

Curriculum Vitae

Allan J. Clarke

Adrian E. Gill Professor of Oceanography
Dept. Earth, Ocean & Atmospheric Science (EOAS)
Florida State University
Tallahassee, FL 32306-4320
aclarke@fsu.edu
tel(850)644-2240
fax(850)644-2581



Education

1976* Ph.D., Department of Applied Mathematics and Theoretical Physics,
Cambridge University, England
1972 First Class Honours B.Sc. in Applied Mathematics, Adelaide, Australia

Employment

1990-present Professor, Department of Oceanography (now EOAS), Florida State University
1984-90 Associate Professor, Department of Oceanography, Florida State University
1981-84 Assistant Professor, Department of Oceanography, Florida State University
1978-81 Research Associate (rank corresponding to Research Assistant Professor),
Department of Oceanography, University of Washington
1976-77 Post Doc. Res. Associate, Dept. of Earth & Planetary Sciences, MIT.

External Activities

Summers Guest Investigator, Woods Hole Oceanographic Institution
1979-80,82,85-87,89-96
Spring 1988 Visiting Scientist, Commonwealth Scientific and Industrial Research
Organization (CSIRO), Australia
Summers 1983-84 Visiting Scientist, CSIRO, Australia
Summer 2000 Lead Instructor: Australian Summer School on El Niño/Southern Oscillation. Flinders
University, Adelaide, Australia
Winter 2016 Invited Guest Lecturer, Oceanic Circulation and Climate Change Winter School, South
China Sea Institute of Oceanology, Guangzhou, China, 14th – 25th November 2016

Honors and Awards

1968-71 Commonwealth University Scholarship
1972-75 George Murray Overseas Scholarship
1974 Woods Hole Summer Fellowship in Geophysical Fluid Dynamics
1974 J.T. Knight Prize, Cambridge University
1984 Developing Scholar Award, Florida State University
1995-96 Teaching Incentive Program (TIP) Award, Florida State University
1999 Professional Excellence Program (PEP) Award, Florida State University
2000 Graduate Teaching Award, Florida State University
2000 Fellow, Royal Meteorological Society
2001 Fellow, American Meteorological Society
2001 Distinguished Research Professor, Florida State University
2002 The Adrian E. Gill Professor of Oceanography
2011 Nominated for Distinguished Teaching Award, Florida State University
2012 Sverdrup Gold Medal, American Meteorological Society
2014 Nominated for Distinguished Teaching Award, Florida State University
2015 Fellow, American Geophysical Union

**PhD work was completed in 1976 but official graduation (in absentia when I was at MIT as a postdoc) was in 1977.*

Service

Chief guest editor for a special *Journal of Marine Research* issue honoring Professor Melvin E. Stern, Member of the National Academy of Sciences. [*J. Mar. Res.* **69**(4-6), 2011].

Research Grants

The Effect of Continental Shelves on Tides in the amount of \$45,518 from NSF (OCE-79-97042) for the period 7/15/79 - 7/14/80.

Equatorial Dynamics in the amount of \$15,966 from NOAA (JISAO) for the period 4/15/80 - 8/15/80.

A Study of Some Aspects of Southern Oscillation Dynamics in the amount of \$20,944 from NASA for the period 9/1/81 - 8/31/82.

The Nonlinear Generation of Long Period Tides on Continental Shelves in the amount of \$98,651 from NSF (OCE-80-07422 and OCE-81-18051) for the period 7/1/80 - 4/30/84.

Wind-Driven Motions on Continental Shelves with Application to the West Florida Shelf in the amount of \$82,000 from NSF (OCE-83-00029) for the period 3/15/83 - 8/31/85.

Numerical Calculations for the Australian Coastal Experiment in the amount of \$9,986 from CSIRO for the period 2/27/84 - 2/26/85.

Wind-Driven Motions on Continental Shelves in the Presence of Sloping Mean Density Surfaces in the amount of \$248,000 from NSF (OCE-85-00669) for the period 3/15/85 - 8/31/88.

An Observational and Theoretical Study of the Effect of Continental Shelf Geometry on Shelf Sea Level and Current Fluctuations in the amount of \$110,436 from NSF (OCE-85-15979) for the period 12/1/85 - 5/31/89.

Seasonal and Interannual Continental Shelf and Slope Flows in the amount of \$284,000 from NSF (OCE-87-23157) for the period 4/1/88 - 3/31/91.

Western Pacific Reflection and ENSO Dynamics in the amount of \$394,000 from NSF (OCE-90-12058) for the period 10/1/90-9/30/94.

An Analysis of Atlantic and Indian Ocean Low Frequency Sea Level Variability in the amount of \$160,940 from NOAA for the period 10/1/91-6/30/94.

The Biennial Oscillation and El Niño/Southern Oscillation (ENSO) Dynamics in the amount of \$650,000 from NSF (OCE-93-01794) for the period 8/1/93-7/31/97.

Using Dynamics and Observations to Assess and Understand Sea Level Rise and Low Frequency Currents on Eastern Ocean Boundaries in the amount of \$195,000 from NSF (OCE-94-15644) for the period 12/15/94-11/30/97.

El Niño/Southern Oscillation Dynamics and Decadal Variability in the amount of \$398,000 from NSF (OCE-96-17304) for the period 04/01/97-03/31/2000.

Biennial Variability and the Spring Persistence Barrier in ENSO in the amount of \$605,000 from NSF (OCE-98-18650) for the period 03/01/99-02/28/2004.

Observations and Dynamics of Interannual Coastal Flows in the amount of \$808,834 from NSF (OCE-0220563) for the period 09/01/02-08/31/07.

Observations, Physics and Modeling of the Phase-Locking of El Niño/Southern Oscillation (ENSO) to the Calendar Year (with K.Y. Kim) in the amount of \$352,968 from NSF (ATM-0326799) for the period 09/01/03-08/31/07.

Using Satellite Data to Understand the Upper Ocean Heat Content in the Equatorial Pacific (fellowship for G. Colantuono/D. Carlson/E. Maksimova) in the amount of \$72,000 from NASA for the period 09/15/04-09/14/09.

Physical and Biological Monitoring of Karenia Red Tides in the Big Bend Area, Florida (with M. Sullivan) in the amount of \$150,000 from the Fish and Wildlife Research Institute for the period 11/14/06-06/15/07.

Interannual and Decadal Variability in the Equatorial Pacific Atmosphere and Ocean in the amount of \$334,307 from NSF (ATM-0623402) for the period 12/15/06-11/30/09.

Biological and Physical Monitoring of Karenia Red Tides in the Big Bend Area, Florida in the amount of \$82,484 from the Fish and Wildlife Research Institute for the period 07/25/07-06/30/08.

Biological and Physical Monitoring of Karenia Red Tides in the Big Bend Area, Florida 2008-2009 (DO1161330) in the amount of \$105,000 from the Fish and Wildlife Research Institute for the period 10/01/08-06/30/09.

Equatorial Wave Reflection and Equatorial Warm Water Volume, in the amount of \$400,000 from NSF (OCE-0850749) for the period 06/01/09-05/31/13.

An Operational Prediction Scheme For Florida's Winter Temperatures, in the amount of \$10,000 from the Florida Climate Institute 02/24/11.

A long-term, interdisciplinary study of Deep-Sea-to-coast connectivity in the northeastern Gulf of Mexico, from the Consortium for Ocean Leadership (Deep-C award SA 12-12/GoMRI-008) (PI Eric Chassignet) in the amount of \$383,747 for the period 10/01/11-12/31/14.

Understanding observed equatorial Pacific, Indian and Atlantic Ocean Interannual Flow using Theory and High Resolution ECCO2 model results, in the amount of \$485,424 from NSF, (OCE-1155257) (Co-PI Lucia Bunge) for the period 02/15/12-01/15/15.

The salinity-driven low-frequency equatorial flow, in the amount of \$338,572 from NASA for the period 07/01/14-06/30/17.

The transport of oil to the coast in the top centimeter of the water column, in the amount \$432,920 from NAS for the period 12/04/15-6/03/18.

Rainfall, Salinity and Interannual Flow in the Equatorial and Near-Equatorial Eastern Pacific, in the amount \$533,591 from NASA for the period 04/26/17-04/25/2020.

Understanding the low frequency dynamics of the throughflow from the Pacific to the Arctic, in the amount \$499,966 from NSF for the period 01/15/18-12/31/20.

Other Funding

Northeastern Gulf of Mexico Physical Oceanography Workshop, Florida State University, April 5-7, 1994. \$40,000 was provided by the MMS (Cooperative Agreement 14-35-0001-30712) for the period 9/27/93-12/27/94. An additional \$6,000 budget (SRAD funds) was contributed toward workshop expenses by Dr. W. Burnett, Chairman, Oceanography Department and Dr. L. Abele, Dean, College of Arts and Sciences, Florida State University.

Refereed Publications

[My Hirsch h-index = 33, based on the Web of Science and 35 based on Google Scholar. The h index is used by major scientific organizations to evaluate both the productivity and quality of a scholar's research. A scholar with an h index of 30 has published 30 papers, each of which has been cited at least 30 times.]

1. Gill, A. E., and A. J. Clarke, 1974: Wind-induced upwelling, coastal currents and sea-level changes. *Deep-Sea Res.*, **21**, 325-345.
2. Clarke, A. J., 1977: Observational and numerical evidence for wind-forced coastally trapped long waves. *J. Phys. Oceanogr.*, **7**(2), 231-247.
3. Clarke, A. J., 1977: Wind-forced linear and nonlinear Kelvin waves along an irregular coastline. *J. Fluid Mech.*, **83**, 337-348.
4. Clarke, A. J., 1978: On wind-driven quasi-geostrophic water movements near fast-ice edges. *Deep-Sea Res.*, **25**, 41-51.

5. Clarke, A. J., 1979: On the generation of the seasonal coastal upwelling in the Gulf of Guinea. *J. Geophys. Res.*, **84**(C7), 3743-3751.
6. Clarke, A. J., and D. S. Battisti, 1981: The effect of continental shelves on tides. *Deep-Sea Res. A*, **28**(7), 665-682.
7. Battisti, D. S., and A. J. Clarke, 1982: A simple method for estimating barotropic tidal currents on continental margins with specific application to the M₂ tide off the Atlantic and Pacific coasts of the United States. *J. Phys. Oceanogr.*, **12**, 8-16.
8. Battisti, D. S., and A. J. Clarke, 1982: Estimation of nearshore tidal currents on nonsmooth continental shelves. *J. Geophys. Res.*, **87**(C10), 7873-7878.
9. Clarke, A. J., 1982: Dynamics of large-scale, wind-driven variations in the Antarctic Circumpolar Current. *J. Phys. Oceanogr.*, **12**(10), 1092-1105.
10. Clarke, A. J., 1983: The reflection of equatorial waves from oceanic boundaries. *J. Phys. Oceanogr.*, **13**(7), 1193-1207.
11. Clarke, A. J., and D. S. Battisti, 1983: Identification of the fortnightly wave observed along the northern coast of the Gulf of Guinea. *J. Phys. Oceanogr.*, **13**, 2192-2200.
12. Clarke, A. J., and R.O.R.Y. Thompson, 1984: Large-scale wind driven ocean response in the Australian Coastal Experiment region. *J. Phys. Oceanogr.*, **14**(2), 338-352.
13. Clarke, A. J., and K. H. Brink, 1985: The response of stratified, frictional shelf and slope waters to fluctuating large-scale low-frequency wind forcing. *J. Phys. Oceanogr.*, **15**(4), 439-453.
14. Church, J. A., N. J. White, A. J. Clarke, H. W. Freeland, and R. L. Smith, 1986: Coastal- trapped waves on the East Australian Continental Shelf. Part II: Model verification. *J. Phys. Oceanogr.*, **16**(11), 1945-1957.
15. Clarke, A. J., and S. Van Gorder, 1986: A method for estimating wind-driven frictional, time-dependent, stratified shelf and slope water flow. *J. Phys. Oceanogr.*, **16**(6), 1013-1028.
16. Freeland, H. J., F.M. Boland, J. A. Church, A. J. Clarke, A. M. G. Forbes, A. Huyer, R. L. Smith, R.O.R.Y. Thompson, and N.J. White, 1986: The Australian Coastal Experiment: A search for coastal-trapped waves. *J. Phys. Oceanogr.*, **16**(7), 1230-1249.
17. Mitchum, G. T., and A. J. Clarke, 1986: The frictional nearshore response to forcing by synoptic scale winds. *J. Phys. Oceanogr.*, **16**(5), 934-946.
18. Mitchum, G. T., and A. J. Clarke, 1986: Evaluation of frictional, wind-forced long-wave theory on the west Florida shelf. *J. Phys. Oceanogr.*, **16**(6), 1029-1037.
19. Clarke, A. J., 1987: The origin of the coastal trapped waves observed during the Australian Coastal Experiment. *J. Phys. Oceanogr.*, **17**(11), 1847-1859.
20. Clarke, A. J., and M. Lopez, 1987: The influence of sloping mean density surfaces on low-frequency shelf water flow. *J. Phys. Oceanogr.*, **17**(4), 507-517.
21. Rocha C., C. A., and A. J. Clarke, 1987: Interaction of ocean tides through a narrow single strait and narrow multiple straits. *J. Phys. Oceanogr.*, **17**(12), 2203-2218.
22. Clarke, A. J., 1988: Inertial wind path and sea surface temperature patterns near the Gulf of Tehuantepec and Gulf of Papagayo. *J. Geophys. Res.*, **93**(C12), 15491-15501 and 15765-15766.
23. Lopez, M., and A. J. Clarke, 1989: The wind-driven shelf and slope water flow in terms of a local and a remote response. *J. Phys. Oceanogr.*, **19**(8), 1091-1101. [http://dx.doi.org/10.1175/1520-0485\(1989\)019<1091:TWDSAS>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1989)019<1091:TWDSAS>2.0.CO;2)
24. Clarke, A. J., 1989: Theoretical understanding of eastern ocean boundary poleward undercurrents. In *Poleward Flows along Eastern Ocean Boundaries*, ed. by S.J. Neshyba, Ch.N.K. Mooers, R.L. Smith, R.T. Barber, Springer-Verlag, pp. 26-39.

25. Clarke, A. J., 1990: Application of a frictional channel flow theory to flow in the Prince of Wales Channel, Torres Strait. *J. Phys. Oceanogr.*, **20**(6), 890-899. [http://dx.doi.org/10.1175/1520-0485\(1990\)020<0890:AOAFCF>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1990)020<0890:AOAFCF>2.0.CO;2)
26. Church, J. A., A. J. Clarke, N. J. White, H. J. Freeland, and R. L. Smith, 1990: Energy conservation in the Australian Coastal Experiment coastal-trapped wave calculations. *J. Phys. Oceanogr.*, **20**, 1113-1114. [http://dx.doi.org/10.1175/1520-0485\(1990\)020<1113:ECITAC>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1990)020<1113:ECITAC>2.0.CO;2)
27. Clarke, A. J., 1991: The dynamics of barotropic tides over the continental shelf and slope. In *Advances in Tidal Hydrodynamics*, ed. by B.B. Parker, John Wiley & Sons, Inc., pp. 79-108.
28. Clarke, A. J., 1991: On the reflection and transmission of low-frequency energy at the irregular western Pacific Ocean boundary. *J. Geophys. Res.: Oceans*, **96**(S01), 3289-3305.
29. Clarke, A. J., and C. Shi, 1991: Critical frequencies at ocean boundaries. *J. Geophys. Res.*, **96**(C6), 10731-10738. doi:10.1029/91JC00933, 1991.
30. Clarke, A. J., 1992: Low frequency reflection from a non-meridional eastern ocean boundary and the use of coastal sea level to monitor eastern Pacific equatorial Kelvin waves. *J. Phys. Oceanogr.*, **22**(2), 163-183. [http://dx.doi.org/10.1175/1520-0485\(1992\)022<0163:LFRFAN>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1992)022<0163:LFRFAN>2.0.CO;2)
31. Clarke, A. J., and X. Liu, 1993: Observations and dynamics of semiannual and annual sea levels near the eastern equatorial Indian Ocean boundary. *J. Phys. Oceanogr.*, **23**(2), 386-399. [http://dx.doi.org/10.1175/1520-0485\(1993\)023<0386:OADOSA>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1993)023<0386:OADOSA>2.0.CO;2)
32. López-Mariscal, M., and A. J. Clarke, 1993: On the influence of wind stress curl on low-frequency shelf water flow. *J. Phys. Oceanogr.*, **23**(12), 2717-2727. [http://dx.doi.org/10.1175/1520-0485\(1993\)023<2717:OTIOWS>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1993)023<2717:OTIOWS>2.0.CO;2)
33. Clarke, A. J., and S. Van Gorder, 1994: On ENSO coastal currents and sea levels. *J. Phys. Oceanogr.*, **24**(3), 661-680. [http://dx.doi.org/10.1175/1520-0485\(1994\)024<0661:OECCAS>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1994)024<0661:OECCAS>2.0.CO;2)
34. Li, B. and A. J. Clarke, 1994: An examination of some ENSO mechanisms using interannual sea level at the eastern and western equatorial boundaries and the zonally averaged equatorial wind. *J. Phys. Oceanogr.*, **24**(3), 681-690. [http://dx.doi.org/10.1175/1520-0485\(1994\)024<0681:AEOSEM>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1994)024<0681:AEOSEM>2.0.CO;2)
35. Clarke, A. J., and X. Liu, 1994: Interannual sea level in the northern and eastern Indian Ocean. *J. Phys. Oceanogr.*, **24**(6), 1224-1235. [http://dx.doi.org/10.1175/1520-0485\(1994\)024<1224:ISLITN>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1994)024<1224:ISLITN>2.0.CO;2)
36. Clarke, A. J., 1994: Why are surface equatorial ENSO winds anomalously westerly under anomalous large-scale convection? *J. Climate*, **7**(10), 1623-1627. [http://dx.doi.org/10.1175/1520-0442\(1994\)007<1623:WASEEW>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(1994)007<1623:WASEEW>2.0.CO;2)
37. Clarke, A. J., and B. Li, 1995: On the timing of warm and cold El Niño–Southern Oscillation events. *J. Climate*, **8**(10), 2571-2574. [http://dx.doi.org/10.1175/1520-0442\(1995\)008<2571:OTTOWA>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(1995)008<2571:OTTOWA>2.0.CO;2)
38. Clarke, A. J., and A. Lebedev, 1996: Long-term changes in the equatorial Pacific trade winds. *J. Climate*, **9**(5), 1020-1029. [http://dx.doi.org/10.1175/1520-0442\(1996\)009<1020:LTCITE>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(1996)009<1020:LTCITE>2.0.CO;2)
39. Clarke, A. J., and A. Lebedev, 1997: Interannual and decadal changes in equatorial wind stress in the Atlantic, Indian and Pacific Oceans and the eastern ocean coastal response. *J. Climate*, **10**(7), 1722-1729. [http://dx.doi.org/10.1175/1520-0442\(1997\)010<1722:IADCIE>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(1997)010<1722:IADCIE>2.0.CO;2)
40. Clarke, A. J., X. Liu and S. Van Gorder, 1998: Dynamics of the biennial oscillation in the equatorial Indian and far western Pacific Oceans. *J. Climate*, **11**(5), 987-1001.

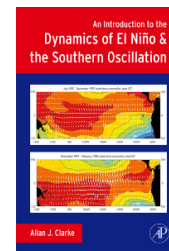
41. Sturges, W., B. G. Hong, and A. J. Clarke, 1998: Decadal wind forcing of the North Atlantic subtropical gyre. *J. Phys. Oceanogr.*, **28**(4), 659-668.
[http://dx.doi.org/10.1175/1520-0485\(1998\)028<0659:DWFOTN>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1998)028<0659:DWFOTN>2.0.CO;2)
42. Clarke, A. J., and R. Ahmed, 1999: Dynamics of remotely forced intraseasonal oscillations off the western coast of South America. *J. Phys. Oceanogr.*, **29**(2), 240-258. [http://dx.doi.org/10.1175/1520-0485\(1999\)029<0240:DORFIO>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1999)029<0240:DORFIO>2.0.CO;2)
43. Clarke, A. J., and S. Van Gorder, 1999: The connection between the boreal spring Southern Oscillation persistence barrier and the biennial oscillation. *J. Climate*, **12**(2), 610-620. [http://dx.doi.org/10.1175/1520-0442\(1999\)012<0610:TCBTBS>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(1999)012<0610:TCBTBS>2.0.CO;2)
44. Clarke, A. J., and A. Lebedev, 1999: Remotely driven decadal and longer changes in the coastal Pacific waters of the Americas. *J. Phys. Oceanogr.*, **29**(4), 828-835. [http://dx.doi.org/10.1175/1520-0485\(1999\)029<0828:RDDALC>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(1999)029<0828:RDDALC>2.0.CO;2)
45. Clarke, A. J., and S. Van Gorder, 2000: Reply to 'Comment on The connection between the boreal spring Southern Oscillation persistence barrier and biennial variability.' *J. Climate*, **13**(3), 668-671.
[http://dx.doi.org/10.1175/1520-0442\(2000\)013<0668:R>2.0.CO;2](http://dx.doi.org/10.1175/1520-0442(2000)013<0668:R>2.0.CO;2)
46. Clarke, A. J., and L. Shu, 2000: Quasi-biennial winds in the far western equatorial Pacific phase-locking El Niño to the seasonal cycle. *Geophys. Res. Letters*, **27**(6), 771-774. doi:10.1029/1999GL010506, 2000.
47. Clarke, A. J., J. Wang and Van Gorder, 2000: A simple warm-pool displacement ENSO model. *J. Phys. Oceanogr.*, **30**(7), 1679-1691; Corrigendum *JPO*, **30**(12), 3271.
[http://dx.doi.org/10.1175/1520-0485\(2000\)030<1679:ASWPDE>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(2000)030<1679:ASWPDE>2.0.CO;2)
48. Hong, B. G., W. Sturges and A. J. Clarke, 2000: Sea level on the U.S. east coast: Decadal variability caused by open ocean wind-curl forcing. *J. Phys. Oceanogr.*, **30**(8) 2088-2098.
[http://dx.doi.org/10.1175/1520-0485\(2000\)030<2088:SLOTUS>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(2000)030<2088:SLOTUS>2.0.CO;2)
49. Clarke, A. J., and S. Van Gorder, 2001: ENSO prediction using an ENSO trigger and a proxy for western equatorial Pacific warm pool movement. *Geophys. Res. Letters*, **28**(4), 579-582.
doi:10.1029/2000GL012201, 2001.
50. Pizarro, O., A. J. Clarke, and S. Van Gorder, 2001: El Niño sea level and currents along the South American coast: Comparison of observations with theory. *J. Phys. Oceanogr.*, **31**(7), 1891-1903.
[http://dx.doi.org/10.1175/1520-0485\(2001\)031<1891:ENOSLA>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(2001)031<1891:ENOSLA>2.0.CO;2)
51. Shu, L., and A. J. Clarke, 2002: Using an ocean model to examine ENSO dynamics. *J. Phys. Oceanogr.*, **32**(3), 903-923.
[http://dx.doi.org/10.1175/1520-0485\(2002\)032<0903:UAOMTE>2.0.CO;2](http://dx.doi.org/10.1175/1520-0485(2002)032<0903:UAOMTE>2.0.CO;2)
52. Clarke, A. J., and S. Van Gorder, 2003: Improving El Niño prediction using a space-time integration of Indo-Pacific winds and equatorial Pacific upper ocean heat content. *Geophys. Res. Letters*, **30**(7), doi:10.1029/2002GL016673, 2003.
53. Clarke, A. J., and J. Li, 2004: El Niño/La Niña shelf edge flow and Australian western rock lobsters. *Geophys. Res. Letters*, **31**(11), L11301 doi:10.1029/2003GL018900, 02 June 2004.
54. Li, J., and A. J. Clarke, 2004: Coastline direction, interannual flow and the strong El Niño currents along Australia's nearly zonal southern coast. *J. Phys. Oceanogr.*, **34**(11), 2373-2381.
<http://dx.doi.org/10.1175/JPO2645.1>
55. Clarke, A. J., and K. Y. Kim, 2005: On weak zonally symmetric ENSO atmospheric heating and the strong zonally symmetric ENSO air temperature response. *J. Atmos. Sciences*, **62**(6), 2012-2022.
<http://dx.doi.org/10.1175/JAS3448.1>
56. Li, J., and A. J. Clarke, 2005: Sea surface temperature and the brown shrimp (*Farfantepenaeus aztecus*) population on the Alabama, Mississippi, Louisiana and Texas continental shelves. *Estuarine, Coastal and Shelf Science*, **64**(2), 261-266.

57. Li, J., and A. J. Clarke, 2005: Interannual flow along the northern coast of the Gulf of Mexico. *J. Geophys. Res. Oceans*, **110**(C11), C11002, doi:10.1029/2004JC002606, 2005.
58. Clarke, A. J., and K. Y. Kim, 2005: The response time of the temperature of the equatorial troposphere to ENSO heating. *J. Atmos. Sciences*, **62**(12), 4412-4422. <http://dx.doi.org/10.1175/JAS3625.1>
59. Clarke, A. J., S. Van Gorder, and G. Colantuono, 2007: Wind stress curl and ENSO discharge/recharge in the equatorial Pacific. *J. Phys. Oceanogr.*, **37**(4), 1077–1091. <http://dx.doi.org/10.1175/JPO3035.1>
60. Everingham, Y. L., A. J. Clarke and S. Van Gorder, 2007: Long lead rainfall forecasts for the Australian sugar industry. *Int. J. Climatol.* **28**(1), 111-117. doi:10.1002/joc.1513.
61. Li, J., and A. J. Clarke, 2007: Interannual sea level variations in the South Pacific 5° – 28°S. *J. Phys. Oceanogr.*, **37**(12) 2882–2894. <http://dx.doi.org/10.1175/2007JPO3656.1>
62. Clarke, A. J., and M. Dottori, 2008: Planetary wave propagation off California and its effect on zooplankton. *J. Phys. Oceanogr.*, **38**(3), 702-714. <http://dx.doi.org/10.1175/2007JPO3691.1>
63. Carlson, D., and A. J. Clarke, 2008: Seasonal along-isobath geostrophic flows on the west Florida shelf with application to *Karenia brevis* red tide blooms in Florida’s Big Bend. *Continental Shelf Research*, **29**, 445-455. doi:10.1016/j.csr.2008.11.003.
64. Bunge, L., and A. J. Clarke, 2009: Seasonal propagation of sea level along the equator in the Atlantic. *J. Phys. Oceanogr.*, **39**(4), 1069-1074. <http://dx.doi.org/10.1175/2008JPO4003.1>
65. Bunge, L., and A. J. Clarke, 2009: A verified estimation of the El Niño index Niño-3.4 since 1877. *J. Climate*, **22**(14), 3979-3992. <http://dx.doi.org/10.1175/2009JCLI2724.1>
66. Dottori, M., and A. J. Clarke, 2009: Rossby waves and the interannual and interdecadal variability of temperature and salinity off California. *J. Phys. Oceanogr.*, **39**(10), 2543-2561. <http://dx.doi.org/10.1175/2009JPO3898.1>
67. Clarke, A. J., 2010: Analytical theory for the quasi-steady and low-frequency equatorial ocean response to wind forcing: The ‘tilt’ and ‘warm water volume’ modes. *J. Phys. Oceanogr.*, **40**(1), 121-137. <http://dx.doi.org/10.1175/2009JPO4263.1>
68. Clarke, A. J., S. Van Gorder, Y. Everingham, 2010: Forecasting long-lead rainfall probability with application to Australia’s northeastern coast. *J. Appl. Meteor. Climatol.*, **49**(7) 1443-1453. doi:10.1175_2010JAMC2373.1.
69. Clarke, A. J., and S. Van Gorder, 2013: On fitting a straight line to data when the “noise” in both variables is unknown. *J. Atmos. Oceanic Technol.*, **30**,151-158.
70. Giunipero, E., and A. J. Clarke, 2013: Estimation of the effect of eddies on coastal El Niño flows using along-track satellite altimeter data. *J. Phys. Oceanogr.* **43**(6), 1209-1224.
71. Maksimova, E. V., and A. J. Clarke, 2013: Multiyear subinertial and seasonal Eulerian current observations near the Florida Big Bend coast. *J. Phys. Oceanogr.* **43**(8), 1691-1709.
72. Clarke, A. J., 2014: El Niño Physics and El Niño Predictability. *Annu. Rev. Mar. Sci.* ,**6**, 79-99. <http://www.annualreviews.org/doi/pdf/10.1146/annurev-marine-010213-135026> .
73. Bunge, L., and A. J. Clarke, 2014: On the warm water volume and its changing relationship with ENSO. *J. Phys. Oceanogr.*, **44**(5), 1372-1385. <http://journals.ametsoc.org/doi/pdf/10.1175/JPO-D-13-062.1>
74. Santema, M., A. J. Clarke and K. Speer, M. Huettel, 2015: Water column oxygen dynamics within the coastal gradient in the northeastern Gulf of Mexico inner shelf. *Cont. Shelf Res.*, **104**, 104-119. <http://dx.doi.org/10.1016/j.csr.2015.05.006>.
75. Zhang, X., and A. J. Clarke, 2015: Observations of interannual equatorial fresh water jets in the western equatorial Pacific. *J. Phys. Oceanogr.*, **45**(11), 2848-2865.
76. Clarke, A. J., and S. Van Gorder, 2016: Subinertial canyon resonance. *Geophys. Res. Letters.*, **43**. DOI:10.1002/2016GL068258.

77. Zhang, X., and A. J. Clarke, 2017: On the dynamical relationship between equatorial Pacific surface currents, zonally-averaged equatorial sea level and El Niño predictions. *Journal of Physical Oceanography*, **47**(2) 323-337 DOI:10.1175/JPO-D-16-0193.1.
78. Clarke, A. J., and S. Van Gorder 2018: The relationship of near-surface flow, Stokes drift and the wind stress. *Journal of Geophysical Research-Oceans*, doi:10.1029/2018JC014102, in press.

Book

Clarke, A. J., 2008: *An Introduction to the Dynamics of El Niño & the Southern Oscillation*, Academic Press, 324 pp. ISBN: 978-0-12-088548-0.



Other Publications

- Clarke, A. J., 1976: Coastal upwelling and coastally trapped long waves. Ph.D. thesis, Cambridge University, 178 pp.
- O'Brien, J. J., R.M.Clancy, A. J. Clarke, M. Crepon, R. Elsberry, T. Gammelsrod, M. MacVean, L. P. Roed, J.D. Thompson, 1977: Upwelling in the ocean: two- and three-dimensional models of upper ocean dynamics and variability. In *Modelling and Prediction of the Upper Layers of the Ocean*, ed. by E.B.Kraus, Pergamon Press, 325 pp.
- Kim, S. E., and A. J. Clarke, 1984: Wind-forced frictionless and frictional continental shelf currents and sea levels. Technical Report, Department of Oceanography, Florida State University, 46 pp.
- Clarke, A. J., 1986: Adrian E. Gill 1937-1986. *Trans., A. Geophys. Union*, **67**, 761.
- Clarke, A. J., 1988: Year-to-year climate fluctuations: The El Niño/Southern Oscillation Phenomenon. In *Critical Thinking: Reading and Writing Across the Curriculum*, ed. by A. B. Grinols, Wadsworth Publishing Company.
- Clarke, A. J., and S. Van Gorder, 1993: A simple theory for the tropospheric biennial oscillation --a preliminary report. Proceedings of the Fourth International Conference on Southern Hemisphere Meteorology and Oceanography, Amer. Meteorol. Soc., Hobart, Australia, 29 March - 2 April, 1993.
- Clarke, A. J., 1995: Overview of the physical oceanography of the Florida shelf in the study region. Northeastern Gulf of Mexico physical workshop; proceedings of a workshop held in Tallahassee, Florida, April 5-7, 1994. Prepared by Florida State University. OCS Study MMS 94-0044. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La. 257 pp.
- Clarke, A. J., 1995: A wind driven shelf flow model (as applied to the West Florida shelf). Northeastern Gulf of Mexico physical workshop; proceedings of a workshop held in Tallahassee, Florida, April 5-7, 1994. Prepared by Florida State University. OCS Study MMS 94-0044. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La. 257 pp.
- Sturges, W., A. J. Clarke, S. Van Gorder, X. Liu and J. Jimeian, 1995: Comparison of current meter observations south of Pensacola with calculations from the Clarke-Van Gorder model. Northeastern Gulf of Mexico physical workshop; proceedings of a workshop held in Tallahassee, Florida, April 5-7, 1994. Prepared by Florida State University. OCS Study MMS 94-0044. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La. 257 pp.
- Clarke, A. J., 1997: Long Period Ocean Waves. In *McGraw-Hill Encyclopedia of Science and Technology*, 8th edition, New York, 15,108 pp.

- Clarke, A. J., 2000: *2000 Australian Summer School Notes on El Niño/Southern Oscillation*. Flinders University, Adelaide, Australia, 100 pp.
- Li, J., & Clarke, A. J. (2004). Interannual flows along Australia's western and southern coasts and along the northern coast of the Gulf of Mexico. Thesis (Ph. D.)--Florida State University, 2004.
<http://etd.lib.fsu.edu/theses/available/etd-10282004-114213>.
- Everingham, Y. L., A. J. Clarke, C. C. M. Chen, S. Van Gorder, P. McGuire, 2007: Exploring the capabilities of a long lead forecasting system for the NSW sugar industry. *Proc. Aust. Soc Sugar Cane Technol.* **29**, 9-17.
- Zhang, X., and A. J. Clarke, 2017: On the dynamical relationship between equatorial Pacific surface currents, zonally-averaged equatorial sea level and El Niño predictions. *CLIVAR Exchange*, in press.

Monthly El Niño Prediction: <http://atmos.eoas.fsu.edu/clarke/elnino/>

Graduate Students and Post Docs

David S. Battisti	M.S.	1981	University of Washington
Gary T. Mitchum	Ph.D.	1984	Florida State University
Sung-Eon Kim	M.S.	1984	Florida State University
Manuel Lopez	M.S.	1986	Florida State University
	Ph.D.	1990	Florida State University
Conrado A. Rocha C.	M.S.	1986	Florida State University
	Ph.D.	1992	Florida State University
Xiang Liu	M.S.	1992	Florida State University
Anna Lebedev	M.S.	1996	Florida State University
Bin Li	Ph.D.	1996	Florida State University
Rizwan Ahmed	M.S.	1997	Florida State University
Lianghua Shu	Ph.D.	1999	Florida State University
Jianke Li	Ph.D.	2004	Florida State University
Marcelo Dottori	Ph.D.	2007	Florida State University
Daniel Carlson	M.S.	2007	Florida State University
Lucia Bunge	Post Doc	2010	Florida State University
Ekaterina Maksimova	Ph.D.	2012	Florida State University
Emma Giunipero	M.S.	2012	Florida State University
Chalermrat Sangmanee	Ph.D.	2017	Florida State University
Xiaolin Zhang	Ph.D.	2017	Florida State University
Xiaolin Zhang	Post Doc	2018	Florida State University
Sean Buchanan	Ph.D.	student	Florida State University