

Dr. Annareli Morales (she/her/ella)

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SHORT BIOGRAPHY

Dr. Annareli Morales is a first-generation, Mexican-American, female scientist raised in a low-income, single-parent home in Cicero, IL, USA. She earned her atmospheric science degrees from the University of Illinois, Colorado State University, and the University of Michigan. Annareli is currently a research scientist with the NOAA Cooperative Institute for Research in Environmental Science (CIRES) researching precipitation over mountains and the physical processes involved with cloud and precipitation development using numerical modeling and observational datasets. In addition to physical science, Annareli advocates for diversity, neurodiversity, inclusion, mental health, bilingual science communication, and “K-Gray” education and outreach in atmospheric sciences.

PROFESSIONAL SUMMARY

Research interests

Mesoscale and microscale meteorology, dynamical and thermodynamic processes relating to orographic precipitation and convection, aerosol-cloud-precipitation impacts, atmospheric rivers, urban flooding, midsummer droughts and precipitation variability in southwestern Mexico, and bilingual science communication.

Leadership and Service

AMS Monthly Weather Review, Associate Editor	2022-Present
AMS Mountain Meteorology Committee, Full Member	2021-Present
AMS Speed Networking session, Mentor	2022
AMS Mountain Meteorology Committee, Program Chair	2021-2022
NCAR ASP Research Reviews Committee	2020-2021
AMS Committee for Hispanic and Latinx Advancement, Academia Ambassador Lead and Academia Ambassador	2020-2022
AMS Members Survey Team, Member	2020-2021
NCAR Forging Allies and Connections for Equity in STEM team	2020-2021
UCAR Work From Home Task Force (Core Team)	2020
NCAR MMM Associate Director Search Committee member	2020
Denver/Boulder Local Chapter of the AMS, President	2019-2020
NCAR ASP Social Networking Committee	2019-2020
AMS Mountain Meteorology Committee, Student Member	2017-2019
Climate and Space Sciences Session Co-Chair for UM Engineering Graduate Symposium	2016
Event Coordinator for department Graduate Undergraduate Student Organization	2016-2017
SOARS Newsletter Subcommittee	2016-2017

Monthly “Ladies Lunch” in CLaSP, Co-developer and Organizer	2015-2016
CLaSP Department Grievance Committee Member	2015-2017
UM College of Engineering Department Visit Committee member	2015
UM Grad Chapter of Society of Hispanic Professional Engineers, Membership Chair	2015
AMS Student Conference Planning Committee, Session chair and Member	2013-2015
CSU Graduate Student Council, Atmospheric Science M.S. Representative	2013-2014
CSU American Association for Aerosol Research (AAAR) Student Chapter, Member and Secretary	2012-2014
Peer reviewer: Journal of Atmospheric Sciences, Journal of Geophysical Research: Atmospheres, Monthly Weather Review, Bulletin of the American Meteorological Society, Geoscientific Model Development, MDPI Atmosphere, Journal of Meteorological Research	

Spanish Translation Service

Handbook: Climate Myth Debunking for TV Meteorologists	2021
AMS Statement: Hurricane Preparedness During the COVID-19 Pandemic	2020

Education and Outreach

Goodwin Elementary Virtual Career Day, Cicero, IL	2022
NOAA’s Picture Climate Change Student Photo Contest, NOAA expert	2022
Presenter at Q&A Session for high school girls in ZClub, Boulder, CO	2022
Speaker for Pagosa Springs, CO Rotary Club, Virtual	2021
Guest Scientist for Virtual student visit to NCAR from Oaxaca, Mexico	2021
Panelist for Diversity and Inclusion in Geoscience Lecture, Univ of WY, Virtual	2020
Skype a Scientist Program, Online school visits for 6 th graders and 3 rd graders	2020
STEAM Camp presentation (Invited), Colorado Migrant Education Program	2020
“Ask NCAR” Virtual Presentation for K-12 students and public audience, Boulder, CO	2020
Womxn of Color in STEM panel (Invited), CU-Boulder, Boulder, CO	2020
Career Panel for students at CU-Boulder (Invited), Boulder, CO	2019
Career Panel for students at Metro State University, Denver, CO	2019
“STEMinists of Color” career panel (Invited), Community College of Denver, CO	2019
Volunteer in radar booth, Super Science Saturday, Boulder, CO	2019
Presenter at Q&A Session for high school girls in ZClub, Boulder, CO	2019
Panelist in ASP Postdoc panel for graduate students (Invited), Boulder, CO	2019
Presentations at multiple schools discussing RELAMPAGO campaign, Argentina	2018
Guest lecturer on precipitation and clouds, South Kitsap School District, Seattle, OR,	2018
Morales Physical Science Scholarship at Morton East High School, Cicero, IL	2018-Present
Volunteer in storm surge booth, Super Science Saturday, Boulder, CO	2017
Graduate School Panelist (Invited), Undergraduate Leadership Workshop, Boulder, CO	2017
Presenter at Chelsea Elementary PTO Science Night, Chelsea, MI	2017
Presenter/coordinator of Science Expo at Casa de la Esperanza, Longmont, CO	2016

Presenter during engineering workshop for middle school girls, Ann Arbor, MI	2016
Panelist during SHPE Graduate School Q&A session, Ann Arbor, MI	2016
Flood expert for students at Northside Elementary School, Ann Arbor, MI	2015
Volunteer at science booth during Chelsea Science Night, Chelsea, MI	2015
Organizer/presenter of outreach activity at Family Center, Fort Collins, CO	2014
Speaker for Exploring Your Horizons workshop, Boulder, CO	2014
Developer/organizer of Super Science Saturday science booth, Boulder, CO	2013
Volunteer at UCAR/Spark Booth at Northern Colorado Maker Faire, Loveland, CO	2013
Organizer/presenter at Little Shop of Physics Open House, Fort Collins, CO	2013
Volunteer at UCAR/Spark Booth during Super Science Saturday, Boulder, CO	2012
Volunteer at UCAR/Spark Booth during WeatherFest, New Orleans, LA	2012
Presenter/translator during Science Expo at Casa de la Esperanza, Longmont, CO	2011

Teaching and Mentoring

NOAA EPP/MSI program	Summer 2022
Serving as co-mentor for an undergraduate student, Stella Heflin, alongside Mimi Hughes. Responsible for designing student science project and providing scientific guidance and career mentoring.	
CIRES RECCS program	Summer 2022
Serving as co-mentor for community college student, Brianna Alcorn, alongside Sara Morris. Responsible for designing student science project and providing scientific guidance and career mentoring.	
PhD Committee Member	2021-Present
Serving on PhD Committee for Elver Villalobos Puma at the Universidad Nacional Agraria La Molina (UNALM), Peru	
Informal Mentor	2021-Present
Providing weekly to bi-weekly mentoring meetings with PhD student, K. Ryder Fox.	
ASP Postdoctoral Peer Mentoring	2020-2021
Provided support and guidance to first-year ASP postdoc during their first six months in the program. Biweekly meetings.	
SOARS Program, Writing Mentor	2017, 2018
Edited and provided critique for undergraduate student's presentations, research paper, and abstract.	
University of Michigan, Graduate Student Instructor	Winter 2017
<i>CLIMATE 102 - Extreme Weather (16-week course, 3 credits)</i>	
Prepared and graded exams, held review sessions and weekly office hours, answered daily questions through email and Active Learning Platform, and guest lectured on Thunderstorms and Lightning for a class of over 180 undergraduate students.	
NCAR Pre-College Internship Program (PRECIP), Science Mentor	2016

Developed 6-week science project for high school student and taught her to run a model to understand orographic precipitation and to use GrADS scripts to analyze results. I mentored, encouraged, and answered her questions on performing scientific research and starting college. Student presented her results during the NCAR poster session and produced a final research paper.

Autonomous University of Yucatán (UADY), Visiting Instructor Summer 2013
Introduction to Meteorology and Hurricanes (2-week course, 2 credits)

Taught introductory meteorology concepts for 20 undergraduate/graduate engineering students through lectures, homework, daily weather discussions, and hands-on experiments in Spanish. The course goal was to raise interest and encourage students to obtain higher degrees in atmospheric science and have them return to UADY in hopes of developing a graduate program with a focus in hurricane forecasting.

SOARS Program, Peer Mentor 2012

Provided peer support and advice for new student intern.

High School Internship and Research Opportunities (HIRO) Program, Peer Mentor 2011

Provided peer support, encouragement, and guidance on research project for high school student intern analyzing radar data.

Invited panelist

AMS Early Career Leadership Academy, Webinar on Science Communication. April 2022

AMS 19th Mountain Meteorology Virtual Conference, July 2020

Special Session: Panel Discussion on Inclusiveness

Professional Development

AMS Short Course – Introduction to WRF-Hydro 2021

NCAR Bystander Intervention and Difficult Conversations Training 2020

NCAR Citizen Science Short Course 2020

NCAR ASP Leadership and Diversity, Equity, and Inclusion Training 2020

Engaged Scientist Workshop, “Communication Tools for Effective Outreach” 2019

ESWN Professional Development Workshop: Leadership Skills for Success 2019

in the Scientific Workforce

Atmospheric River Summer Colloquium at Scripps Institute of Oceanography 2019

ASP Summer Colloquium on Interaction of Precipitation with Orography 2017

University of Washington, OLYMPEX Workshop 2017

Introduction to Bayesian Statistics Workshop, NCAR 2016

Studies of Precipitation, Flooding, and Rainfall Extremes Across Disciplines 2013, 2014

Workshops

CSU Professional Development Institute workshops 2013, 2014

EDUCATION

Doctor of Philosophy 2019
 Atmospheric, Oceanic, and Space Sciences University of Michigan
 Dissertation: *Orographic Precipitation Sensitivity to Microphysical and Environmental
 Parameter Perturbations in Moist, Nearly Neutral Flow*

Master of Science 2014
 Atmospheric Science Colorado State University
 Thesis: *Effect of Latent Heating on Mesoscale Vortex Development During Extreme
 Precipitation: Colorado, September 2013*

Bachelor of Science 2019
 Atmospheric Science and Geology University of Illinois at Urbana-Champaign

PRIZES, HONORS, AND AWARDS

ASP Postdoctoral Fellowship, UCAR/NCAR 2019
 UM Richard F. and Eleanor A. Towner Prize for Distinguished Academic Achievement 2018
 UM Rackham Predoctoral Fellowship 2018-2019
 UM ScholarPOWER PhD Candidate Achievement Award 2017
 NCAR ASP Summer Colloquium on Interaction of Precipitation with Orography 2017
 UM Rackham Conference Travel Grant 2015, 2017, 2018
 Warner Internship for Scientific Enrichment Award, NCAR RAL 2016
 ASP Graduate Visitor Program – NCAR Mesoscale and Microscale Meteorology Lab 2016
 2nd Place Poster Presentation – AMS 16th Conference on Mesoscale Processes 2015
 UM Rackham Merit Fellowship 2015-2016, 2017-2018
 SOARS Graduate Fellowship – CSU 2012-2014
 UIUC High Distinction in Atmospheric Science 2012
 UIUC Yoshi Ogura Undergraduate Research Award 2012
 UIUC Dean’s List Honor Roll 2011, 2012
 SACNAS National Conference Travel Scholarship 2011
 UIUC Horace Wu Dining Service Scholarship 2011, 2012
 League of United Latin American Citizens Scholarship 2008

RELEVANT WORK EXPERIENCE

Research Experience

Research Scientist I, NOAA CIRES 2021-Present
 Working within the Hydrometeorology Modeling and Applications Team at the NOAA
 Physical Science Lab. Currently developing a science plan based off the Study of
 Precipitation, the Lower Atmosphere and Surface for Hydrometeorology (SPLASH)
 2021-2022 field campaign in the East River watershed in Colorado. The main theme of
 my research is understanding how well NOAA operational models can represent
 orographic precipitation and the associated mesoscale and microphysics processes.

- Postdoctoral Fellow, NCAR Advanced Study Program (ASP) 2019-2021
 Performing research on 1) orographic precipitation with idealized simulations and statistical sensitivity analysis methods (co-authors: Hugh Morrison, Derek Posselt), 2) the large-scale weather patterns associate with extreme wind events along the Colorado Front Range (collaborators: Rosimar Rios-Berrios, Andreas Prein), and 3) exploring best practices for bilingual video science communication, focusing on Spanish-language adult speakers (collaborator: Lorena Medina Luna, Dan Zietlow).
- Graduate Student Research Assistant, University of Michigan (UM) 2014-2019
 Performed independent research on the sensitivity of orographic precipitation to microphysical, environmental, and mountain geometry perturbations under the guidance of Derek Posselt and Hugh Morrison. I ran idealized simulations of flow characteristic of atmospheric rivers using Cloud Model 1, and configured model source code and microphysics scheme to test hypotheses. Implemented a statistical algorithm to the model design and used the programming languages NCL and GrADS to visualize and analyze model output.
- Graduate Research Assistant, Colorado State University (CSU) 2012-2014
 Performed independent research on the effects of latent heat release to the enhancement of a mesoscale vortex during the 2013 Colorado Floods under the guidance of Russ Schumacher and Sonia Kreidenweis. I implemented code to the Thompson microphysics scheme within the Weather Research and Forecasting (WRF) model to output microphysical process rates and ran WRF with different latent heating settings.
- Student Research Intern, Summer 2012
 UCAR Significant Opportunities in Atmospheric Research and Science (SOARS) Program
 Simulated an idealized, single-cell deep convective storm using WRF and tested the sensitivity of storm development, intensity, structure, and precipitation efficiency for different microphysical parameterizations and horizontal grid spacings under the guidance of Hugh Morrison and Cecille Villanueva-Birriel.
 Project title: *Sensitivity of a Simulated Deep Convective Storm to WRF Microphysical Schemes and Horizontal Resolution*
- Senior Capstone Project, UIUC Department of Atmospheric Science Fall 2011
 Simulated dust and sea salt particles using the Particle-resolved Monte Carlo aerosol model to understand how the internal mixing processes develops under the guidance of Nicole Reimer and Joseph Ching.
 Project title: *PartMC Model Simulations of Internally Mixed Aerosol Particles*

Student Research Intern, UCAR SOARS Program Summer 2011

Analyzed WRF-Chem model output to correlate the short-lived hydroxyl radical with its environmental and chemical driving factors under the guidance of Sasha Madronich and Alma Hodzic.

Project title: *Semi-Empirical Functions Describing the Response of Short-Lived Radicals to their Driving Forces in the WRF/Chem Model*

Field Work Experience

Snow stake deployment Fall 2021

Study of Precipitation, the Lower Atmosphere and Surface for Hydrometeorology (SPLASH), Gothic, CO

Deployed snow stakes, snow cameras, and temperature sensors to understand and analyze snow depth at six high-elevation sites within Gothic and Crested Butte, CO for the SPLASH campaign.

Mobile observation team Fall 2018

Remote Sensing of Electrification, Lightning, and Mesoscale/Microscale Processes with Adaptive Ground Observations (RELAMPAGO) Field Campaign, Argentina

Launched radiosondes to gather atmospheric data during deep convection initiation in the provinces of Córdoba and Mendoza for 7 intensive observation periods. Responsible for training students to use the Vaisala DigiCORA Sounding System MW4, setting up UHF and GPS antennas and surface stations, as well as preparing balloons and sondes. Provided Spanish translation and participated in numerous education and outreach activities with local and rural schools around Córdoba.

Radar operation and data collection Fall 2010

Doppler On Wheels (DOW) student project, UIUC Radar Meteorology Course

Collected data on boundary layer rolls using the DOW7 mobile radar and analyzed Bragg Scattering from clear air echo. I used the GR2Analyst and NCAR/SOLO software to characterize the early Fall boundary layer.

Surface observations, student volunteer Spring 2009

Profiling of Winter Storms (PLOWS) Project, Wisconsin, USA

Launched radiosondes to gather atmospheric data during winter storms.

PUBLICATIONS

Peer-reviewed

Fox, K. R., B. D. McNoldy, **A. Morales**, and D. S. Nolan, 2022: Sensitivity of surface rainfall in landfalling Hurricane Florence (2018) to sub-kilometer grid spacing and microphysics parameterizations. *Mon. Wea. Rev.*, In Review. [Student led]

- Morales, A.**, M. J. Molina, and co-authors, 2022: Hispanic and Latinx Academics and Researchers in the Atmospheric Sciences: The People, the Challenges, and the Future *Bull. Amer. Met. Soc.*, In Review.
- Morales, A.**, L. Medina Luna, D. Zietlow, and J. LeBeau, 2022: Engaging an Adult Spanish-Speaking Hispanic and Latinx Audience: Testing the Impact of Communication Styles on Inclusion, Accessibility, Learning, and Interest. *Journal of Geoscience Education*, Revisions submitted.
- Villalobos, E., J. Flores, M. Castro, **A. Morales**, K. Mosquera, W. Lavado, and F. Silva, 2022: Summertime precipitation extremes and the influence of atmospheric flows on the western slopes of the southern Andes of Peru. *International Journal of Climatology*, In review. [Student led]
- Morales, A.**, D. J. Posselt, H. Morrison, 2021: Which combinations of environmental conditions and microphysical parameter values produce a given orographic precipitation distribution? *J. Atmos. Sci.*, **78**(2), 619-638. <https://doi.org/10.1175/JAS-D-20-0142.1>
- Morales, A.**, D. J. Posselt, H. Morrison, F. He, 2019: Assessing the Influence of Microphysical and Environmental Parameter Perturbations on Orographic Precipitation, *J. Atmos. Sci.*, **76**, 1373-1395. <https://doi.org/10.1175/JAS-D-18-0301.1>
- Morales, A.**, H. Morrison, D. J. Posselt, 2018: Orographic precipitation response to perturbations in microphysical parameters for idealized moist nearly neutral flow. *J. Atmos. Sci.*, **75**, 1933-1953. <https://doi.org/10.1175/JAS-D-17-0389.1>
- Morales, A.**, R. S. Schumacher, and S.M. Kreidenweis, 2015: Mesoscale vortex development during extreme precipitation: Colorado, September 2013. *Mon. Wea. Rev.*, **143**, 4943-4962. <https://doi.org/10.1175/MWR-D-15-0086.1>
- Morrison, H., **A. Morales**, and C. Villanueva-Birriel, 2015: Concurrent sensitivities of an idealized deep convective storm to parameterization of microphysics, horizontal grid resolution, and environmental static stability. *Mon. Wea. Rev.*, **143**, 2082-2104. <https://doi.org/10.1175/MWR-D-14-00271.1>

Non-peer reviewed, opinion pieces

- Morales, A.**, C. L. Walker, D. L. Carroll-Smith, and M. A. Burt, 2021: Code-switching and assimilation in STEM culture. *Eos*, 102. Published on 28 July 2021. <https://doi.org/10.1029/2021EO161232>
- Morales, A.**, 2015: Cyclonic circulation development during extreme precipitation. *Down to Earth, Physics Today*. Published on 21 April 2015.

PRESENTATIONS

Invited presentation

- Morales, A.**: “Statistical methods for exploring environmental and microphysical controls on orographic precipitation”. *Ciencias atmosféricas para quedarse en casa* Seminar Series, Centro

de Centro de Ciencias de la Atmósfera, Universidad Nacional Autónoma de México (UNAM), April 2021.

Morales, A.: “Exploring environmental and microphysical controls on orographic precipitation”

- Colorado State University, Department of Atmospheric Science Colloquium, December 2020
- University of Utah, Department of Atmospheric Science Graduate Seminar Series, November 2020
- University of Wyoming, Department of Atmospheric Science Seminar Series, October 2020

Morales, A.: “Lost and Found”. *Why AGU Scientists Study the Earth and Space*, eLightning session and panel discussion, AGU Fall Meeting, San Francisco, CA, December 2019

Morales, A.: “Flooding in Colorado”

- Invited lecturer for HERS program, NCAR, Boulder, CO, July 2018
- Invited lecturer for Bridge to the Geosciences program, NCAR, Boulder, CO, June 2018

First-author presentations

Morales, A., L. Medina Luna, D. Zietlow, J. Lebeau, and M. Molina: “Does video communication style influence weather forecasting interest, learning, and inclusion for a Hispanic/Latinx audience?” AMS Annual Meeting, Virtual, Jan 2022 [Oral]

Morales, A., and A. Prein: “Precipitation variability and intermittency over southwestern Mexico”.

- Clouds, Convection, and Precipitation Brown Bag, Virtual, Nov 2020 [Oral]
- Mexican Geophysical Union Annual Meeting (RAUGM), Virtual, Nov 2020 [Oral]

Morales, A.: “Understanding Environmental and Microphysical Parameter Relationships using a Markov Chain Monte Carlo Approach”. Cloud-scale modelling workshop, Boulder, CO, Jan 2020 [Oral]

Morales, A., D. J. Posselt, H. Morrison: “Multivariate Sensitivity Analysis of Orographic Precipitation Within an Idealized Atmospheric River Environment”.

- AMS Annual Meeting, Boston, MA, Jan 2020 [Poster presented by Derek J. Posselt]
- AGU Fall Meeting, San Francisco, CA, Dec 2019 [Poster]
- 13th Annual *Earth System and Space Science Poster Conference*, Boulder, CO, Dec 2019 [Poster]

Morales, A., D. J. Posselt, H. Morrison, and F. He: “Orographic Precipitation from Atmospheric Rivers: Exploring the response to microphysics and environmental parameter perturbations”. NOAA Physical Science Division Seminar, Boulder, CO, Dec 2018. [Oral]

Morales, A., D. J. Posselt, H. Morrison, and F. He: “Orographic Precipitation Response to Microphysical and Environmental Perturbations for Idealized Moist Nearly Neutral Flow”.

- AGU Fall Meeting, Washington, D.C., Dec 2018 [Poster]
- 8th Annual Young Scientist Symposium on Atmospheric Research (YSSAR), Fort Collins, CO, Oct. 2018 [Oral]

- AMS Mountain Meteorology Conference, Santa Fe, NM, June 2018. [Oral]
- Morales, A.:** “Orographic Precipitation: Exploring the Response to Microphysics and Environmental Parameter Perturbations”. NCAR MMM Seminar, Boulder, CO, May 2018. [Oral]
- Morales, A., D.J. Posselt, and H. Morrison:** “Sensitivity of Orographic Precipitation to Microphysics Parameter and Process Perturbations”.
- JPL Earth Science Seminar, Pasadena, CA, July 2017 [Oral]
 - American Meteorological Society (AMS) 98th Annual Meeting, Austin, TX, Jan 2018 [Poster]
- Morales, A., D.J. Posselt, and H. Morrison:** “Sensitivity of Orographic Precipitation to Ice Microphysics Parameter Perturbations”.
- AMS 17th Conference on Mesoscale Processes, San Diego, CA, July 2017 [Oral]
 - 7th Annual YSSAR, Fort Collins, CO, Oct. 2017 [Oral]
- Morales, A., and D.J. Posselt:** “Evaluating the Influence of Microphysics on Orographic Precipitation”. AMS 17th Conference on Mountain Meteorology, Burlington, VT, June 2016 [Oral]
- Morales, A., and D.J. Posselt:** “Evaluating the influence of ice microphysics on an idealized simulation of orographic precipitation”.
- American Geophysical Union Annual Fall Meeting, San Francisco, CA, Dec 2015 [Poster]
 - AMS 16th Conference on Mesoscale Processes, Boston, MA, Aug 2015 [Oral]
- Morales, A., R. Schumacher, and S. Kreidenweis:** “Effect of Latent Heating on Mesoscale Vortex Development during Extreme Precipitation: Colorado, September 2013”.
- American Meteorological Society (AMS) 16th Conference on Mesoscale Processes, Boston, MA, Aug 2015 [Poster]
 - AMS 95th Annual Meeting, Phoenix, AZ, Jan 2015 [Poster]
- Morales, A., C. Villanueva-Birriel, H. Morrison:** “Concurrent Sensitivities of an Isolated Deep Convective Storm to Parameterization of Microphysics, Horizontal Resolution, and Environmental Sounding”. AMS 94th Annual Meeting, Atlanta, GA, Feb 2014. [Oral]
- Morales, A., C. Villanueva-Birriel, H. Morrison:** “Sensitivity of a Simulated Deep Convective Storm to WRF Microphysical Schemes and Horizontal Resolution”.
- Center for Multiscale Modeling of Atmospheric Processes (CMMAP) Student Summer Colloquium, Fort Collins, CO, Aug 2013 [Oral]
 - CSU Atmospheric Chemistry Colloquium, Fort Collins, CO, Jul 2013 [Oral]
 - AMS 93rd Annual Meeting, Austin, TX, Jan 2013 [Poster]
 - CSU American Association for Aerosol Research (AAAR) Student Chapter’s YSSAR, Fort Collins, CO, Oct 2012 [Oral]
 - SOARS Oral Colloquium and Poster Session, Boulder, CO, Aug 2012 [Oral and Poster]
- Morales, A., A. Hodzic, S. Madronich:** “Semi-Empirical Functions Describing the Response of Short-Lived Radicals to their Driving Forces in the WRF/Chem Model”.

- 11th AMS Student Conference, New Orleans, LA, Jan 2012 [Poster]
- Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Annual Meeting, San Jose, CA, Oct 2011 [Poster]
- SOARS Oral Colloquium and Poster Session, Boulder, CO, Aug 2011

Co-author presentations

- de Boer, G., and co-authors including **A. Morales**: “The Study of Precipitation, the Lower Atmosphere and Surface for Hydrometeorology (SPLASH).” AMS 20th Conference on Mountain Meteorology, Park City, UT, June 2022. [Oral]
- Myers, B. M., and co-authors including **A. Morales**: “High Wind Events Over Boulder, CO for the Past Three Decades.” AMS 20th Conference on Mountain Meteorology, Park City, UT, June 2022. [Student led poster]
- Posselt, D.J., G. Tierney, F. He, and **A. Morales**: “Moist Processes as Triggers for Tipping Points in Weather-Climate Interactions”. AMS 98th Annual Meeting, Austin, TX, Jan 2018 [Poster]
- Schumacher, R., and **A. Morales**: “Mesoscale Atmospheric Processes during the September 2013 Extreme Rainfall and Flooding in Colorado”. AMS 95th Annual Meeting, Phoenix, AZ, June 2015. [Oral]
- Schumacher, R., and **A. Morales**: “Atmospheric Processes Associated with the September 2013 Colorado Extreme Rainfall and Flooding”. AMS 16th Conference on Mountain Meteorology, San Diego, CA, Aug 2014. [Oral]
- Roy, G., **A. Morales**, A. Gonzalez: “¡UADY, CSU, y Tu!”. Disaster Awareness and Prevention Conference, Merida, Yucatán, Mexico, Jun 2013 [Oral]