

James H. Ruppert, Jr.

Assistant Professor
School of Meteorology
University of Oklahoma, Norman, OK
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[Research Group Webpage](#)

Curriculum Vitae
November 2023

EDUCATION

2015 **Ph.D.**, Atmospheric Science, Colorado State University, Fort Collins, CO
2012 **M.S.**, Atmospheric Science, Colorado State University, Fort Collins, CO
2009 **B.S.** (*summa cum laude*), Atmospheric Science, University at Albany, Albany, NY

POSITIONS

2021–current **Assistant Professor**
School of Meteorology, University of Oklahoma, Norman, OK

2018–2020 **Assistant Research Professor**
Department of Meteorology and Atmospheric Science, Center for Advanced Data Assimilation and Predictability Techniques, Penn State University, University Park, PA

2015–2018 **NSF AGS and Alexander von Humboldt Postdoctoral Research Fellow**
Max Planck Institute for Meteorology, Hamburg, Germany

2012 **NSF East Asia and Pacific Summer Institutes (EAPSI) Fellow**
Department of Atmospheric Sciences, National Taiwan University, Taipei, Taiwan

2009–2015 **Graduate Research Assistant**
Department of Atmospheric Science, Colorado State University, Fort Collins, CO

REFEREED PUBLICATIONS

	H-index	Total citations
Google Scholar	17	989
Web of Science	16	760

In process:

Luschen, E., J. H. Ruppert, Jr., 2023: Cloud–radiation interaction as a function of tropical convective cloud mode. *Geophys. Res. Lett.*, submitted.

Muehr, A. J., J. H. Ruppert, Jr., M. D. Flornoy, J. M. Peters, 2023: The influence of midlevel shear and horizontal rotors on supercell characteristics updraft dynamics. *J. Atmos. Sci.*, conditionally accepted.

Published:

1. Wang, C.-C., S.-H. Chen, Y.-H. Chen, H.-C. Kuo, **J. H. Ruppert, Jr.**, K. Tsuboki, 2023: Cloud-Resolving Time-Lagged Rainfall Ensemble Forecasts for Typhoons in Taiwan: Examples of Saola (2012), Soulik (2013), and Soudelor (2015). *Weather and Climate Extremes*, **40**, 18pp. DOI: [10.1016/j.wace.2023.100555](https://doi.org/10.1016/j.wace.2023.100555)
2. Qian, T., J. Wei, Y. Sun, Y. Lu, **J. H. Ruppert, Jr.**, 2022: Vertical Wavelengths of Downward Phase Propagating Gravity Waves Determined by Vertical Fluctuation of Idealized Radiosonde Balloons. *J. Atmos. Ocean Technol.*, **39**, 1283–1295. DOI: [10.1175/JTECH-D-21-0137.1](https://doi.org/10.1175/JTECH-D-21-0137.1)

3. **Ruppert, J. H., Jr.**, S. E. Koch, X. Chen, Y. Du, A. Seimon, Y. Sun, J. Wei, and L. F. Bosart, 2022: Mesoscale gravity waves and midlatitude weather: A tribute to Fuqing Zhang. *Bull. Amer. Meteor. Soc.*, DOI: [10.1175/BAMS-D-20-0005.1](https://doi.org/10.1175/BAMS-D-20-0005.1)
4. Zhang, Y., and **Coauthors**, 2021: Ensemble-Based Assimilation of Satellite All-Sky Microwave Radiances Improves Intensity and Rainfall Predictions for Hurricane Harvey (2017). *Geophys. Res. Lett.*, **48**. DOI: [10.1029/2021GL096410](https://doi.org/10.1029/2021GL096410)
5. **Ruppert, J. H., Jr.**, A. A. Wing, X. Tang, and E. L. Duran, 2020: The critical role of cloud–infrared radiation feedback in tropical cyclone development. *Proc. Natl. Acad. Sci.*, **117**, 27884–27892, DOI: [10.1073/pnas.2013584117](https://doi.org/10.1073/pnas.2013584117)
 - * *Science* Editors’ Choice: “Birth of a storm”
<https://doi.org/10.1126/science.2020.370.6518.twil>
 - * Penn State News: [“Greenhouse effect of clouds instrumental in origin of tropical storms”](#)
6. Wing, A. A., and **Coauthors**, 2020: Clouds and convective self-aggregation in a multi-model ensemble of radiative-convective equilibrium simulations. *J. Adv. Model. Earth Syst.* **12**, DOI: [10.1029/2020MS002138](https://doi.org/10.1029/2020MS002138)
7. **Ruppert, J. H., Jr.** and X. Chen, 2020: Island rainfall enhancement in the Maritime Continent. *Geophys. Res. Lett.*, **47**. DOI: [10.1029/2019GL086545](https://doi.org/10.1029/2019GL086545)
8. **Ruppert, J. H., Jr.**, X. Chen, and F. Zhang, 2020: Convectively forced diurnal gravity waves in the Maritime Continent. *J. Atmos. Sci.*, **77**, 1119–1136. DOI: [10.1175/JAS-D-19-0236.1](https://doi.org/10.1175/JAS-D-19-0236.1)
9. **Ruppert, J. H., Jr.**, and F. Zhang, 2019: Diurnal forcing and phase locking of gravity waves in the Maritime Continent. *J. Atmos. Sci.*, **76**, 2815–2835. DOI: [10.1175/JAS-D-19-0061.1](https://doi.org/10.1175/JAS-D-19-0061.1)
10. **Ruppert, J. H., Jr.**, and D. Klocke, 2019: The two diurnal modes of tropical upward motion. *Geophys. Res. Lett.*, **46**. DOI: [10.1029/2018GL081806](https://doi.org/10.1029/2018GL081806)
11. Chen, X., F. Zhang, and **J. H. Ruppert, Jr.**, 2019: Modulations of coastal rainfall diurnal cycle over South China by the boreal summer intraseasonal oscillation. *J. Climate*, **32**, 2089–2108. DOI: [10.1175/JCLI-D-18-0786.1](https://doi.org/10.1175/JCLI-D-18-0786.1)
12. **Ruppert, J. H., Jr.**, and M. E O’Neill, 2019*: Diurnal cloud and circulation changes in tropical cyclones. *Geophys. Res. Lett.*, **46**. DOI: [10.1029/2018GL081302](https://doi.org/10.1029/2018GL081302)
 - * *Eos* Research Spotlight: Underwood, E., 2019: A better understanding of tropical cyclones, *Eos*, 100. DOI: [10.1029/2019EO118381](https://doi.org/10.1029/2019EO118381)
13. **Ruppert, J. H., Jr.**, and C. Hohenegger, 2018: Diurnal circulation adjustment and organized deep convection. *J. Climate*, **31**, 4899–4916. DOI: [10.1175/JCLI-D-17-0693.1](https://doi.org/10.1175/JCLI-D-17-0693.1)
14. Ciesielski, P. E., R. H. Johnson, W. H. Schubert, and **J. H. Ruppert, Jr.**, 2018: Diurnal cycle of the ITCZ in DYNAMO. *J. Climate*, **31**, 4543–4562. DOI: [10.1175/JCLI-D-17-0670.1](https://doi.org/10.1175/JCLI-D-17-0670.1)
15. Bony, S., and **Coauthors**, 2017: EUREC4A: a field campaign to elucidate the couplings between clouds, convection and circulation. *Surveys in Geophysics*. DOI: [10.1007/s10712-017-9428-0](https://doi.org/10.1007/s10712-017-9428-0)
16. **Ruppert, J. H., Jr.**, 2016: Diurnal timescale feedbacks in the tropical cumulus regime. *J. Adv. Model. Earth Syst.*, **8**, 1483–1500. DOI: [10.1002/2016MS000713](https://doi.org/10.1002/2016MS000713)
17. **Ruppert, J. H., Jr.**, and R. H. Johnson, 2016: On the cumulus diurnal cycle over the tropical warm pool. *J. Adv. Model. Earth Syst.*, **8**, 669–690. DOI: [10.1002/2015MS000610](https://doi.org/10.1002/2015MS000610)
18. **Ruppert, J. H., Jr.**, and R. H. Johnson, 2015: Diurnally modulated cumulus moistening in the pre-onset stage of the Madden–Julian oscillation during DYNAMO. *J. Atmos. Sci.*, **72**, 1622–1647. DOI: [10.1175/JAS-D-14-0218.1](https://doi.org/10.1175/JAS-D-14-0218.1)
19. Johnson, R. H., P. E. Ciesielski, **J. H. Ruppert, Jr.**, and M. Katsumata, 2015: Sounding-based thermodynamic budgets for DYNAMO. *J. Atmos. Sci.*, **72**, 598–622. DOI: [10.1175/JAS-D-14-0202.1](https://doi.org/10.1175/JAS-D-14-0202.1)

20. **Ruppert, J. H., Jr.**, and L. F. Bosart, 2014: A case study of the interaction of a mesoscale gravity wave with a mesoscale convective system. *Mon. Wea. Rev.*, **142**, 1403–1429. DOI: [10.1175/MWR-D-13-00274.1](https://doi.org/10.1175/MWR-D-13-00274.1)
21. Johnson, R. H., R. S. Schumacher, **J. H. Ruppert, Jr.**, D. T. Lindsey, J. E. Ruthford, L. Kriederman, 2014: The role of convective outflow in the Waldo Canyon Fire. *Mon. Wea. Rev.*, **142**, 3061–3080. DOI: [10.1175/MWR-D-13-00361.1](https://doi.org/10.1175/MWR-D-13-00361.1)
22. **Ruppert, J. H., Jr.**, R. H. Johnson, and A. K. Rowe, 2013: Diurnal circulations and rainfall in Taiwan during SoWMEX/TIMREX (2008). *Mon. Wea. Rev.*, **141**, 3851–3872. DOI: [10.1175/MWR-D-12-00301.1](https://doi.org/10.1175/MWR-D-12-00301.1)

BOOK CHAPTERS

In process

DeMott, C. A., **J. H. Ruppert, Jr.**, A. V. Rydbeck, 2023: Intraseasonal variability for the Indian Ocean region. *The Indian Ocean and its role in the global climate system*, C. C. Ummenhofer and R. R. Hood, Eds., Elsevier, accepted.

THESES AND DISSERTATIONS

1. **Ruppert, J. H., Jr.**, 2015: Cumulus moistening, the diurnal cycle, and large-scale tropical dynamics. Ph.D. Dissertation, Colorado State University (CSU), 116 pp. ([link to PDF](#))
2. **Ruppert, J. H., Jr.**, 2012: Analysis of the diurnal cycle in Taiwan during the Terrain-influenced Monsoon Rainfall Experiment. M.S. Thesis, CSU, 107 pp., ([link to PDF](#))
3. **Ruppert, J. H., Jr.**, 2009: Analysis of the large-amplitude inertia–gravity wave of 7 March 2008. B.S. Thesis, University at Albany, 38 pp.

PUBLICATIONS IN MEDIA

1. **Ruppert, J. H., Jr.**, and A. A. Wing, 2020: [The 2020 Atlantic hurricane season was a record-breaker, and it's raising more concerns about climate change](#). *The Conversation*.
2. **Ruppert, J. H., Jr.**, 2016: The diurnal cycle: A bridge between weather and climate. *Physics Today: Down to Earth*. DOI: [10.1063/PT.5.4024](https://doi.org/10.1063/PT.5.4024)
3. **Ruppert, J. H., Jr.**, and R. H. Johnson, 2012: The diurnal cycle of rainfall during the Mei-yu season. APEC Research Center for Typhoon and Society (ACTS) Quarterly Newsletter, Vol. 2, No. 3, 8–11., available from [APEC-ACTS](#)

GRANTS & FELLOWSHIPS

Pending:

NSF-AGS (submitted; 2023–2026): “*Collaborative Research: AGS-FIRP Track 2: Process Investigation of Clouds and Convective Organization over the atLantic Ocean (PICCOLO)*”
PIs: A. A. Wing, **J. H. Ruppert, Jr.**, M. E. O’Neill, M. Bell
Amount: \$2,471,426; \$426,219 to OU

Funded:

1. NSF-AGS (2023–2026): “*Collaborative Research: Examining cloud–radiation feedback at convective scales in tropical cyclones*”
PIs: **J. H. Ruppert, Jr.**, R. Rios-Berrios, Y. Zhang
Amount: \$484,910; \$438,627 to OU
2. DOE-RGMA (2023–2026): “*Toward Improving the Simulation and Prediction of Extratropical Northern Hemisphere Blocking Patterns and Extreme Weather*”

PI: J. Furtado; Co-Is: **J. H. Ruppert, Jr.**, S. Cavallo, J. Benedict
Amount: \$847,042; \$673,983 to OU

3. NOAA CPO (2022–2025): “*Understanding diurnal rainfall processes over tropical islands to improve subseasonal to seasonal precipitation forecasts*”
PI: N. Sakaeda; Co-PIs: **J. H. Ruppert, Jr.** and G. Torri
Amount: \$828,199 total, \$497,121 to OU
4. University of Oklahoma, Data Institute for Societal Challenges Big Ideas Challenge Seed Grant Award (2021–2022): “*Towards Improving the Prediction of Blocking Patterns and Extreme Weather on Subseasonal-to-Seasonal Timescales*”
PIs: S. Cavallo, D. Diochnos, J. Furtado, **J. H. Ruppert, Jr.** S. Lamkshmirarahan
Amount: \$10,000
5. NSF-AGS (2019–2023): “*Coupling of Gravity Waves and Convection, and Their Impacts on the Dynamics and Predictability of Multiscale Processes Associated with Moist Baroclinic Jet–Front Systems*”
PI: Y. Zhang; Co-I: **J. H. Ruppert, Jr.**
NSF Award 1712290
Amount: \$870,106; \$71,861 to OU
6. NSF-AGS Postdoctoral Research Fellowship (2016–2018): “*The diurnal cycle, cloud–radiative feedbacks, and large-scale tropical dynamics*”
PI: **J. H. Ruppert, Jr.**
NSF Award 1524844
Amount: \$192,000
7. Alexander von Humboldt Postdoctoral Research Fellowship (2015–2017):
PI: **J. H. Ruppert, Jr.**
Amount: €82,800
8. NSF East Asia and Pacific Summer Institutes Fellowship (2012): “*Relationships between Intraseasonal Variability and Convection in the Southeast Asian Summer Monsoon*”
PI: **J. H. Ruppert, Jr.**
Amount: \$5,000

Not funded:

1. NASA-ROSES (2023–2026): “*The Future of Cloud-Radiative Effects Within Atmospheric Tropical Waves*”
PI: S-N. Wu; Co-I: **J. H. Ruppert, Jr.**
Amount: \$492,953 to OU
2. NASA-ROSES (2023–2026): “*Using geostationary satellite observations to understand environmental controls on entrainment in deep convection*”
PI: J. M. Peters; Co-Is: X. Chen, **J. H. Ruppert, Jr.**
Amount: \$68,577 to OU
3. NASA-FINESST (2022–2025): “*The Future of Cloud-Radiative Effects Within Atmospheric Tropical Waves*”
PI: **J. H. Ruppert, Jr.**; FI: H. Najarian; Co-I: N. Sakaeda
Amount: \$150,000
4. NSF-AGS (2021–2024): “*Dynamics and Predictability of Heavy Coastal Rainfall in the Asian Summer Monsoon*”
PIs: X. Chen, **J. H. Ruppert, Jr.**
Amount: \$679,048; \$334,933 to OU
5. National Geographic (2022–2023): “*Defining the Borrasca: A Destructive yet Unrecognized Class of Windstorm*”
PI: A. Seimon; Co-Is: **J. H. Ruppert, Jr.**, S. J. Talbot, L. F. Bosart, T. A. Seimon, H. Schyma, and

J. B. Ubl
Amount: \$100,000 to OU

TEACHING

2023	Instructor: Atmospheric Dynamics 1 (METR 3113; spring; 58 students) School of Meteorology, University of Oklahoma, Norman, Oklahoma
2023	Instructor: Atmospheric Dynamics 2 (METR 3123; spring; 41 students) School of Meteorology, University of Oklahoma, Norman, Oklahoma
2022	Instructor: Atmospheric Dynamics 1 (METR 3113; fall; 47 students) School of Meteorology, University of Oklahoma, Norman, Oklahoma
2022	Instructor: Atmospheric Dynamics 2 (METR 3123; spring; 35 students) School of Meteorology, University of Oklahoma, Norman, Oklahoma
2021	Instructor: Atmospheric Dynamics 1 (METR 3113; fall; 45 students) School of Meteorology, University of Oklahoma, Norman, Oklahoma
2018	Guest Lecturer: Advanced Lectures on Clouds and Precipitation: Moist Convection and Large-scale Dynamics in the Tropics, CAMS/CMA, Beijing, China
2013	Teaching Assistant, Lab Instructor: Intro. to Weather and Climate (ATS 350; fall) Department of Atmospheric Science, Colorado State University
2012	Teaching Assistant, Lab Instructor: Mesoscale Meteorology (ATS 541; spring) Department of Atmospheric Science, Colorado State University
2010, 2011	Teaching Assistant: Weather and Climate for Educators (summer) Department of Atmospheric Science, Colorado State University

ADVISING AND MENTORING

School of Meteorology, University of Oklahoma

Ph.D. Mentoring

2023–	Emily Luschen, Ph.D. Student
2021–	Hrag Najarian, Ph.D. Student

M.S. Mentoring

2021–2023	Theresa Lincheck
2021–2023	Emily Luschen; Completed, 2023)

Undergraduate Research Mentoring

2022–	Grant Talkington
2022–	Colin Welty
2022–	Robert Frost
2021–	Andrew Muehr
2021–2023	Emily West

Graduate Committee Member

2022–	Andrew Berrington, Ph.D.
2022–	Emily Tinney, Ph.D.
2022–	Andrew Berrington, Ph.D.
2022–	Kayla Wheeler, M.S.

2022– Jason Chiappa, M.S.
2021–2022 Dominic Candela, M.S.
2021–2022 Erin Jones, M.S.
2021–2022 Max Ungar, M.S.
2021–2022 Hrag Najarian, M.S.

Other Institutes

Graduate Research Mentoring

2018 Marie-Léa Pouliquen, Diplôme de l'Ecole Normale Supérieure (M.S.), École normale supérieure, Paris, France, research conducted at Max Planck Institute for Meteorology

Graduate Committee Member

2022– Frederick lat-Hin Tam, Ph.D., Institute of Earth Surface Dynamics, Université de Lausanne, Lausanne, Switzerland
2021 Jacob Sorber, M.S., Dept. of Meteorology and Atmos. Sci., Penn State University
2020 Nicholas Barron, M.S., Dept. of Meteorology and Atmos. Sci., Penn State University

UNIVERSITY OF OKLAHOMA SERVICE

2022– **Faculty Representative:** University of Oklahoma/School of Meteorology Outreach (SoMO) Club
2022 **Volunteer instructor:** University of Oklahoma Precollegiate Programs, Mini-College Day Camp, 25–29 July 2022
2021– **Committee Member:** Graduate Admissions Committee, School of Meteorology
2021–2022 **Committee Member:** University of Oklahoma/School of Meteorology Faculty Search Committee: PBL Observations and Dynamic Meteorology dual search
2021– **Group Leader:** School of Meteorology Mentoring Ecosystem
2021 **Coauthor:** School of Meteorology Strategic Plan 2030

EXTERNAL SERVICE

Continuing: *Associate Editor:* Monthly Weather Review
Invited Conference Session Chair/Organizer:

- AMS 20th Conference on Mesoscale Processes: July 2023, Madison, WI
- AMS 103rd Annual Meeting/3rd Symposium on Mesoscale Processes: Jan 2023, Denver, CO
- AMS 35th Conference on Hurricanes and Tropical Meteorology: May 2022, New Orleans, LA
- AMS 16th Conference on Cloud Physics/16th Conference on Atmospheric Radiation: Aug 2022, Madison, WI

Proposal reviewer: NSF Physical Oceanography, NSF Climate and Large-Scale Dynamics
Journal reviewer: *Climate Dynamics, Geophys. Res. Lett., J. Climate, J. Adv. Model. Earth Syst., J. Atmos. Sci., J. Appl. Meteor. Climatol., J. Geophys. Res., Mon. Wea. Rev., Nature Comm., Quart. J. Roy. Meteor. Soc., Int. J. Climatol.*

- Society memberships:** American Geophysical Union, American Meteorological Society, European Geophysical Union
- 2021** **Committee member:** AMS Max A. Eaton Student Prize Committee
- 2018** **Lead-organizer:** *Climate Science Symposium for the visit of the Alexander von Humboldt Foundation International Climate Protection Fellows* at the Max Planck Institute for Meteorology, Hamburg, Germany
- 2012–16** **Committee member:** AMS Committee on Mesoscale Processes
- 2013** **Club Tres Mentor:** Fort Collins, CO: led hands-on activities for elementary-school students to engage them in science
- 2012–13** **Committee member:** Fort Collins Atmospheric Scientists (FORTCAST; local AMS chapter) Steering Committee
- 2011–15** **Lead-organizer:** “Severe Weather for High Schools” – graduate students conducting interactive learning activities in severe weather in Front Range high schools
- 2011** **Research opportunities for undergraduates (REU) mentor:** David Wang, Department of Atmospheric Science, Colorado State University

FIELD CAMPAIGNS

- 2022–** **Co-PI:** Leadership team planning the *Process Investigation of Clouds and Convective Organization over the Atlantic Ocean (PICCOLO)* 2024 field campaign in the Atlantic Ocean in collaboration with Germany and France.
- 2022** **Science Director:** Rotational science director during the *Prediction of Rainfall Campaign in the Pacific (PRECIP)* 2022 field campaign, Taipei, Taiwan.
- 2011** **Fieldwork operator:** Sounding launches on Diego Garcia, British Indian Ocean Territory during the Dynamics of the MJO (DYNAMO) field campaign for the National Center for Atmospheric Research.

HONORS AND AWARDS

- 2022** Presidential International Travel Fellowship from the University of Oklahoma
- 2021** 2020 Editors' Citation for Excellence in Refereeing – AGU, *Geophys. Res. Lett.*
- 2020** *Science* Magazine, [Editor's Choice](#)
- 2019** EOS [Research Spotlight](#)
- 2016** European Geophysical Union (EGU) Outstanding Student Poster Award
- 2015** NSF AGS Postdoctoral Research Fellowship
- 2015** Alexander von Humboldt Postdoctoral Research Fellowship
- 2015** 1st Place Student Oral Presentation, AMS 16th Conference on Mesoscale Processes
- 2013** Colorado State University, Alumni Award, Department of Atmospheric Science
- 2013** Colorado State University, Shrake Culler Graduate Scholarship
- 2012** NSF East Asia and Pacific Summer Institutes Fellowship
- 2009** 2nd Place Student Poster Presentation, 13th Conference on Mesoscale Processes (AMS)
- 2009** University at Albany, graduation with honors, *summa cum laude*

- 2009** Distinguished Student Award, Department of Atmospheric and Environmental Sciences, University at Albany
- 2009** Undergraduate Research Award, University at Albany

INVITED SEMINARS

- 2022** Department of Meteorology and Atmospheric Science
Penn State University, State College, PA, 30 November 2022
- 2022** Department of Environmental Sciences
University of Virginia, Charlottesville, VA, 6 October 2022
- 2022** 2nd World Conference on Meteotsunamis
Menorca, Balearic Islands, Spain, 19 May 2022
- 2020** Department of Earth System Science
University of California Irvine, Irvine, CA, 6 April 2020
- 2020** NOAA Cooperative Institute for Research in the Atmosphere (CIRA)
Colorado State University, Fort Collins, CO, 4 March 2020
- 2020** Department of Atmospheric Science
University of Wyoming, Laramie, WY, 27 February 2020
- 2020** Department of Meteorology
Naval Postgraduate School, Monterey, CA, 19 February 2020
- 2020** School of Meteorology
University of Oklahoma, Norman, OK, 10 February 2020
- 2020** Department of Meteorology and Atmospheric Science
Penn State University, State College, PA, 5 February 2020
- 2020** Department of Atmospheric and Oceanic Sciences
University of Wisconsin–Madison, Madison, WI, 27 January 2020
- 2019** Department of Atmospheric and Environmental Sciences
University at Albany, Albany, NY, 7 October 2019
- 2019** *Frank Talk Series*, Department of Meteorology and Atmospheric Science
Penn State University, State College, PA, 26 September 2019
- 2019** *Brown Bag Series*, Earth System Science Center
Penn State University, State College, PA, 10 April 2019
- 2018** Department of Meteorology and Atmospheric Science
Penn State University, State College, PA, 4 April 2018
- 2018** Department of Geological and Atmospheric Sciences
Iowa State University, Ames, IA, 14 February 2018
- 2017** Max Planck Institute for Meteorology, Hamburg, Germany, 7 Nov 2017
- 2016** Institute of Geophysics and Meteorology
University of Cologne, Cologne, Germany, 6 December 2016
- 2016** Max Planck Institute for Meteorology, Hamburg, Germany, 5 April 2016

WORKSHOPS AND SYMPOSIA

- 2023** *Mesoscale influences in the ITCZ*
Workshop: Organized Convection Experiments in the tropical Atlantic (ORCESTR)
Kreuth, Germany, 22–24 March 2023
- 2022** *Meteorologically Significant Atmospheric Gravity Waves: Implications for the Role of Moist Convection*

- Workshop: 2nd World Conference on Meteotsunamis
Menorca, Balearic Islands, Spain, 18–20 May 2022
- 2020** *Diurnal cycle of rainfall and circulation in tropical cyclones*
Workshop: 2020 International Workshop on Extreme Rainfall and
Colorado State University, Fort Collins, CO, 2–3 March 2020
- 2018** *Propagating Diurnal Convection in the Maritime Continent during DYNAMO*
Workshop: Second ADAPT Symposium on Advanced Understanding, Monitoring and
Prediction of Weather, Climate and Environmental systems
Penn State University, State College, PA, 16–18 December 2018
- 2018** *Circulation changes forced by the diurnal cycle of tropical organized deep convection*
Workshop: Multiscale Modeling of Atmospheric Processes
CAM5/CMA, Beijing, China, 20–27 March 2018
- 2017** *The diurnal cycle of large-scale overturning circulation*
Workshop: The Future of Cumulus Parameterization
Delft University of Technology, Delft, Netherlands, 10–14 July 2017
- 2016** *Large-scale Sounding Array for EUREC⁴A*
Workshop: The Next-generation Aircraft Remote-sensing for Validation Studies
(NARVAL) II—Elucidating the Role of Cloud–Circulation Coupling in Climate
(EUREC⁴A), University of Cologne, Cologne, Germany, 7–9 December 2016
- 2016** *Diurnal timescale feedbacks in the tropical cumulus regime*
Workshop: GEWEX Convection-Permitting Climate Modeling
National Center for Atmospheric Research, Boulder, CO, 6–8 September 2016
- 2014** *Convective clouds, moisture preconditioning, and the diurnal cycle during DYNAMO*
Workshop: Advances in Tropical Dynamics
University of Hawaii, Honolulu, HI, 14–16 January 2014
- 2013** *The diurnal cycle of moistening during MJO preconditioning periods in DYNAMO*
Workshop: Global Atmospheric System Studies MJO Task Force Meeting on the
Heating and Moistening Processes of the Madden–Julian Oscillation
Centre for Climate Research Singapore, Singapore, 3–5 June 2013

SELECTION OF CONFERENCE AND WORKSHOP PRESENTATIONS

- Included are lead-authored presentations by Ruppert and students and postdocs of his research group (those names in **bold**).
- 2024** **Welty, C., R. M. Frost, and J. H., Ruppert, Jr.**, 2024: Analysis on Tropical Storm Erin (2007) and the Diurnal Cycle in Post-Landfall Tropical Cyclones (poster), *AMS 104th Annual Meeting*, Baltimore, MD.
- Frost, R. M., S. J. Southward, C. Welty, A. A. Alford, and J. H. Ruppert, Jr.**, 2024: An Analysis of Tropical Cyclone Supercells with Variable Electrification (oral), *AMS 23rd Annual Student Conference (at AMS 104th Annual Meeting)*, Baltimore, MD.
- 2023** **Luschen, E. W., J. H., Ruppert, Jr.**, S.-N. Wu, and Y. Zhang, 2023: The Stratiform Radiation Effect on Tropical Organized Deep Convection (oral), *AGU Fall Meeting*, San Francisco, CA.
- Muehr, A. J., J. H., Ruppert, Jr.**, M. Flournoy, and J. Peters, 2023: The Influence of Midlevel Shear and Horizontal Rotors on Supercell Updraft Dynamics (oral), *AMS 20th Conference on Mesoscale Processes*, Madison, WI.
- Ruppert, J. H., Jr., E. W. Luschen**, S.-N. Wu, and Y. Zhang, 2023: Stratiform–Radiation Feedback: A Dynamic Pathway of Upscale Convective Growth through Cloud–Radiation Feedback (oral), *AMS 20th Conference on Mesoscale Processes*, Madison, WI.

- Ruppert, J. H., Jr., E. W. Luschen**, S.-N. Wu, and Y. Zhang, 2023: How does Cloud–Radiation Feedback Promote Convective Upscale Development (oral), *15th International Conference on Mesoscale Convective Systems (ICMCS)*, Fort Collins, CO.
- Luschen, E. W., J. H., Ruppert, Jr.**, S.-N. Wu, and Y. Zhang, 2023: The Impact of Cloud-Radiative Effects on Stratiform Region Downdraft Behavior (oral), *AMS 103rd Annual Meeting*, Denver, CO.
- Lincheck, T., and J. H., Ruppert, Jr.**, 2023: Examining the Role of Radiatively Driven Shallow Circulation in Tropical Cyclogenesis: The Cases of Typhoon Haiyan (2013) and Hurricane Maria (2017) (poster), *AMS 103rd Annual Meeting*, Denver, CO.
- Ruppert, J. H., Jr., E. Luschen**, S.-N. Wu, and Y. Zhang, 2023: The Role of the Midlevel Vortex, Stratiform Precipitation, and Downdrafts in TC Genesis (oral), *AMS 103rd Annual Meeting*, Denver, CO.
- 2022** **Muehr, A. J., J. H., Ruppert, Jr.**, M. Flournoy, and J. Peters, 2022: The Influence of Midlevel Shear and Horizontal Rotors on Supercell Updraft Dynamics (oral), *AMS 30th Conference on Severe Local Storms*, Santa Fe, NM. **2nd Place Outstanding Student Presentation Award.**
- Ruppert, J. H., Jr., E. W. Luschen**, S.-N. Wu, and Y. Zhang, 2022: The stratiform pathway of cloud–radiation feedback (CRF) in tropical convection (oral), *AMS 35th Conference on Hurricanes and Tropical Meteorology*, New Orleans, LA.
- (invited)* **Ruppert, J. H., Jr., 2022:** Scale interaction from the diurnal cycle to intraseasonal modes: A tribute to Dick Johnson (oral), *AMS 102nd Annual Meeting (virtual)*.
- 2021** *(invited)* **Ruppert, J. H., Jr.**, and X. Chen, 2021: Intraseasonal modes and the diurnal cycle of tropical convection in the Indo-Pacific (oral), *AGU Fall meeting (virtual)*.
- Ruppert, J. H., Jr.**, X. Chen, and F. Zhang, 2021: Island Rainfall Enhancement and Diurnal Rectification in the Maritime Continent (oral), *AMS 34th Conference on Hurricanes and Tropical Meteorology (virtual)*.
- Ruppert, J. H., Jr.**, A. A. Wing, X. Tang, and E. Duran, 2021: The critical role of cloud–longwave radiation feedback in the formation and rapid intensification of super Typhoon Haiyan (2013) and major Hurricane Maria (2017) (oral), *AMS 34th Conference on Hurricanes and Tropical Meteorology (virtual)*.
- Ruppert, J. H., Jr.**, A. A. Wing, X. Tang, and E. Duran, 2021: The critical role of cloud–longwave radiation feedback in the formation and rapid intensification of super Typhoon Haiyan (2013) and major Hurricane Maria (2017) (oral), *EGU General Assembly (virtual)*.
- Ruppert, J. H., Jr.**, A. A. Wing, X. Tang, and E. Duran, 2021: The critical role of cloud–longwave radiation feedback in the formation and rapid intensification of super Typhoon Haiyan (2013) and major Hurricane Maria (2017) (oral), *AMS 101st Annual Meeting (virtual)*.
- 2020** **Ruppert, J. H., Jr.**, and X. Chen, 2020: Island Rainfall Enhancement and Diurnal Rectification in the Maritime Continent (poster), *AGU Fall Meeting (virtual)*.
- Ruppert, J. H., Jr.**, F. Zhang, and X. Chen, 2020: Diurnal forcing and phase locking of gravity waves in the Maritime Continent (oral), *AMS 100th Annual Meeting*, Boston, MA.
- 2019** **Ruppert, J. H., Jr.**, F. Zhang: 2019: Diurnal forcing and phase locking of gravity waves in the Maritime Continent (oral), *AMS 18th Conference on Mesoscale Processes*, Savannah, GA.
- 2018** **Ruppert, J. H., Jr.**, C. Hohenegger, M. O’Neill, and D. Klocke, 2018: A tale of two diurnal cloud modes (oral), *AGU Fall Meeting*, Washington D.C.

- Ruppert, J. H., Jr.**, C. Hohenegger, and M. O'Neill, 2018: How does the diurnal radiative heating cycle impact the genesis and intensification of tropical cyclones? (oral), *AMS 33rd Conference on Hurricanes and Tropical Meteorology*, Ponte Vedra, FL.
- Ruppert, J. H., Jr.**, and C. Hohenegger, 2018: Diurnal circulation adjustment and organized deep convection (oral), *AMS 33rd Conference on Hurricanes and Tropical Meteorology*, Ponte Vedra, FL.
- Ruppert, J. H., Jr.**, C. Hohenegger, and M. O'Neill, 2018: *Diurnal circulation adjustment and organized deep convection* (oral), *EGU General Assembly*, Vienna, Austria.
- Ruppert, J. H., Jr.**, C. Hohenegger, and M. O'Neill, 2018: Diurnal modes of tropical cyclones (poster), *EGU General Assembly*, Vienna, Austria.
- 2017** **Ruppert, J. H., Jr.**, and C. Hohenegger, 2017: The diurnal cycle of tropical large-scale circulation (poster), *EGU General Assembly*, Vienna, Austria.
- 2016** **Ruppert, J. H., Jr.**, 2016: Acceleration of the Large-scale Onset of Deep Convection by the Shallow Cumulus Diurnal Cycle (oral), *AGU Fall Meeting*, San Francisco, CA.
- Ruppert, J. H., Jr.**, 2016: Climate implications of the moist convective diurnal cycle (poster), *EGU General Assembly*, Vienna, Austria. **Outstanding student poster award.**
- 2015** **Ruppert, J. H., Jr.**, and R. H. Johnson, 2015: Rectified moistening by the cumulus diurnal cycle (oral), *AMS 16th Conference on Mesoscale Processes*, Boston, MA. **1st place student oral presentation.**
- 2014** **Ruppert, J. H., Jr.**, and R. H. Johnson, 2014: Diurnally modulated cumulus moistening in the pre-onset stage of the Madden–Julian oscillation during DYNAMO (poster), *AGU Fall Meeting*, San Francisco, CA.
- Ruppert, J. H., Jr.**, R. H. Johnson, and P. E. Ciesielski, 2014: Cumulus moistening, convection, and the diurnal cycle during pre-onset periods in DYNAMO (oral), *AMS 31st Conference on Hurricanes and Tropical Meteorology*, San Diego, CA.
- 2013** **Ruppert, J. H., Jr.**, and R. H. Johnson, 2013: The diurnal cycle of moistening by shallow convection during DYNAMO (poster), *AGU Fall Meeting*, San Francisco, CA.
- Ruppert, J. H., Jr.**, and R. H. Johnson, 2013: Diurnal convection and mesoscale organization in the MJO during DYNAMO, *AMS 15th Conference on Mesoscale Processes* (oral), Portland, OR.
- 2012** **Ruppert, J. H., Jr.**, and R. H. Johnson, 2012: *Diurnal cycle of rainfall in Taiwan during SoWMEX/TiMREX (2008)* (poster), *AGU Fall Meeting*, San Francisco, CA.
- 2011** **Ruppert, J. H., Jr.**, and R. H. Johnson, 2011: Analysis of flow variability during the Terrain-influenced Monsoon Rainfall Experiment (2008) (oral), *AMS 14th Conference on Mesoscale Processes*, Los Angeles, CA.
- Ruppert, J. H., Jr.**, and L. F. Bosart, 2011: Case study of a large-amplitude mesoscale inertia–gravity wave over the Southeast U.S. (oral), *AMS 14th Conference on Mesoscale Processes*, Los Angeles, CA.
- Ruppert, J. H., Jr.**, and L. F. Bosart, 2011: Case study of a large-amplitude inertia–gravity wave over the Southeast (p), *AMS 24th Conference on Weather and Forecasting*, Seattle, WA.
- 2010** **Ruppert, J. H., Jr.**, and L. F. Bosart, 2010: Case study of a large-amplitude inertia–gravity wave over the Southeast (p), *AMS 25th Conference on Severe Local Storms*, Denver, CO.

2009

Ruppert, J. H., Jr., and L. F. Bosart, 2009: Case study of a large-amplitude inertia-gravity wave over the Southeast (p), *AMS 13th Conference on Mesoscale Processes*, Salt Lake City, UT. **2nd place student poster presentation.**