

Bruce D. Cornuelle – Biosketch

Scripps Institution of Oceanography, University of California at San Diego

A. Professional Preparation:

Pomona College, Claremont, CA , Physics, B.A. 1978 Magna Cum Laude

MIT- Woods Hole Oceanographic Institution Joint Program, Physical Oceanography Ph.D.1983

B. Appointments:

- 1999 - pres. Research Oceanographer, Scripps Institution of Oceanography, UCSD
- 1999 - pres. Senior Lecturer (unsalaried), Scripps Institution of Oceanography, UCSD
- 1991-1999 Associate Research Oceanographer, Scripps Institution of Oceanography, UCSD
- 1990 - 1999 Lecturer (unsalaried), Scripps Institution of Oceanography, UCSD
- 1985-1991 Assistant Research Oceanographer, Scripps Institution of Oceanography, UCSD
- 1983-1985 Mellon Postdoctoral Fellow, Scripps Institution of Oceanography, UCSD
- 1978-1983 Research Assistant, M.I.T.

C. Publications

Five Relevant Publications:

Hoteit, I., B. Cornuelle, and P. Heimbach (2010) An eddy-permitting, dynamically consistent adjoint- based assimilation system for the tropical Pacific: Hindcast experiments in 2000 *J. Geophys. Res-Oceans*, *115*, doi:10.1029/2009jc005437

Hoteit, I, B.D. Cornuelle, V. Thierry, and D. Stammer (2007) Impact of resolution and optimized ECCO forcing on simulation of the tropical Pacific. *J. of Atmos. and Oceanic Tech.*, *25*, 131–147, doi: <http://dx.doi.org/10.1175/2007JTECHO528.1>.

Hoteit, I, B.D. Cornuelle, A. Köhl, and D. Stammer (2006) Treating Strong Adjoint Sensitivities in Tropical Eddy-Permitting Variational Data Assimilation. *Quart. J. Royal Met. Soc.* *613 Part C*, 3659–3682, doi: 10.1256/qj.05.97.

A. Köhl, D. Stammer, and B.D. Cornuelle (2006) Interannual to Decadal Changes in the ECCO Global Synthesis. *J. Phys. Ocean.* *37 no 2*, 313–337, doi: <http://dx.doi.org/10.1175/JPO3014.1> .

Cornuelle, B. D., T. K. Chereskin, P. P. Niiler, M. Y. Morris, and D. Musgrave (2000) Observations and modeling of a California Undercurrent Eddy. *J. Geophys. Res.*, *105*, 1227–1243. doi: 10.1029/1999JC900284

Five Other Publications:

Kim, S.Y., B.D. Cornuelle, and E.J. Terrill (2009) Anisotropic Response of Surface Currents to the Wind in a Coastal Region. *J. Phys. Oceanogr.*, *39*, 1512–1533, doi:10.1175/2009jpo4013.1

Hoteit, I., B. Cornuelle, S.Y. Kim, G. Forget, A. Kohl and E. Terril (2009) Assessing 4D-VAR for dynamical mapping of coastal high-frequency radar in San Diego. *Dyn. Atm. Oceans*, *48*, 175–197, doi:10.1016/j.dynatmoce.2008.11.005

Schneider, N., and B.D. Cornuelle (2005) The Forcing of the Pacific Decadal Oscillation. *Journal of Climate*, *18*, 4355-4373, doi: <http://dx.doi.org/10.1175/JCLI3527.1>.

Dushaw, B.D., P.F. Worcester, B.D. Cornuelle, and B.M. Howe (1994) Barotropic currents and vorticity in the Central North Pacific Ocean during summer 1987 determined from long-range reciprocal acoustic transmissions. *J. Geophys. Res. C*, *99*, 3263-3272, doi:10.1029/93JC03335 .

Send, U., P. F. Worcester, B. D. Cornuelle, C. O. Tiemann, and B. Baschek (2002) Integral measurements of mass transport and heat content in the Strait of Gibraltar from acoustic transmissions. *Deep-Sea Res. II* *49*, 4069-4095, [http://dx.doi.org/10.1016/S0967-0645\(02\)00143-1](http://dx.doi.org/10.1016/S0967-0645(02)00143-1) .

Synergistic Activities:

- Member, WOCE SSC 2000-2002.
- Associate editor of J. Atm. Ocean. Techn. 2005-present.
- Member of organizing committees for technical meetings and workshops, including AGU sessions. 2008-2011
- Chair of SIO Aquarium–Museum Panel finding ways to communicate SIO science to the public using the Birch Aquarium at Scripps.

Collaborators and Co-Authors last 48 months

Andrew, R. K.(U.Washington), Arango, Hernan G.(Rutgers), Bennett, A. F.(OSU), Birdsall, T. G.(Michigan), Budgell, W. P.(Institute of Marine Sciences), Centurioni, Luca (UCSD/SIO), Chua, B. S.(OSU), Colosi, John (Naval Postgraduate School), Crawford, Greg (Vancouver Island U.), Curchitser, E.(Rutgers), Davis, Russ E.(UCSD/SIO), Di Lorenzo, Emanuele (GeorgiaTech), Duda, Timothy F., Dushaw, Brian D.(U. Washington), Dzieciuch, Matthew A.(UCSD/SIO), Egbert , G. D. (OSU), Fennel, K.(Dalhousie), Forget, G. (MIT), Garfield, Newell (San Francisco State), Gawarkiewicz, Glen (WHOI), Geyer, W. R. (WHOI), Gopalakrishnan, Ganesh (UCSD/SIO), Haidvogel, Dale B.(Rutgers), Haley, Patrick J.(MIT), Jr., Heimbach, P. (MIT), Hendershott, Myrl C. (UCSD/SIO), Hermann, A. J. (NOAA/PMEL), Hodgkiss, William S.(UCSD/SIO), Hoteit, Ibrahim (King Abdullah U), Howe, Bruce M.(U.Hawaii-Manoa), Jan, Sen (Nat.'l Taiwan U.), Jones, Burt (USC), Kim, Sung Yong (UCSD/SIO), Kim, Yoo Yin (UCSD/SIO), Koehl, A.(U. Hamburg) , Kosro, P. Michael (OSU), Kuperman, William A.(UCSD/SIO), Lanerolle, L. (Rutgers), Largier, John L. (UC-Davis), Lee, Craig (U.Washington), Lee, Dong-Kyu (UCSD/SIO), Lee, Ming-An (Nat.'l Taiwan U.), Lermusiaux, Pierre F. J. (MIT), Leslie, Wayne (MIT), Levin, Julia C. (Rutgers), Levin, L. A. (UCSD/SIO), Lien, Ren-Chieh (U. Washington), Luo, H. (Georgia Tech), Luther, Douglas S. (U. Hawaii-Manoa), Mazloff, Matthew R. (UCSD/SIO), McClean, Julie L. (UCSD/SIO), McWilliams, J. C. (UCLA), Menemenlis, D. (JPL), Mercer, J. A. (U. Washington), Metzger, K. (Michigan), Jr., Miller, Arthur J. (UCSD/SIO), Moline, Mark A.(CalPoly), Moore, A. M. (UCSantaCruz), Muccino, J. C. (N/A), Munk, W. H. (USCD/SIO), Neilson,D. J. (CA Dept. of Fish and Game), Niiler, P. P. (UCSD/SIO), Paduan, J. D. (Naval Postgraduate School), Powell, T. M.(UC Berkeley), Raghukumar, K. (UC Santa Cruz), Rasmussen, L. L. (UCSD/SIO), Roemmich, D. (UCSD/SIO), Roux, P. (U. Joseph Fourier(Grenoble), Rudnick, D. L. (UCSD/SIO), Sanford, T. (U. Washington), Sarkar, J. (UCSD/SIO), Shchepetkin, A. F. (UCLA), Sherwood, C. R. (USGS), Signell, R. (USGS), Skarsoulis, E. K. (FORTH, Greece), Song, H. (UCSD/SIO), Spindel, R. C. (U. Washington), Stammer, D. (U. Hamburg), Subramanian, A. C. (UCSD/SIO), Taylor, K. (UCSD/SIO), Terrill, E. J. (UCSD/SIO), Thierry, V. (IFREMER), Todd, R. E. (WHOI), Van Uffelen, L. (H. Hawaii-Manoa), Velez-Belchi, P. (Spanish Institute of Oceanography (IEO), Wang, J. (UCSD), Warner, J. C. (USGS), Washburn, L. (UCSB), Wilkin, J. (Rutgers), Worcester, P.F. (UCSD), Yang, Y. J. (Naval Academy-Taiwan), Zaron, E. D. (Portland State), Zhang, X.(CSIRO)

Advisors

Dr. Carl Wunsch (MIT; Ph.D. advisor) and Dr. Walter Munk
Dr. Robert Knox and Dr. Peter Worcester (Postdoctoral advisors, all at UCSD)

Thesis Advisor and Postgraduate-Scholar Sponsors:

Total = 5/PhD Students: Phillip Sutton (1993) (New Zealand Ntl. Institute), Werner Morawitz (1995), Geologic Resource Partners , Chris Tiemann (2001) (U. Texas), Hajoong Song (2011) (UCSD), Sung Yong Kim (2010) (UCSD)

Total = 7/Postdoctoral Researchers: David Chester (Naval Research Lab), Virginie Thierry (IFREMER), Ganesh Gopalakrishnan (UCSD), Xuebin Zhang (CSIRO), Matthew Mazloff (UCSD), Aurelien Ponte (UCSD), Nidia Martinez Avellanada (UCSD)