



## Frank Edgar Muller-Karger

### Dean

School for Marine Science and Technology  
University of Massachusetts Dartmouth

### Research Interests

Interdisciplinary Earth science and Earth observation; oceanography, coastal and estuarine science; satellite oceanography and remote sensing; science education and strategic planning; formal/informal public education; integration of science, management and education; ocean policy.

### Current Research

- State of FL Geospatial Assessment of Marine Environments (GAME); Defining coastal bioregions of Florida. Co-I with J. Ogden and H. Norris.
- NSF The Cariaco basin oceanographic time series program. Co-I with M. Scranton, R. Thunell, R. Weisberg and K. Fanning.
- NASA An assessment of global organic carbon flux along continental margins. Co-I with C. Hu.
- NASA EAGLE-EYE: Ecological Assessments of Generalized Littoral Environments – an integrated EOS DB/real-time MODIS science applications project. Co-I with C. Hu.
- NASA Collaborative effort with Roff's, Inc. Study of ocean environmental parameters to forecast the effects of climate variability on pelagic fish.
- NASA Environmental assessments of coral reef ecosystems: Interdisciplinary research. Co-I with S. Andrefouet (IRD, New Caledonia, France).
- EPA A binational (U.S.-Mexico) program for red tide research and detection; Gulf of Mexico program. Co-I with C. Hu.

### Recent Publications

- Biggs, D.C., C. Hu, and F.E. Muller-Karger. 2007 (in press). Remotely sensed sea surface chlorophyll and calculated POC flux at Deep Gulf of Mexico Benthos sampling stations. *Deep-Sea Res. II*. Topical issue on DGoMB program.
- Chen, Z., C. Hu, R.N. Conmy, P. Swarzenski, and F. Muller-Karger. 2007. Colored dissolved organic matter in Tampa Bay, Florida. *Mar. Chem.* 104: 98-109.
- Chen, Z., C. Hu, and F.E. Muller-Karger. 2007. Monitoring turbidity in Tampa Bay using MODIS 250 M imagery. *Remote Sens. Environ.* doi:10.1016/j.rse.2006.12.019.
- Chen, Z., F.E. Muller-Karger, and C. Hu. 2007. Remote sensing of water clarity in Tampa Bay. *Remote Sens. Environ.* doi:10.1016/j.rse.2007.01.002.
- Muller-Karger, F.E., R. Varela, R.C. Thunell, M.I. Scranton, G.T. Taylor, Y. Astor, C.R. Benitez-Nelson, L. Lorenzoni, E. Tappa, M.A. Goñi, D. Rueda, and C. Hu. 2007 (accepted). The CARIACO oceanographic time series. In: *Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis*. JGOFS Continental Margins Task Team (CMTT). Editors: Kon-Keo Liu, Larry Atkinson, Renato Quinones, Liana Talaue-McManus (2006) Springer-Verlag, New York.
- Odrizolola, A.L., R. Varela, C. Hu, Y. Astor, L. Lorenzoni, and F.E. Muller-Karger. 2007. On the absorption of light in the Orinoco River plume. *Cont. Shelf Res.* doi:10.1016/j.csr.2007.01.012.
- Oey, L-Y., T. Ezer, C. Hu, and F.E. Muller-Karger. 2007. Baroclinic tidal flows and inundation processes in Cook Inlet, Alaska: Numerical modeling and satellite observations. *Ocean Dynam.* DOI 10.1007/s10236-007-0103-8.
- Tedesco, K., R. Thunell, Y. Astor, and F. Muller-Karger. 2007. The oxygen isotope composition of planktonic foraminifera from the Cariaco Basin, Venezuela: Seasonal and interannual variations. *Mar. Micropaleontol.* Vol. 62: 180-193.
- Thunell, R.C., C.R. Benitez-Nelson, R. Varela, Y. Astor, and F.E. Muller-Karger. 2007 (in press). Particulate organic carbon fluxes along upwelling-dominated continental margins: Rates and mechanisms. *Global Biogeochem. Cy.*