

EMPLOYMENT

Cooperative Institute for Marine and Atmospheric Studies (CIMAS) | University of Miami, Remote Employee | October 2019-present

Position Titles: Associate Scientist | February 2023-present

Assistant Scientist | April 2021-January 2023

Post-Doctoral Associate | October 2019-March 2021

Affiliations: Hurricane Research Division (HRD) of NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML)

EDUCATION

University at Albany, Albany, NY | August 2014-July 2019

Ph.D. in Atmospheric Science, Department of Atmospheric and Environmental Sciences (DAES)

Dissertation Title, On the Frequency, Structure, and Characteristics of Tropical Cyclone Diurnal Pulses

Advisors, Dr. John Molinari (August 2014-December 2018, retired) and Dr. Kristen L. Corbosiero (January-July 2019)

Committee, Drs. Robert G. Fovell and Brian H. Tang

Yale University, New Haven, CT | August 2010-May 2014

Bachelor of Science, Department of Geology and Geophysics (Concentration: Atmosphere, Ocean, and Climate)

Thesis Title, A Genesis Potential Index for Asian-Australian Monsoon Low Pressure Systems

Advisors, Dr. William Boos (research) and Dr. Ronald Smith (academic)

GRANT FUNDING

The Impact of Targeted Synoptic Dropsondes on Tropical Cyclone Forecasts in HAFS, PI, National Oceanographic and Atmospheric Administration, Award Number NA22OAR4590534, 8/1/2022-7/31/2025, \$389,054.

Data Impact Studies, Using OSEs, to Quantify and Optimize the Use of Existing and New Atmospheric Observations, PI (became PI after original and replacement PI accepted positions elsewhere), National Oceanographic and Atmospheric Administration, Award Number NA19OAR0220188, 7/1/2019-6/30/2022 (NCE through 6/30/2023), \$407,683.00.

PUBLICLY-AVAILABLE PRODUCTS

AOML Hurricane Model Viewer^{oo} – Post-TC Verification Tab, Graphics Creator | July 2022-present

- Using GROOT (see below) to generate a selection of verification graphics for TCs worldwide post-dissipation as well as for the entire season by basin
- Graphics generated for operational and experimental GFS-based operational models (e.g., GFS, HAFS, HWRF, HMON, COAMPS-TC)

Tropical Cyclone Diurnal Pulse Archive^{oo}, Creator | September 2020-present

- Created an online archive of diurnal pulses for Atlantic basin tropical cyclones that starts in 2005 and is updated yearly
- Graphics use the objective metrics created by and detailed in Ditchek et al. (2019a) and Ditchek et al. (2019b) to identify pulse type and electric activity.

GROOT: GRaphics for OS(S)Es and Other modeling applications on TCs^{oo}, Creator | October 2019-present

- Created, maintains, and adds new capabilities to a publicly-available TC-verification visualization package
- Package generates graphics of error statistics and assimilated observations for case and composite studies for any number of experiments run with any model that generates TC-tracker output (e.g., HAFS, HWRF, GFS), with user input is confined to a brief namelist
- Utilized by various individuals for their research, presentations, and papers

PAPERS: MANUSCRIPTS & PUBLICATIONS

Ditchek, S.D., J.A. Sippel, X. Wu, and V. Tallapragada 2024: The Overall Impact of Aircraft Reconnaissance Observations on TC Forecasts in GFSv16. *In Preparation*.

Hazelton, A., J. Shin, S. Gopalakrishnan, F. Yang, W. Wang, C-K. Wang, L. Gramer, H-S. Kim, B. Liu, Z. Zhang, X. Lu, L. Zhu, B. Thomas, **S. Ditchek**, G. Alaka, A. Mehra, A. Poyer 2024: Performance of Experimental HAFS-B During the 2024 Hurricane Season, *Submitted to Wea. Forecasting*.

Sippel, J.A., **S.D. Ditchek**, K. Ryan, and C.W. Landsea 2023: The G-IV Inner Circumnavigation: A Story of Successful Organic Interactions Between Research and Operations at NOAA, *BAMS*, 105, E218-E232, <https://doi.org/10.1175/BAMS-D-23-0084.1>^{oo}.

Ditchek, S.D. and J.A. Sippel, 2023: A Comparison of the Impacts of Inner-Core, In-Vortex, and Environmental Dropsondes on Tropical Cyclone Forecasts during the 2017–20 Hurricane Seasons, *Wea. Forecasting*, 38, 2169-2187, <https://doi.org/10.1175/WAF-D-23-0055.1>^{oo}.

- Hazelton A, G.J. Alaka Jr., L. Gramer, W. Ramstrom, **S. Ditchek**, X. Chen, B. Liu, Z. Zhang, L. Zhu, W. Wang, B. Thomas, J. Shin, C-K. Wang, H-S. Kim, X. Zhang, A. Mehra, F. Marks, and S. Gopalakrishnan, 2023: 2022 Real-Time Hurricane Forecasts from an Experimental Version of the Hurricane Analysis and Forecast System (HAFSV0.3S), *Front. Earth Sci.*, 11:1264969 <https://doi.org/10.3389/feart.2023.1264969>^{eo}.
- Holbach, H. and **coauthors**, 2023: Recent Advancements in Aircraft and In Situ Observations of Tropical Cyclones, *Tropical Cyclone Research and Review*, 12, 81-99, <https://doi.org/10.1016/j.tcr.2023.06.001>^{eo}.
- Ditchek, S.D.**, J.A. Sippel, G.J. Alaka Jr., S.B. Goldenberg, and L. Cucurull, 2023: A Systematic Assessment of the Overall Dropsonde Impact during the 2017-2020 Hurricane Seasons using the Basin-Scale HWRF, *Wea. Forecasting*, 38, 789-816, <https://doi.org/10.1175/WAF-D-22-0102.1>^{eo}.
- Ditchek, S.D.**, J.A. Sippel, P.J. Marinescu, and G.J. Alaka Jr., 2023: Improving Best-Track Verification of Tropical Cyclones: A New Metric To Identify Forecast Consistency, *Wea. Forecasting*, 38, 817-831, <https://doi.org/10.1175/WAF-D-22-0168.1>^{eo}.
- Zhang, X., **S.D. Ditchek**, K.L. Corbosiero, W. Xu, 2023: Global and Regional Characteristics of Radially Outward Propagating Tropical Cyclone Diurnal Pulses, *JGR-Atmospheres*, 128, e2022JD037660, <https://doi.org/10.1029/2022JD037660>^{eo}.
- Sippel, J.A. , X. Wu, **S.D. Ditchek**, V. Tallapragada, and D. Kleist, 2022: Impacts of Assimilating Additional Reconnaissance Data on Operational GFS Tropical Cyclone Forecasts. *Wea. Forecasting.*, 37, 1615-1639, <https://doi.org/10.1175/WAF-D-22-0058.1>^{eo}.
- Adkins, J. and **co-authors**, 2021: Geostationary Extended Observations (GeoXO) Hyperspectral InfraRed Sounder Value Assessment Report. NOAA/NESDIS Technical Report, 103pp, <https://doi.org/10.25923/7zvz-fv26>^{eo}.
- Ditchek, S.D.**, K. L. Corbosiero, R. G. Fovell, and J. Molinari, 2020: Electrically active diurnal pulses in Hurricane Harvey (2017). *Mon. Wea. Rev.*, **148**, 2283-2305, <https://doi.org/10.1175/MWR-D-20-0022.1>^{eo}.
- Ditchek, S.D.**, K. L. Corbosiero, R. G. Fovell, and J. Molinari, 2019: Electrically active tropical cyclone diurnal pulses in the Atlantic basin. *Mon. Wea. Rev.*, **147**, 3595-3607, <https://doi.org/10.1175/MWR-D-19-0129.1>^{eo}.
- Ditchek, S.D.**, J. Molinari, K. L. Corbosiero, and R. G. Fovell, 2019: An objective climatology of tropical cyclone diurnal pulses in the Atlantic basin. *Mon. Wea. Rev.*, **147**, 591-605, <https://doi.org/10.1175/MWR-D-18-0368.1>^{eo}.
- Molinari, J., M. Rosenmayer, D. Vollaro, and **S.D. Ditchek**, 2019: Turbulence variations in the upper troposphere in tropical cyclones from NOAA G-IV flight-level vertical acceleration data. *J. Appl. Meteor. Climatol.*, **58**, 569-583, <https://doi.org/10.1175/JAMC-D-18-0148.1>^{eo}.
- Ditchek, S.D.**, T. C. Nelson, M. Rosenmayer, and K. L. Corbosiero, 2017: The relationship between tropical cyclones at genesis and their maximum attained intensity. *J. Climate*. **30**, 4897-4913, <https://doi.org/10.1175/JCLI-D-16-0554.1>^{eo}.
- Ditchek, S.D.**, J. Molinari, and D. Vollaro, 2017: Tropical cyclone outflow-layer structure and the balanced response to eddy forcings. *J. Atmos. Sci.*, **74**, 133-149, <https://doi.org/10.1175/JAS-D-16-0117.1>^{eo}.
- Ditchek, S.D.**, W.R. Boos, S.J. Camargo, and M.K. Tippett, 2016: A genesis index for monsoon disturbances. *J. Climate*, **29**, 5189-5203, <https://doi.org/10.1175/JCLI-D-15-0704.1>^{eo}.

PRESENTATIONS: SCHEDULED & DELIVERED

First-Author Oral Presentations

- **Ditchek, S.D.** and J.A. Sippel 2024: Using Reconnaissance Data to Improve TC Forecasts. *AOML Lab Review, Miami, FL, Hybrid Meeting*.
- **Ditchek, S.D.**, J.A. Sippel, X. Wu, and V. Tallapragada 2024: The Overall Impact of Aircraft Reconnaissance Observations on TC Forecasts in GFSv16. *HFIP Annual Meeting, Miami, FL, Hybrid Meeting*.
- **Ditchek, S.D.**, J.A. Sippel, R. Torn, L. Bucci, and W. Hogsett, 2024: The Sensitivity of the Impact of G-IV Reconnaissance Data to HAFSv2 Version. *HFIP Annual Meeting, Miami, FL, Hybrid Meeting*.
- **Ditchek, S.D.**, J.A. Sippel, R. Torn, L. Bucci, and W. Hogsett, 2024: The Sensitivity of the Impact of G-IV Reconnaissance Data to HAFSv1 Version. *Unifying Innovations in Forecasting Capabilities Workshop 2024, Jackson, MS*.
- **Ditchek, S.D.**, J.A. Sippel, and G.J. Alaka Jr., 2024: Recent Work on the Impact of Aircraft Reconnaissance Data on TC Forecasts. *36th Conference on Hurricanes and Tropical Meteorology, Long Beach, California*.
- **Ditchek, S.D.** 2024: Recent Work on the Impact of Dropsondes on TC Forecasts. *2024 AVAPS Users Group Meeting, Virtual Meeting*.
- **Ditchek, S.D.** 2024: Recent Work on the Impact of Dropsondes on TC Forecasts. *UFS Hurricane Application Team Monthly Meeting, Invited Talk*.
- **Ditchek, S.D.** 2024: Recent Work on the Impact of Dropsondes on TC Forecasts. *AOML/HRD Science Seminar*.
- **Ditchek, S.D.**, R. Torn, L. Bucci, J.A. Sippel, and W. Hogsett, 2024: The Overall and Individual Impact of Two Recent G-IV Flight-Track Changes on TC Forecasts using HAFS. *TCORF/78th IHC, Hybrid Workshop*.

- **Ditchek, S.D.**, R. Torn, L. Bucci, J.A. Sippel, and W. Hogsett 2023: The Overall and Individual Impact of Two Recent G-IV Flight-Track Changes on TC Forecasts using HAFS. *HFIP Annual Meeting, Miami, FL, Hybrid Meeting*.
- **Ditchek, S.D.** 2023: Recent Work on the Impact of Dropsondes on TC Forecasts. *DAES/ASRC Joint Colloquium*, Invited Talk.
- **Ditchek, S.D.**, R. Torn, L. Bucci, J.A. Sippel, and W. Hogsett, 2023: The Impact of the G-IV and Non-Standard G-IV flight patterns on TC Forecasts in HAFS. *TCORF/77th IHC, Hybrid Workshop*.
- **Ditchek, S.D.** 2022: Identifying Consistency in Best-Track TC Verification: A New Metric to Augment the Commonly-Used MAE & MAE Skill. *COAMPS-TC Group Meeting*, Invited Talk.
- **Ditchek, S.D.** 2022: The Consistency Metric and its Utility for HAFS Forecast Performance Evaluation. *EMC Monthly Hurricane Seminar*, Invited Talk.
- **Ditchek, S.D.**, J.A. Sippel, G.J. Alaka Jr., S.B. Goldenberg, and L. Cucurull, 2022: A Systematic Assessment of Dropsonde Impact during the 2017-2020 Hurricane Seasons using the Basin-Scale HWRF: Overall Impacts. *35th Conference on Hurricanes and Tropical Meteorology, New Orleans, Louisiana*.
- **Ditchek, S.D.** and J.A. Sippel, 2022: Recent Results on the Impact of Reconnaissance Data on TC Forecasts in both the Basin-Scale HWRF and GFSv16. *2022 AVAPS Users Group Meeting, Virtual Meeting*
- **Ditchek, S.D.**, J.A. Sippel, G.J. Alaka Jr., S.B. Goldenberg, and L. Cucurull, 2022: A Systematic Assessment of Dropsonde Impact during the 2017-2020 Hurricane Seasons using the Basin-Scale HWRF: Overall Impacts. *26th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS)/102nd AMS Annual Meeting, Virtual Conference*.
- **Ditchek, S.D.**, J.A. Sippel, G.J. Alaka Jr., K. Apodaca, and L. Cucurull, 2021: A Systematic Assessment of Dropsonde Impact during the 2017-2019 Hurricane Seasons using the Basin-Scale HWRF. *34th Conference on Hurricanes and Tropical Meteorology, Virtual Conference*
- **Ditchek, S.D.**, J.A. Sippel, G.J. Alaka Jr., K. Apodaca, and L. Cucurull, 2021: A Systematic Assessment of Dropsonde Impact during the 2017-2019 Hurricane Seasons using the Basin-Scale HWRF. *2021 AVAPS Users Group Meeting, Virtual Meeting*
- **Ditchek, S.D.**, J.A. Sippel, G.J. Alaka Jr., K. Apodaca, and L. Cucurull, 2021: Quantifying the Overall and Radial Impact of Dropsondes during the 2017-2019 Hurricane Seasons using the Basin-Scale HWRF. *25th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS)/101st AMS Annual Meeting, Virtual Conference*
- **Ditchek, S.D.**, J. Molinari, R.G. Fovell, and K.L. Corbosiero, 2018: The Tropical Cyclone Diurnal Cycle in CM1 using an Ensemble Approach. *33rd Conference on Hurricanes and Tropical Meteorology, Ponte Vedra, Florida*
- **Ditchek, S.D.** and J. Molinari, 2016: The Composited Tropical Cyclone Outflow Layer and the Balanced Vortex Response. *32nd Conference on Hurricanes and Tropical Meteorology, San Juan, Puerto Rico*
- **Ditchek, S.D.** and W.R. Boos, 2014: A Genesis Potential Index for Asian-Australian Monsoon Low Pressure Systems. *Yale University's Department of Geology and Geophysics' Senior Thesis Research Symposium, New Haven, CT*
- **Ditchek, S.D.** and W.R. Boos, 2012: A Genesis Potential Index for Summer Monsoon Low Pressure Systems over the Indian Continent Region. *Yale University's Department of Geology and Geophysics' Undergraduate Research Symposium, New Haven, CT*

First-Author Poster Presentations

- **Ditchek, S.D.**, and J.A. Sippel, 2022: An Assessment of the Dropsonde Impact from the G-IV Inner-Ring Circumnavigation during the 2018-2020 Hurricane Seasons Using the Basin-Scale HWRF. *35th Conference on Hurricanes and Tropical Meteorology, New Orleans, Louisiana*.
- **Ditchek, S.D.**, J. Molinari, R.G. Fovell, and K.L. Corbosiero, 2017: The Tropical Cyclone Diurnal Cycle in CM1 using an Ensemble Approach. *18th Cyclone Workshop, Sainte Adele, Quebec, Canada*
- **Ditchek, S.D.**, J. Molinari, R.G. Fovell, and K.L. Corbosiero, 2017: Understanding the Tropical Cyclone Diurnal Cycle using Numerical Modeling. *8th Northeast Tropical Workshop, Rensselaerville, NY*
- **Ditchek, S.D.** and J. Molinari, 2015: A Composite Study of the Tropical Cyclone Outflow Layer. *17th Cyclone Workshop, Pacific Grove, CA*
- **Ditchek, S.D.** and J. Molinari, 2015: A Composite Study of the Tropical Cyclone Outflow Layer. *7th Northeast Tropical Workshop, Dedham, MA*
- **Ditchek, S.D.** and S. Aberson, 2014: Eyewall Mesovortices in Hurricane Fabian (2003) using the HWRF Ensemble Data Assimilation System (HEDAS). *13th Annual AMS Student Conference/94th AMS Annual Meeting, Atlanta, GA*
- **Ditchek, S.D.** and S. Aberson, 2013: Eyewall Mesovortices in Hurricane Fabian (2003) using the HWRF Ensemble Data Assimilation System (HEDAS). *Yale University's Department of Geology and Geophysics' Undergraduate Research Symposium, New Haven, CT*
- **Ditchek, S.D.** and S. Aberson, 2013: Eyewall Mesovortices in Hurricane Fabian (2003) using the HWRF Ensemble Data Assimilation System (HEDAS). *NOAA Hollings Undergraduate Student Science and Education Symposium, Silver Spring, MD*

Co-Authored Oral Presentations | *presenter

- Sippel, J.A.*, **S. D. Ditchek**, K.E. Ryan, and C. W. Landsea 2024: The G-IV Inner Circumnavigation: A Story of Successful Organic Interactions Between Research and Operations at NOAA. *36th Conference on Hurricanes and Tropical Meteorology, Long Beach, California*.
- Corbosiero, K.L.**, X. Zhang, **S. D. Ditchek**, J. O. Piersante, W. Xu, and R. G. Fovell 2024: "Off-the-Clock" Tropical Cyclone Diurnal Pulses. *36th Conference on Hurricanes and Tropical Meteorology, Long Beach, California*.
- Corbosiero, K.L.**, X. Zhang, **S. D. Ditchek**, and W. Xu, 2023: Global Characteristics of "On-the-Clock" and "Off-the-Clock" Tropical Cyclone Diurnal Pulses. *32nd Conference on Weather Analysis and Forecasting (WAF)/28th Conference on Numerical Weather Prediction (NWP)/20th Conference on Mesoscale Processes (MESO). Madison, WI*.
- Sippel, J.A.* and **S. D. Ditchek**, 2023: A Review of Recent Observing System Experiments. *TCORF/77th IHC, Hybrid Workshop*.
- Weixin X.*, X. Zhang, **S. D. Ditchek**, and K. L. Corbosiero, 2023: Diurnal Pulsing in Tropical Cyclone Convection and Its Relationship to TC Intensification. *5th Special Symposium on Tropical Meteorology and Tropical Cyclones/103rd AMS Annual Meeting, Denver, CO*.
- Hazelton, A.T.*, G. J. Alaka Jr., L. J. Gramer, W. Ramstrom, X. Chen, M. C. Ko, **S. D. Ditchek**, K. K. Ahern, G. R. Alvey III, S. Gopalakrishnan, X. Zhang, F. D. Marks Jr., ScD, B. Liu, Z. Zhang, W. Wang, J. Shin, A. Mehra, and V. S. Tallapragada, 2023: Real-Time and Retrospective Evaluation of the Hurricane Analysis and Forecast System (HAFS-S Version). *5th Special Symposium on Tropical Meteorology and Tropical Cyclones/103rd AMS Annual Meeting, Denver, CO*.
- Hazelton, A.T.*, W. Ramstrom, L. J. Gramer, G. J. Alaka Jr., M. C. Ko, **S. D. Ditchek**, X. Chen, K. K. Ahern, H.S. Kim, X. Zhang, S. Gopalakrishnan, F. D. Marks Jr., Z. Zhang, B. Liu, L. Zhu, J.H. Shin, B. Thomas, C.K. Wang, W. Wang, A. Mehra, V. Tallapragada, T. Marchok, and M. Bender, 2022: HAFSV0.3S 2022 HFIP Real-Time Experiment. *HFIP Annual Meeting, Miami, FL, Hybrid Meeting*.
- Sippel, J.A.* and **S. D. Ditchek**, 2022: Lessons Learned from a Recent Dropsonde OSE. *HFIP Annual Meeting, Miami, FL, Hybrid Meeting*.
- Sippel, J.A.*, X. Wu, **S. D. Ditchek**, D. T. Kleist, and V. S. Tallapragada, 2022: Impacts of Assimilating Additional Reconnaissance Data into the Operational GFS Model at NCEP. *35th Conference on Hurricanes and Tropical Meteorology, New Orleans, Louisiana*.

- Aberson, S.D.*, **S.D. Ditchek**, K. J. Sellwood, J. Gamache, and A. Aksoy, 2022: In Search of the Elusive Eyewall Mesocyclone. *35th Conference on Hurricanes and Tropical Meteorology, New Orleans, Louisiana*
- Casey, S.P.F.*, **S.D. Ditchek**, A. Vidal, L. Cucurull, L. Wang, K. Garrett, and P. Weir, 2021: Assimilation of a Geostationary Hyperspectral Infrared Sounder with Updated Viewing Geometry in Global/Regional Observing System Simulation Experiments. *25th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS)/101st AMS Annual Meeting, Virtual Conference*
- Kren, A.C.*, Sippel, J.A., **S.D. Ditchek**, X. Wu, L. Cucurull, G.A. Wick, and B. Annanne, 2020: Extended Impact of Global Hawk Dropsonde Observations for Tropical Cycle Cases in 2016-17. *24th Conference on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS)/100th AMS Annual Meeting, Boston, MA*
- Corbosiero, K.L.* and **S.D. Ditchek**, 2019: Investigating the Diurnal Cycle of Lightning in Tropical Cyclones. *18th Conference on Mesoscale Processes, Savannah, GA* | invited presentation
- Corbosiero, K.L.* and **S.D. Ditchek**, 2019: Investigating the Diurnal Cycle of Lightning in Tropical Cyclones. *9th Northeast Tropical Workshop, Dedham, MA*
- Corbosiero, K.L., Stevenson, S.N.*, **S.D. Ditchek**, 2019: Investigating the Diurnal Cycle of Lightning in Tropical Cyclones. *9th Conference on the Meteorological Application of Lightning Data, Phoenix, AZ*
- Aberson, S.*, **S.D. Ditchek**, A. Aksoy, and K.J. Sellwood, 2014: HEDAS Analyses of a Rapidly Evolving Eyewall of a Major Hurricane – Fabian (2003). *31st Conference on Hurricanes and Tropical Meteorology, San Diego, CA*

Co-Authoring Poster Presentations | *presenter

- Hazelton, A.T.*, G. J. Alaka Jr., X. Chen, S. Gopalakrishnan, X. Zhang, L. J. Gramer, G. T. Alvey, F. D. Marks Jr., and **S. D. Ditchek**, 2023: Evaluation and Improvement of NOAA’s Hurricane Analysis and Forecast System (HAFS). *Unifying Innovations in Forecasting Capabilities Workshop (UFCW), Boulder, CO.*
- Rentzke, N.*, **S.D. Ditchek**, and J.A. Sippel, 2021: Global Hawk Dropsondes Impact on Tropical Cyclone Prediction. *20th Annual Student Conference/101st AMS Annual Meeting, Virtual Conference*

FELLOWSHIPS AND AWARDS

CIMAS “2024 Peer Award” – Recognition the CIMAS Proposal Guidelines | Winter 2024

CIMAS “Cash-in-a-Flash” Award – Recognition of OAR “Team Member of the Year” Award | Winter 2023

Office of Atmospheric Research (OAR) “Team Member of the Year” Award – Personal and Professional Excellence | Winter 2023

CIMAS “Cash-in-a-Flash” Award – CIMAS Proposal Guidelines | Summer 2022

University at Albany and Departmental (DAES) Awards

- DAES Narayan R. Gokhale Distinguished Research Scholarship Award | Fall 2020
- University at Albany’s Distinguished Doctoral Dissertation Award | Spring 2020
- DAES Distinguished Service Award | Fall 2019

National Defense Science and Engineering Graduate (NDSEG) Fellowship | Fall 2014-Summer 2017

National Science Foundation Graduate Research Fellowship Program (NSF GRFP) Honorable Mention | Spring 2016

AfterCollege Science Student Scholarship | Spring 2015

NOAA Hollings Undergraduate Scholarship Program | Summer 2012-Spring 2014

Yale University Awards

- Department of Geology and Geophysics’ Hammer Prize, *Excellence in the Oral Presentation of a Senior Thesis* | Spring 2014
- Department of Geology and Geophysics’ Pat Wilde Prize, *Excellence in Marine Geology and Oceanography* | Spring 2014
- Yale College Dean’s Research Fellowship in the Sciences | Summer 2012
- Department of Geology and Geophysics’ Karen L. Von Damm '77 Undergraduate Research Fellowship | Summer 2012

American Meteorological Society Awards and Programs

- Private Sector Mentorship Program | Spring 2014
- Named Scholarship: K. Vic Ooyama | Fall 2013-Spring 2014
- Freshman Undergraduate Scholarship: Edgar J. Saltsman | Fall 2010-Spring 2011

Society of Exploration Geophysicists Awards

- Anadarko Scholarship | Fall 2013-Spring 2014, Fall 2011-Spring 2012, Fall 2010-Spring 2011
- General Scholarship | Fall 2012-Spring 2013

LEADERSHIP, OUTREACH, AND VOLUNTEER WORK

AOML Lab Review Committee, Member | August 2024-present

One of nine members tasked with preparing for and executing the AOML Lab Review

CIMAS Internal Advisory Committee, Member | July 2021-present

One of fourteen members tasked with addressing CIMAS-related issues and implementing new ideas to foster and strengthen the CIMAS community

- Subcommittee Leader: Proposal-Writing Guideline Improvement Initiative
 - Worked with another CIAC member to create streamlined and clear guidelines for the proposal initiation to submission process at CIMAS
- Initiative Participation: Employee Handbook Revision, CIMAS Celebration, CIMAS Annual Poll & Analysis

American Meteorological Society, Monthly Weather Review, Associate Editor | January 2021-present**Various Journals, Reviewer** | October 2018-present

- American Meteorological Society: *Monthly Weather Review*, *Journal of the Atmospheric Sciences*
- American Geophysical Union: *Geophysical Research Letters*, *Journal of Geophysical Research-Atmospheres*
- Royal Meteorological Society: *Quarterly Journal of the Royal Meteorological Society*

IWTC-X: WMO's 10th International Workshop on Tropical Cyclones, Working Group Member | July 2022-December 2022

Contributed text detailing aircraft reconnaissance 1) sampling updates, 2) data assimilation changes, and 3) data impact studies that occurred since the last IWTC report in 2018

DAES/ASRC Joint Colloquium, University at Albany, DAES, Coordinator, Albany, NY | April 2020-April 2021

- One of three coordinators tasked with organizing and leading the Joint Colloquium for the department
- Worked with coordinators to create a streamlined and transparent Joint Colloquium policy that emphasized diversity and fairness
- Created a centralized database of documents and spreadsheets for future coordinators related to orchestrating the Joint Colloquium

NOAA Hollings Undergraduate Scholarship Program, Co-Mentor | May 2020-July 2020

- Aided an HRD-affiliated Hollings Scholar in their research entitled "Global Hawk Dropsondes Impact on Tropical Cyclone Prediction"
- Provided feedback and edits to abstracts and presentations as well as gave general career advice

Office Assignment Policy Subcommittee, University at Albany, DAES, Member, Albany, NY | December 2018-May 2019

- One of four members tasked with creating an office assignment policy for the department
- Created a streamlined and transparent office assignment policy that emphasized diversity and fairness

Graduate Student Mentorship Program, University at Albany, DAES, Mentor, Albany, NY | September 2017-May 2019

- Developed concept for and aided in the implementation of this new program
- Paired with first-year graduate students to provide guidance and advice, to answer any questions they might have, to facilitate getting them acclimated to graduate school and the department at Albany, and to help them meet other students, especially upper year graduate students.

Graduate Student Committee, University at Albany, DAES, Student Co-Chair, Albany, NY | April 2017-April 2018

- Developed concept for a Graduate Student Committee to foster cohesiveness and structure in the events/activities run by graduate students and to foster growth and new ideas for the department's well-being and the well-being of the graduate students
- Established a calendar for use by the department which includes all events, seminars, and meetings held in the department
- Oversaw the orchestration of the September 2017 Annual Fall Picnic by new student leaders

REU and Internship Night, University at Albany, DAES, Organizer/Presenter, Albany, NY | yearly from 2014-2017

- Created a central database for internship, scholarship, and fellowship opportunities in the atmospheric sciences | November 2015
- Planned and executed the event including coordinating graduate student presenters | November 2015
- Presented information to students about internship, scholarship, and fellowship opportunities | 12/14, 11/15, 09/16, & 09/17

Graduate Recruitment Committee, University at Albany, DAES, Student Chair, Albany, NY | August 2015-August 2017

- Developed and led with two faculty members the 2016 inaugural and 2017 recruitment weekends for prospective graduate students
- Designed and produced personalized welcome materials for prospective students
- Created a centralized database of templates, implementation files, and step-by-step guides to be used by future recruitment coordinators

8th Northeast Tropical Workshop, Co-Organizer | May 2017

Aided in organizing the schedule and creating the website landing page for the 8th Northeast Tropical Workshop

Annual Earth Day, University at Albany, SUNY, Booth Leader, Albany, NY

- Volunteered at an activity booth to explain albedo and low-pressure systems to children | April 2017
- Co-led an activity booth to create anemometers with children and explain their purpose | April 2015

Annual Fall Picnic, University at Albany, DAES, Co-Leader, Albany, NY | September 2016 & October 2015

- Organized and coordinated the annual departmental fall picnic
- Designed invitations and managed fundraising, purchases, and budgets
- Created a centralized database of invitation templates, excel finance sheets, and a step-by-step guide to be used by future picnic coordinators

97th American Meteorological Society Annual Meeting, Lance Bosart Symposium, Co-Organizer | August 2016

Aided in organizing the speaker schedule for the Lance Bosart Symposium

TECHNICAL SKILLS

Operating Systems: *Windows, UNIX*

Programming Languages: *Matlab, R, Fortran77, LaTeX, HTML*

Numerical Modeling: *HAFS, Basin-Scale HWRf, HWRf, Cloud Model 1 (CM1)*

Datasets: *GridSat, WWLLN, ERA-Interim Reanalysis, ERA-5 Reanalysis, ERA-40 Reanalysis, NCEP Reanalysis, GEFS Reanalysis*

Productivity Software: *Microsoft Office Suite including Word, Excel, PowerPoint, OneNote, Publisher*