

C U R R I C U L U M V I T A E

Dr. Sheekela Baker-Yeboah

Natural Science and Mathematics
Lesley College of Liberal Arts and Sciences
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E d u c a t i o n

- 2002 - 2008 Ph.D. in Oceanography
University of Rhode Island, Graduate School of Oceanography
Dissertation: Sea Surface Height Variability and the
Structure of Eddies in the South Atlantic Cape Basin
- 1993 - 1998 M. S. in Marine Science
University of Southern Mississippi, Stennis Space Center
Thesis: Double Vortices In The Ocean:
A Case Study In The Arabian Sea
- 1989 - 1993 B. S. in Mathematics University of Southern Mississippi

E m p l o y m e n t

- Visiting Professor **Natural Science and Mathematics Division**
2013 - Current Lesley University
Cambridge, Massachusetts
- Adjunct Professor **Natural Science and Mathematics Division**
2013 - Spring Lesley University
Cambridge, Massachusetts
- Research Scientist **Physical Oceanography**
2012 - Current Massachusetts Institute of Technology
Dynamical processes of upper and deep ocean vortices;
Interocean exchanges in the South Atlantic;
- Post-Doctoral **Post-Doctoral Associate in Physical Oceanography**
Associate Massachusetts Institute of Technology
2008 - 2012 Dynamical processes of upper and deep ocean vortices;
Interocean exchanges in the southeastern South Atlantic;

Analytical and data assimilation

Remote Sensing Oceanography 1998 - 2002	Research Associate in Physical Oceanography University of Rhode Island Liaison between URI and NOAA National Marine Fisheries; Processing and analysis of AVHRR data; Distributed Oceanographic Data System
1994 - 1998 (Summers)	Research Assistant in Physical Oceanography University of Southern Mississippi

S e a G o i n g E x p e r i e n c e

2005	Research Cruise in the South Atlantic aboard the RRS Discovery Junior Assistant to PI: Recovered instruments; CTD casts; Oxygen titration
2003	Research Cruise in the South Atlantic aboard the R/V Melville Junior Assistant to PI: Deployed instruments; CTD casts; Oxygen titration
1994	Research expedition in the Gulf of Mexico aboard the R/V Pelican Student Assistant to PI: CTD casts; Ship log
1993	Research Cruise in the Mediterranean Sea aboard the R/V Alliance Junior Assistant to PI: Processed shipboard ADCP data; CTD casts

T e a c h i n g E x p e r i e n c e

2013	Teaching: Meteorology with a laboratory component Lesley University; Weekly Labs
2012	Co-Taught graduate course: General Circulation of Ocean MIT; Including Recitation Sessions
2008	Co-Taught graduate course: Abyssal Circulation and Eddies MIT; Including Geophysical Fluid Dynamics Lab on Potential Vorticity
2006	Instructor of undergraduate course OCG 110: The Ocean Planet University of Rhode Island
2006	Preparing for an Academic Career in the Geosciences:

Workshop for Graduate Students and Post-Doctoral Fellows,
Stanford University

2004 Teaching Assistant for graduate course; OCG 501: Physical Oceanography
University of Rhode Island

Academic Service

2009 - 2010 Oceanography/Climate Seminar Coordinator
2006 - 2007 Physical Oceanography Seminar Coordinator
2006 - 2007 Student Admissions and Review Committee
2005 - 2006 Educational Policy Committee

I n t e r n a t i o n a l E x p e r i e n c e

2011 South Atlantic MOC Workshop, Simon's Town, South Africa
2009 Invited Seminar Speaker MOCA09: IAMAS/IAPSO/IACS, Montreal, CA
2009 Seminar Speaker University of Cape Town, South Africa
2005 Geophysical Fluid Dynamics Summer School, Cambridge England, UK
1994 SACLANT Undersea Research Centre Summer Program, La Spezia, Italy

P r o f e s s i o n a l E x p e r i e n c e A n d H o n o r s

Professional Presentations

2011 AGU Poster (OS23A-1620): AGU Fall Meeting, San Francisco, California
2011 Judge for Student Posters: AGU Fall Meeting, San Francisco, California
2010 Ocean Science Speaker (PO15): AGU/OS Meeting, Portland, Oregon
2009 SW Indian Ocean Workshop Seminar Speaker
2008 IAPSO-DOES Poster
2006 American Geophysical Union Poster
2006 Invited Seminar Speaker at AOML in Miami, Florida
1996 American Geophysical Union Presenter

Professional Societies

2008 - Current Sigma Xi
2006 - Current American Association for the Advancement of Science
2005 - Current American Geophysical Union
1995 - 1997 The Oceanography Society
1994 - 1997 Mississippi Academy of Sciences
1993 - 1998 Student Oceanography Society Club

P U B L I C A T I O N S

Sheekela Baker-Yeboah: sbyeboah@mit.edu

Baker-Yeboah, S., G. R. Flierl, and D. R. Watts. Dipoles and the Propagation of Agulhas Eddies: the Effects of Laterally and Vertically Coupled Vortices, in revision.

Baker-Yeboah, S., D. R. Watts, D. A. Byrne, and D. Witter. A Comparative Study of Satellite Altimeter and Pressure-Sensor Equipped Inverted Echo Sounder Sea Surface Height Variability in the Southeast Atlantic, in revision.

Beal, L. M., W. P. M. de Ruijter, A. Biastoch, R. Zahn, Meghan Cronin, Juliet Hermes, Johann Lutjeharms, Graham Quartly, Tomoki Tozuka, **Sheekela Baker-Yeboah**, Thomas Bornman, Paolo Cipollini, Henk Dijkstra, Ian Hall, Wonsun Park, Frank Peeters, Pierrick Penven, Herman Ridderinkhof, and Jens Zinke (2011), On the role of the Agulhas System in Ocean Circulation and Climate, *Nature*, 472, 429-436, doi:10.1038/nature 09983.

<http://www.nature.com/nature/journal/v472/n7344/full/nature09983.html>

Baker-Yeboah, S., D. A. Byrne, and D. R. Watts. Observations of Mesoscale Eddies in the South Atlantic Cape Basin: Baroclinic and Deep Barotropic Eddy Variability, *J. Geophys. Res.*, VOL. 115, C12069, doi:10.1029/2010JC006236, 2010.

[<http://www.agu.org/pubs/crossref/2010/2010JC006236.shtml>]

Baker-Yeboah, S., G. R. Flierl, G. G. Sutyrin, and Y. Zhang. Transformation of an Agulhas Eddy Near the Continental Slope. *Ocean Sci.*, 6, 143-159, 2010.

[<http://dspace.mit.edu/handle/1721.1/66177>]

Baker-Yeboah, S., D. R. Watts, and D. A. Byrne. Baroclinic and Barotropic Sea Surface Height Variability in the Southeast Atlantic from Pressure-Sensor Equipped Inverted Echo Sounders. *J. Atmos. Oceanic Technol.*, 26, 2593-2609, 2009.

[<http://dspace.mit.edu/handle/1721.1/64409>]

Baker-Yeboah, S., 2008: Sea Surface Height Variability and the Structure of Eddies in the South Atlantic Cape Basin. Ph.D. Dissertation, University of Rhode Island, Narragansett 308 pp.

[<http://www.sheelabaker.com/>]

Waring, G. T. , T. Hamazaki, D. Sheehan, G. Wood, S. Baker. Characterization Of Beaked Whale (Ziphiidae) And Sperm Whale (Physeter Macrocephalus) Summer Habitat in Shelf-Edge and Deeper Waters off the Northeast U. S. *Marine Mammal Science*. Vol. 17 Issue 4, 703 -717. October 2001.

Baker, S., D. Sheres, and R. Arnone. Characteristics of double vortices in the Northwestern Arabian Sea and the North Atlantic Gulf Stream region as observed by AVHRR imagery. *Ocean Technology*.

Stennis Space Center, Proceedings of the Gulf Coast Section Marine Technology Society. Navel Oceanographic Office, Stennis Space Center, Mississippi (1997): 32-39.