

HANNAH E. ATTARD

Department of Applied Sciences ◊ *Embry-Riddle Aeronautical University, Worldwide Campus*
www.atmos.albany.edu/student/hattard/ ◊ dr.hannah.attard@gmail.com ◊ 202-630-4761

EDUCATION – UNIVERSITY AT ALBANY, SUNY

- Ph.D. Atmospheric Science** 2018
Dissertation: *The Relationship Between Tropospheric Synoptic Events, Vertical Wave Activity Flux, and Sudden Stratospheric Warmings in the Boreal Winter*
Advisor: Andrea L. Lang
- M.S. Atmospheric Science** 2014
Thesis: *A Climatology of Lower-Stratospheric Fronts over North America*
Advisor: Andrea L. Lang
- B.S. Atmospheric Science (Honors)** 2012
Minor: Mathematics
Honors Thesis: *Large-Scale Precursors to Major Lake-Effect Snowstorms Lee of Lake Erie*
Advisor: Ross A. Lazear

APPOINTMENTS

- Assistant Professor of the Practice** 2019–present
Embry-Riddle Aeronautical University, Worldwide Campus
- National Research Council Postdoctoral Research Associate** 2018–2019
Space Science Division, Naval Research Laboratory
Advisor: John McCormack
- Research Meteorologist** 2015–2018
Riskpulse
- Graduate Research Assistant** 2012–2018
University at Albany, SUNY
Advisor: Andrea Lang
- Graduate Teaching Assistant** 2012–2016
University at Albany, SUNY

TEACHING EXPERIENCE

- Instructor: Embry-Riddle Aeronautical University, Worldwide**
RSCH 202: Introduction to Research Methods - synchronous online Oct 2020
1 section/semester; approx. 7 students/course
- WEAX 201: Meteorology I - synchronous online* Oct 2020
1 section/semester; approx. 16 students/course
- PHYS 102: Explorations in Physics - asynchronous online* Sep 2019; Mar 2020; Aug 2020
1-2 sections/semester; 17-35 students/course
- WEAX 201: Meteorology I - asynchronous online* Sep 2019; Mar 2020; Aug 2020
1 sections/semester; 27-34 students/course
- Guest Lecture: University at Albany, SUNY**
Troposphere-Stratosphere Interaction (Graduate level) Fall 2017
Professor: Andrea Lang

<i>Synoptic Meteorology I (Undergraduate level)</i> Professor: Kristen Corbosiero	Fall 2016
<i>Weather, Climate Change, and Societal Impacts (Undergraduate level)</i> Professor: Brian Tang	Spring 2016
<i>Atmospheric Dynamics (Graduate level)</i> Professor: Brian Rose	Fall 2015
<i>Dynamic Meteorology II (Undergraduate Level)</i> Professor: Andrea Lang	Spring 2013, 2014, 2015
Teaching Assistant: Universtiy at Albany, SUNY <i>Introduction to Climate Change (Online – Undergraduate Level)</i>	2012–2016 Spring 2016
<i>Atmospheric Dynamics (Graduate Level)</i>	Fall 2015
<i>Weather Analysis and Forecasting (Undergraduate Level)</i>	Spring 2014
<i>Dynamic Meteorology III (Undergraduate Level)</i>	Fall 2013
<i>Dynamic Meteorology II (Undergraduate Level)</i>	Spring 2013
<i>Dynamic Meteorology I (Undergraduate Level)</i>	Fall 2012

PUBLICATIONS

I. Peer-Reviewed

Jones Jr., M. and **Coauthors**, 2020: Coupling from the middle atmosphere to the exobase: Dynamical disturbance effects on light chemical species. *Journal of Geophysical Research: Space Physics*, **125** (10), e2020JA028331, doi: 10.1029/2020JA028331

Merryfield, W. and **Coauthors**, 2020: Current and Emerging Developments in Subseasonal to Decadal Prediction. *Bulletin of the American Meteorological Society*, **101** (6), E869–E896, doi: 10.1175/BAMS-D-19-0037.1

Attard, H. E. and A. L. Lang, 2019: Troposphere-stratosphere coupling following blocking and extratropical cyclones. *Mon. Wea. Rev.*, **147**, 1781–1804, doi: 10.1175/MWR-D-18-0335.1

Attard, H. E. and A. L. Lang, 2019: The impact of tropospheric and stratospheric tropical variability on the location, frequency, and duration of cool-season extratropical synoptic events. *Mon. Wea. Rev.*, **147**, 519–542, doi: 10.1175/MWR-D-18-0039.1

Attard, H. E. and A. L. Lang, 2017: Climatological and case analyses of lower-stratospheric fronts over North America. *Q. J. R. Meteor. Soc.*, **143**, 1471–1484, doi: 10.1002/qj.3018

Attard, H. E., R. Rios-Berrios, C. T. Guastini, and A. L. Lang, 2016: Tropospheric and stratospheric precursors to the January 2013 sudden stratospheric warming. *Mon. Wea. Rev.*, **144**:4, 1321–1339, doi: 10.1175/MWR-D-15-0175.1

II. Non-peer reviewed

Attard, H. E. and L. Coy, 2019: Connections between the stratosphere and synoptic variability. *Variations, US CLIVAR*, winter 2019.

FELLOWSHIPS AND AWARDS

NASA Earth and Space Science Fellowship	2016–2018
The Bernard Vonnegut Teaching Award <i>The Department of Atmospheric and Environmental Sciences</i> <i>University at Albany, SUNY</i>	2014, 2016

Travel Grant for the Storm Tracks Workshop	2015
<i>Stratosphere-troposphere Processes and their Role in Climate (SPARC)</i>	
<i>Travel grant funded through the National Science Foundation</i>	
The Karen R. Hitchcock New Frontiers Fund Award	2015
<i>Initiatives for Women</i>	
<i>University at Albany, SUNY</i>	
The Albert N. Husted Fellowship Award	2015
<i>The University at Albany Alumni Association</i>	
<i>University at Albany, SUNY</i>	
President's Award for Exemplary Community Engagement, Key Participant	2014
<i>University at Albany, SUNY</i>	
Outstanding Oral Presentation	2014
<i>26th Conference of Weather Analysis and Forecasting/22nd Conference on Numerical Weather Prediction</i>	
Travel Grant for the 17th Middle Atmosphere Conference	2013
<i>American Meteorological Society</i>	

PRESENTATIONS

I. Invited Presentations

Attard, H. E., 2019: The role of the extratropical stratosphere in sub-seasonal predictability. 18th Annual Energy Conference, Nashville, TN.

Attard, H. E., 2018: Tropospheric synoptic events, vertical wave activity flux, and sudden stratospheric warmings in the boreal winter. NASA Goddard Space Flight Center, Greenbelt, MD.

Attard, H. E., 2017: Troposphere-stratosphere coupling following blocks and extratropical cyclones. University of Wisconsin, Madison, WI.

II. Conference Presentations

Attard, H. E., J. McCormack, A. L. Lang, M. Flatau, K. Viner, and N. Barton, 2019: The tropopause heat flux prior to two Northern Hemisphere SSWs in the high-altitude version of the Navy global environmental model. 20th Conference on Middle Atmosphere, Phoenix, AZ, American Meteorological Society.

Attard, H. E. and A. L. Lang, 2017: Troposphere-stratosphere coupling following blocks and extratropical cyclones. 18th Cyclone Workshop, Sainte Adele, QC, Canada.

Attard, H. E. and A. L. Lang, 2017: Two types of synoptic events and their associated troposphere-stratosphere coupling. 19th Middle Atmosphere Conference, Portland, OR, American Meteorological Society.

Attard, H. E. and A. L. Lang, 2016: Three types of synoptic events and their associated troposphere-to-stratosphere coupling. *Workshop on Sub-seasonal to Seasonal Predictability of Extreme Weather and Climate*, Palisades, NY, International Research Institute for Climate and Society, poster presentation.

Attard, H. E. and A. L. Lang, 2015: The impact of Super Typhoon Nuri (2014) on the structure and strength of the stratospheric polar vortex. 17th Cyclone Workshop, Pacific Grove, CA.

Attard, H. E. and A. L. Lang, 2015: The longitudinal distribution and time series of 100-hPa heat flux prior to sudden stratospheric warming events. *Storm Tracks Workshop*, Grindelwald, Switzerland, Stratosphere-troposphere Processes and their Role in Climate (SPARC).

Attard, H. E., R. Rios-Berrios, C. T. Guastini, and A. L. Lang, 2014: Analysis of the meteorological

precursors leading to the January 2013 sudden stratospheric warming. *39th Annual Northeastern Storm Conference*, Rutland, VT, Lyndon State College AMS/NWA.

Attard, H. E. and A. L. Lang, 2014: A climatology of lower-stratospheric fronts over North America. *26th Conference of Weather Analysis and Forecasting/22nd Conference on Numerical Weather Prediction*, Atlanta, GA, Amer. Meteor. Soc.

Attard, H. E. and A. L. Lang, 2013: A climatology of lower-stratospheric fronts over North America. *16th Cyclone Workshop*, Sainte-Adele, Quebec, CA.

Attard, H. E. and A. L. Lang, 2013: The 25-27 December 2010 snowstorm: A case study of the associated upper-level jet-front systems. *38th Annual Northeastern Storm Conference*, Rutland, VT, Lyndon State College AMS/NWA.

Attard, H. E. and R. A. Lazear, 2012: Large-scale precursors to major lake-effect snowstorms lee of Lake Erie. *37th Annual Northeastern Storm Conference*, Rutland, VT, Lyndon State College AMS/NWA.

PROFESSIONAL DEVELOPMENT

Workshop for Early Career Geoscience Faculty July 2020

Attended the first **virtual** conference

- Learned strategies to: successfully hold a virtual conference, successfully write a grant proposal, Backward course design, time management techniques, create a cohort of mentors

Future Faculty Leadership Council 2013–2015

- Lead a departmental seminar each semester regarding preparing for the job market
- Wrote a blog post each semester for graduate students on preparing for the job market
- Assisted in organizing and presenting university wide workshops regarding preparing for the professoriate

College Teaching Symposium 2012, 2013, 2014

- Presented on: (i) developing your teaching persona and (ii) diversity in the classroom
- Roundtable leader on: (i) managing the student-TA-professor relationship and (ii) establishing authority in the classroom

Seminar in College Teaching (completed course) 2013

University at Albany, SUNY Albany, NY

- Semester-long course on how to design and teach college-level courses to effectively facilitate student learning
- Selection of topics covered: backward course design, effectively implementing classroom activities

OUTREACH

Washington Post Capital Weather Gang Article: “Polar vortex is approaching record strength. That’s not a scary thing” Feb. 2020

Gave interview, quoted in article, supplied figures for article

Posted twitter thread to help fellow professors transition to online course during COVID-19 outbreak March 2020

9,105 impressions; 176 total engagements; 12 retweets; 40 likes

This advice was sent out to all meteorology faculty at the University of Oklahoma by the Associate Director for Undergraduate Studies

GIRLS Science Club, Flying Cloud Institute <i>Workshop and lab leader</i>	2015, 2016
Liberty Partnership Rising Star Program <i>Workshop leader, performed atmospheric science demonstrations</i>	2014, 2015
Family Earth Day Event <i>Activity Leader</i>	2013, 2014, 2015, 2016

SELECTED SERVICE

ERAU-W Mentorship program mentor <i>Work one-on-one with 8 mentees, hold virtual meetings, help create individualized SMART goals</i>	Aug 2020-present
Curriculum Committee <i>Creating applied meteorology minor and bachelor of science major for ERAU-W</i>	Aug 2019-present
Science Committee, 19th Cyclone Workshop <i>Review submitted abstracts and organize conference schedule</i>	2019
Rapporteur, 2018 Conference on Subseasonal to Decadal Prediction <i>Summarize session talks</i>	2018
Graduate Student Association Grants Committee Member <i>Review and rank graduate-student submitted professional development grant applications</i>	2017
Introduction to NCAR Command Language (NCL) Seminar <i>Led workshop for first-year atmospheric science graduate students</i>	2016, 2017
SUNY Faculty Senate Graduate Poster Symposium <i>Poster presenter</i>	2015
Interviewer/Earth Science Expert <i>New York State Master Teacher Program</i>	2014

REVIEWER

National Science Foundation – Climate and Large-Scale Dynamics
 Journal of Geophysical Research-Atmospheres
 International Journal of Climatology

PROFESSIONAL AFFILIATIONS

American Meteorological Society
 American Geophysical Union
 Earth Science Women's Network
 National Association for Geoscience Teachers

TECHNICAL SKILLS

Computer Languages	Python, NCAR Command Language Unix Shell Scripting, HTML
Tools	LaTeX, Vim, Git
Environments	Mac, Linux
Software	Microsoft Office, Adobe Illustrator