**Emily M. Riley Dellaripa**

Department of Atmospheric Science

Colorado State University

1371 Campus Delivery, Fort Collins, CO 80523

Emily.Riley@colostate.edu

**EDUCATION**

2013 Ph.D., Meteorology and Physical Oceanography, University of Miami

Dissertation: *Examining the form-function relationship of convective organization and the larger scale with observations and models*

2009 M.S., Meteorology and Physical Oceanography, University of Miami

Thesis: *A Global Survey of Clouds by CloudSat*

2006 B.S., Meteorology, *cum laude*, Texas A&M University

**PROFESSIONAL EXPERIENCE**

Nov 2019 – Present Research Scientist II, Colorado State University, Fort Collins CO

Nov 2016 – Oct 2019 Research Scientist I, Colorado State University, Fort Collins CO

Nov 2013 – Oct 2016Postdoctoral Fellow, Colorado State University, Fort Collins CO

Aug 2013 – Oct 2013 Postdoctoral Associate, University of Miami, Miami FL

Aug 2006 – Jul 2013 Graduate Research Assistant, University of Miami, Miami FL

Winter 2004 – 2005 Forecast Intern, Weather Research Center, Houston TX

**SUBMITTED**

Cui, J., C. A. DeMott, **E. M. Riley Dellaripa**, and E. D. Maloney, 2023: Process-Based Evaluation of Intraseasonal Oceanic Kelvin Waves in CMIP6 Models. J. Climate

**Riley Dellaripa, E. M.**, C. A. DeMott, J. Cui, and E. D. Maloney, 2023: Evaluation of Intraseasonal Westerly Wind Events in the Pacific Ocean in CMIP6 Models. J. Climate

Wolding, B., A. Rydbeck, J. Dias, F. Ahmed, M. Gehne, G. Kiladis, E. M. Riley Dellaripa, X. Chen, and I. McCoy, 2023: Atmosphere-Ocean Coupled Energy Budgets of Shallow and Deep Tropical Convective Discharge-Recharge Cycles, *J. Atmos. Sci.*, Accepted with revisions.

**PUBLICATIONS**

12) Bui, H. X., E. D. Maloney, E. Short, and **E. M. Riley Dellaripa**, 2023: Diurnal Cycle of Wind Speed and Precipitation over the Northern Austraila Coastal Region: CYGNSS Observations. Geophys. Res. Lett., **50**, e2023GL103005, https://doi.org/10.1029/2023GL103005.

11) **Riley Dellaripa, E. M.**, E. D. Maloney, and C. A. DeMott, 2023: The Diurnal Cycle of East Pacific Convection, Moisture, and CYGNSS Wind Speed and Fluxes. J. Geophys. Res. Atmos., **128**, e2022JD038133. https://doi.org/10.1029/2022JD038133.

10) **Riley Dellaripa, E. M.**, A. Funk, C. Schumacher, H. Bai, and T. Spangehl, 2021: Adapting the COSP Radar Simulator to Compare GCM Output and GPM Precipitation Radar Observations. J. Atmos. Ocean. Technol., **38**, 1457-1475, https://doi.org/10.1175/JTECH-D-20-0089.1.

9) van den Heever, S. C. and Coauthors, 2021: The Colorado State University Convective CLoud Outflows and UpDrafts Experiment (C3LOUD-Ex). *Bull. Amer. Meteor. Soc,***102**, E1283-E1305*,*https://doi.org/10.1175/BAMS-D-19-0013.1.

8) Bui, H. X., E. D. Maloney, **E. M. Riley Dellaripa**, and B. Singh, 2020: Wind Speed, Surface Flux, and Intraseasonal Convection Coupling from CYGNSS Data, *Geophys. Res. Lett.*, **47**, e2020GL090376, https://doi.org/10.1029/2020GL090376.

7) Toms, B. A., S. C. van den Heever, **E. M. Riley Dellaripa**, S. M. Saleeby, E. D. Maloney, 2020: The Boreal Summer Madden-Julian Oscillation and Moist Convective Morphology over the Maritime Continent. J. Atmos. Sci. **77(2)**, 647-667, https://doi.org/10.1175/JAS-D-19-0029.1.

**6) Riley Dellaripa, E.M.**, E. D. Maloney, B. A. Toms, S. M. Saleeby, and S. C. van den Heever, 2020: Topographic Effects on the Luzon Diurnal Cycle During the BSISO**,**J. Atmos. Sci. **77**, 3-30, https://doi.org/10.1175/JAS-D-19-0046.1.

5) **Riley Dellaripa, E. M.**, E. D. Maloney, and S. C. van den Heever, 2018: Wind-Flux Feedbacks and Convective Organization During the November 2011 MJO Event in a High-Resolution Model. *J. Atmos. Sci.,* **75**, 57-84, https://doi.org/10.1175/JAS-D-16-0346.1.

4) Dole, R. D. and Coauthors, 2017: Advancing Science and Services During the 2015-16 El Niño: The NOAA El Nino Rapid Response Field Campaign. *Bull. Amer. Meteor. Soc.,* **99**, 975-1001, https://doi.org/10.1175/BAMS-D-16-0219.1.

3) **Riley Dellaripa, E. M.**,and E. D. Maloney, 2015: Analysis of MJO Wind-Flux Feedbacks in the Indian Ocean Using RAMA Observations. *J. Meteor. Soc. Japan*, **93A**, 1-20, https://doi.org/10.2151/jmsj.2015-021.

2) **Riley, E. M.**, B. E. Mapes, and S. N. Tulich, 2011: Clouds Associated with the Madden-Julian Oscillation: A New Perspective from *CloudSat*. *J. Atmos. Sci.*, **68**, 3032-3051. https://doi.org/10.1175/JAS-D-11-030.1

1) **Riley, E. M.**, and B. E. Mapes, 2009: Unexpected Peak Near -15°C in *CloudSat* Echo Top Climatology. *Geophys. Res. Lett.*, **36**, L09819, https://doi.org/10.1029/2009GL037558.

**GRANTS**

2022 – 2024: NOAA MAPP: “Process-oriented evaluation of oceanic equatorial waves in the Indian and west Pacific Ocean forced by intraseasonal westerly wind events”, PI (NA19OAR4320073)

2021 – 2024: NASA ROSES CYGNSS: “Latent heat flux-convection coupling on mesoscale through intraseasonal scales using CYGNSS,” Co-I (80NSSC21K1004)

2017 – 2021: NASA ROSES CYGNSS: “Understanding tropical convective dynamics and the MJO using CYGNSS Observations,” *Co-I (*NNX17AH77G)

2017 – 2020: NASA ROSES: “Evaluation of Climate Model Precipitation Processes Using a TRMM/GPM Radar Simulator,” *Co-I* (NNX17AH45G)

2016 – 2021: ONR: “Coupled ocean-atmosphere regional model simulations of diurnal Maritime Continent convection and its synergy with MJO propagation,” *Co-I (*N00014-16-1-3087)

**PRESENTATIONS**

**Riley Dellaripa, E. M.,** E. D. Maloney, C. A. DeMott: The Diurnal Cycle of East Pacific Convection, Moisture, and CYGNSS Wind Speed and Fluxes  
Talk: 103rd Annual Meeting, American Meteorological Society. Denver, CO. January 2023.

**Riley Dellaripa, E. M.**, E. D. Maloney, H. Bui, B. Singh: Intraseasonal Variability in Precipitation and Fluxes Across the Tropics Observed by Buoys and CYGNSS

Poster: *Tropical Pacific Observing Needs to Advance Process Understanding and Representation in Models Workshop*, US CLIVAR, Virtual. May 2021.

**Riley Dellaripa, E. M.**, E. D. Maloney, B. A. Toms, S. M. Saleeby, S. C. van den Heever: The Effects of Topography and Air-Sea Feedbacks on the Diurnal Cycle of Convection Over Luzon During the BSISO

Talk: *34th Conference on Hurricanes and Tropical Meteorology*, American Meteorological Society, Virtual. May 2021.

**Riley Dellaripa, E. M.**, E. D. Maloney, S. M. Saleeby, B. A. Toms, C. DeMott, S. C. van den Heever: The Effects of Topography and Air-Sea Feedbacks on the Dirunal Cycle of Convection Over Luzon During the BSISO

Talk: *101st Annual Meeting*, American Meteorological Society. Virtual. January 2021.

**Riley Dellaripa, E. M.**, A. Funk, C. Schumacher, H. Bai, T. Spangehl, E. D. Maloney: Improving Comparisons Between GCM Output and Precipitation Radar Observations

Poster: *Annual Fall Meeting*, American Geophysical Union. San Francisco, CA. December 2019.

**Riley Dellaripa, E. M.**, E. D. Maloney, B. A. Toms, S. M. Saleeby, and S. C. van den Heever: Topographic Effects on the Luzon Diurnal Cycle During the BSISO.  
Poster: *Annual Fall Meeting, American Geophysical Union*. San Francisco, CA. December 2019.

Poster: *CLIVAR workshop: Atmospheric Convection and Air-Sea Interaction Over Tropical Oceans*. Boulder, CO. May 2019.  
  
**Riley Dellaripa, E. M.**, E. D. Maloney, S. M. Saleeby, B. A. Toms, and S. C. van den Heever: The Importance of Topography to the Luzon Diurnal Cycle During a BSISO Event.  
Talk: *33rd Conference on Hurricanes and Tropical Meteorology*, American Meteorological Society. Ponte Vedra, FL. April 2018.

**Riley Dellaripa, E. M.**,C. Schumacher, A. Funk, T. Spangehl, M. Schroeder, E. D. Maloney: Improving Comparison Between GCM Output and Radar Observations.  
Poster: *The Future of Cumulus Parameterization Workshop*, Delft, Netherlands. July 2017.

**Riley Dellaripa, E. M.**, E. D. Maloney, and S. C. van den Heever: Diagnosing Moistening Processes of the November DYNAMO MJO by Cloud Resolving Model Simulations.

Talk: *32nd Conference on Hurricanes and Tropical Meteorology*, American Meteorological Society. San Juan, PR. April 2016.

**Riley Dellaripa, E. M.**,E. D. Maloney, and S. C. van den Heever: The Importance of Wind-Flux Feedbacks During the November CINDY-DYNAMO MJO Event.

Talk: *European Geophysical Meeting*, Vienna, Austria. April 2015.

**Riley Dellaripa, E. M.**,and E. D. Maloney: Analysis of MJO wind-flux feedbacks in the Indian Ocean using RAMA Buoy Observations.

Talk: *Annual Fall Meeting*, San Francisco, CA. December 2014.

Invited Talk: *Young Scientist Symposium on Atmospheric Research*, Colorado State University. October 2014.

**Riley, E. M.**,and E. D. Maloney: Analysis of the MJO-wind speed relationship in the Indian Ocean using observations.

Talk: *31st Conference on Hurricanes and Tropical Meteorology*, American Meteorological SocietySan Diego, CA. April 2014.

**Riley, E. M.**,B. E. Mapes, and S. N. Tulich: The effects of organization on convective and large-scale interactions using cloud-resolving simulations with parameterized large-scale dynamics.

Talk: *Workshop on Tropical Dynamics and the MJO*, Honolulu, HI. January 2014.

**Riley, E. M.**, B. E. Mapes, S. N. Tulich, and Z. Kuang: The role of organization in tropical large-scale, convective interactions.

Talk: *Annual* *Fall Meeting*, American Geophysical Union. San Francisco, CA. December 2012.

**Riley, E. M.**, and B. E. Mapes: Large-scale variations of isolated vs. organized convective cloud systems.

Poster:*1st Annual PAN-GASS Meeting*, Boulder, CO. September 2012.

**Riley, E. M.**, B. E. Mapes, and Z. Kuang: Examining the form-function relationship of convective organization using a CSRM with parameterized large-scale dynamics.

Talk: *30th Conference on Hurricanes and Tropical Meteorology*, American Meteorological Society.Ponte Vedra, FL. April 2012.

**Riley, E. M.**, B. E. Mapes, and Z. Kuang: Isolating the effects of mesoscale organization on the large-scale wave, deep convection interaction.

Talk: *14th Conference on Mesoscale Processes*, American Meteorological Society. Los Angeles, CA. August 2011.

**Riley, E. M.**, and B. E. Mapes: Clouds Associated with the MJO: A new perspective from CloudSat.

Poster: *A-Train Symposium*, New Orleans, LA. October 2010.

Poster: *Monsoon Intraseasonal Variability Modeling Workshop*, Busan, South Korea. June 2010.

Talk:*29th Conference on Hurricanes and Tropical Meteorology*, American Meteorological Society. Tucson, AZ. May 2010.

**Riley, E. M.**, and B. E. Mapes: Cloud Modulation by the MJO.

Talk: *MOCA-09 (IA****M****AS/IAPS****O****/IA****C****S Joint* ***A****ssembly)*, Montreal, Canada. July 2009.

**Riley, E. M.**, P. Zuidema, B. E. Mapes, and D. Painemal: Subtropical Stratocumulus Observed by CloudSat.

Talk and Poster: *4th PAN-GCSS Meeting*, Toulouse, France. June 2008.

Poster:*2008 AGU Joint Assembly*, Ft. Lauderdale, FL. May 2008.

**Riley, E. M.**, and B. E. Mapes: Bimodal peak in tropical mid-level layer clouds observed by CloudSat.

Poster: *4th PAN-GCSS Meeting*, Toulouse, France. June 2008.

Talk:*28th Conference on Hurricanes and Tropical Meteorology*, American Meteorological Society. Orlando, FL. April 2008.

**TEACHING EXPERIENCE**

Teaching Assistant Spring 2010

*MSC303 – Meteorological Instrumentation, University of Miami*

**WORKSHOPS ATTENDED**

* US ClIVAR workshop: Tropical Pacific Observing Needs to Advance Process Understanding and Representation in Models Workshop. Virtual. May 2021.
* US CLIVAR workshop: Atmospheric Convection and Air-Sea Interaction Over Tropical Oceans. Boulder, CO. May 2019.
* The Future of Cumulus Parametrization. Delft, Netherlands. July 2017.
* Workshop on Tropical Dynamics and the MJO. Honolulu, HI. January 2014.
* Preparing for an Academic Career in the Geosciences. Boulder, CO. July 2013.
* CMMAP (Center for Multiscale Modeling of Atmospheric Processes) Team Meeting. January 2013, 2014, 2015, and August 2013, 2014, 2015
* Workshop on Modeling Monsoon Intraseasonal Variability. Busan, South Korea. June 2010.
* Wave-Convection Workshop. Harvard, Cambridge, MA. October 2009.
* UCAR Undergraduate Leadership Workshop. Boulder, CO. June 2005.

**FIELD PROGRAM EXPERIENCE**

* Colorado State University Convective Cloud Outflows and UpDrafts Experiment (C3LOUD-Ex), northwestern Colorado, 2016.
* NOAA El Nino Rapid Response Field Campaign 2016
* NSF/JAMSTEC Dynamics of the Madden-Julian Oscillation (DYNAMO)/CINDY2011, Addu Atoll, Maldives, 2011.
* Student Operated ADRAD (Aggie Doppler Radar) Project, College Station, TX, 2006.
* Texas Air Quality Study II (TexAQS II), Houston, TX, 2005.

**SERVICE AND LEADERSHIP**

* Judge: Student posters and oral presentations at the 9th Symposium on the Madden-Julian Oscillation and Sub-Seasonal Monsson Variability (101st AMS Annual Meeting)
* Judge: Senior Division, Colorado Science and Engineering Fair 2017
* Max Eaton Committee 2014 (*31st Conference on Hurricanes and Tropical Meteorology*)
* Reviewer: Journal of Geophysical Research-Atmospheres
  + 2015 Editors’ Citation for Excellence in Refereeing

Geophysical Research Letters

Journal of the Atmospheric Sciences

Monthly Weather Review

Quarterly Journal of the Royal Meteorological Society

Climate Dynamics

Dynamics of Atmospheres and Oceans

IEEE Transactions on Geoscience and Remote Sensing

* Student Representative, Rosenstiel School of Marine and Atmospheric Science (RSMAS) Graduate Academic Committee (GAC), 2010 – 2012.
* Graduate Student Association (GSA) Senator representing RSMAS-MPO, 2007 – 2008.

**SKILLS**

* Proficient in Python and Interactive Data Language (IDL)
* Familiar with Fortran
* Experience with the revision control system Git
* Experience with data formats including HDF, HDF-EOS, NetCDF, and binary
* Manipulation and processing of geophysical data files with Unix/Linux commands and scripting, Climate Data Operator (CDO) software, and Perl scripts
* Familiar with high-performance computing (HPC) work environments including UCAR’s Cheyenne and Office of Naval Research (ONR) machines.