BIOGRAPHICAL SKETCH

Neal R. Pettigrew
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Professional Preparation

Dartmouth College	Physics	A.B. 1972
Phi Beta Kappa, Magna Cum Laude, with distinction in Physics		
Louisiana State University.	Marine Science	M.S. 1975
M. I. T. /Woods Hole Oceanographic Institution	Physical Oceanography	Ph.D. 1981

Appointments:

Professor of Oceanography, University of Maine	2007-present
Director, University of Maine Ocean Observing	2002-present
Chief Scientist –Gulf of Maine Ocean Observing System	2000-present
Director, Physical Oceanography Group, University of Maine	1998-present
Oceanography Program Coordinator, University of Maine	1997-2000
Associate Professor of Oceanography, University of Maine	1991-2007
Associate Research Professor, University of New Hampshire	1986-1991
Senior Research Scientist, University of New Hampshire	1983-1986
Research Scientist, University of New Hampshire	1981-1983

Research Focus:

My research over the past 25 years has emphasized the physical oceanography of marginal seas, sea straits, and continental shelf and slope regions; ocean observing systems; autonomous vehicles, surface data buoy designs, and interdisciplinary studies relating physical processes and the circulation in coastal regions to questions of larval and contaminant transport, harmful algal blooms, aquaculture, and coastal mixing.

Five Most Relevant Publications

Churchill, J.H., **N.R. Pettigrew**, and R.P. Signell, 2005. Structure and Variability of the Western Maine Coastal Current.. *Deep Sea Res. II*, 52: 2392-2410.

Pettigrew, N.R., J. H. Churchill, C.D. Janzen, L.J. Mangum, R.P. Signell, A.C. Thomas, D.W. Townsend, J.P. Wallinga, H. Xue, 2005**.** The kinematic and hydrographic structure of the Gulf of Maine Coastal Current. *Deep Sea Res. II*, 52: 2369-2391.

Pettigrew, N.R., C. S. Roesler, F. Neville, and H.E. Deese, 2008. An operational real-time ocean sensor network in the Gulf of Maine. S. Nittel, A. Labrinidis, and A Stefanidis (Eds.) DSN 2006, LNCS 4540, pp. 213-238.

Pettigrew, N.R., H.Xue, J.D. Irish, W. Perrie, C.S. Roesler, A.C. Thomas, D.W. Townsend, 2005**.** The Gulf of Maine Ocean Observing System: generic lessons learned in the first seven years of operation (2001-2008). *MTS Journal*, 42, 3, pp. 91-102.

Wanamaker, A.D., K.J. Kreutz Jr, B.R. Schone, **N.R. Pettigrew,** H.W**.** Borns Jr., D.S. Introne, D. Belknap, K.A. Maasch, and S. Feindel 2008. Coupled North Atlantic Slope Water forcing on Gulf of Maine temperatures over the past millennium. Climate Dynamics 31, 183-194.

Five Other Recent Relevant Publications

Beard, K., H. Deese, and **N.R Pettigrew,** 2008. A framework for visualization and exploration of events. Information Visualization 7, 133-151.

Manning, J.P., D.J. McGillicuddy, **N.R. Pettigrew**, J.H. Churchill, and L.S. Incze, 2009. Drifter Observations of the Gulf of Maine Coastal Current, *Cont. Shelf Res*. (in press).

Pettigrew, N.R, and F. Neville, 2008. Gulf of Maine Ocean Observing System (GoMOOS): Current Measurement in an Integrated Ocean Observing System. Proceedings of the IEEE/OES/CMTC 9th Working Conference on Current Measurement Technology, 143-150.

Townsend, D.W., **N.R. Pettigrew**, and A.C. Thomas, 2005. On the Nature of Offshore *Alexandrium fundyense* Blooms in the Gulf of Maine. *Deep Sea Res. II*, 52: 2603-2630.

Xue, H**.,** L.S. Incze, D. Xu, N. Wolff, and **N.R. Pettigrew**, 2007. Connectivity of Lobster Populations in the Coastal Gulf of Maine. Part I: Circulation and Larval Transport Potential. *Ecological Modelling*. doi:10.1016/j.ecolmodel.2007.07.024

Examples of Synergistic Activities

1) **Chief Scientist, Gulf of Maine Ocean Observing System (GoMOOS).**
2) **Scientific consulting over the past decade on site selection and environmental impacts of net pen acquaculture.**
3) **Design specification and testing of RDI and Aanderaa acoustic Doppler profilers.**
4) **Modification of the response method of tidal analysis for data with gaps and/ or large-amplitude features (tidal bores) that are phase-locked with the tides.**

Recent Collaborators:

Don Anderson, WHOI, Woods Hole, MA
Dave Brooks, Texas A&M, College Station, TX
James H Churchill, WHOI, Wood Hole, MA
James D. Irish, UNH, Durham NH
Dennis McGillicuddy, WHOI, Woods Hole, MA
James O'Donnell, University of Connecticut
Peter C. Smith, BIO Nova Scotia, CA
Philip Bogden, GoMOOS, Portland, ME
J*anet Campbell*, UNH, Durham, NH
Al Hansen, URI, Narragansett, RI
Lew Incze, USM, Portland, ME
James Manning, NMFS, Woods Hole, MA
Richard Signell, USGS, Woods Hole, MA
Nikki Tigoni, Cambridge University, UK

Graduate Advisors:
Joseph Suhayda, Department of Civil Engineering, Louisiana State University (MS)
Gabriel T. Csanady, (retired) (PhD)

Graduate Advisees - PhD (6)
Abdelkader Benabdeljelil, Mohammed V University, Morocco: Peter Brickley, University of Maine; Heather Deese, University of Maine (current), Michael Sauer, University of Maine (joint, current), Francois Neville, University of Maine (joint, current).

Graduate Advisees - Masters (5)
Peter Brickley, Robert Hetland, Bin Gong, Robert Stessel (current), Nesrine Sid-Otmane (current)

Post Doctoral Associates- (3)
Carol Janzen, SeaBird Electronics, Neil Fisher, University of Maine
Susan Elston, University of Maine