

QUINTON LAWTON

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EDUCATION

- University of Miami | Rosenstiel School of Marine, Atmospheric, & Earth Science**, Miami, FL August 2024
Doctor of Philosophy (Ph.D.) in Atmospheric Science
Dissertation Title: *Convectively Coupled Kelvin Waves and Their Interactions with African Easterly Waves*
- Texas A&M University**, College Station, TX May 2019
Bachelor of Science (B.S.) in Meteorology
Summa Cum Laude, University Honors Fellow, Research Scholar Distinction

RESEARCH AND FIELD EXPERIENCE

- NSF National Center for Atmospheric Research (NCAR)**, Boulder, CO August 2024 – Present
Advanced Study Program (ASP) Postdoctoral Fellow
- Rosenstiel School of Marine, Atmospheric, & Earth Science**, Miami, FL August 2019 – August 2024
NSF Graduate Research Fellow (GRFP) – Advisor: Dr. Sharanya Majumdar
- European Centre for Medium-Range Weather Forecasts (ECMWF)**, Reading, UK April 2023
Invited Visiting Scientist – Hosts: Linus Magnusson and Rebecca Emerton
- NASA Convective Processes Experiment in Cabo Verde (CPEX-CV)**, Sal, Cabo Verde September 2022
Flight Planning and Scientific Support
- NSF National Center for Atmospheric Research (NCAR)**, Boulder, CO June – July 2022
Visiting Scientist – Host: Dr. Rosimar Rios-Berrios
- Texas A&M Department of Atmospheric Sciences**, College Station, TX August 2016 – August 2019
Undergraduate Researcher – Advisor: Dr. Robert Korty
- NOAA NWS Environmental Modeling Center (EMC)**, College Park, MD June 2018 – August 2018
Student Intern, Lapenta NOAA/NCEP Internship Program

REFEREED PUBLICATIONS

* Denotes undergraduate mentee

- Lawton, Q. A.**, R. Rios-Berrios, F. Judt, L. Magnusson, and M. Köhler, 2025: On the Representation of Convectively Coupled Kelvin Waves in Operational Forecast Models: An Object-Tracking Perspective. *Weather and Forecasting*, In Press. <https://doi.org/10.1175/WAF-D-25-0182.1>
- Majumdar, S. J., L. Magnusson, **Q. A. Lawton**, R. Emerton, S. Lang, M. Maier-Gerber, and D. S. Richardson, 2025: Atlantic tropical wave and cyclogenesis forecasting in the physical and new AI forecast systems at ECMWF. *Weather and Forecasting*, In Press. <https://doi.org/10.1175/WAF-D-25-0200.1>
- Núñez Ocasio, K. M., **Q. A. Lawton**, E. Bercos-Hickey, S. Bourdin, A. Brammer, X. Feng: A Review of African Easterly Waves: Formation, Growth, Structure, and Evolution. *Journal of the Atmospheric Sciences*, In Press. <https://doi.org/10.1175/JAS-D-25-0175.1>
- Lawton, Q. A.**, *B. Weiser, and S. J. Majumdar, 2025: On the Interannual Variability of African Easterly Waves and Its Relationship with El Niño – Southern Oscillation. *Journal of Climate*, **38**(20), 5791-5808. <https://doi.org/10.1175/JCLI-D-25-0113.1>
- Sakaeda, N., S.-N. Wu, R. Rios-Berrios, E. Martin, K. M. Núñez Ocasio, K. Bedka, M. Hollis, B. Lambrigtsen, **Q. A. Lawton**, A. Nehrir, M. Rajagopal, M. Schreier, and S. Wong, 2025: Synoptic Modulation of the West African Coastal Atmosphere and Mesoscale Convective Systems. *Monthly Weather Review*, **153**(10), 1939-1957. <https://doi.org/10.1175/MWR-D-24-0281.1>
- Nowottnick, E., P., and Co-Authors, 2024: Dust, Convection, Winds and Waves: The 2022 NASA CPEX-CV Campaign. *Bulletin of the American Meteorological Society*, **105**(11). <https://doi.org/10.1175/BAMS-D-23-0201.1>
- Núñez Ocasio, K. M., C. A. Davis, Z. L. Moon, and **Q. A. Lawton**, 2024: Moisture Dependence of an African Easterly Wave Within the West African Monsoon System. *Journal of Advances in Modeling Earth Systems*. **16**, e2023MS004070. <https://doi.org/10.1029/2023MS004070>

- Lawton, Q., A.,** R. Rios-Berrios, S. J. Majumdar, R. Emerton, and L. Magnusson, 2024: The Representation of Convectively Coupled Kelvin Waves in Simulations with Modified Wave Amplitudes. *Journal of Advances in Modeling Earth Systems*. **16**, e2023MS004187. <https://doi.org/10.1029/2023MS004187>
- Lawton, Q. A.,** and S. J. Majumdar, 2023: Convectively Coupled Kelvin Waves and Tropical Cyclogenesis: Connections through Convection and Moisture. *Monthly Weather Review*. **151(7)**, 1647-1666. <https://doi.org/10.1175/MWR-D-23-0005.1>
- Lawton, Q. A.,** S. J. Majumdar, K. Dotterer, C. Thorncroft, and C. J. Schreck, 2022: The Influence of Convectively Coupled Kelvin Waves on African Easterly Waves in a Wave-Following Framework. *Monthly Weather Review*, **150(8)**, 2055-2072. <https://doi.org/10.1175/MWR-D-21-0321.1>
- Lawton, Q. A.,** R. Korty, and R. Zamora, 2021: Tropical cyclones downscaled from simulations of the Last Glacial Maximum. *Journal of Climate*, **34(2)**, 659-674. <https://doi.org/10.1175/JCLI-D-20-0409.1>

GRANTS AND FELLOWSHIPS

AGS #2508342, National Science Foundation, PI: *Kelly Núñez Ocasio* April 2026 – Present
Unfunded Collaborator

- *Impacts of Changing Environmental Conditions on Weather Systems over Africa*
- Included as **unfunded collaborator**, contributed to proposal conceptualization and writing.

Director's Reserve Computing Allocation, NSF NCAR MMM July – September 2025
Principal Investigator

- Proposed investigation of high-resolution numerical models and their ability to accurately forecast tropical waves.
- **1 million CPU hours awarded** on NCAR Derecho supercomputer used to run 3km resolution MPAS experiments.

NASA Grant #80NSSC20K0904, NASA, PI: *Jason Dunion* Joined December 2023 – August 2024
Unfunded Collaborator

- *Using Aircraft and Satellite Observations to Characterize African Easterly Wave Variability and Environmental Factors Associated with Downstream Tropical Cyclogenesis.*
- Initial grant awarded April 2020, joined as unfunded collaborator in December 2023.

NSF Graduate Research Fellowship, National Science Foundation Awarded April 2020
Recipient

- *Investigating Multi-Scale Environmental Interactions in Tropical Cyclogenesis from African Easterly Waves.*
- \$102,000 stipend support, \$36,000 cost of education support over 3 years.

Dean's Fellowship, University of Miami Awarded August 2019
Recipient

- \$80,000 stipend support, \$3000 research travel support over 2 years.

AWARDS AND HONORS

F.G. Walton Smith Prize for Outstanding Ph.D. Dissertation , University of Miami Rosenstiel School	May 2025
Outstanding Student Presentation , 35 th and 36 th Conference on Hurricanes and Tropical Meteorology	May 2022, 2024
Outstanding Outreach Award , University of Miami Rosenstiel School	April 2022
COMPASS Seminar Awards, 1st and 2nd Place , University of Miami Rosenstiel School	May 2021, 2023
Excellence in Undergraduate Meteorology Award , Texas A&M Department of Atmospheric Sciences	May 2019
Outstanding Student Award , Texas A&M University College of Geosciences	May 2019
Medallion Scholar Gold Award , Texas A&M University College of Geosciences	May 2019

TEACHING EXPERIENCE

ATOC 3180: Aviation Meteorology, University of Colorado, Boulder October 2025
Guest Lecturer

ATM 244: Tropical Weather and Forecasting, University of Miami August 2021 – December 2021
Graduate Teaching Assistant

SSA 106: Summer Scholars Hurricane Academy, University of Miami July 2021
High School Course at University of Miami: Co-Instructor and Course Designer

ATM 405: Atmospheric Dynamics I , University of Miami <i>Graduate Teaching Assistant</i>	January 2021 – May 2021
ATMO 321: Computer Applications in the Atmospheric Sciences , Texas A&M University <i>Undergraduate Teaching Assistant</i>	January 2019 – May 2019
ATMO 251: Weather Observation and Analysis Lab , Texas A&M University <i>Undergraduate Teaching Assistant</i>	August 2017 – December 2017

RESEARCH ADVISING

Shanna Chamhitt , NSF Significant Opportunities in Atmospheric Research and Science (SOARS) <i>Co-Advisor with Julia Kukulies</i> Project Title: <i>Investigating Non-Propagating Gravity Wave in the Outflow Layer of Tropical Cyclones</i>	May – August 2025
Brooke Weiser (Undergraduate), University of Miami <i>Primary Research Advisor, Committee Member</i> Undergraduate Honors Thesis Title: <i>Environmental Influences on the Variability of African Easterly Wave Activity Across Seasons</i>	August 2022 – May 2024
Integrated Marine Program and College Training (IMPACT) , Miami, FL <i>Research Lab Coach for a group of three high school students</i>	June – July 2023

OTHER COLLABORATIONS

Advancing the Prediction of Hurricanes Experiment (APHEX) , NOAA <i>Collaborator, Genesis State and Favorable Air Mass Experiments</i>	August 2022 - Present
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LEADERSHIP AND SERVICE

Ad Hoc Community Modeling Committee , American Meteorological Society <i>Invited Early Career Member</i>	January 2026 – Present
MMM Management Committee , NSF NCAR <i>At Large Early Career Representative</i>	September 2025 – Present
Public Tour Sub-Guide for the Mesa Laboratory , NSF NCAR <i>Trained Public Tour Guide</i>	February 2025 – Present
K-12 Working Group , UCAR <i>Member</i>	September 2024 – Present
NCAR/UCP Postdoc Fellows Networking Committee <i>Member and Co-Chair (January 2026 – Present)</i>	September 2024 – Present
UCAR Africa Initiative <i>Member</i>	September 2024 – Present
Advisory Council for Department of Atmospheric Sciences , Texas A&M University <i>Invited Member</i>	August 2022 – Present
Early Career Leadership Program , NSF NCAR <i>Selected Participant</i>	February – April 2025
Student Tropical Working Group , University of Miami/North Carolina State <i>Co-organizer and Founding Member</i>	June 2022 – August 2024
Student Affairs: Specialty Meeting Events Committee , American Meteorological Society <i>Committee Member, Liaison for the 36th Conference on Hurricanes and Tropical Meteorology</i>	February 2023 – May 2024
Student Conference Planning Committee , American Meteorological Society <i>Member (2019-2024) and Session Chair (2019 – 2022)</i>	February 2019 – January 2024

OUTREACH ACTIVITIES

Skype a Scientist , Skype a Scientist <i>Volunteering Scientist</i>	January 2021 – Present
Scientist in Every Florida School (SEFS) , Thompson Earth Systems Institute <i>Volunteering Scientist</i>	March 2023 – August 2024
‘Canes on ‘Canes Hurricane Outreach Group , University of Miami <i>Team Leader (2020 –2022), Member (2022 – 2024)</i>	January 2020 – August 2024
Frost School of Music Earth Day Collaborations , University of Miami <i>Collaborating Scientist for development of educational art and music pieces</i>	March 2022 – April 2023
Texas A&M College of Geosciences Geo-X Summer Camp , College Station, TX <i>Lead Counselor for high school geoscience exploration program</i>	June 2017, 2019
LAUNCH Undergraduate Research Ambassador , Texas A&M University <i>Research Ambassador</i>	August 2017 – May 2019
College of Geosciences Undergraduate Recruitment , Texas A&M University <i>Undergraduate Student Recruiter</i>	August 2016 – May 2019

OTHER SERVICE

Journal Editorships

- *Associate Editor* for Monthly Weather Review, January 2025 – Present

Journal Peer Reviews

- Geophysical Research Letters
- Climate Dynamics
- Journal of Geophysical Research: Atmospheres
- Monthly Weather Review
- Quarterly Journal of the Royal Meteorological Society

Session Chairing

- *Machine Learning in Tropical Convection*, 37th Conference on Hurricanes and Tropical Meteorology, April 2026
 - *Atmospheric Waves and Extreme Weather Events in the Tropics*, 37th Conference on Hurricanes and Tropical Meteorology, April 2026
 - *Linking Waves in the Tropics to High Impact Weather*, 36th Conference on Hurricanes and Tropical Meteorology, May 2024
 - *Panel Discussion on Career Development in Tropical Meteorology*, 36th Conference on Hurricanes and Tropical Meteorology, May 2024
 - *Networking Coffee Break for Students, Postdocs, and Early Career Professionals*, 36th Conference on Hurricanes and Tropical Meteorology, May 2024
 - *Integrated Warning Team Virtual Panel*, 21st Annual AMS Student Conference, January 2022
 - *Conversations with Professionals: Public sector speakers*, 20th Annual AMS Student Conference, January 2021
 - *Expand Your Horizons – Integrated Warning Team: Meteorology and Emergency Management*, 20th Annual AMS Student Conference, January 2021
 - *Integrated Warning Team Part I and II*, 19th Annual AMS Student Conference, January 2020
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THESES

- Lawton, Q. A.**, 2024: Convectively Coupled Kelvin Waves and Their Interactions with African Easterly Waves. Doctoral Dissertation, University of Miami. Available electronically from <https://scholarship.miami.edu/esploro/outputs/991032041820802976>.
- Lawton, Q. A.**, 2018: Downscaled Tropical Cyclones in Simulations of the Last Glacial Maximum. Undergraduate Research Scholars Program, Texas A&M University. Available electronically from <https://hdl.handle.net/1969.1/194450>.
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INVITED PRESENTATIONS

- Lawton, Q. A.**, 2025: *African Easterly Waves and Extreme Weather: From Seasonal Variability to Global Prediction*. AESEDA Indaba Seminar Series, Pennsylvania State University. December 12th, 2026. *Virtual Presentation*.
- Lawton, Q. A.**, 2025: *Tropical Wave Interactions: From Dynamics to TC Genesis*. TC-CRF Workshop, Boulder, CO. July 23rd, 2025. Oral Presentation.
- Lawton, Q. A.**, 2025: *Tropical Wave Interactions: From Dynamics to TC Genesis*. TC-CRF Workshop, Boulder, CO. July 23rd, 2025. Oral Presentation.
- Lawton, Q. A.**, 2025: *Tropical Wave Interactions: From Dynamics to Numerical Prediction*. Special Colloquia Series Seminar, Colorado State University Department of Atmospheric Sciences, Fort Collins, CO. June 17th, 2025. *Oral Presentation*.
- Lawton, Q. A.**, 2025: *Riding the (Tropical) Waves: My Journey into Atmospheric Science*. "What's Brewing?" CSU FORTCAST Seminar Series, Fort Collins, CO. February 28th, 2025.
- Lawton, Q. A.**, 2024: *Convectively Coupled Kelvin Waves and Their Interactions: From Reanalysis Data to Numerical Simulations*. MMM Seminar, NSF NCAR, Boulder, CO. October 17, 2024. *Oral Presentation*. https://www.youtube.com/watch?v=s_A9ksNDH-o
- Lawton, Q. A.**, 2024: *Convectively Coupled Kelvin Waves and Their Interactions: From Reanalysis Data to Numerical Simulations*. University of Oxford, School of Geography and the Environment, Oxford, UK. September 17, 2024. *Informal Oral Presentation*.
- Lawton, Q. A.**, S. J. Majumdar, and W. Downs, 2024: *Tropical Wave Diagnostics and Their Applications to Numerical Weather Models*. ECMWF Workshop on Diagnostics for Global Weather Prediction, ECMWF, Reading, UK. September 9-12, 2024. *Oral Presentation*. <https://vimeo.com/1008486935/02b0e63680>
- Lawton, Q. A.**, 2024: *Convectively Coupled Kelvin Waves and Their Interactions: From Reanalysis Data to Numerical Simulations*. University of Leeds, Leeds, UK. September 6, 2024. *Oral Presentation*.
- Lawton, Q. A.**, 2024: *The Influence of Convectively Coupled Kelvin Waves on African Easterly Waves and Tropical Cyclogenesis*. NRL Formal Seminar, Naval Research Laboratory, Monterey, CA. January 16, 2024. *Oral Presentation*.
- Lawton, Q. A.**, 2023: *The Influence of Convectively Coupled Kelvin Waves on African Easterly Waves and Tropical Cyclogenesis*. ECMWF Informal Seminar, ECMWF, Reading, UK. April 18, 2023. *Oral Presentation*. <https://events.ecmwf.int/event/353/>
- Lawton, Q. A.**, 2022: *The Influence of Convectively Coupled Kelvin Waves on African Easterly Waves and Tropical Cyclogenesis*. National Hurricane Center, Miami, FL. *Oral Presentation*.
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OTHER PRESENTATIONS

* Denotes presentation by research mentee(s)

** Denotes award winner

- Lawton, Q. A.**, R. Rios-Berrios, F. Judt, L. Magnusson, and M. Köhler: *Evaluating the Sources of Tropical Wave Forecast Errors in Numerical Models*. 37th Conference on Hurricanes and Tropical Meteorology, San Diego, CA. *Oral Presentation*.
- Lawton, Q. A.**, F. Judt, and R. Rios-Berrios: *Tropical Wave Interactions and Extreme Rainfall Prediction*. 37th Conference on Hurricanes and Tropical Meteorology, San Diego, CA. *Poster Presentation*.
- *Chamhitt, S., D. S. Nolna, **Q. A. Lawton**, and J. Kukulies: *Investigating Non-Propagating Waves in the Outflow Layer of Tropical Cyclones Using Geostationary Satellite Data*. 37th Conference on Hurricanes and Tropical Meteorology, San Diego, CA. *Research Mentor*.
- DiGilio Jr., J., A. C. Michaelis, **Q. A. Lawton**, and R. Rios-Berrios: *Diagnosing Biases Limiting Tropical Cyclogenesis in High-Resolution MPAS-A Simulations*. American Meteorological Society Annual Meeting, Houston, TX. *Collaborator*.
- Lawton, Q. A.**, R. Rios-Berrios, and F. Judt, 2026: *Using MPAS-A to Evaluate Sources of Forecast Errors for Tropical Waves and their Impacts*. American Meteorological Society Annual Meeting, Houston, TX. *Poster Presentation*.
- Lawton, Q. A.**, R. Rios-Berrios, F. Judt, L. Magnusson, and M. Köhler, 2026: *On the Representation of Convectively Coupled Kelvin Waves in Operational Forecast Models: An Object-Tracking Perspective*. American Meteorological Society Annual Meeting, Houston, TX. *Oral Presentation*.
- Lawton, Q. A.**, R. Rios-Berrios, F. Judt, and L. Magnusson, 2025: *Investigating the Forecast Skill of Tropical Waves in MPAS-A Simulations*. Joint MPAS/WRF Users Workshop, Boulder, CO. June 5th, 2025. *Oral Presentation*.

- Lawton, Q. A.,** R. Rios-Berrios, S. J. Majumdar, and W. Downs, 2025: *Techniques for the Identification and Modification of Simulated Tropical Waves*. American Meteorological Society 13th Symposium on the Madden-Julian Oscillation and Sub-Seasonal Monsoon Variability, New Orleans, LA. *Oral Presentation*.
- Brooke, W., **Q. A. Lawton,** and S. J. Majumdar, 2025: *Exploring the Variability of African Easterly Wave Activity Across Seasons*. American Meteorological Society 13th Symposium on the Madden-Julian Oscillation and Sub-Seasonal Monsoon Variability, New Orleans, LA. *Oral Presentation*.
- Majumdar, S. J., L. Magnusson, **Q. A. Lawton,** R. Emerton, M. Maier-Gerber, J. P. Dunion, and J. Zawislak, 2025: *Predictions of Tropical Waves and Cyclogenesis at ECMWF*. American Meteorological Society Seventh Special Symposium on Tropical Meteorology and Tropical Cyclones, New Orleans, LA. *Contributing co-author*.
- **Lawton, Q. A.,** R. Rios-Berrios, S. J. Majumdar, R. Emerton, and L. Magnusson, 2024: *The Representation of Convectively Coupled Kelvin Waves in Global Simulations with Modified Wave Amplitudes*. 36th Conference on Hurricanes and Tropical Meteorology, Long Beach, CA. *Oral Presentation*.
- Núñez Ocasio, K. M., C. Davis, Z. Moon, and **Q. A. Lawton,** 2024: *Moisture Sensitivity of the African Easterly Wave-African Easterly Jet and Convection Systems*. 36th Conference on Hurricanes and Tropical Meteorology, Long Beach, CA. *Contributing co-author*.
- Núñez Ocasio, K. M., and co-authors, 2024: *The Role of the West African Monsoon and Land Breeze during CPEX-CV*. 36th Conference on Hurricanes and Tropical Meteorology, Long Beach, CA. *Contributing co-author*.
- Sakaeda, N., and co-authors, 2024: *Effects of Large-Scale Perturbations on the Evolution of Coastal Offshore Convection over West Africa*. 36th Conference on Hurricanes and Tropical Meteorology, Long Beach, CA. *Contributing co-author*.
- *Weiser, B., **Q. A. Lawton,** and S. J. Majumdar, 2024: *Investigating the Predictability of Tropical Cyclogenesis through a Comparison of African Easterly Wave Seasons*. 2024 American Meteorological Society Student Conference. January 28, 2024. *Project mentor*. <https://ams.confex.com/ams/104ANNUAL/meetingapp.cgi/Paper/440573>
- Lawton, Q. A.** and K. N. Ocasio, 2023: *Objective AEW and MCS Tracking: Applications to the CPEX-CV Campaign*. NASA CPEX Science Team Meeting, Salt Lake City, UT. August 14, 2023, *Poster Presentation*.
- *Angilot, S., I. Ney, D. Acosta, and **Q. A. Lawton,** 2023: *Storm Surge, Sea Level Rise, Climate Change, and U (You)*. Upward Bound Math and Science/IMPACT 2023 Summer Symposium. July 28, 2023. *Project Mentor*.
- Lawton, Q. A.** and S. J. Majumdar, 2023: *Kelvin Waves and Tropical Cyclogenesis: Connections to Convection and Moisture*. EGU General Assembly, Vienna, Austria. April 24-28, 2023, *Oral Presentation*.
- Lawton, Q. A.,** 2023: *The Influence of Convectively Coupled Kelvin Waves on African Easterly Waves and Tropical Cyclogenesis*. University of Reading Department of Meteorology, Reading, UK. April 17, 2023. *Oral Presentation*.
- Emerton, R., M. Rodwell, L. Magnusson, F. Prates, P. Bechtold, and **Q. A. Lawton,** 2022: *Developing diagnostics for evaluation & real-time monitoring of tropical waves*. 6th WGNE workshop on systematic errors in weather and climate models, ECMWF, Reading, UK. *Contributing co-author*.
- Lawton, Q. A.,** R. Rios-Berrios, and S. J. Majumdar, 2023: *Kelvin Waves and Tropical Cyclogenesis: Insights from a MPAS Simulation of Tropical Storm Victor (2021)*. American Meteorological Society's Fifth Special Symposium on Tropical Meteorology and Tropical Cyclones, Denver, CO. Jan 8-12, 2023. *Poster Presentation*.
- Downs, W., S. J. Majumdar, and **Q. A. Lawton,** 2023: *The Effects of African Easterly Wave Merger Events on Tropical Cyclogenesis and Early Intensification*. American Meteorological Society's Fifth Special Symposium on Tropical Meteorology and Tropical Cyclones, Denver, CO. Jan 8-12, 2023. *Contributing co-author*.
- Majumdar, S., E. Ebert, B. W. Golding, D. Hoffmann, and **Q. A. Lawton,** 2023: *Undergraduate Classroom Evaluation of the Value Chain for High-Impact Weather Events*. American Meteorological Society's 32nd Conference on Education, Denver, CO. Jan 8-12, 2023. *Contributing co-author*.
- **Lawton, Q. A.,** S. J. Majumdar, K. Dotterer, C. Thorncroft, and C. J. Schreck III, 2022: *The Influence of Convectively Coupled Kelvin Waves on African Easterly Waves in a Lagrangian Framework*. AMS 35th Conference on Hurricanes and Tropical Meteorology, Tropical Wave I, New Orleans, LA. *Oral Presentation*.
- Lawton Q. A.,** S. J. Majumdar, and K. Dotterer, 2022: *Updating Our Perspective on the Connection Between Tropical Cyclogenesis and Convectively Coupled Kelvin Waves*, AMS 35th Conference on Hurricanes and Tropical Meteorology, Poster Session, New Orleans, LA.
- Lawton, Q. A.,** S. J. Majumdar, K. Dotterer, and C. Thorncroft, 2021: *The Influence of Convectively Coupled Kelvin Waves (CCKWs) on the African Easterly Wave (AEW) Pathway to Tropical Cyclogenesis*. AMS 34th Conference on Hurricanes and Tropical Meteorology, Tropical Cyclogenesis II. *Virtual Poster Presentation*.
- Lawton, Q. A.,** S. J. Majumdar, K. Dotterer, and C. Thorncroft, 2021: *Tropical Cyclogenesis via Convectively Coupled Kelvin Wave (CCKW) – African Easterly Wave (AEW) interactions. Part II: AEW Behavior during the 2020 Atlantic Hurricane Season*. American Meteorological Society's Fourth Special Symposium on Tropical Meteorology and Tropical Cyclones. *Virtual Poster Presentation*.
- Dotterer, K., C. Thorncroft, **Q. A. Lawton,** and S. J. Majumdar, 2021: *Tropical Cyclogenesis via Convectively Coupled Kelvin Wave (CCKW) – African Easterly Wave (AEW) interactions. Part I: CCKW Behavior during the 2020 Atlantic Hurricane Season*. American Meteorological Society's Fourth Special Symposium on Tropical Meteorology and Tropical Cyclones. *Contributing co-author*.
- Walker, A., G. Rizzuto, **Q. A. Lawton,** and S. J. Majumdar, 2021: *Large-Scale Environmental Influences on African Easterly Waves and Tropical Cyclogenesis in the Eastern Atlantic Basin*. 2021 American Meteorological Society Student Conference. *Contributing co-author*.

- Lawton, Q. A.,** S. Abarca, B. Liu, A. Mehra, A.C. Didlake Jr., and R. Rogers, 2019: *Investigating Hurricane Convection in HRRF*. 2019 American Meteorological Society Annual Meeting, Phoenix, AZ. *Poster Presentation*.
- Lawton, Q. A.,** S. Abarca, B. Liu, A. Mehra, A.C. Didlake Jr., and R. Rogers, 2018: *Investigating Hurricane Convection in HRRF*. Texas A&M Department of Atmospheric Sciences, College Station, TX. *Oral Presentation*.
- Lawton, Q. A.,** S. Abarca, B. Liu, A. Mehra, A.C. Didlake Jr., and R. Rogers, 2018: *Investigating Hurricane Convection in HRRF*. NCEP Environmental Modeling Center, College Park, MD. *Oral Presentation*.
- Lawton, Q. A.,** S. Abarca, B. Liu, A. Mehra, A.C. Didlake Jr., and R. Rogers, 2018: *Investigating Hurricane Convection in HRRF*. NCEP Student Presentation Workshop, College Park, MD. *Oral Presentation*.
- Lawton, Q. A.,** and R. L. Kerty, 2018: *Intermodel Variability in Tropical Cyclones Downscaled from Paleoclimate Simulations*. 33rd Conference on Hurricanes and Tropical Meteorology, Ponte Vedra, FL. *Oral Presentation*.
- Lawton, Q. A.,** and R.L Kerty 2018: *Downscaled Tropical Cyclones in Paleoclimate Simulations: Intermodel Variability*. 2018 American Meteorological Society Student Conference, Austin, TX. *Poster Presentation*.
- Lawton, Q. A.,** and R. L. Kerty, 2017: *Downscaled Tropical Cyclones in Paleoclimate Simulations: Intermodel Variability*. 2017 Gulf Coast Undergraduate Research Symposium, Rice University, Houston, TX. *Oral Presentation*.
- Marquez, L., **Q. A. Lawton,** T. M. Fenske, K. L. Squires, and D. T. Conlee, 2018: *Potential Applications of Low Power Amateur Radio Digital Modes in Meteorology*. 2018 American Meteorological Society Student Conference, Austin, TX. *Contributing co-author*.
- Silva, A. M., **Q. A. Lawton,** J. E. Marble, E. A. Smith, E. T. Williams, and D. T. Conlee, 2017: *Methods of Heat Flux Measurement in a Modular Green Roof System*. 2017 American Meteorological Society Student Conference, Seattle, WA. *Poster Presentation*.
- **Silva, A. M., *Q. A. Lawton,** J. E. Marble, E. A. Smith, E. T. Williams, and D. T. Conlee, 2017: *Methods of Heat Flux Measurement in a Modular Green Roof System*. 2017 Texas Weather Conference, Austin, TX. *Poster Presentation*.

PERFORMANCES

- Knecht, I., 2023: *as soon as 2060*. Written with scientific input from K. Papazian and **Q. A. Lawton**. Earth Day Art Model 2023, Donald Tavel Arts Technology Research Center at Purdue, Telematic Festival. <https://edam2023.deck10.media/stages/STAGE-1#event-lbbz2id49>
- Dickey, C., composer, 2023: *Heart of Sky*. Written in collaboration with S. Nebylitsa and **Q. A. Lawton**. Performed by the University of Miami Frost School Mancini Institute Fellows for the 2022 Earth Day Concert hosted by Maria Schneider. <https://news.miami.edu/stories/2022/03/april-guide-to-the-arts-at-the-u.html>

COMMUNITY ACTIVITIES

Outreach Collaborations with External Organizations

- *National Science Teaching Association*, invited speaker on hurricanes for web seminar series, May 2026
- *Conservation and Conservations with the Louisville Zoo*, invited speaker on hurricanes and climate, September 2025
- *Friends of the Fairchild Garden*, gave talk on sea-level rise and storm surge vulnerability, May 2023
- *Frost Science Museum*, collaborated on several weather-themed events with kids experiments, 2021 – 2023
- *The Motivational Edge*, collaborated on in-person youth-outreach event, September 2021
- *All Hands and Hearts Relief Organization*, discussed hurricane science and forecasting, August 2021
- *Miami Piano Slam*, collaborated on hurricane-themed curriculum in Miami-Dade schools, Fall 2020 – Spring 2021

Selected Media Appearances

- *UMiami News*, [“Decades of data show African weather disturbances intensify during La Niña”](#), Sep, 9, 2025.
- *USA Today*, [“The 2025 hurricane season is off to a perplexing start”](#), Jun, 21, 2025.
- *Fox Weather*, [“What does the remainder of hurricane season look like?”](#), Oct, 15, 2024.
- *Fox Weather*, [“Saharan Dust plume keeps hurricanes at bay -- at least for now”](#), Jul, 16, 2024.
- *News@TheU*, [“Investigating the genesis of hurricanes”](#), Jul, 10, 2024.
- *Newsweek*, [“Otis Before-and-After Photos Show Category 5 Hurricane’s Destruction”](#), Oct, 26, 2023.
- *News@TheU*, [“2021 Atlantic hurricane season comes to an end”](#), Nov, 30, 2021.
- *News@TheU*, [“Canes on ‘Canes’ webinar takes a deep dive on hurricanes”](#), Jul, 7, 2021.
- *Miami Living Magazine*, [“Hurricane Prep Tips Amid Pandemic”](#), Jun, 23, 2020.

SCHOLARSHIPS

Orville Family Endowed Senior Named Scholarship , American Meteorological Society	June 2018
Achievement Scholarship , Houston Livestock Show and Rodeo	August 2017
George W. Crocker Scholarship , Texas A&M College of Geosciences	May 2017
Metropolitan Scholarship , Houston Livestock Show and Rodeo	June 2015
Freshman Undergraduate Scholarship , American Meteorological Society	May 2015