

Lourdes B. Avilés, Ph.D.

Professor of Meteorology, Academic Unit Director
Plymouth State University, Plymouth NH

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Meteorology and Physics Program

Computational, Applied, Mathematical, and Physical Sciences
Academic Unit

Exploration and Discovery Integrated Cluster

MSC 48, Plymouth State University, Plymouth, NH 03264

Office – Boyd 309 – (603) 535-3189

Mobile – (603) 236-1938

lourdes.aviles@plymouth.edu

CURRICULUM VITAE

EDUCATION

- Ph.D. Atmospheric Sciences – 2004 – University of Illinois at Urbana-Champaign
 - o Dissertation Topic: Characteristics and Lifecycle of African Easterly Waves and their Likelihood of Developing into Atlantic Tropical Cyclones – Advisor: Mingfang Ting, Ph.D.
 - o State of Illinois Graduate Incentive Fellow
- M.S. Physics – 1997 – University of Puerto Rico, Mayagüez Campus
 - o Thesis Topic: Quasi-elastic Harmonic Potential Simulations – Advisor: Carlos Condat, Ph.D.
- B.S. Physics – 1992 – University of Puerto Rico, Mayagüez Campus
 - o Suma Cum Laude – 3.88/3.92 Cumulative/Major GPA
 - o Enrico Fermi Award – Best Physics Student

EMPLOYMENT HISTORY

- 2015–present: Professor of Meteorology
 - 2017–present: Program Coordinator Meteorology and Physics, Climate Studies, Physics
 - 2020–present: Director/Leader CAMPS Academic Unit
 - 2021 spring semester: temporary Program Coordinator Mathematics
 - 2022 fall semester: temporary Program Coordinator Computer Science and Technology
- 2009–2015: Associate Professor of Meteorology
- 2004–2009: Assistant Professor of Meteorology
 - 2020–present: Meteorology and Physics Discipline, Computational, Applied, Mathematical and Physical Sciences Academic Unit – CAMPS AU
 - 2018–2020: Meteorology and Physics Discipline, Sciences and Technology Academic Unit – SciTech AU
 - 2015–present: Meteorology Program, Exploration and Discovery Integrated Cluster – E&D
 - 2009–2015: Department of Atmospheric Science and Chemistry – ASC
 - 2004–2009: Department of Chemical, Earth, Atmospheric and Physical Science – CEAPS
Plymouth State University, Plymouth, NH
- 1996-2004 –Teaching/Research Assistant (Atmospheric Sciences)
Department of Atmospheric Sciences - DAS
University of Illinois at Urbana-Champaign, Urbana, IL
- 1993-1995 – Lecturer/Adjunct Faculty (Mathematics, Physical Sciences)
Department of Mathematics and Science
Pontifical Catholic University of Puerto Rico, Mayagüez, PR

- 1992-1996 – Teaching/Research Assistant (Physics)
Department of Physics
University of Puerto Rico, Mayagüez Campus, Mayagüez, PR
- 1990-1992 – Summer Intern (Research Technician, Programmer, Data Analyst)
Research (1992), Computing (1991) and Physics (1990) Departments, respectively
Fermi National Accelerator Laboratory, Batavia, IL

TEACHING AREAS

Have taught a variety of atmospheric science courses throughout the B.S. Meteorology core curriculum, upper-level elective, and M.S. applied and specialized courses, as well as general education courses for non-majors, and atmospheric science, physics laboratory for majors, physical sciences for non-majors, and various math courses in previous teaching assistant and lecturer roles at other institutions.

- Current/Recent course rotation:
Dynamic Meteorology I and II, Atmospheric Physics, Climate Dynamics, Air Quality, Tropical Weather and Climate, Severe and Hazardous Weather, Undergraduate Research, Graduate Thesis Research, Introductory Seminars for Meteorology and Climate Studies first year students, University Physics
- Other courses taught over the years:
Introduction to Atmospheric Sciences, Weather, Weather Laboratory, Climatology, Weather and Climate, Radio Forecasting Practicum, Multimedia Forecasting Practicum, Graduate Seminar, Atmospheric Thermodynamics, Broadcast Meteorology, Graduate Research Methods, Scientific Writing Workshop, Physical Sciences for non-majors, Physics Laboratory for Engineers, Physics Laboratory for Biologists, College Algebra, Pre-Calculus, Remedial College Mathematics

RESEARCH AREAS

Current activities focused on *scholarship of integration*: examination of the interdisciplinary connections of meteorological phenomena, events, and practices, with a wide range of natural science topics (atmospheric science, classical and modern physics, optics, astronomy, biochemistry, ecology, forest dynamics, etc.), and humanities/social science topics (anthropology, language, economics, conservation, history of science, etc.) related to each specific phenomenon.

Currently under contract with the American Geophysical Union to write special-topic textbook on the Science and History of Atmospheric Optics – multi-year project

- Historical Meteorology/ Atmospheric Science areas of interest
(published book on the Science and History of The Great New England Hurricane of 1938)
Integrated history and science of atmospheric phenomena (atmospheric optics)
Integrated history and science of past weather events (hurricanes, blizzards, etc.)
Integrated history and science of weather folklore, sayings and myths
History of hurricane knowledge, forecasting, monitoring and general practices
History of forecasting, atmospheric monitoring (instrumentation) and data visualization
Historical influencing personalities in meteorology and related sciences
- Other areas of interest
African easterly waves in Tropical Meteorology
Objective air quality forecasting methods
Air pollution meteorology case studies
Atmospheric Physics/Dynamics topics
The science of Atmospheric Optics
Physical climatology and climate change
Societal impacts of weather and climate
Severe weather science and history

Earth/atmospheric science Pedagogy/best practices
Development/implementation of active learning activities
Appropriate use of technology in the classroom

SERVICE and ADMINISTRATIVE ACTIVITIES Summary/Highlights

Formal and Informal Leadership Positions

- UCAR Board of Trustees – ongoing second term, reelected after serving three-year term
- AMS History Committee Chair – three completed terms, one three-year term as chair
- AMS Graduate Dissertation Award in History of Atmospheric Science – nine times, led three
- AMS Drafting Committee for Curricular Guidelines for programs in atmospheric and related sciences – appointed member
- MWO Board of Trustees – starting first three-year term
- PSU Academic Unit and Cluster Leader – currently CAMPS, previously Science and Technology AU, Exploration and Discovery Integrated Cluster
- PSU Faculty Speaker – twice
- PSU Faculty Steering Committee – five completed terms, three times as Chair (one term filling vacant position concurrent with Faculty Speaker role)
- PSU Hybrid Facebook/Face-to-face Reflective Practice group – created and led group, about five years
- PSU *ad hoc* Faculty Scholarship Group – created and led – about four years
- ASC (Atmospheric Science and Chemistry) Promotion and Tenure Committee standing chair – several years, approximately six
- ASC/CEAPS Curriculum Committee – Meteorology Curriculum Revision committees – three times, led and implemented two rounds of major revisions

UCAR – University Corporation for Atmospheric Research

AMS – American Meteorological Society

MWO – Mount Washington Observatory

CEAPS – former department of Chemical, Earth, Atmospheric, and Physical Sciences

Board and Committee Positions

- UCAR Board of Trustees (BOT) – ongoing second term
- UCAR BOT Executive Committee – ongoing second term
- UCAR BOT Nominating Committee Chair – ongoing second term
- UCAR BOT Personnel Committee – ongoing second term
- UCAR BOT liaison to Governance Task Force – upcoming second term
- UCAR BOT liaison to Nominating Committee – ongoing second term
- UCAR Members Nominating Committee – two completed terms
- UCAR Members Membership Committee – two completed terms
- UCAR Member representative for Plymouth State University, ongoing since 2013
- AMS Board on Higher Education (BHE) – two completed terms
- AMS BHE Liaison to Board of Women and Minorities – two completed terms
- AMS Distinguished Teaching Award Committee – twice
- AMS Children’s Book Award – four times
- AMS Ad Hoc Committee to examine Cleveland Abbe legacy
- AMS Drafting Committee for Curricular Guidelines for programs in atmospheric and related sciences
- AMS History Committee – three completed non-consecutive terms, one as chair
- AIP (American Institute of Physics) History Liaison for AMS – three times
- AMS Graduate Dissertation Award in History of Atmospheric Science – nine times
- AMS History Symposium Committee – six times, conference chair six times, session chair many times

- AMS Education Symposium Committee – three times, University Teaching session chair
- AMS Committee on Hispanic and Latinx Advancement – Academic Ambassador – ongoing for two years
- PSU (Plymouth State University) General Education Committee – two completed terms, and first year faculty observer
- PSU Faculty Speaker – two completed terms with attached Speaker Elect and Parliamentarian roles
- PSU Faculty Steering Committee – five completed terms, three times Chair (one term concurrent with Faculty Speaker)
- PSU Faculty representative to PAT and OS awards – two times each of the four awards as Faculty Speaker
- PSU Faculty representative to the PAT/OS senate – ongoing, several yearly terms (approximately ten)
- PSU President’s Commission on Diversity – two completed three-year terms
- PSU Faculty Welfare Committee – new faculty observer
- PSU Research Advisory Council – two years
- PSU formal Reflective Practice groups – general for about four years, science themed for about two years
- PSU Hybrid Facebook/Face-to-face Reflective Practice group –about five years
- PSU Ad Hoc Faculty Scholarship Group – about four years
- ASC (Atmospheric Science and Chemistry) Promotion and Tenure Committee standing chair – several terms
- ASC/CEAPS (Chemical, Earth, and Atmospheric Sciences) – Department P&T Guidelines committee standing chair
- ASC/CEAPS Curriculum Committee – Meteorology Curriculum Revision committees – three times, led and implemented two rounds of major revisions

SELECT PROFESSIONAL RECOGNITIONS, ACTIVITIES AND INTERESTS

2020 Excellence in Faculty Service Award – Plymouth State University

2019 Faculty/Staff Excellence Award – Plymouth State University Alumni Association

2013 Atmospheric Science Librarians International History Choice Award

Taken by Storm, 1938: A Social and Meteorological History of the Great New England Hurricane

Citation: “ASLI’s Choice for its comprehensive account of this major storm, from its inception to aftermath.”

2009–present: presentations and media appearances related to the Great New England Hurricane of 1938

Nearly 50 presentations from general to specialized topics and purposes to general and technical audiences at various lecture series, special presentations at libraries, historical societies, observatories, conference presentations at regional and national levels. Media interviews: TV, radio, newspaper, online discussion boards, video and audio podcasts – See below for details.

2007–present: appointed member of various national boards and committees

UCAR Board of Trustees, AMS Board on Higher Education, representative to the AMS Board on Women and Minorities, AMS Committee on the History of Atmospheric Sciences and University Consortium for Atmospheric Research, AMS drafting committee, Curricular Guidelines for BS in Meteorology and Related Sciences, (UCAR) Membership Committee, AMS Symposium on Education and Symposium on History, planning committee and session chairing, PSU Program representative to UCAR, UCAR Nominating Committee – See above for details.

2004–present: university, department, and program service activities

- Administrative roles/activities – program coordinator for various programs and disciplines (meteorology, physics, climate studies, mathematics, computer science, Academic Unit leader (Computational, Applied, Mathematical, and Physical Sciences (CAMPS), Science and Technology), Integrated Cluster Leader (Exploration and Discovery, early planning cluster guide)

- Faculty governance – faculty speaker, chair Faculty Steering Committee, member General Education committee, faculty representative to Professional and Technical staff senate, new faculty observer Welfare Committee
- More than 40 faculty and administrator searches and promotion and tenure committees in meteorology, chemistry, biology, mathematics, computer science and information technology, environmental science, physics, and music!
- Faculty week/University Days workshops and presentations, new faculty orientation, spring fling volunteer, class visits (hurricanes, Hispanic culture, science papers, climate change)
- Department and program – meteorology/physics program coordinator, chair ASC promotion and tenure committee, ASC department promotion and tenure guidelines drafting, meteorology program workload plan, curricular revisions of B.S. in Meteorology, M.S. committees, academic advisor
- Student recruitment and orientation activities – orientation, registration, welcome to the major, introduction to academic life, prospective student visit tours, informal zoom info sessions
- Community-related activities – tours, presentations, TV interviews, newspaper interviews, school and camp visits, statewide tech events – see below for details.
- Large number (more than 50) of undergraduate research projects advised in topics covering a wide range of atmospheric science subdisciplines (tropical weather and climate, historical meteorology, applied climate/weather, air quality, severe weather, atmospheric physics, atmospheric optics, and others) at a variety of student skill, interests, and academic levels. Project topics include hurricanes (general and specific historical and recent storms), hurricane origins, tornadoes, flooding, societal impacts of severe weather, severe weather safety, lake effect snow case studies, climatological temperature and precipitation data, objective air quality criteria, ionospheric layers, atmospheric optical mechanisms, etc.)

1997–present: minority/ underrepresented groups service and other activities

- Academic Ambassador for the new AMS BRAID CHALA (Board on Representation, Accessibility, Inclusion, and Diversity, Committee on Hispanic and Latinx Advancement)
- Various interviews related to climate and the environment in Spanish for Telemundo Nueva Inglaterra
- Informal mentor to female Latin graduate students and early professionals in the field of atmospheric science
- AMS Board on Women and Minorities – Board on Higher Education Liaison
- Fellow – Minorities Graduate Incentive Fellowship
- Advisor and host to Puerto Rican students for NSF summer internship program
- Member – Plymouth State University President’s Commission on Diversity
- Invited speaker for Hispanic Culture in the U.S. course – several times
- Invited speaker for choral course – in preparation for production of West Side Story
- Panelist for Diversity in America discussion at PSU
- Panelist for Women in Science and Technology Forum for high school girls
- Planner and moderator – Meteorology Girls Night Out discussion about issues related to being a woman scientist
- Invited keynote speaker – Women in male dominated science fields – Theo Kalikow Awards
- Summer camp virtual presenter for summer weather camp for Puerto Rican students
- Invited presenter in Spanish for seminar series of the student chapter of the American Meteorological Society in Puerto Rico

Additional and More Detailed Professional Activities and Service

Boards and Committees

- 2022–present – Trustee, Mount Washington Observatory (MWO)
- 2021–present – Execute Committee Member of the UCAR BOT, Chair Nominating Committee UCAR BOT, Governance Task Force liaison UCAR BOT, Members Nominating Committee liaison UCAR BOT
- 2019–present – Academic Ambassador, AMS Committee for Hispanic and Latinx Advancement (CHALA)

- 2018–present – Trustee, University Corporation for Atmospheric Research (UCAR)
- 2017–2020 – Chair, American Meteorological Society (AMS) History Committee
- 2014–2015, 2017–2020 – Conference Chairperson, 12th, 13th, 15th, 16th 17th, and 18th AMS History Symposium
- 2015–2016 – Cluster Guide, Exploration and Discovery Integrated Cluster
- 2016–2017, 2013–2014 – Faculty Speaker, Plymouth State University
- 2015–2016/17, 2012–2013 – Chair, Faculty Steering Committee, Faculty Speaker Elect
- 2005–2018 – recurring terms as Chair, Department P&T standing committee
- 2005–present – Chair and Committee Member, several search and promotion committees (see below)
- 2001–2004 – Lead Teaching Assistant, Department of Atmospheric Sciences, University of Illinois, Urbana-Champaign

National Service and other Activities in Atmospheric Sciences

- UCAR (University Corporation for Atmospheric Research)
 - Member, Board of Trustees – 2018–present
 - Member, Board of Trustees Personnel Committee – 2018–present
 - Liaison of Board of Trustees to Nominating Committee – 2019–present
 - Member program representative – 2013–present
 - Nominating Committee – 2014–2017
 - Membership Committee – 2010–2014
 - Early career faculty guest – 2006
- AMS committees 2009-present
 - Committee for Hispanic and Latinx Advancement (current)
 - Ad Hoc Committee – examination of Cleveland Abbe legacy (current)
 - History Committee
 - Chair, History Committee
 - Edward Lorentz Award for Excellence in Teaching Committee
 - Board on Higher Education
 - Board on Women and Minorities
 - Education Symposium planning committee
 - History Symposium planning committee
 - Chairperson, History Symposium
 - Curricular guidelines drafting committee
 - Children’s book award committee
 - History fellowship evaluation committee
- Anonymous reviewer – NSF atmospheric science program grant proposals
- Anonymous reviewer – BAMS (Bulletin of the American Meteorological Society)
- Feedback to Severe and Hazardous Weather textbook authors – 2004–present
- University of Puerto Rico presentations – 2005, 2006, 2019
 - Easterly wave characteristics
 - The Plymouth State Meteorology program
 - Skype presentation on careers in Meteorology
- NSF summer research programs for undergraduate students (informal and REU) – 2005, 2018, 2019, 2020
- *Environmental History* Journal book reviewer
- Invited panelist at regional professional conferences and events
 - Eastern Communication Association, Bailey College
 - Long Island Hurricanes, Hofstra University
 - Science on Tap, SEE Science Center

Faculty Governance and Related

- Computer Science & Technology Discipline Coordinator (2022 Fall, temporary)
- Mathematics Discipline Coordinator (2021 Spring, temporary)
- Computational, Applied, Mathematical, and Physical Sciences Academic Unit, leader 2020–present
- Meteorology/Physics Program Coordinator – 2017–present
- Sciences and Technology Academic Unit, co-leader – 2018–2020
- Cluster Guide, Exploration and Discovery Integrated Cluster – 2015–2016
- Atmospheric Science and Chemistry Department Promotion and Tenure Committee Chair – 2010–2017
- Faculty Speaker- 2013–2014, 2016–2017
 - Speaker Elect with responsibilities – 2012–2013, 2014–2015, 2016
 - Faculty Parliamentarian – 2014–2015, 2017–2018
- Faculty Steering Committee – 2012–2014, 2015–2017
 - Chair – 2012–2013, 2015–2016, 2016
- Faculty Representative to the USNH Board of Trustees – 2014–2015
- Faculty Representative – PAT (Professional/Academic/Technology staff) Senate
 - Elected for several one-year terms – 2005–2010, 2014–2015
- General Education Committee – 2007–2011
 - New Faculty Observer – 2005–2006
 - Appointed 2006–2008
 - Elected for three-year term – 2008–2011
- President’s Commission on Diversity
 - Appointed 2004-2008
- Faculty Welfare Committee – New Faculty Observer
 - Appointed for academic year 2004–2005
- As Faculty Speaker
 - Set agenda and moderate faculty meetings, as expected
 - Steering Committee meeting moderation and participation
 - Monthly meetings with President, Provost/Deans
 - President’s extended cabinet
 - Appoint faculty to unfilled committee and other positions
 - Distinguished PAT staff award selection committees
 - Distinguished OS award selection committee
 - Moderate faculty forums (including unionization discussion)
 - NEASC meetings during accreditation
 - Meet with new faculty during orientation
 - Reestablish of principal administrator evaluation task force
 - Start of faculty governance website revamp (completed by next speaker)
 - Other one-time tasks as they came up
- University Week/Faculty Week/January Jamboree
 - Using tablets in your teaching and grading – JanJam 2021
 - Teaching, Scholarship and Service aspects of Hurricane Research – 2014
 - Post-sabbatical presentation - 2012
 - The Great New England Hurricane – 2009
 - Using PowerPoint in the Classroom workshops – 2007, 2008
 - Effective Teaching - discussion group leader – 2006
 - New Faculty orientation support 2005, 2006, 2007 – “Our Academic Lives” activity – lunch
- Yellow Jacket volunteer – Spring Fling 2008
- Pakistani Teachers Institute
 - Curriculum and general planning – 2005, 2006
- Out of WAC (Writing across the curriculum) newsletter article
 - “What I Learned from Assigning Papers to Non-Majors” – Vol. 14, No. 2 – 2006-2007
- Diversity panel participant – 2006
 - Discussions about diversity in America following showing of the movie “Crash”

- College Learning Assessment test proctor - 2008

Student-related Service

- Schedule Planning - New Student Orientation - 2005-present
- Individual orientation meetings and tours for prospective students - 2004-present
- Academic Life Presentation - "First Class" - New Student Orientation - 2006-2009
- Various other admission events, such as Open Houses, Accepted Student Days, etc.

Academic Searches

- Teaching faculty - Physics 2022
- Teaching faculty - Environmental Science and Policy 2021
- Teaching faculty - Piano 2019
- Tenure track - Math Education 2016
- Two tenure track faculty - Computer Science 2016
- Tenure track faculty - Computer Science - 2013
- Three tenure track faculty - Mathematics - 2013
- Tenure track faculty (chair) - Meteorology - 2012
- Three Contract Faculty - Mathematics - 2012
- Chief Information Officer - 2011
- Tenure track faculty - Mathematics - 2008
- Director - Center for the Environment - 2007
- Tenure track faculty - Meteorology - 2007
- Tenure track faculty - Computer Science - 2007
- Contract faculty - Computer Science - 2006
- Contract faculty - Meteorology - 2005

Promotion and Tenure Committees

Meteorology (5), Chemistry (1), Biology (2), Computer Science (4), Environmental Science and Policy (6, inc. Env. Sci, Hydrology, Center for the Environment), Library (2), Mathematics (4, inc. Math Education)

PSU Course Guest Visits

- The Wicked Problem - 2019
 - Climate Change Panel, Student research feedback
(Course instructors: Cathie LeBlanc and Elisabeth Johnston)
- Plymouth State Choral program - 2019
 - Personal experiences as a Puerto Rican living in the U.S. in preparation for performance of West Side Story
 - Speech samples to coach for West Side Story production
(Course instructor: Dan Perkins)
- Integrated Art Education - 2017
 - Stormy Weather lesson feedback consults
(Course instructor: Trish Lindberg)
- Hispanic Culture in the U.S. - 2006, 2007, 2008, 2010
 - Personal experiences as a Hispanic professional woman in the U.S. - informal presentation
(Course Instructor: Wilson Garcia)
- Weather - 2009
 - The Great New England Hurricane of 1938
(Course Instructor: Lisa Doner)
- Weather - 2008
 - Basics of Tropical Meteorology
(Course Instructor: Sam Miller)
- Composition - 2006
 - Expectations for papers in science courses - informal presentation
(Course Instructor: Liz Ahl)

Departmental/Program Service

- Meteorology and Physics program coordinator – 2017-present
 - o And all activities related to this role
 - o Climate Studies coordinator added in 2021
- P&T committee chair – 2011-2017
- P&T guidelines revision committee – 2005, 2010
- Meteorology program curriculum revision – 2010, 2015, 2019
- Meteorology program work load plan – 2010, 2017
- Meteorology presentations and facility tours
 - Various elementary schools – 2004-present
 - Child Development and Family Center – Pre-K class - 2005
- Other Service – 2004-present
 - Curriculum/Catalog updates
 - General Education course proposals,
 - Meteorology program review
 - Graduate student thesis committees
 - AMS Student chapter advisor for the last few years
 - Admissions events

Graduate Student Advising

- Historical Meteorology
 - Liana Haddad – History of Tornado Forecasting and Warning
- Tropical Meteorology
 - Lauren Carter – USGS precipitation observations during the Great New England Hurricane of 1938
 - Edward Dixon – Environmental characteristics in tornado-forming hurricanes
 - Richard Giard – Characteristics of cyclogenetic African easterly waves
 - David Roache – Analysis of the effects of the ENSO neutral phases on Atlantic tropical cyclone activity
- Atmospheric Physics
 - Scott Beck – Catalogue of Optical Effects
 - Christopher Hohman – Effects of cloud types/heights on surface solar radiation intensity
- Air Quality
 - Laura Landry – Evaluation of air quality forecasting thresholds
 - Gregory Garner – Development of regression trees for air quality forecasting in New Hampshire
 - Kimberly Jeffs – New Hampshire air quality climatology and development of criteria and regression equations for air quality forecasting
 - Brittany Connelly – Effects of the Clean Air Act on acid precipitation/deposition in the Northeast
- Other Areas
 - Nicholas Strickland – Climatology of cold air damming in northern New England
 - Brendon Mitchell – Watershed classification using principal component analysis to study flooding events
 - Sophia Adams – Weather Data observations in U.S. indigenous lands

Invited Local and Regional Talks

- 2009–2022 – Great New England Hurricane of 1938

<ul style="list-style-type: none"> Tri-State Weather Conference (keynote) – 2022 Wilmot Historical Society – 2022 Tri-State Weather Conference 2022 Endfield Shaker Museum - 2021 Ray Center Summer program - 2021 Freedom Historical Society - 2020 Bedford Maple Ridge Retirement Community - 2020 Madison Library - 2019 Pelham Library - 2019 	<ul style="list-style-type: none"> Hofstra University - 2018 Granite State College – Continuing Education - 2018 Hollis Historical Society - 2017 Gilmanton Historical Society - 2017 Valparaiso University - 2017 Pinkham Notch Visitor Center - 2017 Littleton Library - 2016 Museum of the White Mountains – 2021, 2016 Women’s Caucus for Art NH - 2015
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Hebron NH Audubon Society - 2014
Squam Lakes Natural Science Center - 2014
Eastern Communication Association – 2014
Plymouth Rotary Club - 2014
Campton Public Library - 2014
Northeastern Storm Conference – 2018, 2014
Pease Public Library – 2018, 2014, 2013
Mount Washington Observatory Weather Discovery
Center - 2013

Southern New England weather conference - 2013
Thornton Historical Society - 2013
Quincy Bog association - 2013
Mount Washington Observatory – summit - 2013
Campton Historical Society - 2013
Taylor retirement community - 2011
Environmental Science Colloquium - 2009
WMUR 75th anniversary event - 2013
Plymouth State Faculty Week - 2014, 2009

- 2019–2022 – Science and History of Atmospheric Optics
 - OLLI Granite State adult learning (three-part course) – 2022
 - Enfield Shaker Museum – 2022
 - OLLI Granite State adult learning (long form) - 2019
- 2013 Keynote speaker at President’s Commission on the Status of Women awards ceremony
“One of the Boys: Reflections, Experiences and Historical Tidbits on being a Woman in Male-dominated Science Fields”
- 2006 Invited speaker at Plymouth’s State University Society for Scholarly Dialogue
“Why So Many Hurricanes? Is Climate Change to Blame?”

Recurring Statewide Outreach Activities

- Aviation Weather for the ACE aviation academy summer camp
- Weather demonstrations at state events such as AerospaceFest and NH TechFest
- Women in Science and Technology Forum for high school girls, panelist
- New England Astronomy Festival, University of New Hampshire

Teacher Preparation Programs

- Weather Workshop for Teachers – 2007
 - NASA Space Grant
 - Planning and Presentation
- Pakistani Teachers Institute – 2005, 2006
 - Meteorology/Physics/Pedagogy week instructor
 - Curriculum design and general planning – 2006
- North Country Professional Development Day for teachers – 2006
 - Understanding Hurricanes and Tsunamis – workshop
- Indian Ocean Institute 2004
 - Workshop on hurricanes and tsunamis

Collaborations

- Currently in collaboration with the Academic Ambassadors group of the AMS Committee for Hispanic and Latinx Advancement to do the appropriate research and write a peer-reviewed article on the status of Latinx faculty and students in atmospheric and related sciences at U.S. Universities
- Northeast Partnership for Atmospheric Sciences – Research Experiences for Undergraduates NSF/REU collaboration between Plymouth State and Hobart and William Smith Colleges (HWS)
Participated in planning and proposal writing and as a research mentor to two students for ten-week summer sessions on consecutive years.
- Northern New England Cold Air Damming Experiment (CADEX)
Full Meteorology Faculty/Staff collaboration.
Part I, climatology and modeling (finalized) Part II (future), field experiment

- Participated in planning and proposal writing, and advising graduate student work
- Stormy Weather Theater Camp and Musical – CLUSTER project
 - K-12 spring vacation theater camp and original musical performance of Stormy Weather
 - o Initial concept collaboration between myself and professor Trish Lindberg
 - o Meteorology, Elementary Education, Theater, Dance, Integrated Arts, Graphic Design collaboration (including faculty, graduate and undergraduate students, staff, local teachers and their students, and general community members)
 - o Participated in planning and proposal writing, science content consultant, play planning, camp planning, camp running, program writing
 - o Served as producer during the running of the camp

Media Appearances

- TV interviews/appearances
 - Telemundo Nueva Inglaterra/Boston NBC – 2022
 - Climate Change and its effects on the seasons, especially spring
(Bilingual interview)
 - WFFF/WVNY – Local 22/Local 44 News – 2021
 - Plymouth State’s new BS Climate Studies program
 - NBC10/NECN – NBC 10 Boston and New England Cable News interview - 2021
 - Plymouth State’s new BS Climate Studies program
 - WMUR special report – 2016
 - The Year without a Summer
 - TWC (The Weather Channel) skype interview – 2013
 - Great New England Hurricane of 1938
 - WMUR live streaming presentation – 2013
 - Science and History Stories of the Great New England Hurricane of 1938
 - NECN (New England Cable News) interview – 2008
 - Historical Perspective of July 24, 2008 tornado
 - WMUR-TV interview – 2006
 - Effects of Weather on fall foliage
 - The Year Without a Summer: 1816
- Radio Interviews
 - NHPR – New Hampshire Public Radio – All Things Considered – Peter Bealo – 2021
 - Plymouth State’s new BS Climate Studies program
 - WPCR – Plymouth State Radio – Philosophy 4 Life - Maria Sanders – 2014
 - Great New England Hurricane of 1938
 - NHPR – New Hampshire Public Radio - Chris Jensen – 2013
 - Great New England Hurricane of 1938
 - WCBS – New York City Newsradio 880 – 2013
 - Great New England Hurricane of 1938
 - WNTK – Encore89 news and entertainment news show – 2013
 - Great New England Hurricane of 1938
 - WBUR – Boston Public Radio – Radio Boston news show – 2011
 - Hurricane Irene
- Newspaper interviews
 - Concord Monitor
 - “Plymouth State Takes New Approach to Climate Change
David Brooks – February 14, 2021
 - Boston Herald

“At Least 9 Named Storms Expected this Hurricane Season, Experts Say”
 Alexi Cohan – July 13, 2019
 The Conway Daily Sun
 “The Hurricane of ’38: A Storm Like no Other”
 Tom Eastman – September 21, 2018
 The Laconia Daily Sun
 “One-in-a-million Volts – Woman Captures Lightning Strike on Meredith Bay”
 Adam Drapcho – August 14, 2018
 CT Post
 “Seventy Seven Years Ago, Devastating Hurricane Struck Region”
 Frank Juliano – September 21, 2015
 Associated Press
 The Great New England Hurricane of 1938 - published nationally under many different titles
 Lynne Touhy - September 20-25, 2013
 New Hampshire Union Leader
 “PSU professor chronicles 1938 hurricane and how it laid claim to New England”
 Dan Seufert - September 24, 2013
 Boston Globe
 “Survivors, scientists recall ‘Great Hurricane’”
 Jeremy C. Fox - September 21, 2013
 New Hampshire Union Leader
 “Lightning strike at Scout camp was ‘ground current,’ expert says”
 Dan Seufert - June 26, 2013
 Foster’s Daily Democrat
 “Fall Foliage Expected to Dazzle on Time”
 Robert M. Cook - September 14, 2008
 The Laker
 “Deadly Tornado Strikes Central NH: Is This Part of a New Weather Pattern”
 Christine H. Randall – August 11, 2008
 The Laconia Citizen
 “Storm, Funnel Clouds Eyed as Possible Tornadoes”
 Jason G. Howe, John Koziol – July 25, 2008
 The Eagle Tribune
 “Debate Swirls Over Chance of Hurricane Making Landfall in New England this Season”
 Courtney Paquette – July 30, 2006
 The Eagle Tribune
 “Storm Helps Shed Light on Danger of Lightning Strikes”
 Courtney Paquette – July 13 2006
 Foster’s Daily Democrat
 “Experts Say Northeast to Face More Hurricane Risk in Future”
 Robert – M. Cook - March 26, 2006
 Story picked up by Associated Press
 Boston Globe - “Meteorologists Say New England Could Get a Big One”
 Clarification published March 29, 2006 – “Clarification: Northeast Hurricane Story”
 The Laconia Citizen
 “More to Snowflakes than Meets the Eye”
 Bethany Gordon – December 16, 2004

- Other media appearances

Charla Virtual – FacebookLive Telemundo Nueva Inglaterra broadcast – April 22, 2021
 (Spanish) Earth Day, Paris Climate Accord
 Charla Virtual – FacebookLive Telemundo Nueva Inglaterra broadcast – March 25, 2021
 (Spanish) Climate Change, Recycling

WeatherBrains – video/audio podcast - Episode 411 – December 9, 2013
General and Great New England Hurricane conversations
WeatherBrains – other appearances as invited panel member in 2017 and 2018
The Barometer Bob Show – video/audio podcast – September 19, 2013
Hurricanes and Great New England Hurricane
Front Page – AMS Blog – YouTube channel – September 20, 2013
Great New England Hurricane

SELECT PUBLICATIONS AND PRESENTATIONS

Avilés, L. B., 2024?: *Introduction to Atmospheric Optics: A Survey of the Science and History of Light and Color in the Sky*. American Geophysical Union, 500 pp.
(under contract, in preparation)

Morales, A., M.J. Molina, J.E. Trujillo-Falcón, A.L. Lang, B.S. Barrett, L.B. Avilés S.J. Camargo, J.M. Nuñez Ocasio, E. Murillo, and C. Bieri, 2022: Hispanic and Latinx Academics and Researchers in the Atmospheric Sciences: The People, the Challenges, and the Future. *Bull. Amer. Meteor. Soc.*
(Submitted)

Avilés, L.B., ***complete names*** 2022: Report: The Contributions and Legacy of Cleveland Abbe (BAMS April)***

Avilés, L. B., 2018: *Taken by Storm, 1938: A Social and Meteorological History of the Great New England Hurricane, 2nd Ed.*. American Meteorological Society, 384 pp.

Avilés, L. B., 2015: *North Carolina's Hurricane History, 4th Ed.*, by Jay Barnes. Book Review. *Environmental History* 19(2), 375-377 pp.

Avilés, L. B., 2014: *Fire Island Past, Present, and Future: The Environmental History of a Barrier Beach*. Book Review. *Environmental History* 19(2), 375-377 pp.

Avilés, L. B., 2013: *Taken by Storm, 1938: A Social and Meteorological History of the Great New England Hurricane*. American Meteorological Society, 384 pp.

Nielsen-Gammon, J. W., L. B. Avilés and E. Joseph, 2009: What Does it Take to Get Into Graduate School. *Bull. Amer. Meteor. Soc.*, 90, 1698-1705.

Avilés, L. B., 2015: Taken by Nature: The Science, History and Art of the Great New England Hurricane of 1938. Force of Nature: Exploring the Power of the Feminine Juried Exhibition invited presentation. Women's Caucus for Art, Karl Drerup Gallery, Plymouth, NH

Hoffman, E. G., L. B. Avilés, S. Miller, B. Hoch, and J. M. Cordeira, 2015: NOAA ESRL Snow Level Radar Observations of Mixed Precipitation Events in Plymouth, NH. 40th Annual Northeastern Storm Conference, Saratoga Springs, NY.

Avilés, L. B., 2014: Using Historical Data to Inform a General-Audience-Level Narrative of the Great New England Hurricane of 1938. 31st Conference on Hurricanes and Tropical Meteorology, San Diego, CA.

Avilés, L. B., 2014: Finding the Storm: Resource and Archival Research on the Great New England Hurricane of 1938. 17th Conference of Atmospheric Science Librarians International, 94rd Annual Meeting of the American Meteorological Society, Atlanta, GA.

Avilés, L. B., 2014: Seventy Five Years Later: Little Known, Updated and New Information Related to the Great New England Hurricane of 1938. 12th History Symposium, 94rd Annual Meeting of the American Meteorological Society, Atlanta, GA.

- Avilés, L. B., 2014: Introducing General Audiences to Atmospheric Science Topics through Historical Weather Events: The Great New England Hurricane of 1938. 23rd Symposium on Education, 94rd Annual Meeting of the American Meteorological Society, Atlanta, GA.
- Avilés, L. B., 2014: Seventy Five Years Later: Little Known, Updated, and New Information Related to the Great New England Hurricane of 1938. 39th Northeastern Storm Conference, Rutland, VT
- Avilés, L. B., D. Vallee, B. Avery and S.A. Jasko, 2014: The 1938 Hurricane, a Junior Forecaster, and Public Understanding. 105th Annual Eastern Communication Association Convention, Providence, FI.
- Avilés, L. B. (curator), 2013: The Great Blowdown: Effects of the 1938 Hurricane in Northern New England. Museum of the White Mountains panel exhibit.
- Avilés, L. B., 2013: 75 Years After the Great New England Hurricane. 14th Southern New England Weather Conference, Canton, MA
- Avilés, L. B., 2013: On the Nuances Associated with Analyzing Historical Rainfall Observations before and during the Great New England Hurricane of 1938. 11th History Symposium, 93rd Annual Meeting of the American Meteorological Society, Austin, TX.
- Avilés, L. B., 2013: On the Actions and Inaction of the U.S. Weather Bureau During the Great New England Hurricane of 1938. 38th Northeastern Storm Conference, Rutland, VT
- Avilés, L. B., 2012: On the Actions and Inaction of the U.S. Weather Bureau During the Great New England Hurricane of 1938. 10th History Symposium, 92rd Annual Meeting of the American Meteorological Society, New Orleans, LA.
- Nielsen-Gammon, J. W., L. B. Avilés, A. Hansen, A. Roebuck, J. Horel, 2010: Bachelor's Degree in Atmospheric Science: an Information Statement of the American Meteorological Society (adopted by the AMS Council on 22 September 2010). [Available online at http://www.ametsoc.org/policy/2010degree_atmosphericsscience_amsstatement.html]
- Avilés, L. B., 2007: Integration of Lecture, Laboratory and Hands-On Activities in an Introductory Severe Weather Course for Non-Majors. 16th Symposium on Education, 87th Annual Meeting of the American Meteorological Society, San Antonio, TX.
- Bixby, B., K. Franceour, L. Landry, L. B. Avilés, E. G. Hoffman, J. K. Koermer, S. T., Miller and J. Zabransky, 2007: Development of Regional Ozone Case Studies as Tools for Air Quality Forecasting. 8th Conference in Atmospheric Chemistry, 87th Annual Meeting of the American Meteorological Society, San Antonio, TX.
- Hoch, B. and L. B. Avilés, 2007: Using Podcasts to Distribute Real Time Multimedia Meteorological Products. 16th Symposium on Education, 87th Annual Meeting of the American Meteorological Society, San Antonio, TX.
- Avilés, L. B., 2006: The Pakistani Teachers Institute 2005-2006. 7th International Conference on School and Popular Meteorological and Oceanographic Education, Boulder, CO.
- Avilés, L. B., 2006: Meteorology Week – Pakistani Teachers Institute 2005. 15th Symposium on Education, 86th Annual Meeting of the American Meteorological Society, Atlanta, GA.
- Avilés, L. B., 2006: Why So Many Hurricanes? Is Global Warming to Blame? Plymouth Magazine, XXII, 14-15.
- Avilés, L. B., 2004: *African Easterly Waves: Their Evolution and Their Role in Tropical Cyclone Formation*. Ph.D. Dissertation, University of Illinois, 211 pp.
- Bramer, D. J., D. Charlevoix, G. McFarquhar, R. Herman, L. B. Avilés, L. DiGirolamo, M. Ramamurthy, R. Wilhelmson, 2003: Developing Interactive Models to Support a Digital Collection of Earth System Science Resources. 12th Symposium on Education, 83rd Meeting of the American Meteorological Society, Long Beach, CA.

Charlevoix, D. and L. B. Avilés: 2003: Assessment of Interactive, Hands-On Meteorology Exercises in a Course of Undergraduate Non-Majors. Extended abstract, 12th Symposium on Education, 83rd Meeting of the American Meteorological Society, Long Beach, CA.

Avilés, L. B., 2000: The Energetics of the African Easterly Wave Life Cycle: A Case Study. Extended Abstract, 24th Conference on Hurricanes and Tropical Meteorology, Fort Lauderdale, FL.

Avilés, L. B., 1999: Tropical Easterly Wave Activity Observed Using NCEP/NCAR Reanalysis Data. Extended Abstract, 23rd Conference on Hurricanes and Tropical Meteorology, 79th Annual Meeting of the American Meteorological Society, Dallas, TX.

Avilés, L. B., 1997: *Evaluation of the Quasielastic Dynamic Structure Factor for Anharmonic Potentials*. M.S. Thesis, University of Puerto Rico, Mayagüez, 151 pp.

PROFESSIONAL DEVELOPMENT ACTIVITIES

- Professional Conferences – recurrent professional and semi-professional conferences in the field
 - American Meteorological Society Annual Meeting
 - Conference on Hurricanes and Tropical Meteorology
 - International Conference on School and Popular Meteorological and Oceanographic Education
 - Northeastern Storm Conference
 - Southern New England Weather Conference
 - Tri-State Weather Conference
- National/Regional workshops – meteorological tools, applications, and pedagogy
 - NSF workshop – Proposal preparation – Geosciences programs
 - AMS workshop – Scientific Inquiry in the Classroom
 - Unidata workshop – Integrated Data Viewer
 - Unidata workshop – Unidata users workshop – use of data in teaching
- Local/PSU workshops – many topics related to tools, students, and university planning (Advising undergraduate students, scholarship at a teaching institution, students with disabilities, universal presentation design, critical thinking, writing across the curriculum, integral theory in the classroom, plagiarism, grant writing and submission, academic expectations and assessment, classroom technologies, promotion and tenure guidelines, Mahara online portfolio, Degree Works advising tool, using iPad for teaching/grading, etc)
- Reflective Practice and other groups
 - Created/led, Member – hybrid Facebook/face-to-face group – 2011-2015
 - Member – general – 2007-2011
 - Member –science) – 2016-2018
 - Created/led informal faculty scholarship group – approximately 2015-2018

Professional Organizations

Present and Past

- American Meteorological Society
- American Institute of Physics
- American Physical Society
- American Geophysical Union
- National Weather Association
- American Association of Science Teachers

Other Interests, Activities, and Skills

Computer programming – FORTRAN, Python, various other types of coding
Fully bilingual – English/Spanish, basic understanding of Italian, Portuguese

Nature photography

Choral singing

REFERENCES

Available upon request