Curriculum Vitae

Dr. JORGE VAZQUEZ
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EDUCATION:

1991 PHD Geological Sciences, University of Southern California, Los Angeles, California, USA .
Dissertation title: Sea Level Variabilities in the Gulf Stream between Cape Hatteras and 50 degrees West

1983 MS Oceanography, Graduate School of Oceanography, University of
        Rhode Island, Narragansett, RI., USA

Thesis Title: Observations on the propagation, growth, and predictability of Gulf Stream meanders
        Downstream of Cape Hatteras

1980 BS with honors in Physics, University of Miami, Miami, Fl. USA.

RESEARCH INTERESTS:

Validation of remote sensing data in Coastal areas
Application of high resolution remote sensing and models to coastal areas. Includes identification of
climate signals and development of monitoring methodologies.
Connections of Earth's Water Cycle between land and ocean

PROFESSIONAL EXPERIENCE:

2016 –   Appointed guest editor of Remote Sensing for Special Issue of Remote Sensing of Sea Surface
        Temperature data. Issue was published as a book for Remote Sensing. Appointed also as
        Associate Editor.
2011-   Appointed Scientist for Sea Surface Salinity for the Physical Oceanography   Distributed Active
        Archive Center.
2011-   Asked to serve on the Pacific Climate Information System (PaCIS) Steering Committee
2010-   Appointed guest editor for special Deep Sea Research Issue on Satellite Oceanography and
        Climate
2008-   Served as NASA representative to the Data Management and Communications Steering
        Committee
2003-2008 Adjunct Faculty in Earth Science at Azusa Pacific University
2002-   Project Scientist for Sea Surface Temperature of the Physical Oceanography Distributed Active
        Archive Center.

1993- 2002 Deputy Task Scientist for the Physical Oceanography Distributed Active
        Archive Center (PODAAC).

1993-1994 Visiting Scientist, Institute of Marine Science, Barcelona, Spain. Spanish Grant to apply remote
        sensing techniques to study the Mediterranean
1987-1991 Doctoral Student University of Southern California, Los Angeles, Ca.
        Research on the long-period variability of the Gulf Stream
        using remote sensing data. Use of statistical modeling to determine the
        space-time scales of the Gulf Stream.
1984-present Jet Propulsion Laboratory, California Institute of
        Technology, Pasadena, Ca, USA
        Research Scientist. Key Staff
1980-1983 Graduate School of Oceanography, University of Rhode
        Island, Narragansett,RI, USA
        Graduate research assistantship to study Gulf Stream using satellite and
        inverted echo sounder data, including work in time series analysis.
        Experience in collecting in-situ and hydrographic data during three research cruises.

PROFESSIONAL ASSOCIATIONS:

        Member of American Geophysical Union
        Member of American Meteorological Society
        Member of Oceanography Society

TEACHING EXPERIENCE:

 2018- Mentored students and professors at Spelman College through the Historical Black Colleges and
    Universities (HBCU) program.

 2017-Supported Sabbatical of Profesor Jose Gomez-Valdes from the Physical Oceanography Department, Center
    for Scientific Research and Higher Education at Ensenada, Ensenada, Mexico (CICESE)

2016-Mentored post-doctoral student Hector Salvador Torres from Ensenada, Mexico

2008-2011 Adjunct Faculty in Earth Science at Azusa Pacific University

1993-1995 Member of two doctoral committees: Elisa Garcia-Gorriz, Catherine Bouzinac
        Advisor for post-doctoral studies for Dr. Elisa Garcia-Gorriz.   Studies concentrated on using
        Altimetry and SST data in the Mediterranean.

1996-Developed and taught satellite oceanography graduate level course at the University of the
        Gran Canary, Canary Islands, Spain. Course taught in Spanish.

        Delivered several keynote and outreach presentations in support of the outreach programs at the
        Jet Propulsion Laboratory. Included presentations on missions such as the NASA Aquarius Project
        as well joint programs between the Cal State University System and NASA.

AWARDS and Honors:

        JPL Bonus Award for support of Aquarius Project.
        NASA MANNED FLIGHT AWARENESS PROGRAM in recognition
        of excellence and support of the NASA manned space program and its
        mission payloads.

Who's Who in Science and Engineering
NASA Group Achievement Award for implementation of the Global Data Assembly Center
National Ocean Partnership Award for Excellence
NASA Group Achievement Award for the Physical Oceanography Distributed Active Archive Center.
National Ocean Partnership Award for excellence supporting joint programs between NASA and NOAA.

FOREIGN LANGUAGES:

Fluent in Spanish and English. Travel knowledge of French

SERVICE ACTIVITIES:

President Glendale Sunrise Rotary Club
President JPL Ski Club 1984-1987
Big Brothers of LA
Chaired Rotary Youth Leadership Awards Camp (RYLA) for Rotary District 5260
Elder Glendale Presbyterian Church

PERSONAL:

Born in Cuba
Citizen of the United States

RECENT CONFERENCE PRESENTATIONS:

Co-chaired meeting of the Group for High Resolution Sea Surface Temperature Users Symposium

Co-Chaired Session on Development and Application of Ocean Climate Data Records From Space, 2006, Ocean Science Meeting, Honolulu, Hawaii

Co-Chaired Session on Ocean Climate Data Records at AGU 2007 Joint Assembly in Acapulco Mexico

Seasonal to Interannual Variability of Sea Surface Temperatures in the Gulf of Mexico, presented at AGU 2007 Joint Assembly

Multi-Sensor Satellite Analysis of Upper Ocean Response Before and After Coastally Trapped Disturbances, presented at AGU 2007 Joint Assembly

Co-chaired session on the application of Remote Sensing to Coastal Regions at the Ocean Science 2016 Meeting

Co-chaired Session at the American Geophysical Union Ocean Science 2018 Meeting on Application of Remote Sensing to Coastal Regions.

Selected PUBLICATIONS:

1. Vazquez-Cuervo, J. and J. Gomez-Valdes, 2018, SMAP and CalCOFI Observe Freshening during the 2014-2016 Northeast Pacific Warm Anomaly, Remote Sensing, 10 (11), DOI: 10.3390/rs10111716

2. Vqzquez-Cuervo, J., S. Fournier, B. Dzwonkowski and J. T. Reager, 2018, Intercomparison of In-Situ and Remote Sensing Salinity Products in the Gulf of Mexico, a River-Influenced System, Remote Sensing, 10 (10), DOI: 10.3390/rs10101590.

3. Chin, T. M., Vazquez-Cuervo, J. and E. M. Armstrong, 2017, A multi-scale high-resolution analysis of global sea surface temperature, Remote Sensing of Environment, 200, 154-169, DOI: 10.1016/j.rse.2017.07.029

4. Relationship between SST gradients and upwelling off Peru and Chile: Model/Satellite Data Analysis, **J.Vazquez-Cuervo**, B. Dewitte, H. Torres, D. Menemenlis, T.M. Chin, E.M. Armstrong, 2017. International Journal of Remote Sensing. 38 (23), 6599-6622, doi: 10.1080/01431161.2017.1362130.

5. Evaluation of the Multi-Scale Ultra-High Resolution (MUR) Analysis of Lake Surface Temperature, E. Crosman, **J. Vazquez-Cuervo**, 2017, T. M. Chin 9, (7), doi: 10.3390/rs9070723.

6. Evaluation of the Multi-Scale Ultra-High Resolution (MUR) Analysis of Lake Surface Temperature, E. Crosman, **J. Vazquez-Cuervo**, E. M. Armstrong, Remote Sensing of Environment, 200, 154-169, doi: 10.1016/j.rse.2017.07.029.

7. Sensitivity of Ocean Surface Salinity Measurements From Spaceborne L-Band Radiometers to Ancillary Sea Surface Temperature, T. F. Meissner, Wentz, J. Scott, **J. Vazquez-Cuervo**, 2016, IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, 54, (12), 7105-7111, doi: 10.1109/TGRS.2016.2596100.

8. SMAP observes flooding from land to sea: The Texas event of 2015, S. Fournier, S., J. T. Reager, T. Lee, **J. Vazquez-Cuervo**, C. H. David, M. M. Geirach, 2016, Geophysical Research Letters, 43, (19),10338-10346, doi: 10.1002/2016GL070821.

9. On "Gridless" Interpolation and Subgrid Data Density, T. M, Chin, **J. Vazquez-Cuervo**, E. M. Armstrong, 2014, Journal of Atmospheric and Oceanic Technology, 31, (7),1642-1652, doi: 10.1175/JTECH-D-13-00219.1

10. Gierach, M., **J. Vazquez-Cuervo**, T. Lee, and V. Tsontos, 2013: Aquarius and SMOS detect effects of an extreme Mississippi river, Q1 flooding event in the Gulf of Mexico, accepted Geophysical Research Letters.

11. **Vazquez-Cuervo, J.**, B. Dewitte, T. M. Chin, E. M. Armstrong, S. Purca, and E. Alburqueque. 2013. An Analysis of SST Gradients off the Peruvian Coast: The impact of going to higher resolution. Remote Sensing of the Environment, 131, 76-84. doi:10.1016/j.rse.2012.12.010.

12. Armstrong, E. M., G. Wagner, **J. Vazquez-Cuervo**, T. M. Chin, 2012: Comparisons of regional satellite sea surface temperature gradients derived from MODIS and AVHRR sensors, International Journal of Remote Sensing, 33:21, 6639-665.

13. Garcia-Soto, C. **J. Vazquez-Cuervo**, P. Clemente-Colon, and F. Hernandez, Satellite Oceanography and Climate Change: Introduction to Special Issue as Guest Editor, 2012: Deep Sea Research Part II: Satellite Oceanography and Climate Change, 77-80, 1-9.

14. Dash, P., A. Ignatov, M. Martin, C. Donlon, B. Brasnett, R. W. Reynolds, V. Banzon, H. Beggs, J.-F. Cayula, Y. Chao, R. Grumbin, E. Maturi, A. Harris, J.

Mittaz, J. Sapper, T. M. Chin, **J. Vazquez-Cuervo**, E.M. Armstrong, C. Gentemann, J. Cummings, J-F Piolle, E. Autret, J. Roberts-Jones, S Ishizaki, J. L. Hoyer, and D. Poulter, Group for High Resolution Sea Surface Temperature (GHRSST) analysis fields inter-comparisons-Part 2 Near Real Time web-based level 4 quality monitor (SQUAM), 2012: Deep Sea Research Part II: Satellite Oceanography and Climate Change, 77-80, 31-43.

15. Dewitte, B. **J.Vazquez-Cuervo**, K.Goubanova, S.Illig, K.Takahashi, G.Cambon, S.Purca, D. Correa, D.Gutierrez, A.Sifeddine, L.Ortlieb, Change in El Nino flavours over 1958–2008: Implications for the long-term trend of the upwelling off Peru, 2012: Deep Sea Research Part II: Satellite Oceanography and Climate Change, 77-80, 143-156.

16. **Vazquez-Cuervo**, J., E. M. Armstrong, K. S. Casey, R. Evans, K. Kilpatrick, 2010: Comparison between the Pathfinder Versions 5.0 and 4.1 Sea Surface Temperature Datasets: A Case Study for High Resolution. J. Climate, 23, 1047–1059.

17. Freeman A, V. Zlotnicki, T. Liu, B. Holt, R. Kwok, S. Yueh, **J. Vazquez-Cuervo**, D. Siege, G. Lagerloef,2010. Ocean Measurements from Space in 2025, Oceanography, 23 (4).

18. Donlon C. J. , K. S . Casey, I. S . Robinson , C. L . Gentemann , R. W. Reynolds , I. Barton , O. Arino , J. Stark, N. Rayner , P. LeBorgne , D. Poulter , **J. Vazquez-Cuervo**, E. Armstrong , H. Beggs , D. Llewellyn- Jones , P. J . Minnett, C. J . Merchant, and R. Evans. 2009: The GODAE High-Resolution Sea Surface Temperature Pilot Project, Oceanography, 22 (3).

19. **Vazquez-Cuervo, J.**, E. Armstrong, K. Casey, R. Evans, and K. Kilpatrick, 2009: A Comparison between Version 5 and Version 4.1 of the Pathfinder Sea Surface Temperature Data Sets, "A Case Study for High Resolution, Accepted to Journal of Climate.

20. Donlon, C., I. Robinson, K Casey, **J Vazquez-Cuervo**, E. Armstrong, O Arino, C Gentemann, D May, P. Le Borgne, J Piolle, I Barton, H Beggs, D. J. S. Poulter, C. J. Merchant, A. Bingham, S Heinz, A Harris, G Wick, B Emery, P Minnett, R Evans, D Lellewylln-Jones, C. Mutlow, R. Reynolds, H. Kawamura, and N. Raynor, in press Bulletin of the American Meteorological Society, 2007: The Global Ocean Data Assimilation Experiment (GODAE) High Resolution Sea Surface Temperature Pilot Project, Bulletin of the American Meteorological Society.

21. **Vazquez-Cuervo, J**. and E. Armstrong, A. Harris, 2004: The Effect of Aerosols and Clouds on the Retrieval of Infrared Sea Surface Temperatures, Journal of Climate, (11), 3921-3933.

22. Armstrong, E. M. and **J. Vazquez-Cuervo**, 2001: A New Global Satellite-Based Sea Surface Temperature Climatology, Geophysical Research Letters, 28 (22), 4199-4202.

23. **Vazquez-Cuervo, J.**, and R. Sumgaysay, 2001: "Comparisons of SSTs as derived from the European Remote Sensing Satellite and the NOAA/NASA AVHRR Oceans Pathfinder Data Set", Bulletin of the American Meteorological Society, 82 (5), 925-944.

24. Garcia-Gorriz, E., **J. Vazquez**, 1999: Ocean-Atmosphere Coupling in the Mediterranean, International Journal of Remote Sensing, 20 (11).

25. Viudez, A., Haney, B. and **J. Vazquez-Cuervo**, 1999: The deflection of baroclinic jets near the coast: A Case Study in the Alboran Sea, Journal of Physical Oceanography, 28 (2).

26. Bouzinac, C., **J. Vazquez**, C. Millot and J. Font, 1998: CEOF Analysis of ERS-1 and TOPEX/Poseidon Combined Altimetric Data in the Region of the Algerian Current, Journal of Geophysical research.

27. **Vazquez, J.**, Font, J., and Martinez-Benjamin, J.J., 1996: Observations on the circulation in the Alboran Sea using ERS1 altimetry and AVHRR data, Journal of Physical Oceanography.

28. Smith, E. A., **J., Vazquez**, A. Van Tran, and R. Sumagaysay, 1995: A Satellite-Derived Sea Sea Surface Temperature Data Set for Global Studies from the NOAA/NASA Pathfinder Program, EOS.

29. **Vazquez, J.**, A V. Tran, R. Sumagaysay, E. Smith, S. Digby, and K. Perry, 1994, NOAA/NASA AVHRR Oceans Pathfinder Sea Surface Temperature Data Set User's Handbook.

30. **Vazquez, J.** 1993: Observations on the long-period variability of the Gulf Stream, Journal of Geophysical Research., 98(c11).

31. Dickey, T. Granata, J. Marra, C. Langdon, J. Wiggert, Z. Chai, M. Hamilton, **J. Vazquez**, M. Stramska, R. Gidigare and D. Siegel, 1993. Seasonal Variability of Bio-optical and Physical Properties in the Sargasso Sea, Journal of Geophysical Research, 98(c1).

32. Fu, L.-L., **J. Vazquez** and C. Perigaud, 1991. "Fitting Dynamic Models to the GEOSAT sea level observations in the Tropical Pacific Ocean. Part 1: A free wave model, Journal of Physical Oceanography, 21(6).

33. **Vazquez, J.**, V. Zlotnicki and L.-L. Fu, 1990. Sea level variabilities in the Gulf Stream between Cape Hatteras and 50 degrees West-a GEOSAT Study, Journal of Geophysical Research, 95 (C10).

34. Fu, L.-L. and **J. Vazquez**, 1988. On correcting radial orbit errors for an altimetric satellite using cross-over analysis, Journal of Atmospheric and Oceanic Technology, 5 (3).

35. Fu, L.-L. and **J. Vazquez**, 1987. Seasonal variability of the Gulf Stream from satellite altimetry, Journal of Geophysical Research, 92 (C1), 749-754.

36. **Vazquez, J.** and D. R. Watts, 1985. Observations on the propagation, growth, and predictability of Gulf Stream meanders. Journal of Geophysical Research, 90(C4), 7143-7151.