

Yuko M. Okumura

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Education

- 2005 - Ph.D. (Meteorology), University of Hawaii, Honolulu, Hawaii
Dissertation: "Ocean-atmosphere interaction in the seasonal to decadal variations of tropical Atlantic climate", Committee: Shang-Ping Xie (chair), Kevin Hamilton, Julian McCreary, Axel Timmermann, and Bing Wang
- 2000 - M.S. (Climate Dynamics), Hokkaido University, Sapporo, Japan
Thesis: "Ocean-atmosphere and tropical-extratropical interactions in the pan-Atlantic decadal oscillations"
- 1998 - B.S. (Geophysics), Hokkaido University, Sapporo, Japan
Thesis: "Review of theoretical and observational studies on teleconnections associated with El Nino-Southern Oscillation"
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Research Interests

- Climate variability and change
 - Large-scale ocean-atmosphere interaction
 - Atmospheric teleconnection
 - Paleoclimate and thermohaline circulation
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Appointments

- Research Associate, Institute for Geophysics, Jackson School of Geosciences, The University of Texas at Austin, Austin, Texas, September 2011-Present
- Visiting Assistant Researcher, International Pacific Research Center, University of Hawaii, Honolulu, Hawaii, June 2011-August 2011
- Visiting Scientist, Climate and Global Dynamics Division, National Center for Atmospheric Research, Boulder, Colorado, September 2009 - December 2011
- NOAA Climate and Global Change Postdoctoral Fellow, UCAR Visiting Scientist Program and National Center for Atmospheric Research, Boulder, Colorado, September 2006-September 2009
- Postdoctoral Fellow, International Pacific Research Center, University of Hawaii, Honolulu, Hawaii, January 2006-July 2006
- Research Assistant, Department of Meteorology, University of Hawaii, Honolulu, Hawaii, January 2000-December 2005

Honor

- Editor's Award, *Journal of Climate*, American Meteorological Society, 2011
- NOAA Climate and Global Change Postdoctoral Fellowship, 2006-2009

Research Grants Awarded

“Modeling and observational study of decadal ENSO modulation and tropical Pacific decadal variability”, PI Yuko M. Okumura, NSF AGS: \$482K for FY13-16

“Applying ice cores, instrumental records and climate modeling towards a mechanistic understanding of Antarctic climate variability on interannual to multidecadal timescales”, PI Clara Deser, co-PIs Yuko Okumura and David Schneider, NSF ANT: \$495K for FY09-FY11

Publications

- 1) Okumura, Y. M., 2013: Origins of tropical Pacific decadal variability: Role of stochastic atmospheric forcing from the South Pacific. *J. Climate*, **26**, 9791-9796.
- 2) Hereid, K. A., T. M. Quinn, and Y. M. Okumura, 2013: Assessing spatial variability in ENSO event detection skill using coral geochemistry. *Paleoceanography*, **28**, 14-23.
- 3) Tokinaga, H., S.-P. Xie, C. Deser, Y. Kosaka, and Y. M. Okumura, 2012: Slowdown of the Walker circulation driven by tropical Indo-Pacific warming. *Nature*, **491**, 439-443.
- 4) Okumura, Y. M., D. Schneider, C. Deser, and R. Wilson, 2012: Decadal-interdecadal climate variability over Antarctica and linkages to the tropics: Analysis of ice core, instrumental and tropical proxy data. *J. Climate*, **25**, 7421-7441.
- 5) Schneider, D. P., Y. Okumura, and C. Deser, 2012: Observed Antarctic interannual climate variability and tropical linkages, *J. Climate*, **25**, 4048-4066.
- 6) Grodsky, S. A., J. A. Carton, S. Nigam, and Y. Okumura, 2012: Tropical Atlantic biases in CCSM4. *J. Climate*, **25**, 3684-3701.
- 7) Deser, C., A. S. Phillips, R. A. Tomas, Y. Okumura, M. A. Alexander, A. Capotondi, J. D. Scott, Y.-O. Kwon, and M. Ohba, 2012: ENSO and Pacific decadal variability in a 1300-year control integration of Community Climate System Model Version 4. *J. Climate*, **25**, 2622-2651.
- 8) Chowdary, J. S., S.-P. Xie, H. Tokinaga, Y. M. Okumura, H. Kubota, N. C. Johnson, and X.-T. Zheng, 2012: Inter-decadal variations in ENSO teleconnection to the Indo-western Pacific for 1870-2007. *J. Climate*, **25**, 1722-1744.
- 9) Tokinaga, H., S.-P. Xie, A. Timmermann, S. McGregor, T. Ogata, H. Kubota, and Y. M. Okumura, 2012: Regional patterns of tropical Indo-Pacific climate change: Evidence of the Walker circulation weakening. *J. Climate*, **25**, 1689-1710.
- 10) Schneider, D. P., C. Deser, and Y. Okumura, 2012: An assessment and interpretation of the observed warming of West Antarctica in the austral spring. *Climate Dynamics*, **38**, 323-347.
- 11) Okumura, Y. M., M. Ohba, C. Deser, and H. Ueda, 2011: A proposed mechanism for asymmetric duration of El Niño and La Niña. *J. Climate*, **24**, 3822-3829.
- 12) Okumura, Y. M., and C. Deser, 2010: Asymmetry in the duration of El Niño and La Niña. *J. Climate*, **23**, 5826-5843.

- 13) Hodson, D. L. R., R. T. Sutton, C. Cassou, N. Keenlyside, Y. Okumura, and T. Zhou, 2010: Climate impacts of recent multidecadal changes in Atlantic Ocean sea surface temperature: A multimodel comparison. *Climate Dynamics*, **34**, 1041-1058.
- 14) Zhou, T., R. Yu, J. Zhang, H. Drange, C. Cassou, C. Deser, D. L. R. Hodson, E. SanchezGomez, J. Li, N. Keenlyside, X. Xin, and Y. Okumura, 2009: Why the western Pacific subtropical high has extended westward since the late 1970s. *J. Climate*, **22**, 2199-2215.
- 15) Timmermann, A., L. Menviel, Y. Okumura, A. Schilla, U. Merkel, O. Timm, A. Hu, B. Otto-Bliesner, and M. Schulz, 2009: Towards a quantitative understanding of millennial-scale Antarctic warming events. *Quaternary Science Reviews*, **29**, 74-85, doi: 10.1016/j.quascirev.2009.06.021.
- 16) Okumura, Y. M., C. Deser, A. Hu, A. Timmermann, and S.-P. Xie, 2009: North Pacific climate response to freshwater forcing in the subarctic North Atlantic: Oceanic and atmospheric pathways. *J. Climate*, **22**, 1424-1445.
- 17) SanchezGomez E., C. Cassou, D. L. R. Hodson, N. Keenlyside, Y. Okumura, and T. Zhou 2008: North Atlantic weather regimes response to Indian-western Pacific Ocean warming: A multi-model study. *Geophys. Res. Lett.*, **35**, L15706, doi:10.1029/2008GL034345.
- 18) Xie, S.-P., Y. Okumura, T. Miyama, and A. Timmermann, 2008: Influences of Atlantic climate change on the tropical Pacific via the Central American Isthmus. *J. Climate*, **21**, 3914–3928.
- 19) Timmermann, A., Y. Okumura, S.-I. An, A. Clement, B. Dong, E. Guilyardi, A. Hu, J. H. Jungclaus, M. Renold, T. F. Stocker, R. J. Stouffer, R. Sutton, S.-P. Xie, and J. Yin, 2007: The influence of a weakening of the Atlantic meridional overturning circulation on ENSO. *J. Climate*, **20**, 4899-4919.
- 20) Okumura, Y., and S.-P. Xie, 2006: Some overlooked features of tropical Atlantic climate leading to a new Nino-like phenomenon. *J. Climate*, **19**, 5859-5874.
- 21) Okumura, Y., and S.-P. Xie, 2004: Interaction of the Atlantic equatorial cold tongue and the African monsoon. *J. Climate*, **17**, 3589-3602.
- 22) Okumura, Y., S.-P. Xie, A. Numaguti, and Y. Tanimoto, 2001: Tropical Atlantic air-sea interaction and its influence on the NAO. *Geophys. Res. Lett.*, **28**, 1507-1510.

Community Service

- Member, American Meteorological Society Committee on Air-Sea Interaction, 2008-2012
- Organizer, 18th AMS Conference on Air-Sea Interaction, Boston, Massachusetts, 2012
- Co-chair and Session Chair, 17th AMS Conference on Air-Sea Interaction, Annapolis, Maryland, 2010
- Reviews for *NSF proposals*, *NOAA proposal*, *Nature Climate Change*, *Journal of Climate*, *Geophysical Research Letters*, *Journal of Geophysical Research*, *Climate Dynamics*, *International Journal of Climatology*, *Paleoceanography*, *Journal of Marine Research*, *Journal of the Meteorological Society of Japan*, and *AGU Monograph*

Internal Committee and Service

- UTIG Seminar Committee, 2013-
 - Selection Committee, UTIG Ewing/Worzel and Gale White Fellowships, 2012-
 - Selection Committee, Jackson School Postdoctoral Fellowship, 2012
 - Judge, the 1st Annual Jackson School Research Symposium Poster Contest, 2012
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Professional Memberships

- American Meteorological Society
 - American Geophysical Union
 - Meteorological Society of Japan
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Presentations

Invited Talks

- “Origins of Tropical Pacific Decadal Variability: Role of Stochastic Atmospheric Forcing from the South Pacific”, AOGS 10th Annual Meeting, Brisbane, Australia, June 2013
- “Atlantic Niño II: Phenomena and Implications for Climate Predictability”, AMMA-Ocean/TACE/PIRATA Meeting, Karlsruhe, Germany, November 2007
- “Shutdown of the Atlantic thermohaline circulation and its impact on North Pacific climate”, 12th Annual CCSM Workshop, Breckenridge, Colorado, June 2007

Other Conference Presentations

- CESM Climate Variability and Change Working Group Meeting, Boulder, Colorado, March 2013
- AMS 93rd Annual Meeting, Austin, TX, January 2013
- AGU Fall Meeting, San Francisco, California, December 2012
- WCRP Open Science Conference, Denver, Colorado, October 2011
- West Antarctic Ice Sheet Workshop, Loveland, Colorado, September 2011
- AMS 17th Conference on Air-Sea Interaction, Annapolis, Maryland, September 2010
- Ocean Science Meeting, Portland, Oregon, February 2010
- 8th NOAA Summer Institute, Steamboat Springs, Colorado, July 2008
- Junior Faculty Forum, Boulder, Colorado, July 2008
- 13th Annual CCSM Workshop, Breckenridge, Colorado, June 2008
- AMS 15th Conference on Air-Sea Interaction, Portland, Oregon, August 2007
- Ocean Science Meeting, Honolulu, Hawaii, February 2006
- AMS 86th Annual Meeting, Atlanta, Georgia, January 2006
- U.S. CLIVAR Atlantic Science Conference, Miami, Florida, February 2005
- MSJ Autumn Meeting, Fukuoka, Japan, October 2004
- AGU Joint Assembly, Montreal, Canada, May 2004
- IUGG General Assembly, Sapporo, Japan, July 2003
- U.S. CLIVAR Atlantic Science Conference, Boulder, Colorado, June 2001
- Chapman Conference on the North Atlantic Oscillation, Orense, Spain, December 2000
- AMS 10th Conference on Air-Sea Interaction, Fort Lauderdale, Florida, May 2000

Seminars/Symposium/Lecture

- Climate Forum, University of Texas at Austin, Austin, Texas, April 2013

- Climate and Global Dynamics Division Seminar, NCAR, Boulder, Colorado, October 2011
- International Pacific Research Center Seminar, University of Hawaii, Honolulu, Hawaii, May 2011
- Physical Oceanography Seminar, WHOI, Woods Hole, Massachusetts, April 2011
- Institute for Geophysics Seminar, University of Texas at Austin, Austin, Texas, April 2011
- Climate and Global Dynamics Division Research Report, NCAR, Boulder, Colorado, January 2010
- Climate and Global Dynamics Division Research Report, NCAR, Boulder, Colorado, April 2006
- Climate and Global Dynamics Division Seminar, NCAR, Boulder, Colorado, November 2006
- Guest lecture, Colorado State University, Fort Collins, Colorado, October 2006
- Annual Symposium, International Pacific Research Center, Honolulu, Hawaii, May 2006
- Meteorology Department Seminar, University of Hawaii, Honolulu, Hawaii, October 2004
- Meteorology Department Seminar, University of Hawaii, Honolulu, Hawaii, March 2002