazos (University of the Incarnate Word), Anna Miller (Reed College), Khalil McMillan (North Carolina A&T State University), Alexia Prospero (Valparaiso University), Keenan Eure (University of Maryland at College Park)

Summer is a very busy time of the year at the Earth System Modeling and Education Institute (ESMEI), the institutional legacy of CMMAP, for many reasons. One of which is the much anticipated arrival of the summer interns participating in the REU (Research Experiences for Undergraduates) Site In Climate Science at Colorado State University (an NSF sponsored program). This is an exciting research opportunity in beautiful Fort Collins where undergraduate interns join world-class atmospheric scientists investigating the science of clouds, climate and climate change, weather, and modeling.

During the REU program, interns have the opportunity to attend scientific seminars, visit national scientific laboratories, and participate in a variety of professional development training. Each

intern has a mentoring team, which consists of an Atmospheric Science faculty mentor, a research mentor, and a graduate student mentor. The REU program introduces interns to the intensive research environment of CSU and the graduate student experience. At the end of the summer program, the interns present their research at our annual Student Research Symposium.

During Summer 2016, research projects included studies examining the response of stratospheric ozone to sudden stratospheric warnings, evaluating a wildfire smoke forecasting tool, and quantifying the transport of air into Mesoscale Convective Systems, to name a few.

For more information, visit esmei.colostate.edu/reu.html.



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The *Atmospheric Science Newsletter* is published annually for alumni, friends, and members of the department.

Please send alumni news, article suggestions, comments, questions, corrections, and address updates to: info@atmos.colostate.edu, or call (970) 491-8682.

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DESIGNATION

ATS, CIRA Named Program of Research and Scholarly Excellence

We are pleased to announce that the Department of Atmospheric Science and CIRA have been jointly designated as a CSU Program of Research and Scholarly Excellence (PRSE). Atmospheric Science has been repeatedly designated as a PRSE since the program's inception in 1991. CIRA and ATS were jointly designated in 2012 and have now been re-designated as a PRSE for the next four years.

PRSE selection is a competitive process open to programs across campus. This year's ATS/CIRA designation is the result of a successful proposal submitted earlier this year. Our selection reflects the many collective accomplishments of ATS and CIRA faculty, staff, and students — and our broader

collaborators at CSU and beyond — over the past 5 years. PRSE designation comes with award of a graduate student fellowship from the Graduate School and an opportunity to compete for other funding from the office of the Vice President for Research.

Thanks to all that each of you do to make atmospheric science research and graduate education at CSU so successful. We look forward to continued synergy in the partnership between ATS and CIRA as we tackle the many compelling scientific challenges in our field.

—Professor and Department Head Jeff Collett and Professor and CIRA Director Chris Kummerow