

Curriculum Vitae
Emily M. Riley Dellaripa
Department of Atmospheric Science
Colorado State University
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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 2016 Postdoctoral 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

PUBLICATIONS

- 10) **Riley Dellaripa, E. M.**, A. Funk, C. Schumacher, H. Bai, and T. Spanghel: Adapting the COSP Radar Simulator to Compare GCM Output and GPM Precipitation Radar Observations, *J. Atmos. Ocean. Technol.*, conditionally accepted.
- 9) van den Heever, S. C. and Coauthors: Diving into Cold Pools and Flying into Updrafts of Deep Convective Storms, *Bull. Amer. Meteor. Soc.*, conditionally accepted.
- 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, doi:10.1029/2020GL090376 .
- 7) Toms, B. A., S. C. van den Heever, **E. M. Riley Dellaripa**, S. M. Saleeby, E. D. Maloney, 2020: The Relationship Between the Boreal Summertime Madden-Julian Oscillation and Tropical Moist Convective Morphology. *J. Atmos. Sci.* **77**, 647-667, doi: 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, doi: 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, doi: 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 Niño Rapid Response Field Campaign. *Bull. Amer. Meteor. Soc.*, **99**, 975-1001, doi: 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, doi: 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. doi: 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, doi: 10.1029/2009GL037558.

GRANTS

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

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

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

PRESENTATIONS

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 Diurnal Cycle of Convection Over Luzon During the BSISO

Talk: 101st Annual AMS Meeting. Virtual. January 2021.

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

Poster: 100th Annual AGU Fall Meeting. 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: 100th Annual AGU Fall Meeting. 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*, Ponte Vedra, FL. April 2018.

Riley Dellaripa, E. M., C. Schumacher, A. Funk, T. Spanghel, 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*, 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: *EGU 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: *AGU 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*, San 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: *AGU Fall Meeting*, 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*, 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*, 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*, Tucson, AZ. May 2010.

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

Talk: *MOCA-09 (IAMAS/IAPSO/IACS Joint Assembly)*, 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*, Orlando, FL. April 2008.

TEACHING EXPERIENCE

Teaching Assistant

Spring 2010

MSC303 – Meteorological Instrumentation, University of Miami

WORKSHOPS ATTENDED

- 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.

- Helped plan storm chase strategy and deployment of rawinsondes
- Participated in storm chases and launched rawinsondes

NOAA El Nino Rapid Response Field Campaign 2016

- Participated in daily forecast briefings for daily flight missions

NSF/JAMSTEC Dynamics of the Madden-Julian Oscillation (DYNAMO)/CINDY2011, Addu Atoll, Maldives, 2011.

- Helped run and maintain the Shared Mobile Atmospheric Research and Teaching Radar (SMART-R)
- Applied radar cell-tracking algorithm to SMART-R observations

Student Operated ADRAD (Aggie Doppler Radar) Project, College Station, TX, 2006.

- Group leader for daily forecasts, and running and maintaining ADRAD

Texas Air Quality Study II (TexAQS II), Houston, TX, 2005.

- Helped run and maintain SMART-R

PROFESSIONAL AFFILIATIONS

American Geophysical Union (AGU)

SERVICE AND LEADERSHIP

Judge: Student posters and oral presentations at the 9th Symposium on the Madden-Julian Oscillation and Sub-Seasonal Monsoon 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

- 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
- Proficient in Interactive Data Language (IDL)

- Familiar with Python and Fortran
- Experience with the revision control system Git
- Familiar with high-performance computing (HPC) work environments including UCAR's Cheyenne and Office of Naval Research (ONR) machines.