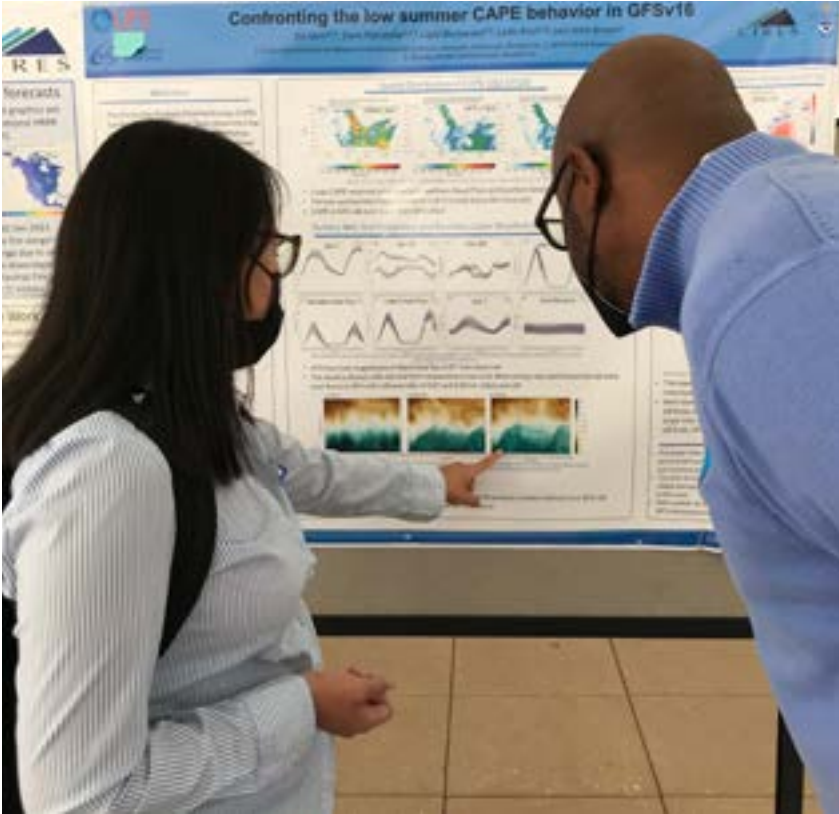


CIRES Rendezvous2023



**Celebrate
outstanding
science with
your CIRES
colleagues!**

ANNUAL SCIENCE
SYMPOSIUM

TUESDAY, MAY 16

UNIVERSITY
MEMORIAL CENTER

The CIRES Members' Council is pleased to announce the 18th annual CIRES Rendezvous. This institute-wide symposium spotlights the depth, breadth, and quality of the pacesetter science being done at CIRES. We hope to encourage collaborations that might result in new interdisciplinary research, and to facilitate connections among our many innovative scientists, science support staff, and administrative staff. The event includes an entire afternoon devoted to science and poster presentations by CIRES members.

AGENDA

Please allow some time to check-in before the festivities begin.

**10:00 AM - 11:30 AM: POSTER SETUP
UMC Terrace Tent and Aspen Rooms**

**11:00 AM - 11:25 AM
CHECK IN / Glen Miller Ballroom foyer**

**11:30 AM - 1:30 PM
LUNCHEON / FLASH TALKS / STATE OF THE INSTITUTE
ADDRESS & AWARDS
Glen Miller Ballroom**

For those joining us virtually, tune in here:

https://www.youtube.com/watch?v=_lfiG4UNbiM

Please stay tuned between 12 & 12:15 for the welcome and start of Waleed's presentation. The start time is dependent upon the lunch service and how quickly people get through the line.

**1:30 - 4:30 PM
POSTER SESSION / UMC Terrace Tent and Aspen Rooms**

Poster titles, abstracts, and PDFs plus all other Rendezvous details can be found here:
<https://ciresevents.colorado.edu/rendezvous/>

From the Director



Dear Colleagues,

Welcome to the CIRES Rendezvous 2023. I am glad we can celebrate our past year's achievements and all that lies ahead, and as with other years, we have much to celebrate. We have had a strong year in funding, with \$89M in awards so far in the first three quarters of the year, and we are on track to reach \$100M by the end of the fiscal year (June 30, 2023). Of 203 submitted proposals in FY 2022, we have had a remarkable proposal success rate of 46.8%, which is a testimony to the exceptional brilliance of our researchers and the strength of our research infrastructure. More important than the actual dollars, however, is what we do with that support, and we continue to achieve much with it, all in ways that benefit our neighbors, our nation, and society in general.

In the past year, five people affiliated with CIRES have been recognized as highly-cited authors; we have had the institute's most highly cited paper in its history, a piece in the Lancet co-authored by José-Luis Jiménez, on airborne transmission of the virus that causes covid; we have secured two very large grants and contracts, worth a combined total of nearly \$100M. And we have continued to support NOAA through our recently awarded cooperative agreement, in its tremendously important mission of protecting lives and property—through development of scientific knowledge, through forecast improvements, through change observations and process studies, and much more.

It is easy to lose sight—in our day-to-day work—of the bigger picture of which we are a part. Our work is so very important, as it permeates people's daily lives and will have positive impacts for generations to come. Moreover, we do it extremely well. I know it, our peers know it, our partners and sponsors know it, political leaders know it, and the media knows it. I hope you feel the satisfaction and sense of achievement you all deserve to feel from being meaningful contributors to something big and important. For all you do to support our tremendously important mission, you have my infinite gratitude and my utmost respect.

Thank you for making CIRES an intellectual powerhouse, and such an important and impactful community where environmental sciences flourish. I appreciate you all.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Waleed Abdalati'. The signature is fluid and cursive, written over a light blue horizontal line.

Waleed Abdalati, CIRES Director

5 Years

Caroline Alden
Jennifer Balch
Samuel Califf
Ryan Cassotto
Joost de Gouw
William Diment
Sarah Doherty
Jeffrey Duda
Anna Fudale
Maxwell Holloway
Nicole Joy
Jennifer Katzung
Lauren Kim
Michael MacFerrin
Walter Meier
Julie Miller
Twila Moon
Rachel Nagy
Britt-Anne Parker
Greg Rose
Matthew Rossi
Molly Smith
Lise St. Denis
Christine Wiedinmyer
Mary Woloszyn
Caroline Womack

10 Years

John Albers
Charles Anderson
Kevin Beam
Michael Burek
Agnieszka Gautier
Michael Hardesty
Jeffrey Johnson
Liam Kilcommons
Shannon Leslie
Ben Livneh
Richard McLaughlin
Eric Moglia
Hilary Peddicord
Imtiaz Rangwala
Jih-Wang Wang

15 Years

Christopher Bond
Terence Bullett
Kara Csibrik
Evelyn Grell
Glenn Scott Lewis
Glen McConville
Manoj Nair
Mark Seefeldt
Jesse Varner
Ann Windnagel

20 Years

Kimberly Baugh
Owen Cooper
Andrew Crotwell
José-Luis Jiménez
Linda Pendergrass
Vera Schulte-Pelkum
Amy Solomon
Ken Tanaka

25 Years

Gilbert Compo
Donald David
Kelvin Fedrick
Catherine Fowler
Gary Hodges
Xiangbao Jing

30 Years

Teddy De Maria
Geoffrey Dutton
Joan Hart
Karen O'Loughlin
Theodore Scambos

Associate Scientist II

Maxwell Holloway
Samantha Lee
Samuel Taylor

Associate Scientist III

Seth Arens	Audrey Payne
Brian Butterworth	Katya Schloesser
Christina Kumler	Kenneth Schuldt
Michael Laxer	Brandon Shelton
Monica Madronich	Daniel Warren
Eric Moglia	Georgianna Zelenak

Senior Associate Scientist

Molly Crotwell	Eric Schnepf
Jeffrey Hamilton	Michon Scott
Matthew Love	Kenneth Smith
Brandi McCarty	Richard Tisinai

Research Scientist II

Melissa Breeden	Zachary Lawrence
Ryan Cassotto	Xiaoyu Long
Aparajeo Chattopadhyay	Christopher Maloney
Siwei He	Julie Miller
Bo Huang	Gordon Novak
Yue Jia	Xia Sun
Aleya Kaushik	Jianhao Zhang
Michael Koontz	

Research Scientist III

Xin Lan	Joseph Sedlar	Man Zhang
Haiqin Li	Mark Seefeldt	
Zhe Peng	Caroline Womack	

Senior Research Scientist

Takanobu Yamaguchi	Henry Alken
Tapuosi Lotoaniu	Song you Hong

Administrative Associate II

Meghan Henderson
Cameron Walker

Administrative Associate III

April Laliberte

AWARDS

CIRES scientists are often integral to NOAA award-winning science and engineering teams but cannot be given certain federal awards, such as the prestigious Department of Commerce Gold, Silver, and Bronze Medals. The CIRES Director recognizes the extraordinary achievements of CIRES scientists working in partnership with federal colleagues.



CIRES Silver Medal

Dave Allured
Irina Djalalova

For development and implementation of Air Quality Model v6 to significantly advance operational air quality predictions for the Nation.



CIRES Bronze Medals

Sunil Baidar
Ludovic Bariteau
Byron Blomquist

Steve Borenstein
Radiance Calmer
Gijs de Boer

Jonathan Hamilton
Maxwell Holloway
Jan Kazil

Richard Marchbanks
Takanobu Yamaguchi
Michael Zucker

For scientific achievement in the design and implementation of the complex Atlantic Tradewind Ocean-atmosphere Mesoscale Interaction Campaign.

Ludovic Bariteau
Byron Blomquist
Radiance Calmer
John Cassano
Dave Costa
Gijs de Boer

Michael Gallagher
Anne Gold
Jonathan Griffith
Jonathan Hamilton
Sean Horvath
Katy Human

Gina Jozef
Sergey Matrosov
Lianna Nixon
Ola Persson
Laura Riihimaki
Katya Schloesser

Matthew Shupe
Anne Sledd
Amy Solomon
Julienne Stroeve

For extraordinary contributions to the year-long Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAIC) polar expedition.

Shilpi Gupta
Alexander Kirst
WenWei Liao
Hilary Peddicord
Beth Wehe

For the Commerce Department's first research-to-education transition that secured NOAA's ability to deliver data products to a vast network with global reach.

Kelsey Satalino
Adam Lang
Joel Lisonbee

Elizabeth Ossowski
Britt Parker
Sylvia Reeves

Amanda Sheffield
Molly Woloszyn

For the new Drought.gov website, a cutting-edge implementation of the NIDIS public law, built on interagency and DOC partnerships.

Kenneth Aikin
Sunil Baidar
Brandi McCarty

Jeff Peischl
Michael A. Robinson
Christoph Senff

Chelsea Stockwell

For synthesis, critical evaluation, and communication to scientists and the public about the global air quality impacts of COVID-19 pandemic lockdowns.

CIRES Outstanding Performance Awards: Science and Engineering

CRITERIA 1: Development of new scientific, engineering, and/or software tools or models directly resulting in novel research valuable to CIRES and the wider scientific community.

CRITERIA 2: Uncommon initiative, resourcefulness, and/or scientific creativity conducting research with potential to expand or change the direction of a particular field or discipline.

CRITERIA 3: Participation in collaborative and/or multidisciplinary research that engages a broader cross-section than the nominee's typical scientific or engineering community.

The OPA committee has selected these winners in the Science and Engineering category:

Maxwell Holloway

NOAA'S CSL

Maxwell Holloway's impressive skills in hardware design, CAD, mechanical fabrication, assembly and modification, as well as his extensive knowledge and skill in electronics, have propelled the group's instrument development and field campaign successes. Holloway was integral to the design, modification, and implementation of the latest generation of the 2-axis mirror scanner system for the MicroDop doppler LiDAR system. He served as lead engineer in uploading and installing research systems for several recent field campaigns including the California Fire Dynamics Experiment, SUNVEx, and SITE. His excellent coordination with external collaborators has resulted in rich data set used to better understand wildfire behavior, and the PUMAS platform is now a model for other research entities.

Christopher Amante, Kelly Carignan, Elliot Lim, Matthew Love, Mike MacFerrin

NOAA'S NCEI

This NCEI/CIRES Digital Elevation Model (DEM) team reached a major scientific milestone by releasing a new Earth TOPOgraphy (ETOPO) global relief model that includes significant improvements and updates to the 2009 version. This widely-used global digital elevation model helps scientists forecast and model tsunamis and other coastal hazards, and is a critical tool for diverse other users. With knowledge and determination, this team overcame numerous hurdles to build ETOPO 2022 to serve present and future needs of the scientific global hazard and mapping communities and beyond, through higher spatial resolution, as well as improved bathymetric and topographic accuracy. Since its release, ETOPO has been the top-cited product of NCEI.

Elizabeth Asher

NOAA'S CSL

Elizabeth Asher is a key contributor to NOAA's Balloon Baseline Stratospheric Aerosol Profiles project where she has pioneered the deployment of Portable Optical Particle Spectrometers (POPS) at multiple locations and at critical times to measure key episodes, such as the Raikoke (2019) and Hunga-Tonga (2022) volcanic eruptions, as well as the 2022 Australian New Year's fires. Her innovations and resourcefulness have allowed the POPS to survive long-duration flights in harsh conditions and for extended periods over large geographic regions. Asher's work has produced an entirely new type of stratospheric dataset which will answer long-standing questions about aerosol dispersion, variability, and background conditions in a critical region of the atmosphere.

CIRES Outstanding Performance Awards: Service

CRITERIA 1: Implementation of a creative or innovative idea, device, process, or system that aids in research, teaching, or outreach at CIRES.

CRITERIA 2: Development or improvement of a service that increases the efficiency, quality, or visibility of scientific research or outreach.

CRITERIA 3: Providing a service that promotes or inspires excellence and dedication to research performed at CIRES or in the wider community.

The OPA committee has selected these winners in the Service category:

Hazel Bain

NOAA SPACE WEATHER PREDICTION CENTER

At the Space Weather Prediction Center (SWPC), Hazel Bain's leadership, expertise, and enthusiasm have helped shape the nation's understanding of space weather impacts on aviation and the strategies necessary to mitigate them. In September 2022, Bain helped lead SWPC's inaugural Space Weather Prediction Testbed Experiment (SWPT), a key component of the recently-released Space Weather Research-to-Operations and Operations-to-Research Framework published by the White House Office of Science and Technology Policy. Recognizing the importance of collaboration during the ambitious event, Bain ensured the experiment incorporated contributions from the airline industry, SWPC, NASA, model developers, international partners, and others. The successful, multi-day event was a key step in both improving space weather products in support of global aviation and improving flight safety by mitigating impacts to aircraft systems and passenger health during space weather storms.

Katherine Boyd, Benét Duncan, Ethan Knight, Megan Littrell, Casey Lea Marsh, Ami Nacu-Schmidt, Christine Okochi, Daniela Pennycook, Matthew Price, Brigitta Rongstad, Annamarie Schaecher

CIRES EDUCATION & OUTREACH, CIRES ADMIN, AND WWA

This CIRES team developed and led the We are Water project, an ambitious public education program focused on water in the desert Southwest. As communities across the Four Corners region are increasingly experiencing disruptions from climate change, this culturally responsive exhibit inspired community dialogue around water by both designing an interactive, traveling exhibit, take-home activities, and library programs, and implementing them on-site with partnering libraries. This innovative model of inspiring public dialogue about a contentious and societally relevant topic in rural areas raises awareness about these changes and hazards within communities, and inspires engagement and resilience. The exhibit is an excellent example of translating complicated science topics into engaging, hopeful, and interactive outreach.

Chris Bond, Lisa Booker, Daniel Crumly, Leslie Goldman, Jonathan Kovarik, Shannon Leslie, Matt Savoie, Amy Steiker

NSIDC

This National Snow and Ice Data Center (NSIDC) Cloud Migration Team came together to address a "big data" challenge by launching NASA's Ice, Cloud, and Land Elevation Satellite-2 (ICESat-2) data—an Earth observing mission that produces 1 TB of data a day—into the NASA Earthdata Cloud. By making those data publicly available in a commercial cloud environment, the team inspired, led, and marked a significant achievement for the Distributed Active Archive Center (DAAC) at NSIDC as it supports NASA's goal to move its Earth science data to the cloud. The migration allows for the ever-expanding growth in data volumes while boosting the accessibility of the science. Cloud users can access open data without downloading it to their own systems, which fosters open sharing of data, information, and knowledge within the scientific community and the public.

George C. and Joan A. Reid Award

Made possible by the Reids' generous contribution to an endowed scholarship fund, the Reid Award celebrates intellectual contributions to CIRES and leadership within the broader University of Colorado Boulder community. It is awarded every two years.

George Colvin Reid (1929–2011) was an eminent atmospheric scientist who pioneered research into critical environmental issues such as stratospheric ozone depletion and global climate change. Always a progressive thinker, he was one of the initial four fellows who founded the Cooperative Institute for Research in Environmental Sciences. Joan A. Reid (1932–2015) was one of the first women to enroll in the University of Colorado School of Law. She spent most of her career with the nonprofit Rocky Mountain Mineral Law Foundation, and was a frequent community volunteer, an avid outdoorsperson, and with her husband George, an inveterate world traveler.

Zach Schiffman

Zach Schiffman's Ph.D. thesis centers on laboratory studies of atmospheric aerosols to explore their role in climate change. One project Zach has explored is so-called "contact nucleation," a process whereby particle collisions in the atmosphere lead to particle phase changes. The particle phase can in turn impact atmospheric chemistry and water uptake, both of which influence the effect of aerosols on climate. His first-author paper on this work was recently published in *ACS Earth and Space Chemistry*. He is also a co-author on two additional publications on aerosol microphysics. As he moves ahead in his Ph.D. research, Zach will perform laboratory studies on brown carbon in the atmosphere and its impact on climate. In addition to Zach's research success, he has achieved distinction in his academic coursework, been honored with a Graduate Teaching Excellence Award, and has been awarded the Sharrah Summer Fellowship from the Chemistry Department. Last year, Zach was a recipient of a CIRES Graduate Student Research Award.

Beyond his accomplishments in scholarship at CU, Zach is committed to outreach, service, and community-building at the university. He serves as a site leader with the CU Partnerships for Informal Science Education in the Community (PISEC), where he leads volunteers at K-12 schools in the St. Vrain Valley School District to engage students underrepresented in STEM in inquiry-based science. He also serves on the leadership team for CHEMunity, a graduate student organization that seeks to build community among graduate students and within the greater CU Boulder chemistry department. In this role, he organizes events for local scientists, helps to host the visitation weekend for prospective graduate students, mentors first-year students, and contributes to a positive and inclusive culture at CU Boulder.

Zach's outstanding scholarship, along with his unwavering commitment and dedication to community service, renders him a deserving candidate to be recognized with the Reid Memorial Scholarship in honor of the legacy of George C. and Joan A. Reid.

About CIRES Members Council



Rendezvous is organized each year by the CIRES Members Council (CMC). We represent the interests of all CIRES members with respect to CIRES governance, organizational direction, and the day-to-day workplace environment. As a representative group made up of CIRES members, we are tasked with the following:

- Representing the concerns of the CIRES Membership by bringing issues to the attention of the CIRES administration;
- Working to improve the lines of communication within and between all CIRES units;
- Providing a means of member participation in CIRES governance and a voice on committees and working groups which form the core of that governance;
- Contributing to the process which determines CIRES' research direction and areas of research; and
- Fostering a positive workplace environment and Members' connection with CIRES by facilitating Members' understanding of their roles within CIRES.

The CIRES Members Council provides the opportunity for service as well as career enhancement, benefiting representatives and constituents alike.

cires.colorado.edu/about/institutional-programs/cires-members-council

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Use your device to find poster locations and/or abstracts:

<https://ciresevents.colorado.edu/rendezvous/posters>

UMC Terrace Pavilion

CRYOSPHERIC AND POLAR PROCESSES

ENV. OBSERVATIONS, MODELING, FORECASTING

WESTERN WATER ASSESSMENT

ECOSYSTEM SCIENCE

SOLID EARTH SCIENCES

WEATHER AND CLIMATE DYNAMICS

EDUCATION & OUTREACH

UMC MAIN ENTRANCE

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CASH BAR (CREDIT CARDS ONLY)

SNACKS

UMC Aspen Room

ADMINISTRATION

ENVIRONMENTAL
CHEMISTRY



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colorado.edu/rendezvous/](https://ciresevents.colorado.edu/rendezvous/)

CASH
BAR
(CREDIT
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ONLY)

SNACKS

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