

### Position and Research Expertise

Lisa Beal is a Professor of Oceanography in the Ocean Sciences department at the University of Miami's Rosenstiel School of Marine and Atmospheric Science. She is an expert on the Agulhas System of currents off South Africa and has brought recognition to the key role this System plays in a warming climate through her publications and international leadership.

### Teaching and Mentoring

Beal teaches courses on Physical Oceanography and on Climate Change. She advises graduate students and postdoctoral scientists in both the Ocean Sciences and the Meteorology and Physical Oceanography programs, conducting research using observing and modelling tools.

### Career Summary

Beal has participated in 16 scientific voyages to the Atlantic and Indian Oceans, totalling 342 days at sea, planning and leading 6 of these voyages as Chief Scientist. She has published over 50 peer-reviewed scientific publications and her work has been featured on BBC Radio 4's Material World. Beal grew up in the U.K., where she received her PhD from the National Oceanography Centre at the University of Southampton. She moved to the United States as a postdoctoral scientist, first at Columbia University and then at Scripps Institution of Oceanography. Beal joined the faculty at the University of Miami in 2003, where her research has focused on large scale ocean circulation and western boundary currents, as well as the ocean's role in the coupled climate system.



### Awards and Leadership Positions

As chair of the Scientific Committee on Oceanic Research's (SCOR) Working Group 136, Beal led a Nature review article on the Agulhas system and co-organized the first AGU Chapman Conference to be held on the African continent. She served as Oceans Editor for the AGU journal Geophysical Research Letters. Beal is co-Chair of the Climate Variability and Predictability (CLIVAR) Indian Ocean Regional Panel, an international steering committee of the Global Ocean Observing System (GOOS), and a member of the US Steering Committee of the Second International Indian Ocean Expedition (IIOE-2). In 2015, Beal partnered with South African and Dutch scientists to pioneer sustained observations of the Agulhas system as part of GOOS.

### Scientific Research

Beal collects *in situ* observations of the ocean using moored, profiling, and underway instrumentation to measure its fluxes and variability. These instruments include acoustic current meters and current profilers, CTDs which measure temperature and salinity, and inverted echosounders which provide a bulk measure of the properties of the water column. She uses models to help understand the wider context of these measurements in terms of global ocean circulation and climate. Beal is best known for her contributions to the understanding of the Agulhas Current System, including its intensity, downstream evolution, water mass characteristics, cross-frontal mixing, temporal variability, and decadal trends.

### Service at UM and for the wider Scientific Community

In addition to her research, Beal is involved in community work to increase the engagement, recruitment, and retention of women and minorities in oceanography. She also works to advance resources and capacity for ocean sciences in southern Africa, where she teaches periodically in the Honors program at the University of Cape Town and has formed local partnerships to develop sustained observations of the Agulhas System.