



Rendezvous2025

THURSDAY, MAY 15, 2025

UNIVERSITY MEMORIAL CENTER

GLENN MILLER BALLROOM, UMC TERRACE TENT, ASPEN ROOMS

Hosted by



SCAN TO VIEW THE MAP
OF POSTERS



READ THE ABSTRACTS



(To all award recipients: Please gather by the stage immediately following the awards presentation for a group picture. Weather permitting, we will take the picture outside on the UMC Terrace.)

The [CIRES Members' Council](#) (CMC) is pleased to announce the 20th annual CIRES Rendezvous. This institute-wide symposium will take place on Thursday, May 15th, 2025 with the aim of bringing awareness to the depth, breadth, and quality of the pacesetting 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.

AGENDA

10:00 AM - 12:45 PM - POSTER SETUP

UMC Terrace Tent and Aspen Rooms. CMC members will be available to assist you; thumbtacks will be provided.

12:30 PM - 1:00 PM - CHECK IN

Glenn Miller Ballroom foyer

1:00 PM - 2:15 PM - FLASH TALKS / STATE OF THE INSTITUTE ADDRESS & AWARDS

Glenn Miller Ballroom

- Welcome by your CMC
- Flash Talks by CIRES early-career researchers
- State of the Institute address and presentation of CIRES awards by Waleed Abdalati, CIRES Director

2:15 PM - 5:00PM - POSTER SESSION

UMC Terrace Tent and Aspen Rooms

- Credit card bar available (Don't forget your ID!)
- Light appetizers and desserts provided



From the Director

Dear Colleagues,

Welcome to the CIRES Rendezvous 2025! At a time when we are facing so many challenges to the work we do, it is especially important that we pause, reflect on the importance of our work and how well we do it, and celebrate – not just our past year's achievements, but who we are as a community. I often cite statistics that highlight our achievements, and we certainly have impressive statistics again this year:

- \$113,034,046 in awards so far in the first three quarters of the year (as of 3/31/25), comprising about a fifth of the university's \$587 million in research awards. This was a 13.8 percent increase in award dollars compared to the same period last year.
- Submission of 199 CIRES-led proposals in FY2024, with a proposal success rate of nearly 50 percent. So far in FY2025, we have submitted 214 CIRES-led proposals.
- Publication of 490 peer-reviewed journal articles in the past year.

While these numbers are, as usual, very impressive, this year I want to focus more on some of our tremendous strengths that are difficult to quantify. How do we quantify the difference we make in people's lives, health and safety? How do we quantify our contributions to our nation's success and well-being? How do we quantify losses avoided through our impactful research and applied activities? How do we quantify the value of some of the early steps in what, down the road, will lead to solutions to some of society's greatest challenges? Yet that is the nature of our work. We seek to understand; we develop knowledge that serves society's needs. We toil – through data, through mud (literally), through experiments, through theoretical analyses, and so much more – to serve a purpose that is bigger than any of us.

It is easy to lose sight, especially in today's political and research environment, of the bigger picture of which we are a part. Our work is so very important, as it permeates people's daily lives and has extremely positive impacts, not just for today's society, but for generations to come. Moreover, we do it extremely well. I know it, our peers know it, our partners and sponsors know it, and the media knows it. Despite some of the current challenges we face, I hope you feel the satisfaction and sense of achievement you all deserve to feel from being meaningful contributors – in each of your roles – to something so big and important. For all you do to support our critical mission, you have my infinite gratitude and my utmost respect.

Waleed Abdalati

PROMOTIONS

ASSOCIATE SCIENTIST II

Alan Bourgeois
Emily Carpenter
Jordan Galletta
Amy Gilliland
Alexander Hewett
Ann Mahon
Jaclyn Stickrod
Timothy Taylor

ASSOCIATE SCIENTIST III

Mikala Beig
Mary Ellen Byers
Mariama Dryak-Vallies
Peter Effertz
Rachael Fritchie
Matthew Green
Charlotte Martinkus
Anthony Pirolli
Ryan Weber
Li yin Young

SENIOR ASSOCIATE SCIENTIST

Lisa Booker
Kelvin Fedrick
Leslie Goldman
Craig Hoffman
Glenn Scott Lewis
Joel Lisonbee
John Mund
Matthew Price
Sylvia Reeves
Josh Riley
Amy Steiker
Mary Woloszyn
David Zakavec

ADMINISTRATIVE ASSOCIATE II

Sommer Axner
Autumn Coleman

RESEARCH SCIENTIST II

Niraj Agarwal
Leidy Romero Alvarez
Kelly Balmes
Sudheer Reddy Bhimireddy
Vanessa Caicedo
Xuanyu Chen
Michael Gallagher
Han Huynh
Congmeng Lyu
Ming Lyu
David Marsico
Georgia Michailoudi
You mi Oh
Alexander Thompson
Kinya Toride

RESEARCH SCIENTIST III

Daniel Abdi
Adam Ahern
Christopher Amante
Kai-Lan Chang
Barbara Dix
Audrey Gaudel
Jake Gristey
Christina Holt
Michael Lawler
Meng Li
Matthew Rossi
Brandon Wolding
Jane Wolken
Kristen Zuraski

SENIOR RESEARCH SCIENTIST

Hazel Bain
Carrie Bell
Matthew Druckenmiller
Noor Johnson
Larissa Krista
Imtiaz Rangwala

ADMINISTRATIVE ASSOCIATE III

Laura Burfield
Brigitta Rongstad Strong
Jazmin Surface
Cameron Walker

YEARS OF SERVICE

AS OF APRIL 30, 2025

5 YEARS

Bianca Adler
Peemin Chen
Alicia Christensen
James Correia Jr
Barbara Dix
Ryan Fritts
Michael Gallagher
Leslie Goldman
Patrick Graham
Matthew Green
Jonathan Griffith
Craig Hoffman
Christina Holt
Bo Huang
Ginikanda Ilangakoon
Aleya Kaushik
Daniel Keane
Ethan Knight
Angela Knight
Alyson Krimmer
Adam Lang
Joel Lisonbee
Christopher Maloney
Jessica Nation
Nate Quarderer
Caitlin Ruby
David Schneider
Jordan Schnell
Amanda Sheffield
Xia Sun
Jazmin Surface
Jimena Ugaz-Pereda
Daniel Van Hoomissen
Caihong Vanderburgh
Claire Waugh
Dawn Williams
Chunhua Zhou

10 YEARS

Nathan Campbell
Jason English
Craig Hartsough
Philip Handley
Michael Hobbins
Brian Kress
Christina Kumler
Thomas Legard
Haiqin Li
Ruifang Li
Amy Steiker
Aaron Sweeney
Margaret Tilton
Karin Vergoth
Yan Wang
David Zakavec

15 YEARS

Henry Alken
Maxwell Boykoff
Anne Gold
Christopher Golden
Derek Hageman
Eric Hints
George Mungov
Elizabeth Wehe

20 YEARS

Lone Hansen
Jonathan Kofler
Jonathan Kovarik
Yelena Pichugina
Stefan Tulich

25 YEARS

Dave Allured
Elisabeth Andrews
Andrew Barrett
Christopher Harrop
Brandi McCarty
Jon Nance
Bruce Raup
Michon Scott
Harald Stark
Charles Wilson

30 YEARS

Joseph Barsugli
Darren Jackson
Richard Marchbanks
Chesley McColl
Fred Moore
Irina Petropavlovskikh
James Scott
Christoph Senff
Tatiana Smirnova

35 YEARS

Tim Fuller-Rowell
Paul Johnston
Mark Serreze

40 YEARS

Don "Hoop" Hooper

CIRES OUTSTANDING PERFORMANCE AWARDS

The CIRES Outstanding Performance Awards, given by the CIRES Members' Council, are meant to recognize projects that are novel and high-impact and show remarkable creativity or resourcefulness. Winners have been nominated by their peers within CIRES. There are three categories: Science & Engineering, Science Service, and Administrative Service.

Find out more here: <https://cires.colorado.edu/award-programs/outstanding-performance-awards>

Science & Engineering

Jeff Johnson

NOAA SWPC

Under Jeff's leadership, his team has developed cutting-edge systems that are critical to safeguarding the nation's power grid, economic stability, and national security. These systems deliver real-time, high-precision space weather data that enable Space Weather Prediction Center forecasters to issue timely forecasts, watches, warnings, and alerts for geomagnetic storms, events that pose significant risks to critical infrastructure. By integrating high-cadence, high-resolution observations, Jeff's work has revolutionized space weather forecasting, providing earlier warnings that allow utilities, aviation, and other key industries to mitigate disruptions, protect assets, and ensure operational continuity. His leadership has driven NOAA and its partners toward a proactive, real-time, data-driven forecasting model, transforming the nation's ability to prepare for and respond to space weather threats before they impact vital systems.

Alex Fritz

NOAA GML

Alex achieved engineering excellence under time pressure to develop the Sonde-Pi reception system, a small, portable hardware system that captures data from balloon-borne instruments measuring pressure, temperature, water vapor, ozone, and aerosols in the upper atmosphere. Alex's work substantially increased the volume of data collected, allowing for the transmission of 25% more water vapor data and 50 percent more aerosol data with a cost savings of 70 percent. Alex designed permanent Sonde-Pi reception systems that are now installed at NOAA balloon sites in Colorado, Hawaii, Alaska, New Zealand, and Reunion Island, as well as mobile Sonde-Pi reception systems that are used on field campaigns. These measurements are important for satellite validation and monitoring long-term changes in atmospheric composition. Alex also worked on software updates to improve data processing, collaborating with engineers in NOAA labs, technicians in Hawaii and Alaska, and researchers in New Zealand.

Michael Gallagher

NOAA PSL

Michael has displayed scientific excellence by developing instrument suites that provide autonomous energy budget measurements at remote locations on the Greenland Ice Sheet. Specifically, Michael developed an autonomous, smart, renewable power system for scientific instrumentation in Greenland. He also advanced and optimized an instrument suite that measures all components of the Arctic surface energy budget. Michael's leadership is evident in his ability to work with multidisciplinary teams and solve complex logistical challenges. His problem-solving skills were particularly highlighted through his development of a lithium-based power system to overcome a critical field observation limitation. His interdisciplinary reach is broad, integrating atmospheric science, hydrology, and engineering. His work represents a major advance in our ability to make remote, sophisticated measurements in the Arctic and will be the basis for many future activities.

Prashant Sardeshmukh

NOAA PSL

Prashant's creativity and openness have fueled transformational successes in climate science and particularly have advanced our understanding of El Niño-Southern Oscillation (ENSO) dynamics. Despite decades of research, a vital component of ENSO dynamics remained unexplored, leading to biases in climate models and inaccurate ENSO predictions. To remedy this, Prashant used data-adaptive techniques to show that vertical atmospheric motions, resulting in cloud shielding, are at least as important to the timing and intensity of El Niño as are other effects. Prashant's result indicates that a vital facet of the dynamics of El Niño has been unrecognized in decades of El Niño modeling. But his innovative thinking is not limited to El Niño. Countless examples are in his unusual, open-minded approach to research and his dedication to mentoring young scientists. He consistently seeks out other researchers to engage in new approaches to old problems. His contributions to climate science are both deep and wide-ranging.

CIRES OUTSTANDING PERFORMANCE AWARDS

Science Service

Jeff Peischl, Anna McAuliffe, Sonja Wolter, Steve Borenstein, Eric Moglia, Kate Baugh, Monica Madronich, Tim Newberger, and Molly Crotwell

GML

This team designed, executed, and refined a groundbreaking airborne survey that has significantly advanced greenhouse gas monitoring across the United States, especially in places that have been difficult to access. Their problem-solving creativity has refined greenhouse gas emission estimates that are critical for climate policy, global assessments, climate modeling, and mitigation strategies.

Nathan Miles

NOAA SWPC

Nathan Miles developed operational algorithms for a first-of-its-kind instrument at the Space Weather Prediction Center to produce near-real-time images of the Sun's corona, which are critical in space forecasting. Images from other instruments are typically received hours later, but this instrument produces images every 15 minutes and Nathan has reduced the processing time for these images to under two minutes. This is a game-changer for space weather forecasters. These images will be used by space weather forecasters and researchers around the world for decades to come.

James Negus

NOAA NCEI

James Negus dedicates a significant portion of his time at CIRES to science outreach and communication. His involvement in outreach ranges from appearing on podcasts and in films to engaging with schools and serving as an advisor, writer, and narrator for the NASA-funded "Science through Shadows" project. His innovative outreach inspires curiosity and creates pathways for people from all walks of life to connect with CIRES and NOAA's world-class research. His passion for scientific communication inspires excellence both at CIRES and in the wider community.

Administrative Service

Rebecca Stossmeister and Laura Burfield
CIRES Finance

Laura and Rebecca have provided exceptional improvements to operational processes that support the research and outreach teams of the North Central Climate Adaptation Science Center (NC CASC). Laura and Rebecca were instrumental in receiving a renewed five-year, \$7.4 million cooperative agreement from the U.S. Geological Survey to continue hosting NC CASC at CU Boulder. They have been key to service improvements that increase the effectiveness, efficiency, and quality of NC CASC work and operations. In addition to financial management, they have also provided administrative support for research and capacity-building activities of the center.

CIRES BRONZE MEDALS

CIRES scientists are often integral to NOAA award-winning science and engineering teams but cannot receive certain federal awards, such as the prestigious Department of Commerce Gold, Silver, and Bronze Medals. With CIRES medals, we recognize the extraordinary achievements of CIRES scientists working in partnership with federal colleagues.

2023: FOR EXCEPTIONAL SERVICE TO COMMUNITIES AFFECTED BY THE MARSHALL FIRE in providing timely air quality information to support recovery efforts.

Kenneth Aikin

Matthew Coggon

Jeff Peischl

Chelsea Stockwell

Kristen Zuraski

2024: FOR CRUISEPACK, a tool that enables critical marine geophysical data to be archived and preserved for generations to come.

Charles Anderson

Carrie Wall

Veronica Martinez

Jessica Nation

MORE BRONZE MEDALS >>>

CIRES BRONZE MEDALS

The CIRES/NOAA Outreach Ambassadors

For significantly enhancing NOAA's ability to increase awareness of NOAA's mission through outreach, education and service. For work performed in 2023/2024

Astrid Maute (SWPC)

Bianca Baier (GML)

Christina Kumler (GSL)

Christoph Senff (CSL)

Chuck Anderson (NCEI)

Craig Hartsough (GSL)

Eleanor Waxman (CSL)

Eric Moglia (GML)

Hilary Peddicord (CEEE)

Jessica Knezha (PSL)

Jessica Nation (NCEI)

James Negus (NCEI)

Karin Vergoth (GML)

Kimberly Moreland (SWPC)

Lucia Harrop (CIRES Admin)

Monica Madronich (GML)

Peter Effertz (GML)

Sergio Ibarra-Espinosa (GML)

Shawn Murdzek (GSL)

Vanessa Caicedo (GML)

Wyndom Chace (CSL)

SCHOLARSHIPS

Reid Memorial Scholarship

George C. Reid, one of the four founding CIRES Fellows, passed away in 2011. Reid was an eminent atmospheric scientist who pioneered research into critical environmental issues such as stratospheric ozone depletion and global climate change. To honor his legacy, George's wife Joan made a generous gift to CIRES to support the creation of the George C. Reid Endowed Scholarship Fund, for the benefit of CIRES, in the Graduate School at the University of Colorado Boulder. When Joan passed away in 2015, the Reid family expanded the gift to honor the couple's collective contributions to the University of Colorado community with the George C. and Joan A. Reid Memorial Scholarship Fund. Every two years, the \$2,000 scholarship is awarded to an outstanding CIRES graduate student.

Yingfei Chen

Yingfei receives the 2025 Reid Memorial Scholarship for his significant contributions to research at McMurdo Station, Antarctica, using lidar to study the upper atmosphere. He has collected invaluable data for the scientific community to use in the coming decades. In addition, Yingfei has used lidar data collected here in Boulder to make eye-opening scientific discoveries on the thermosphere-ionosphere metal layers; his discoveries have advanced the study of space-atmosphere interactions. Finally, Yingfei has actively engaged in CIRES and CU Boulder outreach, including hosting a webinar from Antarctica for K-12 students, giving an early-career lightning talk at Rendezvous 2023, and collaborating with scientists at NOAA's Space Weather Prediction Center scientists on upper atmosphere research.

Richard Armstrong Memorial Scholarship

Richard Armstrong spent much of his career working as a scientist in CIRES' National Snow and Ice Data Center. He was an innovative researcher and a dedicated mentor, passionate about supporting the successes of others, including women and those from less well-resourced countries. After his passing in 2023, Armstrong's family and CIRES created the Richard Armstrong Memorial Scholarship Fund, for outstanding CIRES graduate students at the University of Colorado Boulder. They hope that those benefiting from this award will work to create opportunities for all.

Jessica E. Rush

Jesse receives the 2025 Armstrong Memorial Scholarship for her passion, creativity, and dedication to leadership and mentoring. Jesse's graduate work expands upon questions she developed during her undergraduate honors thesis. She is currently studying climate warming in Alaska peatlands with rapidly advancing tools, establishing herself as a scientist and leader in environmental biogeochemistry. Jesse has contributed greatly to the CIRES graduate student community by serving as co-chair of the CIRES Graduate Student Council and attending faculty searches to provide feedback on prospective community members. Jesse is also a very effective educator; she has gone above and beyond as a graduate teaching assistant, providing trainings for other teaching assistants in the ecology and evolutionary biology department, developing field safety plans for the department's field and laboratory courses, and creating publicly available course materials for instructors to use. She is a rising star and she sets the bar high for what it means to be an engaged leader in her community.



The CIRES Members' Council (CMC) organizes Rendezvous annually. 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 employees, we are tasked with the following:

- Represent the concerns of the CIRES members by bringing issues to the attention of CIRES administration and leadership
- Work to improve the lines of communication within and between all CIRES units
- Provide a means of member participation in CIRES governance and a voice on committees and working groups that form the core of that governance
- Foster a positive workplace environment and connection to CIRES

The CIRES Members' Council provides service and career enhancement opportunities that benefit representatives and constituents alike.

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



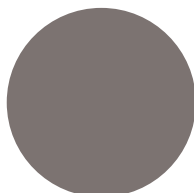
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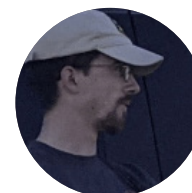
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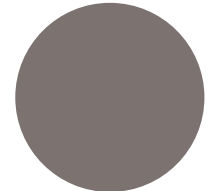
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Ryan Cassotto
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Scott Lewis
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Alison Post
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POSTER SESSION MAP

COMMUNICATIONS,
POLICY, OUTREACH,
EDUCATION

A.I., MACHINE
LEARNING, MODELLING

CRYOSPHERIC AND
POLAR PROCESSES

DATA (management,
analysis, visualization,
science and assimilation)

ECOSYSTEM SCIENCE

ENVIRONMENTAL
CHEMISTRY

ENVIRONMENTAL
MONITORING AND
OBSERVATIONS

FORECASTING

SOFTWARE
DEVELOPMENT

SOLID EARTH SCIENCES

WEATHER AND CLIMATE

UMC Terrace Tent

FRONT DESK

BAR
(CREDIT CARDS ONLY)

SNACKS

AMM-01 EMO-11
AMM-02 EMO-10
AMM-03 EMO-09
CPP-01 EMO-08

CPP-02 EMO-07
CPP-03 EMO-16
CPP-04 EMO-06
CPP-05 EMO-05

CPOE-05 EMO-04
CPP-06 EMO-03
CPP-07 EMO-02
CPP-08 EMO-01

CPP-09 EC-05
CPP-10 EC-04
EC-01 CPOE-06
EC-02 EC-03

EMO-12 FOR-01
EMO-13 FOR-02
EMO-14 FOR-03
CPOE-08 SES-01

EMO-15 SES-02
ES-01 CPOE-10
ES-02 SES-03
ES-03 SOFT-01

ES-04 SOFT-02
ES-05 WC-01
ES-06 WC-02
ES-07 WC-03

CPOE-09 WC-04
ES-08 WC-05
ES-09 CPOE-11
ES-10 WC-06

CPOE-13
WC-20
WC-19
WC-18

WC-17
WC-16
WC-15
WC-14

CPOE-12
WC-13
WC-12
WC-11

WC-10
WC-09
WC-08
WC-07

Aspen Rooms

COMMUNICATIONS, POLICY,
OUTREACH, EDUCATION

WATER RESOURCES

ADMINISTRATION

