Renellys C. Perez, Ph.D.

National Oceanic and Atmospheric Administration (NOAA)
Oceanic and Atmospheric Research (OAR)
Atlantic Oceanographic and Meteorological Laboratory (AOML)
4301 Rickenbacker Causeway, Miami, FL 33149
305-361-4518 (work), 786-448-9647 (cell)
Renellys.C.Perez@noaa.gov; https://www.aoml.noaa.gov/people/renellys-perez/

EDUCATION

Ph.D. Oceanography, 2006, Oregon State University, College of Oceanic and Atmospheric Sciences, *Dissertation*: Numerical and assimilative studies of the equatorial Pacific cold tongue, *Advisor*: Prof. Robert N. Miller

M.S. Applied Marine Physics, 1999, University of Miami, Rosenstiel School of Marine and Atmospheric Science, *Thesis*: Model skill assessment in the Louisiana-Texas (LATEX) shelfbreak zone, *Advisor*: Prof. Christopher N. K. Mooers

B.S. Applied Mathematics and Pure Physics, 1995, University of Miami, Cum Laude

RESEARCH INTERESTS

Physical oceanography, climate science, air-sea interactions, ocean's impact on society - Investigating the dynamical and thermodynamical processes that drive equatorial ocean currents, equatorial waves, and tropical instability waves and how they influence sea surface temperature variability in the Atlantic and Pacific oceans; characterizing the variability of boundary currents and the overturning circulations in the South Atlantic, and their influence on regional and global heat and salt distributions, as well as their impact on weather, climate, and sea level; observing deep and abyssal changes in temperature in the South and North Atlantic Oceans; examining how sea level pressure changes over the central North Pacific can be an early precursor for El Niño events.

PROFESSIONAL EXPERIENCE

10/2024-present, *Supervisory Research Physical Scientist (ZP1301-IV)*, Deputy Director, NOAA/AOML/Physical Oceanography Division (PhOD).

07/2024-10/2024, *Supervisory Research Physical Scientist (ZP1301-V)*, Temporary Acting Director, NOAA/AOML/Physical Oceanography Division (PhOD).

08/2022-07/2024, *Supervisory Research Physical Scientist (ZP1301-IV)*, Deputy Director, NOAA/AOML/Physical Oceanography Division (PhOD).

08/2021-08/2022, *Research Oceanographer (ZP1360-III-03)*, NOAA/AOML/PhOD.

04/2021-08/2021, *Supervisory Research Oceanographer (ZP1360-IV-01)*, Temporary Acting Deputy Director, NOAA/AOML/Ocean Chemistry and Ecosystem Division (OCED).

10/2017-04/2021, *Research Oceanographer (ZP1360-III-03)*, NOAA/AOML/PhOD.

06/2011-09/2017, *Associate Scientist,* University of Miami (UM), Cooperative Institute for Marine and Atmospheric Studies (CIMAS) and NOAA/AOML/PhOD.

11/2008-05/2011, *Assistant Scientist,* UM, CIMAS and NOAA/AOML/PhOD.

12/2005-10/2008, *National Research Council* (NRC) *Postdoctoral Fellow*, NOAA/Pacific Marine Environmental Laboratory/Ocean Climate Research Division, *Postdoctoral Fellow.*

10/2005-12/2005, *Postdoctoral Fellow,* University of Washington, Joint Institute for the Study of the Atmosphere and Ocean.

08/1998-10/2005, *Graduate Research/Teaching Assistant,* Oregon State University, College of Oceanic and Atmospheric Sciences.

08/1995-07/1998, *Graduate Research Assistant.* UM, Rosenstiel School.

01/1992-07/1995, *Undergraduate Research Assistant,* UM, Rosenstiel School.

EXTERNAL FUNDING

2022 Developing a more resilient Southwest Atlantic Meridional overturning circulation (SAM) array, NOAA, 10/01/2022-09/30/2024, $325,000 (lead-PI)

2021 Innovative analysis of deep and abyssal temperatures from bottom-moored instruments, NOAA, 09/01/21-08/31/24, $440,292 (lead-PI)

2020 An optimized hybrid seasonal forecast system for U. S. regional precipitation in late-summer to mid-fall based on inter-basin SST and convection parameters, NOAA, 09/01/20-08/31/21, $204,400 (unfunded co-PI)

2018 Combining coastal altimetry and in situ observations to improve Meridional Overturning Circulation estimates in the South Atlantic, NASA, $161,878, 01/01/18-12/31/20 (co-PI)

2016 Collaborative Research: Extratropical triggering of ENSO events through the trade-Wind charging mechanism, NSF-CLD, 09/15/16-09/14/19, $343,452 (lead-PI)

2016 South Atlantic-North Atlantic Meridional Overturning Circulation (MOC) linkages: Analysis of the upper and lower limbs with in situ moored instruments, NOAA, 07/01/16-06/30/19, $353,031 (co-PI)

2014 Variability of the South Atlantic Subtropical Gyre, NASA, 05/01/14-04/30/17, $346,494 (lead-PI)

2013 South Atlantic Meridional Overturning Circulation: Pathways and Modes of Variability, NOAA, 09/01/13-8/31/16, $222,723 (lead-PI)

2010 Collaborative Research: Global Impact of Eddies on Inertial Oscillations of the Mixed Layer. NSF-OCE-1031278, 10/01/10-09/30/14, $66,313 (lead-PI)

PUBLICATIONS (PEER-REVIEWED)

(1) Tuchen, F. P., **R. C. Perez**, G. R. Foltz, M. J. McPhaden, and R. Lumpkin, 2024: Multidecadal intensification of the equatorial Pacific upper-ocean circulation. *J. Geophys. Res. Oceans*., 129, e2024JC021343, https://doi.org/10.1029/2024JC021343.

(2) Lumpkin, R., F. Bringas, and **R. C. Perez**, 2024: Surface currents. In Chapter 3, State of the Climate in 2023. *Bulletin of the American Meteorological Society*, https://doi.org/10.1175/BAMS-D-24-0100.1.

(3) Arumi-Planas, C. S. Dong, **R. C. Perez**, M. J. Harrison, R. Farneti, and A. Hernández-Guerra, 2024: A multi-data set analysis of the Freshwater Transport by the Atlantic Meridional Overturning Circulation at nominally 34.5ºS, *J. Geophys. Res. Oceans*, https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2023JC020558.

(4) Biló, T. C., **R. C. Perez**, S. Dong, W. Johns, and T. Kanzow, 2024: Weakening of the Atlantic meridional overturning circulation abyssal limb in the North Atlantic. *Nature Geoscience,* **17**, 419–425. https://doi.org/10.1038/s41561-024-01422-4.

(5) Tuchen, F. P., **R. C. Perez**, G. R. Foltz, P. Brandt, A. Subramaniam, S.-K. Lee, R. Lumpkin, and R. Hummels, 2024: Modulation of equatorial currents and tropical instability waves during the 2021 Atlantic Niño. *J. Geophys. Res. Oceans*, 129(1):e2023JC020431, doi:/10.1029/2023JC020431.

(6) McPhaden, M. J., K. J. Connell, G. R. Foltz, **R. C. Perez**, K. Grissom, 2023: Tropical ocean observations for weather and climate: A decadal overview of the Global Tropical Moored Buoy Array. *Oceanography*, 36(2–3), 32–43, doi:10.5670/oceanog.2023.211.

(7) Connell, K. J., M. J. McPhaden, G. R. Foltz, **R. C. Perez**, and K. Grissom, 2023: Surviving piracy and the coronavirus pandemic. *Oceanography,* 36(2–3), 44–45, doi:10.5670/oceanog.2023.212.

(8) Baker, J. A., R. Renshaw, L. C. Jackson, C. Dubois, D. Iovino, H. Zuo, **R. C. Perez**, S. Dong, M. Kersalé, M. Mayer, J. Mayer, S. Speich, and T. Lamont, 2023: South Atlantic overturning and heat transport variations in ocean reanalyses and observation-based estimates, in: 7th edition of the Copernicus Ocean State Report (OSR7), edited by: von Schuckmann, K., Moreira, L., Le Traon, P.-Y., Grégoire, M., Marcos, M., Staneva, J., Brasseur, P., Garric, G., Lionello, P., Karstensen, J., and Neukermans, G., Copernicus Publications, *State Planet*, 1-osr7, 4, doi:10.5194/sp-1-osr7-4-2023.

(9) Chidichimo, M. P., **R. C. Perez**, S. Speich, M. Kersalé, J. Sprintall, S. Dong, T. Lamont, O. T. Sato, T. K. Chereskin, R. Hummels, and C. Schmid, 2023: Energetic overturning flows, dynamic interocean exchanges, and ocean warming observed in the South Atlantic. *Commun. Earth Environ.,* 4, 10, doi:10.1038/s43247-022-00644-x.

(10) Tuchen, F.P., **R. C. Perez**, G.R. Foltz, P. Brandt, and R. Lumpkin, 2022: Multidecadal intensification of Atlantic tropical instability waves. *Geophysical Research Letters*, **49**(22):e2022GL101073, doi:10.1029/2022GL101073.

(11) Hummels, R., B. Johns, S. Speich, **R. Perez**, P. Brandt, M. Lankhorst, and U. Send, 2022: The AMOC in the Tropical Atlantic, *CLIVAR Exchanges*, **82**, 22-28, doi:10.36071/clivar.82.2022.

(12) **Perez, R. C.**, G. R. Foltz, R. Lumpkin, J. Wei, K. Voss, M. Ondrusek, M. Wang, and M. Bourassa, 2022: Oceanographic buoys: providing ocean data to assess the accuracy of variables derived from satellite measurements. *In: Field Measurements for Passive Environmental Remote Sensing (ed., Nick Nalli),79-96,* doi:10.1016/B978-0-12-823953-7.00002-2.

(13) Nalli, N. R., G. R. Foltz, J. Gero, L. Gibson, R. O. Knuteson, R. Lumpkin, P. J. Minnett, V. R. Morris, M. Ondrusek, **R. C. Perez**, M. Wang, and J. Wei, 2022: Ship-based cal/val campaigns. In: Field Measurements for Passive Environmental Remote Sensing (ed., Nick Nalli), 195-215, doi:10.1016/B978-0-12-823953-7.00002-2.

(14) Volkov, D.L., S. Dong, E. Frajka-Williams, Y. Fu, G. Goni, W. Hobbs, W. Johns, M. Kersalé, S. Lozier, B. Moat, **R. Perez**, D. Rayner, D. Smeed, and J. Willis, 2022: Atlantic meridional

overturning circulation and heat transport. [In: State of the Climate 2021], *Bull. Am. Met. Soc.*, 103(8):S175-178, doi:10.1175/BAMS-D-22-0072.1.

(15) Campos, E. J. D., M. C. van Caspel, W. Zenk, E. G. Morozov, D. I. Frey, A. R. Piola, C. S. Meinen, O. T. Sato, **R. C. Perez**, and S. Dong, 2021: Warming trend in the abyssal flow through the Vema Channel in the South Atlantic. *Geophys. Res. Lett.*, doi: 10.1029/2021GL094709.

(16) Chakravorty, S., **R. C. Perez**, B.T. Anderson, S. M. Larson, and B. S. Giese, 2021: Ocean dynamics are key to extratropical forcing of El Niño. *J. Clim.,* doi:10.1175/JCLI-D-20-0933.1.

(17) Chakravorty, S., **R. C. Perez**, C. Gnanaseelan, and B. T. Anderson, 2021: Revisiting the recharge and discharge processes for different flavors of El Niño. *Journal of Geophysical Research–Oceans*, 126, e2020JC017075, doi:10.1029/2020JC017075.

(18) Chidichimo, M. P., A. R. Piola, C. S. Meinen, **R. C. Perez**, E. J. D. Campos, S. Dong, R. Lumpkin, and S. L. Garzoli, 2021: Brazil Current volume transport variability during 2009-2015 from a long-term moored array at 34.5°S. *J. Geophys. Res*., doi:10.1029/2020JC017146.

(19) Kersalé, M., C. S. Meinen, **R. C. Perez**, A. R. Pola, S. Speich, E. J. D. Campos, S. L. Garzoli, I. Ansorge, D. L. Volkov, M. Le Hénaff, S. Dong, T. Lamont, O. T. Sato, M. van den Berg, 2021: Multi-year estimates of Daily Heat Transport by the Atlantic Meridional Overturning Circulation at 34.5°S. *J. Geophys. Res*., doi:10.1029/2020JC016947.

(20) Volkov, D. L., S. Dong, M. Lankhorst, M. Kersalé, A. Sanchez-Franks, C. Schmid, J. Herrford, **R. C. Perez**, B. I. Moat, P. Brandt, C. S. Meinen, M. O. Baringer, E. Frajka-Williams, and D. Smeed, 2021: Meridional overturning circulation and heat transport in the Atlantic Ocean [in "State of the Climate in 2020"]. *Bull. Amer. Meteor. Soc*., 102(8): S176-S179, doi:10.1175/BAMS-D-21-0083.1.

(21) Chakravorty, S., **R. C. Perez**, B. T. Anderson, B. S. Giese, S. M. Larson, and V. Pivotti, 2020: Testing the trade wind charging mechanism and its influence on ENSO variability. *J. Clim*., 33, 7391–7411, doi:10.1175/JCLI-D-19-0727.1.

(22) Christophersen, J. A., G. Foltz, and **R. C. Perez**, 2020: Surface expressions of atmospheric thermal tides in the tropical Atlantic and their impact on open-ocean precipitation. *J. Geophys. Res. Atmos.,* 125*,* doi:10.1029/2019JD031997.

(23) Foltz, G. R., R. Hummels, M. Dengler, **R. C. Perez**, and M. Araujo, 2020: Vertical turbulent cooling of the mixed layer in the Atlantic ITCZ and trade wind regions. *Journal of Geophysical Research Oceans*, 125, doi:10.1029/2019JC015529.

(24) Kersalé, M., C. S. Meinen, **R. C. Perez,** M. Le Hénaff, D. Valla, T. Lamont, O. T. Sato, S. Dong, T. Terre, M. van Caspel, M. P. Chidichimo, M. van den Berg, S. Speich, A. R. Piola, E. J. D. Campos, I. Ansorge, D. L. Volkov, R. Lumpkin, S. Garzoli, 2020: Highly variable upper and abyssal overturning cells in the South Atlantic, *Science Advances*, 6, 32, eaba7573, doi:10.1126/sciadv.aba7573.

(25) Meinen, C. S., **R. C. Perez**, S. Dong, A. R. Piola, and E. Campos, 2020: Observed ocean bottom temperature variability at four sites in the Argentine Basin: Evidence of decadal deep/abyssal warming amidst hourly to interannual variability during 2009-2019. *Geophys. Res. Lett.*, 47, doi:10.1029/2020GL089093.

(26) Volkov, D.L., C.S. Meinen, C. Schmid, B. Moat, M. Lankhorst, S. Dong, F. Li, W. Johns, S. Lozier, **R. Perez**, G. Goni, M. Kersale, E. Frajka-Williams, M. Baringer, D. Smeed, D. Rayner, A. Sanchez-Franks, and U. Send, 2020: Atlantic meridional overturning circulation and associated heat transport [in "State of the Climate in 2019"]. Bull. Amer. Meteor. Soc., 101 (8), S163–S169, doi:10.1175/BAMS-D-20-0105.1.

(27) Bourlès, B., M. Araujo, M. J. McPhaden, P. Brandt, G. R. Foltz, R. Lumpkin, H. Giordani, F. Hernandez, N. Lefevre, P. Nobre, E. Campos, R. Saravanan, J. Trotte-Duha, M. Dengler, J. Hahn, R. Hummels, J. F. Lubbecke, M. Rouault, L. Cotrim, A. Sutton, M. Jochum, and **R. C. Perez**, 2019: PIRATA: A sustained observing system for tropical Atlantic climate research and forecasting. *Earth and Space Sciences*, 6, 577-616, doi:10.1029/2018EA000428.

(28) Foltz, G. R., … **R. C. Perez**, …, 2019: The tropical Atlantic observing system. *Frontiers in Marine Science*, 6, 206, doi:10.3389/fmars.2019.00206.

(29) Frajka-Williams, E., …, **R. C. Perez**, …, 2019: Atlantic meridional overturning circulation: Observed transport and variability. *Frontiers in Marine Science*, 6, 260, doi: 10.3389/fmars.2019.00260.

(30) Inoue, R., R.-C. Lien, J. N. Moum, **R. C. Perez**, and M. C. Gregg, 2019: Variations of equatorial shear, stratification, and turbulence within a tropical instability wave cycle. *J. Geophys. Res.,* 124, 1858-1875, doi:10.1029/2018JC014480.

(31) Kersalé, M., **R. C. Perez**, S. Speich, C. S. Meinen, T. Lamont, M. Le Hénaff, M. A. van den Berg, S. Majumder, I. J. Ansorge, S. Dong, C. Schmid, T. Terre, and S. L. Garzoli, 2019: Shallow and Deep Eastern Boundary Currents in the South Atlantic at 34.5°S: Mean structure and variability. *J. Geophys. Res*., 124, 1634-1659, doi:10.1029/2018JC014554.

(32) **Perez, R. C.,** G. R. Foltz, R. Lumpkin, C. Schmid, 2019: Direct Measurements of Upper Ocean Horizontal Velocity and Vertical Shear in the Tropical North Atlantic at 4°N, 23°W. *J. Geophys. Res.,* 124, 4133-4151*,* doi:10.1029/2019JC015064.

(33) Meinen, C. S., S. Speich, A. R. Piola, I. Ansorge, E. Campos, M. Kersalé, T. Terre, M. P. Chidichimo, T. Lamont, O. T. Sato, **R. C. Perez**, D. Valla, M. van den Berg, M. Le Hénaff, S. Dong, and S. L. Garzoli, 2018: Meridional Overturning Circulation transport variability at 34.5°S during 2009-2017: Baroclinic and barotropic flows and the dueling influence of the boundaries. *Geophys. Res. Lett.,* 45, 4180-4188, doi:10.1029/2018GL077408.

(34) Meinen, C. S., S. L. Garzoli, **R. C. Perez**, E. Campos, A. R. Piola, S. Dong, M.-P. Chidichimo, and O. Sato, 2017: Characteristics and causes of Deep Western Boundary Current variability at 34.5°S during 2009-2014. *Ocean Science,* 13, 175-194, doi:10.5194/os-13-175-2017.

(35) Rugg, A., G. R. Foltz, and **R. C. Perez**, 2016: Role of mixed layer dynamics in tropical North Atlantic interannual sea surface temperature variability. *J. Clim*., 29, 8083-8101, doi:10.1175/JCLI-D-15-0867.1.

(36) Elipot, S., R. Lumpkin, **R. C. Perez**, J. M. Lilly, J. Early, and A. Sykulski, 2016: A global surface drifter dataset at hourly resolution. *J. Geophys. Res.*, 121, 2937-2966, doi:10.1002/2016JC011716.

(37) Lumpkin, R., L. Centurioni, and **R. C. Perez**, 2016: Fulfilling observing system implementation requirements with the global drifter array. *Journal of Atmos. Oceanic Technol.,* 33, 685-695, doi:10.1175/JTECH-D-15-0255.1.

(38) **Perez, R. C.**, M. O. Baringer, S. Dong, S. L. Garzoli, M. Goes, G. J. Goni, R. Lumpkin, C. S. Meinen, R. Msadek, and U. Rivero, 2015: Measuring the Atlantic meridional overturning circulation. *Mar. Tech. Soc. Journal*, 49(2), 167-177, doi:10.4031/MTSJ.49.2.14.

(39) Anderson, B. T., and **R. C. Perez**, 2015: ENSO and Non-ENSO induced charging and discharging of the equatorial Pacific. *Clim. Dyn.*, 45, 2309-2327, doi:10.1007/s00382-015-2472-x.

(40) Garzoli, S. L., S. Dong, R. Fine, C. Meinen, **R. C. Perez**, C. Schmid, E. van Sebille, and Q. Yao, 2015: The fate of the Deep Western Boundary Current in the South Atlantic. *Deep Sea Res.*, 103, 125-136, doi:10.1016/j.dsr.2015.05.008.

(41) **Perez, R. C.**, V. Hormann, R. Lumpkin, P. Brandt, W. E. Johns, F. Hernandez, C. Schmid, and B. Bourlès, 2014: Mean meridional currents in the central and eastern equatorial Atlantic. *Clim. Dyn.,* 43, 2943-2962, doi:10.1007/s00382-013-1968-5.

(42) Johns, E. M., B. A. Muhling, **R. C. Perez**, F. E. Müller-Karger, N. Melo, R. H. Smith, J. T. Lamkin, T. L. Gerard, and E. Malca, 2014: Amazon River water in the northeastern Caribbean Sea and its effect on larval reef fish assemblages during April 2009. *Fisheries Oceanogr.*, 23:6, 472-494, doi:10.1111/fog.12082.

(43) Anderson, B. T., **R. C. Perez**, A. Karspeck, 2013: Triggering of El Niño onset through the trade wind-induced charging of the equatorial Pacific. *Geophys. Res. Lett*., 40, 1212-1216, doi:10.1002/grl.50200.

(44) Garzoli, S. L., M. O. Baringer, S. Dong, **R. C. Perez**, and Q. Yao, 2013: South Atlantic meridional fluxes. *Deep Sea Res. I*, 71, 21–32, doi: 10.1016/j.dsr.2012.09.003.

(45) Goes, M., G. J. Goni, V. Hormann, and **R. C. Perez**, 2013: Variability of the Atlantic off-equatorial eastward currents during 1993-2010 using a synthetic method. *J. Geophys. Res.,* 118, 3026-3045, doi:10.1002/jgrc.20186.

(46) Hormann, V., R. Lumpkin, and **R. C. Perez**, 2013: A generalized method for estimating the structure of the equatorial Atlantic cold tongue: Application to drifter observations. *Journal of Atmos. Oceanic Technol.,* 30, 1884–1895, doi:10.1175/JTECH-D-12-00173.1.

(47) Meinen, C. S., S. Speich, **R. C. Perez**, S. Dong, A. R. Piola, S. L. Garzoli, M. Baringer, S. Gladyshev, and E. Campos, 2013: Temporal variability of the meridional overturning circulation at 34.5°S: Results from two pilot boundary arrays in the South Atlantic. *J. Geophys. Res.*, 118, 6461-6478, doi:10.1002/2013JC009228.

(48) Meinen, C. S., A. Piola, **R. C. Perez**, and S. L. Garzoli, 2012: Deep Western Boundary Current transport variability in the South Atlantic: Preliminary results from a pilot array at 34.5°S. *Ocean Science*, 8, 1041-1054, doi:10.5194/os-8-1041-2012.

(49) **Perez, R. C.**, R. Lumpkin, W. E. Johns, G. R. Foltz, and V. Hormann, 2012: Interannual variations of Atlantic tropical instability waves. *J. Geophys. Res.,* 117, C03011, doi:10.1029/2011JC007584.

(50) **Perez, R. C.**, S. L. Garzoli, C. S. Meinen, and R. P. Matano, 2011: Geostrophic velocity measurement techniques for the meridional overturning circulation and meridional heat transport in the South Atlantic. *Journal of Atmos. Oceanic Technol.,* 28, 1504-1521, doi:10.1175/JTECH-D-11-00058.1.

(51) **Perez, R. C.**, M. F. Cronin, and W. S. Kessler, 2010: Tropical cells and a secondary circulation near the northern front of the equatorial Pacific cold tongue. *J. Phys. Oceanogr.,* 40, 2091-2106, doi:10.1175/2010JPO4366.1.

(52) **Perez, R. C.**, and W. S. Kessler, 2009: The three-dimensional structure of tropical cells in the central equatorial Pacific ocean. *J. Phys. Oceanogr.,* 39(1), 27-49,doi:10.1175/2008JPO4029.1.

(53) **Perez, R. C.**, D. B. Chelton, and R. N. Miller, 2005: The effects of wind forcing and background mean currents on the latitudinal structure of equatorial Rossby waves. *J. Phys. Oceanogr.,* 35(5), 666-682, doi:10.1175/JPO2714.1.

PUBLICATIONS (NON-PEER-REVIEWED)

(1) **Perez, R. C.**, S. Garzoli, R. Hummels, and I. Ansorge, 2022: Inclusive science in the South Atlantic. *Commun. Earth Environ.,* 4, 10, doi:10.1038/s43247-022-00644-x.

(2) Berx, B., D. Volkov, J. Baehr, M.O. Baringer, P. Brandt, K. Burmeister, S. Cunningham, M.F. de Jong, L. de Steur, S. Dong, E. Frajka-Williams, G.J. Goni, N.P. Holliday, R. Hummels, R.

Ingvaldsen, K. Jochumsen, W. Johns, S. Jónsson, J. Karstensen, D. Kieke, R. Krishfield, M. Lankhorst, K.M.H. Larsen, I. Le Bras, C.M. Lee, F. Li, S. Lozier, A. Macrander, G. McCarthy, C. Mertens, B. Moat, M. Moritz, **R. Perez**, I. Polyakov, A. Proshutinsky, B. Rabe, M. Rhein, C. Schmid, Ø. Skagseth, D.A. Smeed, M.-L. Timmermans, W.-J. von Appen, B. Williams, R. Woodgate, and I. Yashayaev. 2021. Climate-relevant ocean transport measurements in the Atlantic and Arctic Oceans. Pp. 10–11 in Frontiers in Ocean Observing: Documenting Ecosystems, Understanding Environmental Changes, Forecasting Hazards. E.S. Kappel, S.K. Juniper, S. Seeyave, E. Smith, and M. Visbeck, eds, *A Supplement to Oceanography 34(4)*, https://doi.org/10.5670/oceanog.2021.supplement.02-04.

(3) **Perez, R.,** M. Srokosz, and G. Danabasoglu, 2019: Atlantic overturning circulation questions abound, *Eos, 100,* https://doi.org/10.1029/2019EO114603.

(4) Danabasoglu, G., M. F. de Jong, A. Karspeck, M. Lankhorst, M. Patterson, **R. Perez**, A. Schmittner, W. Weijer, S. Yeager, and R. Zhang, 2016: 2016 US AMOC Science Team Report on Progress and Priorities. A US CLIVAR Report, *Report 2016-4*, 178pp., doi:10.5072/FK2125WB5P.

(5) Danabasoglu, G., R. Curry, A. Karspeck, C. Meinen, R. Msadek, M. Patterson, **R. Perez**, A. Schmittner, L. Thompson, and S. Yeager, 2015: 2014 US AMOC Science Team Annual Report on Progress and Priorities. *Report 2015-1*, US CLIVAR Project Office, 165 pp.

(6) **Perez, R. C.**, 2014: Autobiographical sketches of women in oceanography. *Oceanography Supplement*, 27(7), 186.

(7) Ansorge, I. J., M. O. Baringer, E. J. D. Campos, S. Dong, R. A. Fine, S. L. Garzoli, C. S. Meinen, **R. C. Perez**, A. R. Piola, M. J. Roberts, S. Speich, J. Sprintall, T. Terre, M. A. Van de Berg, 2014: Basin-wide oceanographic array bridges the South Atlantic. *EOS*, 95, 53-54, doi: 10.1002/2014EO060001.

(8) Garzoli, S., P. Abrahamsen, I. Ansorge, A. Biastoch, E. Campos, M. Mata, C. Meinen, J. Pelegri, **R. Perez**, A. Piola, C. Reason, M. Roberts, S. Speich, J. Sprintall, R. Watts, and all of the SAMOC IV participants, 2012. South Atlantic Meridional Overturning Circulation (SAMOC) – Fourth Workshop. *CLIVAR Exchanges*, No. 58 pp. 2-4.

(9) Thompson, L., **R. C. Perez**, and A. E. Shevenell, 2011: Closed ranks in oceanography. *Nature Geoscience*, doi:10.1038/ngeo1113.

(10) Thompson, L., **R. C. Perez**, and A. E. Shevenell, 2011: Reply to “Not just family matters”. *Nature Geoscience*, doi:10.1038/ngeo1165.

(11) **Perez**, R. C., 2006: Numerical and assimilative studies of the equatorial Pacific cold tongue. Ph. D. Dissertation, Oregon State University, Corvallis, Oregon.

(12) Mooers, C.N.K. and **R.C. Perez**. 1999: Evaluation of the DYNALYSIS Gulf of Mexico Princeton ocean model's skill in simulating the Louisiana-Texas shelf circulation during the LATEX field program (April 1992 to March 1994). (Section 8 of DYNALYSIS Final Technical Report). OCS Study. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La.

(13) **Perez, R. C.**, 1998: Evaluation of the DYNALYSIS Gulf of Mexico Princeton ocean model's skill in simulating the Louisiana-Texas shelf circulation during the LATEX field program (April 1992 to March 1994). University of Miami technical report, No. RSMAS98-004.

SELECTED PRESENTATIONS (LAST FIVE YEARS)

AGU Philip

PhOD retreat (July 2024)

"PhOD 101"

10th SAMOC Logistics Workshop (May 2024)

"SAMBA-West update"

Florida LambdaRail (May 2024)

"Welcome to AOML"

OceanSites Meeting (November 2023)

"South Atlantic Meridional overturning circulation Basin-wide Array (SAMBA) at 34.5S"

SAMOC lightning talk (July 2023)

"South Atlantic Meridional Overturning Circulation"

AMOC webinar (June 2023)

"Recent Observational Advances from the South Atlantic Meridional Overturning Circulation (SAMOC) initiative at 34.5S"

ORTA Meeting (April 2023)

"Ocean Observing Platforms used for Hurricane Research and Improving Forecasts"

TRIATLAS/PIRATA-25 Meeting (October 2022)

"Recent Observational Advances from the South Atlantic Meridional Overturning Circulation (SAMOC) initiative at 34.5S"

AOML Interview (June 2022)

"Energetic Flows in the Tropical and South Atlantic Oceans - Leadership through Science, Diversity, and Inclusion"

GOOS/UN Decade Co-Design conference (June 2022)

"Tropical Atlantic Observing System (TAOS) Review" (invited talk)

All-Atlantic Ocean Research Alliance Forum (May 2022)

"South Atlantic Meridional overturning circulation Basin-wide Array (SAMBA) at 34.5S"

USAMOC Science Team Meeting (April 2022)

"Recent observational advances from the South Atlantic Meridional overturning circulation Basin-wide Array (SAMBA) at 34.5S"

"10-year time series of Deep Western Boundary Current Volume Transport at 34.5S"

NOAA/AOML/PhOD Seminar (March 2022)

"Deep Western Boundary Current Volume Transport at 34.5S"

American Geophysical Union Ocean Sciences Meeting (March 2022)

"Deep Western Boundary Current Volume Transport at 34.5S"

Ronald H. Brown Users Meeting (September 2021)

"FY22 PIRATA Northeast Extension Cruise Requirements"

GOMO Community Virtual Workshop (July 2021, invited talk)

"Developing a diverse and inclusive ocean observing workforce"

PIRATA-24/Tropical Atlantic Variability Virtual Meeting (May 2021)

"Four years of velocity and vertical shear observations in the tropical North Atlantic"

Lamont-Doherty Earth Observatory (January 2021, invited talk)

"Recent advances in the study of the meridional overturning circulation in the South Atlantic"

NOAA/AOML/PhOD Seminar (May 2020)

"Three-years of velocity and vertical shear measurements in the tropical North Atlantic"

TRIATLAS meeting (May 2020)

"Three-years of velocity and vertical shear measurements in the tropical North Atlantic"

US CLIVAR Surface Current workshop (February 2020)

"Daily to interannual variations of velocity and vertical shear in the tropical North Atlantic"

American Geophysical Union Ocean Sciences Meeting (February 2020)
"Three-years of velocity and vertical shear measurements from the Tropical Atlantic Current Observations Study (TACOS)"
"Direct measurements of upper ocean horizontal velocity and vertical shear in the tropical North Atlantic, an update"
IUGG/IAPSO Meeting (July 2019, invited talk)
"Recent advances in the study of the meridional overturning circulation in the South Atlantic"
OOMD Community Workshop (June 2019, invited talk)
"Basin-scale observing to improve predictions and forecasts"
Ronald H. Brown Users Meeting (November 2018)
"FY19 PIRATA Northeast Extension Cruise Requirements"
PIRATA-23 Meeting and TAOS-2 Meeting (October 2018)
Several presentations on TACOS, PIRATA NorthEast Extension, and Drifters
SEFSC-AOML Workshop (September 2018)
"PIRATA Northeast Extension cruises and possible collaborations"
NOAA/AOML/PhOD Seminar (September 2018)
"Upper ocean horizontal velocity and vertical shear in the tropical North Atlantic"
International AMOC Science Meeting (July 2018)
"Observed changes in the South Atlantic subtropical gyre and links to water mass and transport variations at 34.5S"
ATOMIC/SECO Meeting (June 2018)
"NOAA/AOML fieldwork in Caribbean and tropical Atlantic"
American Geophysical Union Ocean Sciences Meeting (February 2018)
"Observed changes in sea surface height, heat content, and water masses in the South Atlantic subtropical gyre"
Tropical Atlantic Observing System Review Workshop (February 2018)
"Shipboard-vessel Data"
NOAA/AOML/PhOD Seminar (October 2017)
"Tropical Atlantic Currents Observations Study (TACOS) at 4°N, 23°W"
US CLIVAR meeting (August 2017)
"Health of the tropical observing system"
US AMOC Science Team Meeting (May 2017)
"Characteristics and causes of Deep Western Boundary Current transport variability at 34.5°S during 2009-2014"
NOAA OOMD Community workshop (May 2017)
"Boundary Currents: Progress and forward looking to OceanObs'19" (invited talk)
"Deep Western Boundary Current measurements at 34.5°S in the South Atlantic: Recent results from the Southwest Atlantic MOC project"
US CLIVAR SSC meeting (January 2017)
"Phenomena Observations Synthesis (POS) panel: Review of implementation progress"

AWARDS

2020	NOAA OAR EEO/Diversity Award for Exemplary Service
2014	NOAA/AOML/PhOD Outreach Award
2006	Selected to attend Physical Oceanography Dissertation Symposium (Honolulu, HI)
2005	National Research Council Postdoctoral Fellow

2003	Wayne Burt Excellence in Physical Oceanography Award (Oregon State University)
1995	Distinguished Undergraduate in Mathematics (University of Miami)
1995	Distinguished Undergraduate in Physics (University of Miami)
1994	NSF Incentives for Excellence Scholarship (University of Miami)
1994	Phi Beta Kappa Honor Society (University of Miami)
1993	Golden Key National Honor Society (University of Miami)

PROFESSIONAL SERVICE ACTIVITIES

2024	Organized PhOD divisional retreat (July 2024; Miami, FL)
2024	AMS Summer Policy Colloquium (Washington, DC)
2024	Co-Organized 10th SAMOC Logistics Meeting
2023	Lead US Delegate at the Seventeenth Intergovernmental Session of the IOC Sub-commission for the Caribbean and Adjacent Regions (SC-IOCARIBE-XVII)
2022-pres.	PIRATA SSG Member
2022-pres.	AtlantOS Steering Committee Member
2021-pres.	Elected to Latinos@NOAA Executive Board
2021	Organized UN Ocean Decade Webinar for AOML
2021	Co-Organized 9th SAMOC Logistics Meeting
2021	Science organizing committee of PIRATA-24/Tropical Atlantic Variability Meeting
2020	Member of Latinos@NOAA Employee Resource Group
2020	Participating in NOAA Mentoring Program
2020	Attended the NOAA Virtual Leadership Seminar series in August 2020
2020	Organizer for the first AOML/GFDL Science Connections Workshop in August 2020
2020-pres.	Member of U.S. National Academy of Sciences Geodesy and Geophysics panel
2020-pres.	Member of SAMOC Executive Committee
2019	Chaired a session during the SAMOC VIII Workshop in Montreal, Canada
2019	Co-organized NOAA's OOMD Community Workshop in June 2019
2018	Chair of 2018 International AMOC Science Meeting organizing committee in Miami, FL in July 2018
2018	Co-chair of SAMOC session at 2018 Ocean Sciences meeting in Portland, Oregon
2017-pres.	Founding member of NOAA/AOML Diversity Inclusion & You (DIY) group
2017	Guest editor for U.S. CLIVAR Variations spring 2017 issue on Deep Ocean Observations and Science
2017	Co-organized NOAA's OOMD Community Workshop in May 2017
2016	NSF physical oceanography grant proposal panel member
2016	Co-organized South Atlantic Meridional Overturning Circulation (SAMOC) logistics meeting in New Orleans, LA, and a SAMOC science session at the Ocean Sciences meeting
2015-2017	Co-chair for the US CLIVAR Phenomena, Observations, and Synthesis (POS) panel
2015	NOAA grant proposal panel member
2015	Chair of US AMOC Task Team 1
2015	Breakout session leader for NOAA Climate Observation Division meeting in College Park, MD on 15-17 June 2015
2014	Co-organized the RAPID – USAMOC international workshop in Bristol, UK on 21-24 July 2015
2014	Vice-chair for US AMOC Task Team 1

2014-pres.	Member of the US AMOC Science Team
2014-2017	Member of US CLIVAR Phenomena, Observations, and Synthesis (POS) panel
2013	Co-organized a meeting to discuss logistics and planning for a trans-basin array to measure the Meridional Overturning Circulation (MOC) along 34.5°S in the Atlantic at NOAA/AOML in Miami, FL on 29-31 January 2013
2012	Co-organized a meeting on Inertial Oscillation Physics and Lagrangian Methods at NOAA/AOML in Miami, FL on 7-9 November 2012
2012-2014	Member of the NOAA/AOML/PhOD award committee
2011	Chaired a session on "Tropical Atlantic Variability" at the NOAA/AOML/PhOD Science Retreat in Miami, FL on 15-16 February 2011
2010	Chaired a session on the "Upper Ocean Circulation in Equatorial Cold Tongues" at the 2010 Ocean Sciences Meeting in Portland, Oregon on 22-26 February 2010
2010-2013	CIMAS/AOML Liaison
2008-pres.	Reviewer for the following journals: Biogeosciences, Climate Dynamics, Dynamics of Atmospheres and Oceans, Geophysical Research Letters, Journal of Climate, Journal of Geophysical Research, Journal of Physical Oceanography, Ocean Dynamics, Ocean Modelling, Ocean Science; and, funding agencies: the National Science Foundation, the Brazilian funding agency FAPESP, and the South African funding agency NRF.
1999-2003	Oregon State University, College of Oceanic and Atmospheric Sciences Physical Oceanography Faculty Hiring Committee, Student representative (Fall 2003) Promotion and Tenure Committee, Student representative (Fall 2002) Student Advisory Committee, Division representative (2002-2003) Student Fees Committee, Member (2001-2002) Computer Committee, Student representative (2001-2002) Graduate Student Senator (2000-2002) Instructional Programs Committee, Student representative (1999-2001)
1995-1998	University of Miami, Rosenstiel School of Marine and Atmospheric Science Marine Science Graduate Student Organization, Vice President (1997-1998) Alumni Association, Student representative (1997-1998) Student Travel Fund Committee, Division representative (1997-1998) Marine Science Graduate Student Organization, Division representative (1995-1996)

MENTORING AND OUTREACH ACTIVITIES

2024	Presentation at MAST Academy on how ocean currents can influence weather, climate, sea-level and Sargassum (November 2024)
2024	Interview with a Communications & Legislative Affairs Specialist (Contractor) for the NOAA Climate Program Office regarding an article on AMOC and the Gulf Stream (November 2024)
2024	Presentation for the Hispanic Heritage Month Buen Provecho event (October 2024)
2024	Mentoring interviews with two early career researchers (October 2024)
2024	Participated in the Letters to a Pre-Scientist program
2024	CIMAS Mentor
2024	Participated in AOML's Bring Your Child to Work day (April 2024)
2024	Participated in Miami Children's Museum earth day activities (April 2024)
2024	Interview for Italian news story by Resource Solutions International entitled "What's Happening with the Atlantic Meridional Overturning Circulation"

2024	Participated in the Letters to a Pre-Scientist program
2023	Gave one Skype a Scientist Talk (August 2023)
2023	Density demonstrations for the Thompson Earth Systems Institute-Scientist in Every Florida School teacher training event (June 2023)
2023	Gave one interview to Live Science (June 2023)
2023	Panelist during NWS Mentoring ERG Forum (May 2023)
2023	Density demonstrations during your child to work day (April 2023)
2023	Gave a tour of the engineering space to Wall Street Journal Podcast (March 2023)
2023	Gave a career presentation for Girl Scouts of Tropical Florida's Women in STEM virtual series (February 2023)
2022	Co-mentored two Ph.D. students from the Canary Islands, V. Cainzos and C. Arumi (September-November 2022)
2022	Gave 1 Scientist in Every Florida School Talk (November 2022)
2023	Organized a PIES telemetry training session for five visitors from Spain (October 2022)
2022	Attended the SACNAS Diversity in STEM conference (October 2022)
2022	Mentored a NOAA William M. Lapenta Scholar, C. Hank Dolce (June-August 2022)
2022	Latinos@NOAA Summer Presentation @ CUNY (July 2022)
2022	Black in Marine Science Density Demonstration (May 2022)
2022	Guest speaker presentation for AOML's Outreach & Education webpage (April 2022)
2022	MPOWIR Mentor Group Co-leader
2022	AOML Mentor/Ambassador to Jasmin John
2022	NOAA Ambassador
2022	Gave 2 Skype-A-Scientist Talks (March 2022)
2021	Gave 1 Skype-A-Scientist Talk (October 2021)
2021	Mentored a NOAA William M. Lapenta Scholar, Michelle Spencer (June-August 2021)
2021	Gave a presentation for NOAA/AOML Virtual Open House (April 2021)
2021	Video interview with COX Media Group I WFOX/WJAX/MyTVJax on the impacts of the overturning circulation on the Florida Current (April 2021)
2021	Gave 2 Skype-A-Scientist Talks (March 2021)
2021	Co-moderator of a Careers in NOAA panel for RSMAS Diversity in Marine Science event (February 2021)
2020	Gave 2 Scientist in Every Florida School Talks (December 2020)
2020	Career lecture for UM/RSMAS students (November 2020)
2020	Gave 2 Skype-A-Scientist Talks (September/October 2020)
2020	Guest lecture for undergraduate students at Manchester University (September 2020)
2020	Participated in NCAS-m panel for Howard University on NOAA ocean/atmosphere observations and technologies (July 2020)
2020	Participated in a Skype-A-Scientist Talk (June 2020)
2020	Outreach talk to high school students Royal Palm Beach High School via SEFS program (April 2020)
2020	Participated in the NOSB Manatee Bowl as a rules judge
2019	Density demos at World Ocean's Day at Frost Science Museum (June 2019)
2019	Mentored French graduate student, Oliver Narinc (10-month internship)
2018	Participated in three Skype-A-Scientist interviews (February, April, November 2018)
2017	Gave a presentation for AOML's Diversity Inclusion & You (DIY) STEM Outreach lunch and learn series (December 2017)

2010-2020	Participated and/or conducted density demo/presentation in an annual outreach event hosted by University of Miami Rosenstiel School of Marine and Atmospheric Science and the American Association of University Women: Exploring Marine Science Day for 6-7th grade girls
2007-pres.	Actively engaged with Mentoring Physical Oceanographic Women to Increase Retention (MPOWIR)
2017	Participated in the Bring Your Child to Work Day (February 2017)
2016	Mentored MAST academy teacher, Alycia Ciresi (June – July 2016)
2016	Mentored Hollings Undergraduate Scholar, Dylan Gates (May – July 2016)
2016	Density and convection current demonstrations for AOML My Brother's Keeper event (March 2016)
2016-2017	MPOWIR Mentor Group Co-leader
2016	Participated on a panel in an MPOWIR Townhall at the Ocean Sciences Meeting (February 2016)
2016	Gave an interview to high school students working on a student film project on climate change (February 2016)
2016	Participated in the Bring Your Child to Work Day (February 2016)
2015	Interviewed for National Geographic for the story "Century-Old Message in a Bottle Returned to Sender" (http://news.nationalgeographic.com/2015/08/150825-message-bottle-lego-rubber-ducky-drifter-oceans-currents-science/) (August 2015)
2015	Mentored two MAST high school students for 3 days on developing a YouTube video on density and convection currents (July 2015)
2015	Mentored Hollings Undergraduate Scholar, Allyson Rugg (May – July 2015)
2015	Density and convection current demonstrations for AOML Open House (May 2015)
2015	Participated in the Bring Your Child to Work Day (April 2015)
2015	Attended the AAAS Communicating Climate Science Workshop (March 2015)
2015	Career Day presentations at Sunset Elementary (February 2015)
2014	Career Day presentations at Frank C. Martin International K-8 Center (December 2014)
2014	Conducted a density demonstration and effect of temperature and salt on density for Disability Awareness event at NOAA/AOML (November 2014)
2014	Gave a presentation on "Sea Level Rise" during a panel discussion entitled "The Future of Fort Lauderdale: Protecting our Paradise against Rising Seas and Stronger Storms" for the Broward County young professional community (July 2014)
2014	Mentored three MAST high school students for a week on developing a demonstration on buoyancy (July 2014)
2014	Demonstration on convective ocean currents for NOAA/AOML Bring Your Child to Work Day
2014	Demonstration on convective ocean currents for Immaculate Conception School 3rd to 5th grade students
2013	Guest lecturer for dual-enrollment college and high school Oceanography class at the Maritime and Science Technology (MAST) Academy
2013-2014	Career Day presentation at Somerset Academy Silver Palms School to middle/high school students
2013	IT Women presentation for 9-12th grade students on career paths in NOAA at South Broward high school
2013	Science judge for National Ocean Science Bowl Eastern Florida Regional Competition

2013 Attended the Center for Ocean Sciences Education Excellence Florida Presentation Bootcamp course
2011 Organized ocean pressure demonstration for students using styrofoam cups for students at the French American School of Miami (a local primary school)

POSTDOCTORAL RESEARCHER MENTORED
Dr. Franz Philip Tuchen (2022-pres.)
Dr. Soumi Charkravorty (2017-2021)
Dr. Marion Kersalé (2017-2020)

DOCTORAL COMMITTEE
Dr. Veronica Cainzos Diaz (2023)

CRUISE LEADERSHIP
2024 *Chief Scientist,* PIRATA Northeast Extension Cruise (NOAA Gordon Gunter)
2021 *Chief Scientist,* PIRATA Northeast Extension Cruise (NOAA Ronald H. Brown)
2019 *Chief Scientist,* PIRATA Northeast Extension Cruise (NOAA Ronald H. Brown)
2017 *Chief Scientist,* PIRATA Northeast Extension Cruise (NOAA Ronald H. Brown)
2013 *Co-chief Scientist,* PIRATA Northeast Extension Cruise (NOAA Ship Ronald H. Brown)
2012 *Shadow Co-Chief Scientist,* Fall Western Boundary Time Series Cruise (R/V Endeavor)

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Researcher ID: 20 (1538 citations), Google Scholar: 24 (2053 citations)