

CHRISTOPHER L. SABINE – BIOGRAPHICAL SKETCH

A. Professional Preparation

Texas A&M University at Galveston,	Marine Science	B.S.; 1986
University of Hawaii at Manoa	Oceanography	Ph.D., 1992
Postdoc at Princeton University	Ocean Carbon Cycle	1992-1994

B. Appointments

2011-Present	Director, NOAA Pacific Marine Environmental Laboratory
2007-Present	Affiliate Full Professor, Department of Oceanography, University of Washington
2004-Present	Senior Fellow, University of Washington Joint Institute for the Study of the Atmosphere and Ocean
2008-2011	Supervisory Oceanographer, NOAA Pacific Marine Environmental Laboratory
2002-2008	Oceanographer, NOAA Pacific Marine Environmental Laboratory
1999-2007	Affiliate Assistant Professor, Department of Oceanography, University of Washington
1999-2002	Research Scientist, Joint Institute for the Study of the Atmosphere and the Ocean, University of Washington/NOAA Pacific Marine Environmental Laboratory.
1994-1999	Research Staff, Program in Atmospheric and Ocean Sciences, Department of Geosciences, Princeton University.
1992-1994	Research Associate, Program in Atmospheric and Ocean Sciences, Department of Geological and Geophysical Sciences, Princeton University.
1987-1992	Graduate Research Assistant, Hawaii Institute of Geophysics, University of Hawaii at Manoa

C. Publications

5 Most Relevant to Proposed Work

- Sabine, C.L.**, R.A. Feely, R. Wanninkhof, T. Takahashi, S. Khatiwala, and G.-H. Park (2011): The global ocean carbon cycle. In *State of the Climate in 2010*, 3. Global Oceans. Bull. Am. Meteorol. Soc., 92(6), S100–S108, <http://dx.doi.org/10.1175/1520-0477-92.6.S1>.
- Michalak, A.M., R.B. Jackson, G. Marland, **C. Sabine**, and the Carbon Cycle Science Working Group (2011): *A U.S. Carbon Cycle Science Plan*. A Report for The U.S. Climate Change Science Program, Washington D.C., <http://www.carboncyclescience.gov/USCarbonCycleSciencePlan-August2011.pdf>, 94 pp.
- Ho, D.T., **C.L. Sabine**, D. Hebert, D.S. Ullman, R. Wanninkhof, R.C. Hamme, P.G. Strutton, B. Hales, J.B. Edson, and B.R. Hargreaves (2011): Southern Ocean gas exchange experiment: Setting the stage. *J. Geophys. Res.*, 116, C00F08, <http://dx.doi.org/10.1029/2010JC006852>.
- Lee, K., **C.L. Sabine**, T. Tanhua, T.-W. Kim, R.A. Feely, and H.-C. Kim (2011): Roles of marginal seas in absorbing and storing fossil fuel CO₂. *Energy Environ. Sci.*, 4, <http://dx.doi.org/10.1039/C0EE00663G>, 1133–1146.
- Bond, N.A., M.F. Cronin, **C. Sabine**, Y. Kawai, H. Ichikawa, P. Freitag, and K. Ronnholm (2011): Upper-ocean response to Typhoon Choi-Wan as measured by the Kuroshio Extension Observatory (KEO) mooring. *J. Geophys. Res.*, 116, C02031, <http://dx.doi.org/10.1029/2010JC006548>, 8 pp.

5 Other Significant Publications

- Vandemark, D., J.E. Salisbury, C.W. Hunt, S.M. Shellito, J.D. Irish, W.R. McGillis, **C.L. Sabine**, and S.M. Maenner (2011): Temporal and spatial dynamics of CO₂ air-sea flux in the Gulf of Maine. *J. Geophys. Res.*, 116, C01012, <http://dx.doi.org/10.1029/2010JC006408>.
- Shamberger, K.E.F., R.A. Feely, **C.L. Sabine**, M.J. Atkinson, E.H. DeCarlo, F.T. Mackenzie, P.S. Drupp, and D.A. Butterfield (2011): Calcification and organic production on a Hawaiian coral reef. *Mar. Chem.*, 127(1–4), <http://dx.doi.org/10.1016/j.marchem.2011.08.003>, 64–75.

- Emerson, S., **C. Sabine**, M.F. Cronin, R. Feely, S. Cullison, and M. DeGrandpre (2011): Quantifying the flux of CaCO₃ and organic carbon from the surface ocean using in situ measurements of O₂, N₂, pCO₂ and pH. *Global Biogeochem. Cycles*, <http://dx.doi.org/10.1029/2010GB003924>, 12pp.
- Drupp, P., E. Heinen De Carlo, F.T. Mackenzie, P. Bienfang, and **C.L. Sabine** (2011): Nutrient inputs, phytoplankton response and CO₂ variations in a semi-enclosed subtropical embayment, Kaneohe Bay, Hawaii. *Aquat. Geochem.*, <http://dx.doi.org/10.1007/s10498-010-9115-y>, 473–498.
- Fassbender, A.J., **C.L. Sabine**, R.A. Feely, C. Langdon, and C.W. Mordy (2011): Inorganic carbon dynamics during northern California coastal upwelling. *Cont. Shelf Res.*, <http://dx.doi.org/10.1016/j.csr.2011.04.006>, 1180–1192.

D. Synergistic Activities

- Coordinating Lead Author for IPCC Working Group 1 Chapter 6
- Member of JSOST Interagency Working Group on Ocean Acidification
- Co-chair of the Global Ocean Ship-based Hydrographic Investigations Panel
- Ex-officio SSC member for U.S. Ocean Carbon and Biogeochemistry Program
- Member of Ocean Carbon and Biogeochemistry Time-Series Advisory Committee

E. Collaborators & Other Affiliations

Collaborators and co-editors

S. Alin (NOAA/PMEL); R. Anderson (Columbia); M. Atkinson (Hawaii); N. Bond (Washington); L. Bopp (CEA-CNRS-UVSQ, France); A. Borges (Liege); P. Boyd (Otago); D. Bronk (William & Mary); D. Butterfield (NOAA/PMEL); K. Caldeira (Stanford-Carnegie Institution); J. Canadell (CSIRO); Wei-J. Cai (Georgia); P. Ciais (LSCE-IPSL); M. Cronin (NOAA/PMEL); K. Davis (Penn State); E. DeCarlo (Hawaii); R. DeFries (Columbia); S. Denning (Colorado State); C. Deutsch (UCLA); A. Dickson (UCSD); L. Dilling (Colorado-Boulder); S. Doney (WHOI); P. Drupp (Hawaii); R. Feely (NOAA/PMEL); C. Field (Carnegie Institute for Science); P. Friedlingstein (Bristol); E. Gloor (Leeds); D. Glover (WHOI); N. Gruber (ETH Zurich); K. Gurney (Purdue); B. Hales (Oregon State); J. Irish (WHOI); M. Ishii (MRI, Japan); A. Jacobson (Colorado); R. Jackson (Duke); T. Jickells (East Anglia); F. Joos (Bern); S. Khattiwala (Columbia); R. Key (Princeton); A. Kozyr (Oakridge National Lab.); K. Lee (Pohang); C. LeQuere (East Anglia); S. Lohrenz (S. Mississippi); C. Lo Monaco (Pierre & Marie Curie); F. Mackenzie (Hawaii); T. Martz (UCSD); G. Marland (Oak Ridge National Lab); G. McKinley (Wisconsin); N. Metzl (Pierre & Marie Curie); A. Michalak (Michigan); S. Mikaloff-Fletcher (NIWA, NZ); C. Miller (Cal Tech.); F. Millero (Miami); P. Monfray (CNRS); P. Monteiro (Council for Scientific & Industrial Res.); J. Newton (Washington); D. Ojima (The Heinz Center); J. Orr (LSCE/CEA); J. Randerson (UC - Irvine); M. Raupach (Center for International Climate); A. Rios (CSIC); K. Rodgers (Princeton); S. Running (Montana); J. Salsbury (New Hampshire); U. Schuster (East Anglia); K. Shamberger (Washington); C. Sweeney (Colorado-Boulder); A. Sutton (NOAA/PMEL); T. Takahashi (Columbia); T. Tanhua (IFM-GEOMAR); P. Tans (NOAA/ESRL); P. Thornton (Oak Ridge National Lab.); D. Vandemark (New Hampshire); R. Wanninkhof (NOAA/AOML); A. Watson (E. Anglia); N. Zeng (Maryland)

Graduate Advisors and Postdoctoral Sponsors

Graduate Advisor: Fred Mackenzie; University of Hawaii

Principal Postdoctoral Sponsor: Jorge Sarmiento; Princeton University

Thesis Advisor (Total =4) and Postgraduate-Scholar Sponsor (Total =2)

Katherine Fagan (PhD 2011, Univ. of Washington); Andrea Fassbender (masters 2010, Univ. of Washington; current PhD student); Gwenn Hennon (current PhD student, Univ. of Washington); Nancy Williams (current masters student, Univ. of Washington); Laurie Juraneck (former postdoc, Oregon State); Adrienne Sutton (current postdoc at NOAA/PMEL).