

PROFESSIONAL RESULTS:

2020 – present: Electronics Engineer, National Oceanic Atmospheric Administration, Woods Hole, MA

At the National Marine Fisheries Service, Northeast Fisheries Science Center, provide technical consulting services to scientists for fisheries surveys and studies.

- Improve and update a variety of survey equipment such as fish measuring boards, EchoCAL documentation, shipboard wiring and data collection systems.
- Brought 3D printing capability to the Center
- Awarded \$1.5M+ funds for autonomous underwater vehicle technology for the scallop fishery survey, demonstrated readiness level 7 operations, under budget.

2000 – 2020: Electronics Engineer, U.S. Geological Survey, Woods Hole, MA

Manage the group that provides technical consulting services to senior scientists for physical oceanographic and sediment transport studies. Introduced new supervisory methods, trained and mentored junior technologists.

- Supervise and/or participate in >400 mooring and bottom lander deployments
- System design, embedded programming and project management for an animated underwater frame to measure optical and acoustic profiles of particles near the seabed, while cabled to shore.
- Designed and deployed moorings to survive and return data from a turbidity flow in Monterey Canyon
- Managed the project to collect data on Diamond Shoals, off Cape Hatteras, NC through winter storms
- Collaborated with Woods Hole Oceanographic to transition their acoustic modems to shallow water use
- Developed time series data processing, visualization and analysis software for a variety of instrument systems.
- Delivered >23 publications and talks
- Excellence in leadership award, 2013

1990 – 2000: Electronics Engineer, U.S. Geological Survey, Woods Hole, MA

Provide technical consulting services to senior scientists nationwide for physical oceanographic and sediment transport studies. Conduct field work as part of the Sediment Transport Group.

- 264 moorings and landers deployed at sites from 1 m to 3 km depth
- Design, develop, maintain, calibrate and test equipment as needed (ADCPs, VACMs, CTDs, etc.)
- Develop data processing software for ADCPs, ADVs, and other instrumentation in MATLAB and C++
- Designed, built and deployed the MIDAS logger, featured in Sea Technology magazine
- Nine publications and talks, documentation of systems in use at USGS

1987 – 1990: Research Assistant, University of New Hampshire, Durham, NH

- Design, development, calibration and upgrade of the intelligent CTD (thesis work).
- Software development, processing and analysis of hydrographic data in C and PRIMOS.
- Instruct laboratory classes.
- Two publications and talks.

1986-1987: Member of Technical Staff, TRW Federal Systems Group, McLean, VA

Staff for the Navy's Life Cycle Manager for the Landing Craft, Air Cushion Vehicle (LCAC). Assess viability, cost and monitoring of craft design changes, technical manuals, and test equipment; develop programs for reliability, availability and maintainability of the LCAC. Identify deviations using shipyard inspections.

EDUCATION

M.S., University of New Hampshire, 1990 (ocean engineering, instrumentation)

B.S., United States Merchant Marine Academy, 1986 (marine & systems engineering)

LICENSES & PROFESSIONAL AFFILIATIONS

U.S. Coast Guard Merchant Marine License, 3rd Assistant Engineer, unlimited horsepower, 1986-2012

Professional Engineering License #53747, Electrical Engineer, 2017

FCC radio license W1FX

IEEE Oceanic Engineering Society, Marine Technology Society

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SELECT PUBLICATIONS:

- Martini, M.A., Montgomery, E.T., Suttles, S.E., and Warner, J.C., 2021, Summary of oceanographic and water-quality measurements offshore of Matanzas Inlet, Florida, 2018: U.S. Geological Survey Open-File Report 2021-1014, 21 p., <https://doi.org/10.3133/ofr20211014>.
- Martini, M.A., Aretxabaleta, A.L., and Sherwood, C.R., 2019, Using the Lomb-Scargle method for wave statistics from gappy time series. IEEE/OES Twelfth Current, Waves and Turbulence Measurement (CWTM) Workshop Proceedings, pp. 1-9.
- Suttles, S.E., Ganju, N.K., Brosnahan, S.M., Montgomery, E.T., Dickhudt, P.J., Beudin, Alexis, Nowacki, D.J., and Martini, M.A., 2017, Summary of oceanographic and water-quality measurements in Chincoteague Bay, Maryland and Virginia, 2014-15: U.S. Geological Survey Open-File Report 2017-1032, 95 p., <https://doi.org/10.3133/ofr20171032>
- Suttles, S.E., Ganju, N.K., Montgomery, E.T., Dickhudt, P.J., Borden, Jonathan., Brosnahan, S.M., and Martini, M.A., 2016, Summary of oceanographic and water-quality measurements in Barnegat Bay, New Jersey, 2014-15: U.S. Geological Survey Open-File Report 2016-1149, 22 p., <http://dx.doi.org/10.3133/ofr20161149>
- Montgomery, E.T., Ganju, N.K., Dickhudt, P.J., Borden, Jonathan., Martini, M.A., and Brosnahan, S.M., 2015, Summary of oceanographic and water-quality measurements in Rachel Carson National Wildlife Refuge, Wells, Maine, in 2013: U.S. Geological Survey Open-File Report 2015-1072, 28 p., <http://dx.doi.org/10.3133/ofr20151072>
- Armstrong, Brandy N.; Warner, John C.; List, Jeffrey H.; Martini, Marinna A.; Montgomery, Ellyn T.; Traykovski, Peter A.; Voulgaris, George, 2015. Coastal Change Processes Project data report for oceanographic observations near Fire Island, New York, February through May 2014. U.S. Geological Survey Open-File Report 2015-1033, HTML Document, at http://pubs.usgs.gov/of/2015/1033/ofr2015-1033-title_page.html
- Armstrong, B.N., Warner, J.C., List, J.H., Martini, M.A., Montgomery, E.T., Voulgaris, George, and Traykovski, P.A., 2014, Coastal Change Processes Project data report for observations near Fire Island, New York, January to April 2012: U.S. Geological Survey Open-File Report 2014-1159, <https://dx.doi.org/10.3133/ofr20141159>
- Armstrong, Brandy N.; Warner, John C.; Voulgaris, George; List, Jeffrey H.; Thieler, Robert; Martini, Marinna A.; Montgomery, Ellyn; McNinch, Jesse; Book, Jeffrey W.; Haas, Kevin, 2013. Carolinas Coastal Change Processes Project data report for nearshore observations at Cape Hatteras, North Carolina. U.S. Geological Survey Open-File Report 2012-1219, U.S. Geological Survey
- M. Martini, J. C. Warner, J. List, B. Armstrong, E. Montgomery and N. Marshall, "Observations of ocean circulation and sediment transport experiment offshore of Fire Island, NY," 2012 Oceans, Hampton Roads, VA, 2012, pp. 1-8.
- Martini, M.; Warner, J.C.; List, J.; Armstrong, B.; Voulgaris, G.; Schwab, B. "Collecting Ocean-Circulation and Sediment-Transport Data Offshore of Fire Island, New York," Soundwaves, July/August 2012.
- Sherwood, C.R., Dickhudt, P.J., Martini, M.A., Montgomery, E.T., and Boss, E.S., 2012, Profile measurements and data from the 2011 Optics, Acoustics, and Stress In-Situ (OASIS) project at the Martha's Vineyard Coastal Observatory: U.S. Geological Survey Open-File Report 2012-1178, at <http://pubs.usgs.gov/of/2012/1178/>
- Armstrong, Brandy N.; Warner, John C.; Voulgaris, George ; List, Jeffrey H.; Thieler, E. Robert; Martini, Marinna A.; Montgomery, Ellyn T., 2011. Carolinas Coastal Change Processes Project data report for observations near Diamond Shoals, North Carolina, January-May 2009. U.S. Geological Survey Open-File Report 2011-1156, HTML Document; Matlab M-files Downloads; Metadata, <http://pubs.usgs.gov/of/2011/1156/>
- Ganju, N.K., Dickhudt, P.J., Montgomery, E.T., Brennand, Patrick, Derby, R.K., Brooks, T.W., Guntenspergen, G.R., Martini, M.A., Borden, Jonathan, and Baldwin, S.M., 2012, Summary of oceanographic and water-quality measurements near the Blackwater National Wildlife Refuge, Maryland, 2011: U.S. Geological Survey Open-File Report 2012-1099, available only at <http://pubs.usgs.gov/of/2012/1099/>
- Ganju, Neil K.; Dickhudt, Patrick J.; Thomas, Jennifer A.; Borden, Jonathan ; Sherwood, Christopher R.; Montgomery, Ellyn T.; Twomey, Erin R.; Martini, Marinna A., 2011. Summary of oceanographic and water-quality measurements in West Falmouth Harbor and Buzzards Bay, Massachusetts, 2009-2010. U.S. Geological Survey Open-File Report 2011-1113, at <http://pubs.usgs.gov/of/2011/1113/>
- Rosenberger, Kurt ; Noble, Marlene A.; Sherwood, Christopher R.; Martini, Marinna M.; Ferreira, Joanne T.; Montgomery, Ellyn, 2011. Palos Verdes Shelf oceanographic study; data report for observations December 2007-April 2008. U.S. Geological Survey Open-File Report 2010-1240, v, 27 p.; Figures; Appendices, <http://pubs.usgs.gov/of/2010/1240/>
- Cote, J.M., Hotchkiss, F.S., Martini, M.A., Denham, C.R., and Ramsey, A.L. "Acoustic Doppler current profiler data processing system manual." U.S. Geological Survey Open-File Report 00-458, Version 7. <http://pubs.usgs.gov/of/2000/of00-458/>
- Foote, K.G.; Martini, M.A.; "Standard-target calibration of an acoustic backscatter system," OCEANS 2010, vol., no., pp.1-5, 20-23 Sept. 2010.
- Martini, M.A.; Foote, K.G.; "Measurements of echo stability of an acoustic backscatter system," OCEANS 2010,

- vol., no., pp.1-7, 20-23 Sept. 2010.
- Montgomery, E., Martini, M., Sherwood, C., USGS Sediment-Transport Investigators Calibrate Tripod-Mounted Underwater Sonars in a Large Tank at the University of New Hampshire, Soundwaves, March 2010.
- Butman, Bradford; Alexander, P. Soupy; Bothner, Michael H.; Borden, Jonathan; Casso, Michael A.; Gutierrez, Benjamin T.; Hastings, Mary E.; Lightsom, Frances L.; Martini, Marianna A.; Montgomery, Ellyn T.; Rendigs, Richard R.; Strahle, William S., 2009. Long-Term Oceanographic Observations in Massachusetts Bay, 1989-2006. U.S. Geological Survey Data Series 74, Available online and on DVD-ROM, <http://pubs.usgs.gov/ds/74/>
- Martini, M., Armstrong, B., Warner, J.C., "High resolution near-bed observations in winter near Cape Hatteras, North Carolina," OCEANS 2009, MTS/IEEE Biloxi - Marine Technology for Our Future: Global and Local Challenges, vol., no., pp.1-10, 26-29 Oct. 2009.
- Montgomery, Ellyn T.; Martini, Marianna A.; Lightsom, Frances L.; Butman, Bradford, 2008. Documentation of the U.S. Geological Survey Oceanographic Time-Series Measurement Database. Geological Survey (U.S.) Open-File Report 2007-1194, Available online, <http://woodshole.er.usgs.gov/pubs/of2007-1194/>
- Martini, M.A. Butman, B., and Mickelson, M. "Evaluation of the long-term performance of new Oxygen Sensors in Coastal Waters," Journal of Atmospheric and Oceanic Technology, Vol. 24, pp. 1924-1935, 2007.
- Martini, M.; Butman, B.; Ware, J.; Frye, D., "Field Tests of Acoustic Telemetry for a Portable Coastal Observatory," OCEANS 2006, vol., no., pp.1-6, 18-21 Sept. 2006.
- Sullivan, C.M., Warner, J.C., Martini, M.A., Lightsom, F.S., Voulgaris, G., and Work, P. "Wave Data Processing Toolbox Manual Version 1.0", U.S. Geological Survey Open File Report 2005-1211, 2006.
- Coté, J.M., Hotchkiss, F.S., Martini, M.A., Denham, C.R., and Ramsey, A.L. "Acoustic Doppler current profiler data processing system manual." U.S. Geological Survey Open-File Report 00-458, Version 6 (2006).
- Sullivan, Charlene M.; Warner, John C.; Martini, Marianna A.; Voulgaris, George; Work, Paul A.; Haas, Kevin A.; Hanes, Daniel, 2006. South Carolina Coastal Erosion Study, Data Report for Observations, October 2003 - April 2004. Open-File Report 2005-1429, <http://pubs.usgs.gov/of/2005/1429/>
- Martini, M., Lightsom, F.L., Sherwood, C.R., Xu, J., Lacy, J.R., Ramsey, A. and Horwitz, R., "Hydratools, a MATLAB Based Data Processing Package for Sontek Hydra Data." Proceedings of the IEEE/OES Eighth Working Conference on Current Measurement Technology, ISBN 0-7803-8989-1, pp. 147-151, Southampton, UK, 28-29 June, 2005.
- edited by Bothner, Michael H.; Butman, Bradford; contributing authors Alexander, P. Soupy; Blackwood, Dann S.; Borden, Jonathan; Casso, Michael A.; Crusius, John; Goudreau, Joanne; Kalnejais, Linda H.; Lamothe, Paul J.; Martin, William R.; Martini, Marianna A.; Milbert, Sandra M.; Rendigs, Richard R.; Sayles, Frederick L.; Signell, Richard P.; Valentine, Page C.; Warner, John C., 2005. Processes influencing the transport and fate of contaminated sediments in the coastal ocean - Boston Harbor and Massachusetts Bay. Open-File Report 2005-1250, un-paginated, <http://pubs.usgs.gov/of/2005/1250/>
- Butman, B., Alexander, P.S., Harris, C.K., Traykovski, P.A., Buchholtz ten Brink, M.R., Lightsom, F.S., and Martini, M.A. "Oceanographic observations in the Hudson Shelf Valley, December 1999 - April 2000: data report." U.S. Geological Survey Open-File Report 02-217, 2003.
- Martini, M., AUSGS Capabilities for Studying Sediment Transport in the Ocean, Proceedings of the Federal Interagency Sediment Monitoring Instrument and Analysis Research Workshop, September 9-11, 2003, Flagstaff, Arizona, U.S. Geological Survey Circular 1276, (2005).
- Martini, M. and Ramsey, A., Evaluation of an RDI 1200 kHz ADCP using fast ping rates to measure near bottom mean currents [abs.]. Proceedings of the IEEE/OES 7th Working Conference on Current Measurement Technology, ISBN 0-7803-7813-X/03, p. 250, (2003).
- Butman, B., Bothner, M.H., Lightsom, F.L., Gutierrez, B.T., Martini, M.A., and Strahle, W.S. "Long-term oceanographic observations in western Massachusetts Bay offshore of Boston, Massachusetts: data report for 1989-2000." U.S. Geological Survey Digital Data Series DDS-74, DVD-ROM (2002).
- Ware, J., Frye, D., Hogg, N., Koshi, P., Butman, B., and Martini, M. "Acoustically linked ocean observatories; initial results from three installations [abs.]." Eos, Transactions, American Geophysical Union, American Society of Limnology and Oceanography, 2002 Ocean Sciences Meeting, Supplement 84, no. 4 (2002).
- Cote, J.M., Martini, M and Hotchkiss, F., 2000, Post-processing Methods to Improve ADCP Velocity Measurements [poster]. ASLO-AGU Ocean Sciences Meeting, Abstracts published as supplement to Eos, Transactions, American Geophysical Union, Vol. 80, No. 49, Dec. 7, pp. 193-194, (1999).
- Martini, M. and Clay, P., An inter-comparison test of an RD Instruments= workhorse ADCP mounted in a new trawl resistant bottom mount, an RD Instruments= broadband ADCP and a vector measuring current meter, Proceedings of the Oceanology International Conference, vol. 1, pp. 257-267, (1998).
- Morrison, A.T.I., Williams, J.A.I., and Martini, M., "Calibration of the BASS acoustic current meter with carrageenan agar." Institute of Electrical and Electronics Engineers-Oceanic Engineering Society (IEEE-OES), OCEANS '93, Proceedings 3 (1993).
- Strahle, W.J., Martini, M.A., and Davis, R.E., "Instrument packages to study long-term sediment transport processes in a shallow bay." Marine Technology Society Journal (MTS), Proceedings 2, (1994).
- Strahle, W.J., Worrlow, S.E., Fucile, P.D., and Martini, M.A., "New recording package for VACM provides sensor

- flexibility." Marine Technology Society Journal (MTS), Proceedings, (1994).
- Strahle, W.J., Perez, C., and Martini, M.A., "Antifouling leaching technique for optical lenses." Institute of Electrical and Electronics Engineers-Oceanic Engineering Society (IEEE-OES), Proceedings, OCEANS OSATES '94 Conference, (1994).
- Martini, M.A. and Williams, A., "Benthic Acoustic Stress Sensor (BASS): electronics check-out procedures." U.S. Geological Survey Open-File Report 93-722, (1993).
- Martini, M.A., and W.J. Strahle. "Multi-Sensor System for Coastal Environments." Sea Technology 34 (1993): 49-49.
- Martini, M. and Strahle, W. "A multi-sensor oceanographic measurement system for coastal environments [abs.]." Institute Electrical Electronic Engineers and Marine Technical Society, Proceedings 2 (1992).
- Martini, M., Irish, J.D. and Bradley, A.M., "In Situ Evaluation of Ocean Profiling Sensors," Marine Tech. Soc. Conference Proceedings, vol. II, pp. 338-343, (1990).
- Irish, J.D.; Martini, M.; Needell, G.J.; "Thoughtful" CTD Profiling System," OCEANS '89. Proceedings, vol.5, no., pp.1636-1641, 18-21 Sep 1989.
- Martini, M.; Irish, J.D.; "Removing Ship's Motion Effects from CTD Data," OCEANS '89. Proceedings, vol.5, no., pp.1615-1620, 18-21 Sep 1989.

SELECT PUBLICATIONS with ACKNOWLEDGEMENT for SIGNIFICANT CONTRIBUTION:

- Ganju, N. K., Defne, Z., Elsey-Quirk, T., & Moriarty, J. M. (2019). Role of tidal wetland stability in lateral fluxes of particulate organic matter and carbon. Journal of Geophysical Research: Biogeosciences, 124. <https://doi.org/10.1029/2018JG004920>
- Boss, E.; Sherwood, C.R.; Hill, P.; Milligan, T. Advantages and Limitations to the Use of Optical Measurements to Study Sediment Properties. Appl. Sci. 2018, 8, 2692. DOI: 10.3390/app8122692

FIELD AND MARITIME EXPERIENCE:

- 2023-2022 assist with acoustic calibrations of the F/V Henry B, Bigelow and R/V Neil Armstrong
- 2023 F/V Henry B. Bigelow deployment of MBARI LRAUV to acquire bottom images, demonstrate readiness level
- 2023 F/V Gloria Michelle deployment of MBARI LRAUV to acquire bottom images, demonstrate readiness level
- 2021 R/V Hugh R. Sharp scallop survey leg with HabCam, US northeast coast
- 2021 F/V Henry B. Bigelow bottom trawl survey leg, US northeast coast
- 2018 R/V Savannah, deploy moorings and bottom landers off Matanzas, FL.
<https://www.facebook.com/coastalandoceanscience/videos/1575094382585204/>
- 2016 R/V Tioga, deploy a waverider buoy in Cape Cod Bay, MA.
<http://cdip.ucsd.edu/?&sub=data&nav=historic&stn=221&stream=p1>
- 2014 R/V Connecticut, deploy and recover 2 quadpods and 2 bottom sleds with ground lines and moorings
- 2012 R/V Bold, SEABOSS sampling cruise, 350 stations to characterize the Massachusetts Coastal Zone Management area previously mapped by USGS and others.
- 2012 R/V Connecticut, deploy and recover 9 tripods and 6 buoys (two cruises) off Fire Island, NY.
- 2011 Create a moving arm and underwater node interface for our existing tripod: Sherwood, C., Mechanical Arm + Internet = Realtime Profiles of Particles Near the Seafloor, Soundwaves, Nov./Dec. 2011.
- 2010 R/V Tommy Munro, two cruises, Deepwater Horizon oil spill response, service tripods and final recovery
- 2010 R/V Acadiana, Deepwater Horizon oil spill response, deploy 4 ADCP tripods around the Chandeleur Islands, LA.
- 2010 Field work in West Falmouth Harbor, MA.
- 2010 Acoustic target calibration testing at the Woods Hole Oceanographic Institution.
- 2010 Field work at Cape Hatteras, NC. Instrumentation and general shore support.
- 2010 Calibration of a sonar at the University of New Hampshire.
- 2009 R/V Tioga, deploy and recovery tripods in Buzzards Bay, MA, to support estuarine studies
- 2009 R/V Connecticut, deploy and recover tripods and moorings (two cruises) on Diamond Shoals, Cape Hatteras, NC.
- 2007 R/V Connecticut, deploy and recover tripods (two cruises) at the Martha's Vineyard Observatory, follow up study, http://www.onr.navy.mil/sci_tech/32/reports/docs/06/cgsherwo.pdf
- 2007 R/V Gordon Sproul, deploy moorings and tripods off Palos Verdes, CA. <http://walrus.wr.usgs.gov/pv/>
- 2006 R/V Connecticut, recovery moorings and tripods deployed in the Hudson Shelf Valley.
<http://woodshole.er.usgs.gov/project-pages/newyork/>
- 2006 M/V Samantha Miller, deploy moorings and tripods to measure sediment transport and circulation in the Hudson Shelf Valley. <http://woodshole.er.usgs.gov/project-pages/newyork/>

2005 R/V Argo Maine, replace moorings and tripods in Massachusetts Bay supporting the Massachusetts long term monitoring project <http://pubs.usgs.gov/ds/74/index.html>

2005 R/V Connecticut, deploy and recover tripods (two cruises) at the Martha=s Vineyard Observatory, http://www.onr.navy.mil/sci_tech/32/reports/docs/06/cgsherwo.pdf

2004 R/V Oceanus, aborted attempt to deploy a tripod in the Gulf of Lyon, France, part of EuroStrataform. French permission never received.

2003-2004 R/V Dan Moore deploy moorings and tripods to describe the physical processes that control the transport of sediment in Long Bay, specifically off the coast of Myrtle Beach, South Carolina, <http://woodshole.er.usgs.gov/project-pages/scarolina/html/po.htm>

2003 R/V Connecticut, turn around moorings and tripods in Massachusetts Bay, MA circulation study.

2003 R/V Point Sur, recover 3 subsurface moorings designed to collect flow and sediment data from turbidity flow events.

2003 R/V Asterias, deploy and recover tripods for instrumentation test off Martha=s Vineyard, MA

2002 R/V Point Sur, deploy 3 subsurface moorings designed to collect flow and sediment data from turbidity flow events.

2002 R/V Edwin Link, turn around tripods in the Adriatic Sea, part of EuroStrataform.

2000 R/V Endeavor, deploy moorings in the Gulf of Maine.

2000 R/V Endeavor, recover moorings and tripods in the Hudson Shelf Valley.

2000 R/V Gordon Sproul, deploy moorings and tripods in Santa Monica Bay, CA.,

2000 R/V Connecticut, recover tripod with ROV that was deployed in the Hudson Shelf Valley

1999 R/V Oceanus, deploy and service moorings on Georges Bank, MA for the GLOBEC experiment, three cruises.

1999 R/V Edwin Link, supporting the GLOBEC program, circulations studies on Georges Bank, MA,

1998 R/V Gordon Sproul, circulation studies in Santa Monica Bay, CA,

1998 R/V Point Sur, recover moorings in Monterey Canyon, CA

1998 R/V Oceanus, Deploy and recover 8 moorings in the Gulf of Maine for a circulation modelling study (two cruises), Fong, D.A., Geyer, W.R, and R.P. Signell, 1997. The wind-forced response of a buoyant coastal current: observations of the western Gulf of Maine plume, *Journal of Marine Systems*, 12, 69-81.

1997 NOAA Mac Arthur, deploy moorings to study oceanic circulation on the shelf, develop sediment transport models, and study El Nino events.

1997 R/V Point Sur, deploy 2 subsurface moorings on canyon walls and one out in the canyon fan designed to collect flow and sediment data from turbidity flow events.

1997 R/V Point Sur, recover moorings, Monterey Canyon, CABarry, J.P., Paull, C.K., Xu, J.P., Buck, K.R., Whaling, P., Ussler, W. III, and Caresse, D., The tempo and intensity of turbidity flows in Monterey Canyon [abs.]: Ocean Sciences Meeting, Honolulu, Hawai'i, February 20-24, 2006

1997 R/V Oceanus, deploy and service moorings on Georges Bank, MA for the GLOBEC experiment, three cruises.

1996 R/V Point Sur, mooring work (two cruises), Monterey Canyon, CA

1996 R/V Dan Moore, deploy tripods to measure bottom currents and waves to investigate the flow field and sediment transport in a rippled scour depression offshore of Wrightsville Beach, NC.

1996 R/V Kila, deploy a mooring in Mamala Bay, HI, to determine how the dredged material-- and any associate pollutants might be moved or reworked by oceanographic processes and redistributed after disposal.

1994 R/V Gordon Sproul, recover moorings from Monterey Canyon, CA.

1994 R/V Gulf Challenger, deploy/recover moorings in the Gulf of Maine, three cruises.

1993 R/V Argo Maine, deploy moorings and tripods to study Gulf of Maine circulation.

1993 R/V Gordon Sproul, moorings off Paolos Verdes, CA.

1993 R/V Gordon Sproul, deploy moorings in Monterey Canyon, CA.

1993 R/V Asterias, recover mooring in Massachusetts Bay, part of the long term circulations study.

1992 R/V Gordon Sproul, recover moorings off Palos Verdes, CA.

1992 USC Ship R/V John V. Vickers, Deploy moorings and tripods off Palos Verdes, CA. Information gathered by an array of moorings was designed to provide both a basic description of the circulation patterns in the region and an understanding of important physical processes, especially those processes that control the resuspension and transport of sediment and associated pollutants. <http://walrus.wr.usgs.gov/pv/pvcurrents.html>

1991 R/V Argo Maine, Massachusetts Bay circulation study.

1991 R/V Wecoma, recover surface marker buoys and 3 current moorings on CA Continental Shelf in Sediment TRansport Events on Shelves and Slopes (STRESS) experiment to study resuspension/transport of fine-grained sediments in winter storms at sites C2, C3, and C4.,

1991 R/V Oceanus, recover moorings in Massachusetts Bay, MA (two cruises).

1990-1996 USCG White Heath, USCG Marcus Hanna and F/V Christopher Andrew, tri-annual cruises to

- replace moorings and tripods in Massachusetts Bay supporting the Massachusetts long term monitoring project <http://pubs.usgs.gov/ds/74/index.html>
- 1990-1992 R/V Tommy Munro, R/V Verril, deploy and turn around moorings, tripods and piling mounts at five sites over a two year study to study sub-tidal circulation patterns and tidal current shear in the shallow, highly stratified Mobile Bay, Alabama.
- 1990 R/V Wecoma, Deploy surface marker buoys and 3 current moorings on CA Continental Shelf in Sediment TRansport Events on Shelves and Slopes (STRESS) experiment to study resuspension/transport of fine-grained sediments in winter storms at sites C2, C3, and C4., two cruises
- 1990 R/V Endeavor, deploy and recover ocean bottom seismometers off the Chesapeake Bay, VA.
- 1990 R/V Oceanus Recover two subsurface moorings from Deep Water Dump Site DWDS 106, southern flank of Georges Bank. Collect and process sediment samples for studies of benthic infauna, microbiology, heavy metal and organic geochemistry. Overall objective of the sampling is to extend our study (initial survey on Atlantis cruise 122) of the sea floor to determine where particles from sewage sludge are being deposited as a result of discharge in the dump site (2250-2750 m water depth).
- 1990 USNS De Steiguer, deploy a mooring off the Farallon Islands, CA, The information gathered by the moored array and by allied programs in the study was designed to provide both a basic description of the current field and an understanding of the underlying physical processes in the region. It was necessary to gather this knowledge so that models could be developed that would allow the Environmental Protection Agency (EPA) to choose appropriate sites for the deposition of materials dredged from San Francisco Bay. The observed currents will also be used with simple advection/dispersion models to allow the EPA to predict the ultimate fate of materials deposited at those sites.
- 1990 R/V Asterias, test ocean bottom seismometers.
- 1989 R/V Oceanus - thesis research and assisting members of WHOI's Advanced Ocean Physics and Engineering Department in testing the Flying Fish fast profiler
- 1989 R/V Onrust - study in Long Island Sound, NY.
- 1987-1990 teach instrumentation class to U. Of New Hampshire Students aboard the R/V Jere Chase
- 1985 Work for six months as engine cadet aboard the Military Sealift Command tanker M/V Sealift Atlantic
- 1983 Work for six months as engine cadet aboard the container ships U.S. Lines SS American Altair and the American Export Lines SS Export Freedom.