

Haydee Salmun

Associate Professor of Earth and Environmental Sciences
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EDUCATION AND PROFESSIONAL BACKGROUND

Johns Hopkins University	Earth & Planetary Sciences/Oceanography	PhD 1989
University of Missouri-St. Louis	Physics	MS 1980
University of Buenos Aires, Argentina	Physics	BSc 1977
University of Oxford, UK	Oceanography Postdoctoral Research Assistant	1989-1993

POSTGRADUATION EDUCATION and OTHER TRAINING

1989 - 1993 Postdoctoral Research Assistant, University of Oxford, UK. Oceanography
1991 Junior Research Fellow at CNRS - INSU Summer School, Roscoff, France
1990 Visiting Fellow Scholar, Dept. of Earth and Planetary Sciences, Johns Hopkins University
1980 Visiting Fellow, Climate Group of the Atmospheric Analysis and Prediction Division at the National Center for Atmospheric Research, Boulder, CO
1979 Summer Student Visitor, Advanced Study Program at the National Center for Atmospheric Research, Boulder, CO

ACADEMIC POSITIONS AND RELATED EXPERIENCE

2006 - Present Associate Professor, Department of Geography, Hunter College **and** PhD Program in Earth and Environmental Science, The Graduate Center of CUNY
2003 - 2006 Assistant Professor, PhD Program in Earth and Environmental Science, The Graduate Center of CUNY
2001 - 2006 Assistant Professor, Department of Geography, Hunter College of CUNY
1993 - 2001 Associate Research Scientist, Dept. of Geography and Environmental Engineering, Johns Hopkins University
1983 - 1988 Research Assistant, Dept. of Earth and Planetary Sciences, Johns Hopkins University
1981 - 1982 Visiting Scholar, Climate Group of the Atmospheric Analysis and Prediction Division at the National Center for Atmospheric Research, Boulder, CO
1979 - 1983 Research Assistant, Dept. of Meteorology, University of Maryland, College Park
1978 - 1979 Research Assistant, Dept. of Physics, University of Missouri at St. Louis

Short appointments and visits

2018 Visiting Scholar, Instituto de Geologia de Costas y del Cuaternario, Universidad Nacional de Mar del Plata, Argentina
2010 Visiting Professor at the EFLUM Laboratory of Environmental Fluid Mechanics and Hydrology, EPFL, Lausanne, Switzerland

ACADEMIC AND PROFESSIONAL HONORS AND AWARDS

GAIN (Geoscience Academics in Northeast) Summer Writing Retreat for women geoscientists award (NSF-ADVANCE Program), 2007, 2008, 2011, 2012, 2013, 2016.

Hunter College Presidential Travel Award, 2004, 2005, 2006, 2008, 2010, 2011, 2013 and 2016.

Outstanding Undergraduate Mentoring in the Sciences Award, Hunter College of CUNY, 2011.

Gender Equity Program Fellowship, Hunter College of CUNY, 2002, 2003 and 2004.

Selected for the AAAS Lecture Series on Women in Science and Engineering, American Association for the Advancement of Science, 2002.

PUBLICATIONS

a. Articles in Peer-Reviewed Journals

- 2023 Seijo-Ellis, G., D. Giglio and **H. Salmun**. Intrusions of Amazon river waters in the Virgin Islands basin from 2007 to 2017. *J. Geophys. Res., Oceans*. **In Press**.
- 2022 **Salmun, H.**, H. Josephs and A. Molod. GRWP-PBLH: Global Radar Wind Profiler Planetary Boundary Layer Height Data. *Bulletin of the American Meteorological Society*. **In Revision**.
- 2019 Molod, A., **H. Salmun** and A. Marquardt Collow. Annual Cycle of Planetary Boundary Layer Heights estimated from NOAA Profiler Network Data. *J. Geophys. Res., Atmospheres*. Vol.17, No. 12, 6207-622.
- 2019 Seijo-Ellis, G. G., D. Lindo-Atichati and **H. Salmun**. Vertical structure of the water column at the Virgin Islands shelf break and trough. *J. Mar. Sci. Eng.*, 7(3), 74; <https://doi.org/10.3390/jmse7030074>.
- 2016 Meehan, K. C. and **H. Salmun**. Integrating Technology in Today's Undergraduate Classrooms: A Look at Students Perspectives. *Journal of College Science Teaching*. Vol 41, No. 1.
- 2016 **Salmun, H.** and F. Buonaiuto. The Catalyst Program at Hunter College – A partnership among earth science, physics, computer science and mathematics. *Journal of STEM Education: Innovations and Research*. Vol. 17, No. 2, 42-50.
- 2015 Molod, A., **H. Salmun** and M. Dempsey. Estimating Planetary Boundary Layer Heights from NOAA Profiler Network Operational Wind Profiler Data. *Journal of Atmospheric and Oceanic Technology*. Vol. 32, No. 9, 1545-1561.
- 2015 **Salmun, H.**, A. Molod. The use of a Statistical Model of Storm Surge as a Bias Correction for Dynamical Surge Models and its Applicability along the U. S. East Coast. *J. Mar. Sci. Eng.* **3(1)**, 73-86; doi:10.3390/jmse3010073.
- 2011 **Salmun, H.**, A. Molod, K. Wisniewska and F. Buonaiuto. Statistical prediction of the storm surge associated with cool-weather storms at The Battery, New York. *Journal of Applied Meteorology and Climatology*. **50**, 273–282.
- 2009 **Salmun, H.**, A. Molod, F. Buonaiuto, K. Wisniewska and K. Clarke. East Coast Cool-weather Storms in the New York Metropolitan Region. *Journal of Applied Meteorology and Climatology*. **48**, No. 11, 2320-2330.
- 2009 **Salmun, H.**, A. Molod, J. Albrecht and F. Santos. Scales of Variability of Surface Vegetation: Calculation and Implications for Climate Models. *J. Geophys. Res., Biogeosciences*, **114**, G02007, doi:10.1029/2008JG000762.
- 2007 **Salmun, H.**, A. Molod and A. Ira. Observational Validation of an Extended Mosaic Technique for Capturing Sub-Grid Scale Heterogeneity in a GCM. *Tellus, B*, **59(3)**, 625–632.
- 2006 **Salmun, H.** and A. Molod. Progress in Modeling the Impact of Land Use Change on the Global Climate. *Progress in Physical Geography*, **30(6)**, 737-749.
- 2006 Molod, A and **H. Salmun**. Comment on “A Proposed Structure for Coupling Tiled Surfaces with the Planetary Boundary Layer” by M.J. Best, A. Beljaars, J. Polcher, and P. Viterbo. *J. Hydrometeorology*, **7(4)**, 833–834.

- 2004 Molod, A., **H. Salmun** and D. Waugh. The Impact on a GCM Climate of an Extended Mosaic Technique for the Land-Atmosphere Coupling. *Journal of Climate*, **17**, No. 20, 3877–3891.
- 2003 Molod, A., **H. Salmun** and D. Waugh. A new look at modeling surface heterogeneity: extending its influence in the vertical. *J. Hydrometeorology*, **5**, No. 4, 810-825.
- 2002 Molod, A. and **H. Salmun**. A global assessment of the mosaic approach to modeling land-surface heterogeneity. *J. Geophys. Res., Atmospheres*. V. **107**, No. D14, doi: 10.1029/2001JD000588.
- 1995 **Salmun, H.** Convection patterns in a triangular domain. *Int. J. Heat & Mass Transfer*, **38**, No. 2, 351-362.
- 1995 **Salmun, H.** The stability of a single-cell steady-state solution in a triangular enclosure. *Int. J. Heat & Mass Transfer*, **38**, No. 2, 363-369.
- 1992 **Salmun, H.** and O. M. Phillips. An experiment in boundary mixing. Part 2. The slope dependence at small angles. *J. Fluid Mech.*, **240**, 355-377.
- 1991 **Salmun, H.**, P. D. Killworth and J. R. Blundell. A two-dimensional model of boundary mixing. *J. Geophys. Res.*, **96**, No C10, 18447-18474.
- 1986 Phillips, O.M., J. H. Shyu and **H. Salmun**. An experiment in boundary mixing: mean circulation and transport rate. *J. Fluid Mech.*, **173**, 473-499.
- 1980 **Salmun, H.**, R.F. Cahalan and G.R. North. Latitude-dependent sensitivity to stationary perturbations in simple climate models. *J. Atmos. Sci.*, **37**, No. 8.

b. Reports and Book chapters (Peer-reviewed)

- 2021 Teixeira, J, J. R. Piepmeier, A. R. Nehrir, C. O. Ao, S. S. Chen, C. A. Clayson, A. M. Fridlind, M. Lebsock, W. McCarthy, **H. Salmun**, J. A. Santanello, D. D. Turner, Z. Wang, and X. Zeng (2021): Toward a Global Planetary Boundary Layer Observing System: The NASA PBL Incubation Team Report. NASA PBL Incubation Team. 134 pp. <https://science.nasa.gov/earth-science/decadal-pbl>
- 2002 **Salmun, H.** and K. Goetchius. Assessing Atrazine Input and Removal Processes in the Chesapeake Bay Environment: An Overview. In Fate and Transport of Chemicals in the Environment: Impacts, Monitoring, and Remediation, ACS Publisher, Lipnick, R.L., Mason, R.P. and Phillips, M.L., Eds.
- 2001 **Salmun, H.** From teaching to learning: a course on women, gender and science. In A new Generation of Feminist Science Studies, Mayberry, M., Subramaniam, B. and Weasel, L., eds. Routledge Press.

d. Work in progress

- 2023 **Salmun, H.**, A. Molod and H. Josephs. Planetary Boundary Layer Heights Retrievals from Radar Wind Profiler Global Networks. [To be submitted to the Journal of Geophysical research- Atmospheres \(Spring 2023\)](#)
- 2023 **Salmun, H.**, J. R. Lewis, V. Caicedo and R. Delgado. Characterizing PBL Height Estimates using Data from Different Instruments - A Case Study. [To be submitted to the Journal of Geophysical research- Atmospheres \(Spring 2023\)](#)

PROFESSIONAL ACTIVITIES:

a. Grants (awarded since 2005)

- 2022 “Exploring Strategies and Developing PBL Data Assimilation Including PBL Height from Multiple Observing Systems in the Global GEOS System”, **Co-I**, (PI: **Y. Zhu** GMAO

- NASA/Goddard Space Flight Center). NASA Start date 08/2022, duration 36 months.
- 2021 “Collaborative Research: Enhancing Asian American and Pacific Islander Participation and Belonging in the Geosciences”, ***Collaborator***, (PIs: **D. Ibarra, Brown University and K. Lau, Penn State University**). National Science Foundation, EAGER Program. Start date: 01/2022, duration: 24 months.
- 2021 “GP-GO: Growing the number and diversity of non-geoscience undergraduates in Cornell’s graduate programs in Atmospheric and Geological Sciences with a Geoscience Learning Ecosystem”, ***Collaborator***, (PI: **M. Pritchard Cornell University**). National Science Foundation, ICER - GEOPATHS-Grad Opportunities GO Program. Start date: 9/01/2021, duration: 36 months.
- 2021 “A Combined Record of Boundary Layer Heights Retrieved from Wind Profilers and Ceilometers”. PSC-CUNY Research Program, PSC-CUNY Award (Enhanced) # 64711-00, \$11753.80, 7/1/21-6/30/22. ***PI***.
- 2020 “A long-term characterization of the water mass exchanges and connectivity at the Southern Puerto Rico shelf break and Virgin Islands trough”. PSC-CUNY Research Program, PSC-CUNY Award # 63733-00 51, \$5971.09, 7/1/20-6/30/21. ***PI***.
- 2020 “Using Global Ground-Based Measurements of Planetary Boundary Layer Height to Inform Incubation Study Team”. NASA Grant Number 80NSSC20K0664, \$71,233.00, 2/14/20-2/13/21. ***PI***.
- 2018 “Water mass exchanges and connectivity at the Southern Puerto Rico shelf break and Virgin Islands trough”. PSC-CUNY Research Program, PSC-CUNY Award #: 61687-00 49, \$71,233.00, 7/1/18-6/30/19. ***PI***.
- 2018 “Storms along the Patagonian Shelf in the Next Century – Assessing changes with CMIP5 Data”. Presidential Fund for Faculty Advancement, Hunter College of CUNY, \$2,500.00, 7/1/18-6/30/19. ***PI***.
- 2016 “Estimation of planetary boundary layer heights from global network wind profiler data”. PSC-CUNY Research Program, PSC-CUNY Enhanced Award #: 69861-00 47, \$11448.80, 7/1/16-12/31/17. ***PI***.
- 2014 “The Catalyst Scholarship Program at Hunter College: a partnership among earth science, physics, computer science and mathematics”. Presidential Fund for Faculty Advancement, Hunter College of CUNY, \$1,000.00, 1/1/14-12/31/14. ***PI***.
- 2012 “Determining Planetary Boundary Layer Heights from Operational Wind Profiler Data”. Presidential Fund for Faculty Advancement, Hunter College of CUNY, \$1,800.00, 2/1/12-12/31/13. ***PI***.
- 2010 “Statistical prediction of storm surge associated with East Coast Cool-weather Storms at The Battery, New York.” PSC-CUNY-41 Research Program, PSC-CUNY Award #: 63088-00 41, \$5116.90, 7/1/10-12/30/11. ***PI***.
- 2009 “The CATALYST Scholarship Program”, ***PI*** (F. Buonaiuto, J. Seager, A. Peluso, V. Teller, Co-PIs, Y. C. Chen, Senior Personnel); National Science Foundation DUE S-STEM Award Number 0850021, \$596,000.00, 6/1/09-5/31/14.
- 2008 “A study of Nor’easters using buoy data in the New York metropolitan region”; PSC-CUNY-39 Research Program, PSC-CUNY Award #: 61533-00 39, \$5850.64, 7/1/08-6/30/09. ***PI***.

- 2007 “An Investigation of the Strength of Land-Atmosphere Coupling in General Circulation Models”; PSC-CUNY-38 Research Program, PSC-CUNY Award #: 69727-00 38, \$3,084.00, 7/1/07-6/30/08. **PI**
- 2006 “Observational Validation of an Extended Mosaic Technique for the Land-Atmosphere Coupling”; PSC-CUNY-37 Research Program, PSC-CUNY Award #: 68640-00 37, \$4233.64, 7/1/06-6/30/07. **PI**
- 2005 “An Investigation of a Potential Climate-Scale Mode of Interaction between the Land Surface and the Atmosphere” - renewal; PSC-CUNY-35 Research Program, PSC-CUNY Award #: 67865-00 36, \$ 3,385.00, 7/1/05-6/30/06. **PI**

b. Presented Scholarship

Invited Presentations (selected since 2005):

- 2018 *Studying coastal dynamics along the Patagonian Shelf: an integrated Earth Systems Science approach.* Presented at the Instituto de Geologia de Costas y del Cuaternario, Universidad Nacional de Mar del Plata, Argentina.
- 2016 *Estimating Planetary Boundary Layer Heights from NOAA Profiler Network Wind Profiler Data.* Earth Science Seminar Series, School of Earth and Environmental Science, Queens College of CUNY.
- 2013 *Statistical Models for Predicting Storm Maximum Storm Surge and their Application to Forecasting in Coastal Regions.* Presented at the BIT - 3rd Annual World Congress of Marine Biotechnology, Session 1-5: Physical Oceanography and Marine Chemistry; September 23-25, Hangzhou, China.
- 2012 *A turbulent* journey of doing science on fluid earth.* Presented at the Science Today Series: Focus on Women in Science, Technology, Engineering and Mathematics, SUNY Oswego (February).
 (*)'Turbulent' because, by and large, the 'flow' cannot be orderly (laminar) for a woman in STEM, and because the subject of turbulent processes is what ties a lot of my work together.
- 2008 *Academic Career Opportunities in Earth Sciences and the Role of Mentoring in Promoting Diversity.* Presented at the annual conference of the National Association of Black Geologists and Geophysicists, as part of a special session on *Diversity in Earth Sciences: Disciplines, People and Careers.* Atlanta, Georgia.
- 2008 *East Coast Cool-weather Storms in the New York Metropolitan Area.* Presented at the annual conference of the National Association of Black Geologists and Geophysicists, Atlanta, Georgia.
- 2006 Invited On-Camera Interview: “*Geo Basics: An Introduction to Earth Science*”, an educational Earth Science video series produced for Cambridge Educational (The Cambridge Core Science Series), an 8 part series to be distributed as supplemental educational material to high schools, colleges and libraries throughout North America. The interview highlighted Hunter College and the Geography Department, besides my scientific and educational expertise (September).
- 2006 *Progress in Modeling the Impact of Land Cover Change on the Global Climate.* Geography Seminar Series, Department of Geography, Hunter College of CUNY (February) **and** School of Earth and Environmental Science, Queens College of CUNY, (April).

Conference Presentations and Abstracts (selected, since 2015)

- 2023 **Salmun, H.**, A. Molod and H. Josephs. Land-Atmosphere Interactions Using Planetary Boundary Layer Heights Estimated Using Data from a Global Network of Radar Wind Profilers. (***JointJI***)

- B.4**), American Meteorological Society 103rd Annual Meeting, Denver, CO & Online, 8 – 12 January.
- 2021 **Salmun, H.**, A. Molod and H. Josephs. PBL Height Estimates from Global Networks of Radar Wind Profilers. (*Abstract: A21D-08*). American Geophysical Union Fall Meeting. New Orleans, LA & Online Everywhere, 13 – 17, December.
- 2021 Zhu, Y., N. Arnold, N. Boukachaba, E. El Akkraoui, M. Ganeshan, J. Jin, H. Josephs, B. Karpowicz, J. R. Lewis, E. L. McGrath-Spangler, A. Molod, J. Munchak, S. P. Palmer, S. Pawson, **H. Salmun**, J. A. Santanello, R. Todling, E. J. Welton, D. L. Wu and J. E. Yorks. Strategies and Development of Global PBL Data Assimilation Including PBL Height in the GMAO GEOS System. (*Abstract: A21D-05*). American Geophysical Union Fall Meeting. New Orleans, LA & Online Everywhere, 13 – 17, December.
- 2021 Teixeira, J, J. R. Piepmeier, A. R. Nehrir, C. O. Ao, S. S. Chen, C. A. Clayson, A. M. Fridlind, M. Lebsock, W. McCarthy, **H. Salmun**, J. A. Santanello, D. D. Turner, Z. Wang, and X. Zeng. NASA Planetary Boundary Layer (PBL) Incubation Study (**Invited Presentation**). AMS101, 101st Annual Meeting, American Meteorological Society, 10 – 15 January.
- 2018 Seijo-Ellis, G. G., D. Lindo-Atichati and **Salmun, H.** Vertical Structure of the Water Column at the Virgin Islands Shelf Break and Trough (*Abstract: OS31D-1820*). American Geophysical Union Fall Meeting. Washington, DC, 10 – 14, December.
- 2018 **Salmun, H.**, A. Molod and A. Collow. The Use of MERRA-2 near surface meteorology to understand the behavior of planetary boundary layer heights derived from Wind Profiler data over the US Great Plains. (*Abstract: A13M-2638*). **New/Updated Results**. American Geophysical Union Fall Meeting. Washington, DC, 10 – 14, December.
- 2017 **Salmun, H.**, A. Molod and A. Collow. The Use of MERRA-2 near surface meteorology to understand the behavior of planetary boundary layer heights derived from Wind Profiler data over the US Great Plains. American Geophysical Union Fall Meeting. New Orleans, LA, 11 – 15, December.
- 2017 Lindo-Atichati, D., R. Smith, **H. Salmun** and G. Seijo Ellis. Modeling biophysical surface transport and cross-shelf exchanges. NOAA CARICOOS Meeting, 28 April, Puerto Rico.
- 2017 Bayron, J. M., **H. Salmun**, D. S. Ebel, H. C. Connolly Jr., V. E. Hamilton and D. S. A. Lauretta. Fluid Flow Model for Chondritic Parent Bodies. Solar System Symposium in Sapporo, Japan.
- 2016 Molod, A. and **H. Salmun**. Estimating Planetary Boundary Layer Heights from NOAA Profiler Network Wind Profiler Data; in *Advances in Understanding and Remote Sensing of Land-Atmosphere Interactions: From Bedrock to Boundary Layer I*. American Geophysical Union Fall Meeting. San Francisco, CA, 12 – 16 December.
- 2016 **Salmun, H.** A synergistic effort among geoscience, physics, computer science and mathematics at Hunter College of CUNY as a Catalyst for educating Earth scientists; in *NSF-Supported Undergraduate Learning Opportunities About the Earth, Oceans, and Atmospheric Sciences*. American Geophysical Union Fall Meeting. San Francisco, CA, 12 – 6 December.
- 2016 **Salmun, H.** and F. Buonaiuto. Earth Science Curriculum Enrichment Through Matlab! in *Teaching Geoscience with MATLAB*. American Geophysical Union Fall Meeting. San Francisco, CA, 12 – 16 December.
- 2016 Molod, A. and **H. Salmun**. Estimating Planetary Boundary Layer Heights from NOAA Profiler Network Wind Profiler Data. American Meteorological Society's 18th Symposium on Meteorological Observation and Instrumentation – 96th Annual Meeting. New Orleans, LA, 11 – 14 January.

Conference and Workshop organizing

- 2020 **Co-host, co-lead & session co-chair** of NASA PBL Incubation VIRTUAL Workshop, 19 - 27 May.
- 2016 **Session Co-Organizer & Chair**: *Advances in Understanding and Remote Sensing of Land-Atmosphere Interactions: From Bedrock to Boundary Layer I & II*. American Geophysical Union Fall Meeting. San Francisco, CA, 12 – 16 December.
- 2012 **Session Organizer**: *From supercells to water quality: modeling atmospheric and oceanographic processes (Oral Presentations)*. Association of American Geographers – Annual Meeting. New York, N. Y., 24 – 28 February.

PROFESSIONAL SERVICE OUTSIDE HUNTER COLLEGE

- 2015 - Present Member of Editorial Board of *Advances in Meteorology*
- 2014 Member of a Site Visit for an NSF ADVANCE Institutional Transformation Awardee
- 2012 NSF S-STEM Projects Meeting coordinated by American Society for Engineering Education, October 14-16, Arlington, VA. **Invited**.
- 2009, 2010, 2020, 2021, 2022 Member NSF STEM Review Panels and NASA Earth Science Panels.
- 2005 - 2010 Member of Editorial Board of the *Women's Studies Quarterly (WSQ)*, a journal published by the Feminist Press at the Graduate Center of The City University of New York. Specialty: Women in Science.

Reviewer for Peer-Reviewed Journals

Journal of Fluid Mechanics; *International Journal of Heat and Mass Transfer*; *Limnology and Oceanography*; *Water Resources Research*; *Journal of Geophysical Research/Oceans*; *Heat Transfer Engineering*; *Advances in Water Resources*; *Journal of Heat Transfer*; *Journal of Theoretical and Applied Climatology*; *International Journal of Thermal Sciences*; *Landscape and Urban Planning*; *The Professional Geographer*; *AREA: Journal of the Royal Geographical Society*; *International Journal of Climatology*; *Weather, Climate and Society*; *Journal of Applied Meteorology and Climatology*; *Journal of Marine Science and Engineering*; *Advances in Meteorology*; *Atmosphere*; *Geosciences*, *J. of STEM Education* and *J. of Advances in Modeling of Earth Science*.

Reviewer for Proposal to Agencies

National Science Foundation, Physical and Biological Oceanography Programs and Dynamic Meteorology Program; CICEET (NOAA/UNH Cooperative Institute for Coastal and Estuarine Environmental Technology) Rhode Island Sea Grant College Program (URI); NASA Earth Science Programs; North Carolina Water Resources Research Institute; PSC CUNY Research Award Program; Swiss National Science Foundation, NASA.

PROFESSIONAL SERVICE AT THE CITY UNIVERSITY OF NEW YORK

Hunter College

- 2013 – 2014 Member of Arts and Sciences Strategic Plan Implementation Committee, Hunter College.
- 2013 – 2016 Member of Hunter College Senate Committee on Computing & Technology.
- 2004/08 – 2012/17 Member of Hunter College Senate.
- 2004 – 2008 Member of Hunter College Senate.
- 2007 Member of Mellon Project at Hunter College. Sub-Committees on Pluralism & Diversity in the General Education Curriculum & on Math and Science in General Education.

2004 Co-Organizer for the Round Table of Gender Race and Science at Hunter College. Event co-sponsored by Geography, the Gender Equity Project, Dean of Arts & Sciences and the Provost Offices of Hunter College.

The Graduate Center

2011 – 2017 Co-organizer of the GEOS seminar series at the Earth and Environmental Sciences Doctoral Program, The Graduate Center of CUNY.

2015 – 2017 Member Ad Hoc Advisory Committee for the Earth & Environmental Science Program, The Graduate Center, CUNY.

2013 – 2014 Member of Faculty Membership Committee, Earth and Environmental Sciences Doctoral Program, Graduate Center of CUNY.

2010 – 2020 Member Curriculum Committee, Earth and Environmental Sciences Doctoral Program, Graduate Center of CUNY.

2007 – 2022 Member of First Year Doctoral Examination for the Earth and Environmental Sciences Doctoral Program, Graduate Center of CUNY.

2003 – 2007 Member of Executive Committee for the Earth and Environmental Sciences Doctoral Program, Graduate Center of CUNY and Member of two Doctoral Dissertations Committees.

2004 Organizer Fall Seminar Series for the Urban Coastal Environmental Processes Research Center, Graduate Center of CUNY.

Department of Geography

2018 – Present Lab Issues Committee Chair.

2002/09 – 2015/20 Undergraduate Adviser for the Environmental Studies Major.

2009 – Present Member of Personnel & Budget Committee.

2002 – 2006 Member of Graduate Admissions Committee.

2003 – Present Member of Environmental Studies Curriculum Sub-Committee.

2004– 2008 Implemented, Sponsored and Co-organized Departmental Seminar.

TEACHING & CURRICULAR ACTIVITIES

Curricular Development: A course entitled “Women, Gender and Diversity in Science and Engineering” designed to understand the intersection between issues of gender, societal behaviors and scientific knowledge from the perspective of a practicing scientist. Syllabus, methodology and reading list available from *A New Generation of Feminist Science Studies*, Routledge Press (2001).

Undergraduate Courses

- Weather and Climate
- Introduction to Oceanography
- Introduction to Environmental Science
- Earth Science Systems I & II (new courses developed for Environmental Studies Core Curriculum)
- Advanced Oceanography (new course, developed for upper level undergraduate/graduate course)
- Introduction to Fluid Mechanics – joint with Physics (new course to Hunter’s science curriculum, undergraduate level)
- Introduction to the Southern Ocean – Study Abroad winter course, upper level (Argentina)
- Hydrology (upper level undergraduate and graduate course)

- The Catalyst Seminar – Semester 1: Exposure & Connections; Semester 2: Interdisciplinary Project; Semester 3: Group Interdisciplinary Project – Students’ Research Project
- Global Climate Change

Graduate Courses

- Earth System Science I & II – Graduate core courses for first year doctoral students, Doctoral Program in Earth and Environmental Science, The Graduate Center.
- Advanced Analysis of Atmosphere/Ocean Dynamics (with Matlab) – new graduate seminar for second year doctoral students at Doctoral Program in Earth and Environmental Science, The Graduate Center.
- Dissertation Proposal Writing Workshop – Second year Ph. D. Students at Doctoral Program in Earth and Environmental Science, The Graduate Center.

Supervision and Mentoring of Undergraduate Students (selected from a total of 54; illustrative examples since 2015)

- 2022 **Jonathan Lopez** (MA/BA Program ’2022 Environmental Earth Science, Honors). Honors Thesis: *The Great Green Wall in Africa and its ability to combat environmental and social issues.*
- 2021 **Cloè Cozette Muller** (BA’2021 Environmental Studies, Honors). Honors Thesis: *A Piece of the Caribbean Sea: A look into the local ocean dynamics at the Virgin Island Shelf Break and Trough.* **Winner of the 2012 Miriam and Saul B. Cohen Prize for Geographic Excellence and 2022 Fulbright Scholarship Recipient.**
- Victoria Caegle** (BA’2021 Environmental Studies, Honors). Honors Thesis: *The Potential for Hydroxyapatite and its Modifications for Bioremediation of Polluted Waters.*
- Loviena Motilall** (BA’2021 Environmental Studies, Honors). Honors Thesis: *Marine Heatwaves are Exacerbating the Decay of Coral Reefs in the Main Hawaiian Islands.*
- 2019 **Rebecca Alisandratos** (BA’ 2020, Environmental Earth Science, Honors). Research Project: *The Relationships Between Environmental Factors and Fish Abundance and Species Richness on Caribbean Coral Reefs.*
- 2017 **Glenn Liu** (BA’ 2017, Environmental Earth Science, Honors). Honors Thesis: *Assessing the Variability of Salinity, Temperature, and Chlorophyll-a in the Hudson River Estuary for Oyster Reef Restoration.*
- Elliot David** (BA’ 2018, Environmental Earth Science, **2018 Schwarzman Scholar**). Research Project: *Pollution in Portugal: A case study in fishing practices and environmental policy in Cascais.*
- 2016 **Sofia Chelpton** (BA’ 2016, Environmental Earth Science, Honors). Honors Thesis: *Study of the dynamics and transport of pollutants into the upper troposphere using data from the CONTRAST Experiment.*
- Ronald Kichurchak** (BA’ 2016, Environmental Earth Science, Honors). Honors Thesis: *The Effect of Soil Type on the Nitrogen Removal Capacity in Riparian Buffer Zones.*
- Alexander Prescott** (BA’2016, Environmental Management & Policy, Honors). Honors Thesis: *Eco-gentrification in Chelsea, Manhattan - Exploring the ramifications of the High Line Park.*
- 2015 **Miri Dainson** (BA’ 2015, Environmental Earth Science, Honors). Honors Thesis: *Effect of Avian Brood Parasite Range Expansion on Host Defensive Behaviors.*

Supervision and Mentoring of Graduate Students (selected from most recent)
At Hunter College

Holly Josephs, MS' 2021. Research Project: *Estimation of planetary boundary layer heights from global network wind profiler data.* At present: a PhD student in the Department of Civil & Environmental Engineering at Rutgers University.

Deana Baron, MS' 2019. Research Project: *Using StrideSearch algorithm to study storm tracks in the Southwestern Atlantic Ocean.*

Mark Dempsey, MA' 2013. Thesis Title: *Estimation of planetary boundary layer heights using wind profiler data.*

Andreea Ira, MA' 2006. Thesis Title: *Observational Validation Study of the Extended Mosaic Technique for the Land Surface – Atmosphere Coupling in Global Models.*

Fernanda Santos, MA' 2007. Thesis Title: *Quantifying the Scales of the Land Surface Heterogeneity.*
At The Graduate Center, Earth & Environmental Science Doctoral Program

2018 **Jeyavinoth Jeyaratman (JJ)**, PhD'2021, Doctoral Committee Member. Thesis Title: *Study of convective cloud Properties Using Multi-Satellite Observations and Cloud-Resolving Model and Evaluation of GCM Cumulus Parameterization.*

2017 – 2020 **Giovanni G. Seijo-Ellis**, PhD Student - Transferred to another school 2020, Co-Advisor.
Research Focus: Oceanography.

2016 **Jasmine Bayron**, PhD'2020, Doctoral Committee Member. Thesis Title: *The Solar System Family Tree: Investigating a Possible Parent body Relationship between B-type Asteroids and Aqueously Altered Carbonaceous Meteorites.*

Peter Matt, PhD'2019, Doctoral Committee Member. Thesis Title: *The Physical State of Mobilized Sulfide Ore During Regional Metamorphism ~1150 Ma, Balmat Zinc Mine, Northwest Adirondacks, New York.*

Spiros Papanikolaou, PhD'2017, Doctoral Committee Member. Thesis Title: *Seasonal Characterization of NYC Urban Thermal Environment.*

2015 **Yi Tang**, PhD'2019, Doctoral Committee Member. Thesis Title: *The distribution, fractionation, and application of the 210Po/210Pb system: Insights from three GEOTRACES transects.*

Samuel Frank, PhD'2015, Doctoral Committee Member. Thesis Title: *Cutting Carbon Emissions in the States: A National Patchwork Leading to a National Policy.*

SYNERGISTIC ACTIVITIES

Participation in GeoDES (Geoscience Diversity Experiential Simulations), an NSF funded project to train 30 geoscientists (faculty and administrators) selected from all institutions in the country, to be “champions for diversity” and combat the hostile climates in geoscience departments. 2017 - 2018.

<https://cpaess.ucar.edu/meetings/2017/geodes-workshop>

Principal Investigator and Director of the The Catalyst Scholarship Program at Hunter College, a program established with an award from the National Science Foundation (NSF), Division of Undergraduate Education (DUE), 2009 – 2014. Participating Disciplines: Earth Science (Geography), Physics, Computer Science and Mathematics and Statistics.

Fellow Associate with the Gender Equity Program at Hunter College, 2002, 2003, 2004.

AAAS Lecture Series on Women in Science and Engineering 2002: one of nine women scientists selected to participate the Latin America Series in Panama City.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Geophysical Union, Ocean Sciences Section; American Meteorological Society; American Association for the Advancement of Science.

TEACHING, MENTORING & SERVICE AT JOHNS HOPKINS UNIVERSITY, 1994-2001

Undergraduate courses

Climate Modeling and Climate Change (upper level /graduate)
Women in Science/Women on Science (upper level /graduate seminar)
Women, Gender and Diversity in Science and Engineering (undergraduate seminar)
The Earth's Climate: Dynamics and Change (freshman seminar)
Introduction to Oceanography

Graduate courses

Introduction to Fluid Mechanics; Principles in Hydrology

Supervision and Mentoring of Students

April Bowling, BS 1996; Xin Lu, MS 1997; Reina Nakamura, BS 1997; Anthony Cahill, PhD 1998, (Member of Doctoral Committee); Dusan Zagar, International Exchange Student (PhD), Fall 1997; Reena Bhatt, BS 2000; Kristin Goetchious, MSE in Water Resources, 2001.

Postdoctoral Advisees

Andrew Palowich, 1995-1997; Qingping Zu, 1996-1997; Yassar Farhan, 1998-1999.

Professional Service

Departmental Committee for Student recruitment & Member of 3 PhD Committees for students in Environmental Engineering 1998-1999.

Whiting School of Engineering Committee on Gender Issues, 1999-2000.

Member of 3 PhD Committees for students in Environmental Engineering

External member of Graduate Board Orals/Thesis defense in the Department of Hispanic and Italian Studies for works related to the history, culture and literature of Argentina and environmental change.

Co-Chair for the 1998-Johns Hopkins Conference in Environmental Fluid Mechanics. A major international conference covering critical aspects of fluid flow in the environment, with a special session dedicated to honor the work and contributions of Professor Owen M. Phillips.