

Manfredi Manizza

Postdoctoral Research Associate

Department of Earth, Atmospheric and Planetary Sciences
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, MA 02139
Tel: (617)-452-2977;
Fax: (617)-253-4464
E-mail: mmanizza@ocean.mit.edu

Education

2006	PhD in Environmental Sciences, University of East Anglia, Norwich, UK
2002	Msc in Oceanography, University of Southampton, Southampton, UK
1998	Laurea Degree in Biological Oceanography, Polytechnic University of Marche, Ancona, Italy

Professional Experience

2006–present	Research Associate, Massachusetts Institute of Technology, Cambridge, USA
2003–2006	Postgraduate Researcher, Max-Planck-Institut for Biogeochemistry, Jena, Germany
2000–2001	Research Assistant, Division of Physical Oceanography, Institute of Reserach on Marine Fishery, Ancona, Italy

Awards and Honors

2006	CARBOOCEAN integrative grant for doctoral studies
2004	Student Poster award at SOLAS Open Science Conference, Halifax, Canada
2003	LINKECOL Fellowship for doctoral exchange program from European Science Foundation
2003	Integrative grant for doctoral studies from NOCES research project, European Union
2002	3-year doctoral grant from Max Planck Society

Summer Schools and Courses

2008	Summer School of Arctic Climate Modeling - International Arctic Research Center, University of Fairbanks, Fairbanks, Alaska
2004	Urbino Summer School in Paleoclimatology, University of Urbino, Urbino, Italy
2003	Geophysical and Environmental Fluid Dynamics Summer School, Department of Applied Mathematics and Theoretical Physics, University of Cambridge, Cambridge, UK.

Professional Societies

American Geophysical Union

Activities

Reviewer for Journal of Climate, Climate Dynamics, Global Biogeochemical Cycles.

Co-organizer of Sack Lunch Oceanography Seminar Series for PAOC, MIT.

Graduate and Postgraduate Advisors

Postdoctoral Advisor : Michael J. Follows, Massachusetts Institute of Technology, Cambridge, USA.

Doctoral Advisors : Corinne Le Quéré, Andrew J. Watson, University of East Anglia, Norwich, UK.

Master Advisors : Ekaterina Popova, Meric Srokosz, National Oceanographic Centre, Southampton, UK.

Undergraduate Advisors: Aniello Russo, Antonio Pusceddu, Polytechnical University of Marche, Ancona, Italy.

Publications

Refereed Journals

Manizza M., M. J. Follows, S. Dutkiewicz, J. McClelland, D. Menemenlis, C. N. Hill, B. J. Peterson - Modelling the response of the Arctic Ocean CO₂ sink to rapid sea-ice loss (2000-2007). In Preparation.

Manizza M., R. Ferrari - Interaction between water mass geometry and vertical mixing : implications for LGM ocean carbon cycle. In Preparation.

Manizza M., M. J. Follows, S. Dutkiewicz, J. McClelland, D. Menemenlis, C. N. Hill, B. Peterson - On the influence of terrigenous dissolved organic carbon on the air-sea CO₂ fluxes of the Arctic Ocean. In Preparation.

Manizza M., S. Dutkiewicz, D. Menemenlis, M. J. Follows, C. N. Hill - Simulated disruption of the Arctic Ocean productivity caused by North Pacific Iron Fertilization. In Preparation.

Manizza M., C. Le Quéré, A. J. Watson, E. T. Buitenhuis, Modeling the response of sea-ice to phytoplankton-light feedback in a future climate *Climate Dynamics*, In Preparation.

Manizza M., C. Le Quéré, A. J. Watson, E. T. Buitenhuis, On the Gaian functioning of ocean ecosystems *Tellus - B.*, To be submitted.

- Manizza M.**, C. Le Quéré, E. T. Buitenhuis (2008) Sensitivity of global ocean biogeochemical dynamics to ecosystem structure in a future climate *Geophys. Res. Lett.*, Submitted.
- Manizza M.**, M. J. Follows, S. Dutkiewicz, J. McClelland, D. Menemenlis, C. N. Hill, A. Townsend-Small, B. J. Peterson (2008) Modeling transport and fate of riverine dissolved organic carbon in the Arctic Ocean. *Global Biogeochemical Cycles.*, Submitted.
- Manizza M.**, C. Le Quéré, A. J. Watson, E. T. Buitenhuis, (2008) Ocean biogeochemical response to phytoplankton-light feedback in a global model *J. Geophys. Res. Oceans*, 113, C10010, doi:10.1029/2007JC004478.
- S. M. Vallina, R. Simó, **M. Manizza** (2007) Weak response of oceanic dimethylsulfide to upper mixing induced by global warming *Proceed. Nat. Acad. Sci.* , Vol. 104, no 41, 16004-16009.
- C. Le Quéré *et al.* (**co-author**) (2005). Ecosystem dynamics based on plankton functional types for global ocean biogeochemistry models *Global Change Biology*.**11** doi:10.1111/j.1365-2486.2005.01004.x, pp 2016-2040.
- Manizza M.**, C. Le Quéré, A. J. Watson, E. T. Buitenhuis, (2005). Bio-optical feedbacks among phytoplankton, upper ocean physics and sea-ice in a global model *Geophys. Res. Lett.*, **18**, 841–851, 2005.

Non-Refereed Journals

- Manizza M.**, N. Metzl, C. Le Quéré Interannual Variability of the Ocean Carbon Cycle, SOLAS Newsletters, Issue # 0.

Theses

- PhD Thesis:** Modeling phytoplankton-light feedback and its biogeochemical implications (2006), School of Environmental Sciences, University of East Anglia, Norwich, UK.
- Msc Thesis:** The effect of wind stress on biological productivity at the Iceland Faeroes Front : A modelling study (2002), National Oceanography Centre, Southampton, University of Southampton, Southampton, UK.
- Laurea Degree Thesis:** Spatial distribution and composition of particulate organic matter in relation to different water masses in the Strait of Magellan (Chile) (1998) Polytechnical University of Marche, Ancona, Italy.

Books

- The Millennium Ecosystem Assessment, Chapter 13, Air Quality and Climate (Contributing author)