

# Álvaro Montenegro

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## *Employment*

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- Assistant Professor 2012 to present  
Ohio State University  
Department of Geography, Columbus, OH, USA.
- Assistant Professor 2009 to 2012  
St. Francis Xavier University  
Department of Earth Sciences, Antigonish, NS, Canada.
- Postdoctoral Fellow 2004-2009  
University of Victoria, Victoria, BC, Canada.  
Research in climatology and climate-human interaction.
- Consultant
  - The Pacific Climate Impacts Consortium , Victoria, BC, Canada. 07/2006-01/2009  
Research in regional climate impacts.
  - Canadian Parks and Wilderness Society, Vancouver, BC, Canada. 08/2008-04/2009  
Climate impacts on regional oceanography and marine ecosystems.
- Science Writer 1997-1998  
Folha de São Paulo daily newspaper. São Paulo, SP, Brazil.  
Developing and writing science related stories for the daily publication.

## *Academic and Administrative Appointments*

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- Director Atmospheric Sciences Program 2014 to present  
Ohio State University
- Adjunct Professor 2012 to present  
St. Francis Xavier University  
Department of Earth Sciences, Antigonish, NS, Canada.
- Visiting Professor 2013 to present  
UNESP - Campus do Litoral Paulista, São Vicente, SP, Brazil.

## *Courses taught*

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- Ohio State University 2012 to present
  - Biogeography (undergraduate)
  - Global Climate Change: Causes and Consequences (undergraduate)
  - Climate System Modeling: Basics and Applications (undergraduate/graduate)
  - Introduction to Weather and Climate (undergraduate)
  - Our Global Environment (undergraduate)
  - Environmental Conservation (graduate/undergraduate)
  
- UNESP, various units, SP, Brazil. 2009 and 2013-2015
  - Climatology and Climate Change (graduate/undergraduate)
  - Introduction to Climate Modeling (graduate/undergraduate)
  
- St. Francis Xavier University 2009 to 2012
  - Quantitative Methods in Earth Sciences (undergraduate)
  - Earth Systems Science (undergraduate)
  - Physical Oceanography (undergraduate)
  - Oceanography (undergraduate)
  
- University of Victoria. 2004 - 2009
  - Descriptive Physical Oceanography (undergraduate)
  - Introduction to the Earth System (undergraduate)
  - Introduction to Physical Oceanography (graduate/undergraduate)
  - Understanding the World Oceans (undergraduate)

## *Education*

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- Ph.D. Physical Oceanography 1999-2003  
Florida State University. Tallahassee, FL, USA.
- M.S. Physical Oceanography 1997-1999  
University of São Paulo. São Paulo, SP, Brazil.
- B.S. Oceanography - Coastal Resources Management 1992-1996  
University of Rio Grande. Rio Grande, RS, Brazil.
- B.A. Business and Administration 1988-1992  
EAESP - Getúlio Vargas Foundation. São Paulo, SP, Brazil.

## ***Awards and Grants***

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2015 - FAPESP-OSU Regular Research Award - U\$100,000  
 2014 - Lawrence A. Brown Faculty Fellowship Award - U\$5,000  
 2013 - FAPESP-OSU Mobility Grant - U\$20,000  
 2010 - The Atlantic Computational Excellence Network Graduate Fellowship, Cn\$20,000  
 2010 - Natural Sciences and Engineering Research Council of Canada Individual Discovery Grant - Cn\$110,000  
 2000 - South Atlantic Climate Change Consortium research aid - U\$1,200  
 1999 - CNPq (Brazilian Federal Government) Ph.D. Grant - U\$150,000  
 1997 - Fapesp (São Paulo State) M.S. Grant - U\$20,000

## ***Editorial Activities***

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2014 to present - Editorial Advisory Board, De Gruyter Open's Open Access Books program in Geography  
 2016 - Guest Editor - AIMS Geosciences special issue: Global Temperature and Climate Change

## ***Publications***

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### Submitted

Maas, Dv.L., R. Lal, K. Coleman, A. Montenegro and W.A. Dick *Modeling Soil Organic Carbon in Corn-based Systems in Ohio*, under revision in *Journal of Soil and Water Conservation*

### In press and published:

Montenegro, A., R. Callaghan and S.M. Fitzpatrick, 2016, Using Seafaring Simulations and Shortest Hop Trajectories to Model the Prehistoric Colonization of Remote Oceania, 2016, Proceedings of the National Academy of Sciences, doi: 10.1073/pnas.1612426113.

DiNezio, P, A. T.Axel , J. Tierney, F. F. Jin, B.L. Otto-Bliesner, N. Rosenbloom , B. Mapes , R.Neale, R. Ivanovic and A. Montenegro 2016, *The climate response of the Indo-Pacific warm pool to glacial sea level*, *Paleoceanography*, 31, 866-894, doi:10.1002/2015PA002890

Longobardi, P., A. Montenegro, H. Beltrami and M. Eby, 2016, *Deforestation induced climate change: Effects of spatial scale*, *PlosOne*, 11, doi:10.1371/journal.pone.0153357

Wang, H. D. Liu, H. Lin, A. Montenegro and X. Zhu, 2015, *NDVI and Vegetation Phenology Dynamics under the Influence of Sunshine Duration on the Tibetan Plateau*, *International Journal of Climatology*, DOI: 10.1002/joc.4013.

Kim, H.L., A. Ratan, G.H. Perry, A. Montenegro, W. Miller and S.C. Schuster, 2014, *Khoisan hunter-gatherers have been the largest population throughout most of modern human demographic history*, *Nature Communications*, DOI: 10.1038/ncomms6692.

Kistler, L., A. Montenegro, B.D. Smith, J.A. Gifford, R.E. Green, L.A. Newsom and B. Shapiro, 2014, *Transoceanic drift and the domestication of African bottle gourds in the Americas*, *Proceedings of the National*

Academy of Sciences, doi/10.1073/pnas.1318678111

Montenegro, A., R. T. Callaghan and S. M. Fitzpatrick, 2014, *From west to east: Environmental influences on the rate and pathways of Polynesian colonization*, *The Holocene*, 24, 242-256, DOI: 10.1177/0959683613517402.

Murdock, T.Q., S. W. Taylor, A. Flower, A. Mehlenbacher, A. Montenegro, F. W. Zwiers and R. Alfaro, 2013, *Pest outbreak distribution and forest management impacts in a changing climate in British Columbia*, *Journal of Environmental Science & Policy*, 26, 75-89.

Arora, V. and A. Montenegro, 2011, *Small temperature benefits provided by realistic afforestation efforts*, *Nature Geoscience*, doi:10.1038/ngeo1182.

Montenegro, A., P. Spence, K. J. Meissner, M. Eby, M. J. Melchin and S.T. Johnston, 2011, *Climate simulations of the Permian-Triassic boundary: Ocean acidification and the extinction event*, *Paleoceanography*, doi:10.1029/2010PA002058, 2011

Carlson, M., J. Chen, S. Elgie, C. Henschel, A. Montenegro, N. Roulet, N. Scott, C. Tarnocai and J. Wells, *Maintaining the Role of Canada's Forests and Peatlands in Climate Regulation*, 2010, *Forestry Chronicle*, 86.

Spence, P., J.C.Fyfe, Montenegro, A. and A.J. Weaver, *On the Southern Ocean response to poleward intensifying winds: coarse versus eddy-permitting simulations*, 2010, *Journal of Climate*, 23, doi:10.1175/2010JCLI3098.1.

Montenegro, A., M. Eby, E. C. Wiebe and A. J. Weaver, 2009, *Albedo changes and the net carbon drawdown of afforestation from satellite observations*, *Global and Planetary Change* doi:10.1016/j.gloplacha.2009.08.005.

Eby, M., K. Zickfeld, A. Montenegro, A., D. Archer, K.J. Meissner and A.J. Weaver, *Lifetime of anthropogenic climate change*, 2009, doi:10.1175/2008JCLI2554.1, *Journal of Climate*.

Archer, D., M. Eby, V. Brovkin, A. Ridgwell, L. Cao, U. Mikolajewicz, K. Caldeira, K. Matsumoto, G. Munhoven, A. Montenegro and K. Tokos, *Atmospheric lifetime of fossil-fuel carbon dioxide*, 2009, 10.1146/annurev.earth.031208.100206 *Annual Reviews of Earth and Planetary Sciences*.

Meissner, K.J., A. Montenegro and C. Avis, 2008, *Paleoceanography*. In: *Encyclopedia of Paleoclimatology and Ancient Environments*. Gornitz, V., Ed., *Encyclopedia of Earth Sciences Series*, Kluwer Academic Publishers.

Montenegro, A., C. Avis and A.J. Weaver, 2008, *Modelling the pre-historic arrival of the sweet potato in Polynesia*, *Journal of Archaeological Science*, 35, 355-367

Avis, C, A. Montenegro and A.J. Weaver, 2008, *Simulating Island Discovery during the Lapita expansion*. In: *Canoes and voyaging in the South Pacific, from prehistory to present*, A. Di Piazza, E. Pearthree, F. Damon and C. Mondragon, Eds. Oxford: Archaeopress.

Montenegro, A., V. Brovkin, M. Eby, D. Archer and A.J. Weaver, 2007, *Long term fate of anthropogenic carbon*, *Geophysical Research Letters*, 34, L10707, doi:10.1029/2007/GL030905.

Weaver, A.J., K. Zickfeld, A. Montenegro and M. Eby, 2007, *2050 emission reduction targets*, *Geophysical Research Letters*, 34, L19703, doi:10.1029/2007/GL031018.

Montenegro, A., M. Eby, A.J. Weaver and Steven R. Jayne, 2007, *Response of a climate model to tidal mixing*

*parameterization under present day and Last Glacial Maximum conditions*, Ocean Modelling, 19, 125-137.

Montenegro, A., and G.W. Weatherly, 2007, *Deep Variability in the Atlantic Western Boundary Current based on altimetric and XBT data*, J. Geophys. Research, 112, doi:10.1029/2005JC003237.

Avis, C., A. Montenegro and A.J. Weaver, *The discovery of Western Oceania: A new perspective*, 2007, Journal of Island and Coastal Archaeology. 2, 197-209, DOI:10.1080/15564890701518557.

Montenegro, A., M. Eby, J. Kaplan, K.J. Meissner and A.J. Weaver, 2006, *Carbon storage on exposed continental shelves during the glacial-interglacial transition*. Geophys. Res. Lett., 33, L08703, doi:10.1029/2005GL025480.

Montenegro, A., A. Araujo, M. Eby, L.F. Ferreira, R. Hetherington and A.J. Weaver, 2006, *Parasites, paleoclimate and the peopling of the Americas: Using the hookworm to time the Clovis migration*. Current Anthropology, 47, 1, 193-200.

Montenegro, A., R. Hetherington, M. Eby and A.J. Weaver, 2006, *Modelling pre-historic transoceanic crossings into the Americas*. Quaternary Science Reviews, 25, 1323-1338, doi:10.1016/j.quascirev.2005.11.008.

Montenegro, A. and C. A. Fonseca and E. J. Campos, 1999, *Implementation of the Princeton University Ocean Model for the study of circulation and dispersion of materials in the Todos os Santos Bay, Bahia* (in Portuguese). PUC-SP Cienc. Biol. Ambien., v.1, n.2, 115-129.

Silva, T. A. and R.O. Cavalli and A. Montenegro, 1995, *Burrowing of Penaeus paulensis Perez-Farfante, 1967 (Decapoda, Penaeidae) under laboratory conditions* (in Portuguese). Náuplius, v.3, 15-21.