Vita

Enrique N. Curchitser
Institute of Marine and Coastal Sciences, Rutgers University, New Brunswick, NJ 08901
enrique@marine.rutgers.edu

Professional interests

General circulation of the ocean, dynamics of eastern boundary currents and shelf circulation, sea-ice ocean interactions, coupled bio-physical and numerical modeling.

Professional preparation

1988 B.S. with honors, in Mechanical and Aerospace Engineering, Rutgers University. Honors thesis title: *Numerical Study of Rayleigh-Benard Convection in 3-D.*

1993 M.S. in Mechanical and Aerospace Engineering, Rutgers University. Thesis title: *Cyclic Reduction Solutions of Aerodynamic Problems Using MIMD Distributed Memory Multiprocessors*.

1999 Ph.D. in Oceanography, Rutgers University. Dissertation title: *On the Transient Adjustment of a Mid-latitude Abyssal Ocean Basin with Realistic Geometry and Bathymetry*.

Appointments

9/06-present Associate Research Professor, Institute of Marine and Coastal Sciences, Rutgers University.

9/06-present Executive director for U.S. GLOBEC.

9/06-present Adjunct Associate Research Scientist at the Lamont-Doherty Earth Observatory, Columbia University.

4/02-8/06 Doherty Associate Research Scientist at the Lamont-Doherty Earth Observatory, Columbia University.

2/01-4/02 Post-Doctoral fellow at the Lamont-Doherty Earth Observatory and the Department of Applied Mathematics, Columbia University.

8/00-2/01 Visiting Scientist at the Alfred Wegener Institute for Polar and Marine Research, in Bremerhaven, Germany.

9/99-8/00 Postdoctoral scientist at the NASA Goddard Institute for Space Studies.

1993-1999 Research assistant in Oceanography, Rutgers University.

1989-1993 Research assistant in Mechanical and Aerospace Engineering, Rutgers University.

1988-1989 Teaching assistant in Mechanical and Aerospace Engineering, Rutgers University.

Honors and Awards

Faculty fellowship from the Advanced Study Program at the National Center for Atmospheric Research, Boulder, Colorado, Summer 2006.

Post-doctoral fellowship award from the Columbia University Earth Institute Center for Non-Linear Earth Systems, 2001.

James Slade honors scholar, College of Engineering, Rutgers University, 1988.

American Society of Mechanical Engineers. Best technical paper award on a paper titled: *Numerical study of Rayleigh-Benard Convection in 3-D.* ASME northeast regional student competition, March 1988.

Tau Beta Pi national engineering honor society, elected 1987.

Pi Tau Sigma national mechanical engineering honor society, elected 1986.

Relevant Publications

A.J. Hermann, E.N. Curchitser, D.B. Haidvogel, and E.L. Dobbins, 2008. A comparison of remote versus local influence of El Niño on the coastal circulation of the Northeast Pacific. *Deep Sea Res.*, In press

Combes, V., E. Di Lorenzo and E.N. Curchitser, 2008. Interannual and decadal variations in cross-shelf mixing in the Gulf of Alaska. *J. Phys. Oce.*, In press.

Huang, H.P., A. Kaplan, E.N. Curchitser, and N. Maximenko, 2007. The degree of anisotropy for mid-ocean currents from satellite observations and an eddy-permitting model simulation. *J. Geophys. Res.*, 112, C09005, doi:10.1029/2007JC004105.

Powell, T, C. Lewis, E.N. Curchitser, D.B. Haidvogel, A.J. Hermann and E.L Dobbins, 2006. Results from a three-dimensional, nested biological-physical model of the California Current System and comparisons with statistics from satellite imagery. *J. Geophys. Res.*, 111, C07018, doi:10.1029/2004JC002506

Curchitser, E.N, D.B. Haidvogel, A.J. Hermann, E.L. Dobbins, T. Powell and A. Kaplan, 2005. Multi-scale modeling of the North Pacific Ocean: Assessment of simulated basin-scale Variability (1996-2003). *J. Geophys. Res.*, 110, C11021, doi:101029/2005JC002902.

Other Publications

Fiechter, J., A.M. Moore, C.A. Edwards, K.W. Burland, E. Di Lorenzo, C.V. Lewis, T.M. Powell, E.N. Curchitser and K. Hedstrom, 2008. A simple approach to model iron limitation on primary production in the Coastal Gulf of Alaska. *Deep Sea Res.*, in press

Gan J.P., H. Li, E.N. Curchitser and D.B. Haidvogel, 2006. Modeling South China Sea Circulation . Part I: Response to seasonal forcing regimes. *J. Geophys. Res.*, 111, C06034, doi:10.1029/2005JC003298.

Curchitser, E.N., D.B. Haidvogel, and M. Iskandarani, 2001. Transient adjustment of circulation in a mid-latitude abyssal ocean basin with realistic geometry and bathymetry. *J. Phys. Ocean.*, 31(3):725-745.

Curchitser, E.N., D.B. Haidvogel, and M. Iskandarani, 1999. On the transient adjustment of a mid-latitude abyssal ocean basin with realistic geometry: The constant depth limit. *Dyn. Atmo. Ocean.*, 29:147–188.

Curchitser, E.N., M. Iskandarani and D.B. Haidvogel, 1998. Spectral element solution of the Shallow-Water Equations on multiprocessor computers. *J. Atmo. Ocean. Techn.*, 15(2):510–521.

Synergistic activities

2007-present Member of the task team formulating a strategic plan for the development of the National Center for Atmospheric Research (NCAR) next generation comprehensive Earth System Model.

2007-present Member of the Ecosystem Studies of Subarctic Seas (ESSAS) modeling working group.

2006-present Member of Pacific International Consortium for the Exploration of the Seas (PICES) working group (WG-20): *Evaluation of Climate Change Projections*.

2006-present Member of the Community Climate System Model (NCAR-CCSM) ocean working group.

2005-2008 Member of the National Science Foundation (NSF) Partnership for Advanced Computational Infrastructure (PACI) allocations committee.

Graduate Dissertation Adviser

Dr. Dale B. Haidvogel (Rutgers University)

Recent collaborators Dr. M. Alexander (NOAA), Dr. H. Bathchelder (OSU), Dr. N. Bond (U. Wash./PMEL), Dr. A. Capotondi (Coloradu U.), Dr. A. Gangopadyay (U. Mass.), Dr. D. Haidvogel (Rutgers U.), Dr. K. Hedstrom (Alaska-Fairbanks), Dr. A. Hermann (U. Wash./PMEL), Dr. H.P. Huang (LDEO), Dr. W. Large (NCAR), Dr. T. Powell (UC Berkeley), Dr. A. Kaplan (LDEO), Dr. T. Weingartner (Alaska-Fairbanks).