

Resume'

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Dr David Shonting
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Senior Scientist [Emeritus – Retired] – Physical Oceanographer, Head, Oceanography Group,
Naval Undersea Warfare Center [Formerly Naval Underwater Systems Center]
Newport, RI 02841

Professor [Adjunct] of Physical Oceanography
Dept of Ocean Engineering and Graduate School of Oceanography
University of Rhode Island, Narragansett, RI, 02881

Education:

BS – Chemistry / University of New Hampshire
MS – Physical Chemistry / University of New Hampshire
ScD – Physical Oceanography / Massachusetts Institute of Technology
[Doctoral dissertation: Observations of Particle Motions in Ocean waves]

Language skills: Fluent in English, Italian. Working knowledge of French and German
Fair speaking/reading skills in Russian and Portuguese.

Visiting Professor/Lecturer:

Southeastern Mass. Univ. /Dartmouth, MA
Northeastern Univ. /Boston, MA,
Salve Regina Univ. Newport RI
Lecturer: von Karman Institute for Fluid Dynamics, Waterloo, Belgium, 1971

Publications:

Thirty-one peer reviewed scientific journal papers or book chapters.
Forty-five Science Articles and Technical Reports. Over 90 scientific presentations.
Presently completing Books: 1] Tsunamis: Their Generation and Effects, 2] Thoughts on
Winds, Waves, and Hurricanes

Five U.S. Patents:

- 1] SUBMARINE DEPLOYED SEA-STATE SENSOR #5,676,576
- 2] IMPROVED SUBMARINE DEPLOYED SEA-STATE SENSOR # 5,792,950
- 3] SYSTEM AND METHOD FOR CALIBRATING ACCELEROMETER OVER OCEAN WAVE FREQUENCIES #5,970,779
- 4] ACOUSTIC AND ENVIRONMENTAL MONITORING SYSTEM # 5,504,714
- 5] SELF-CONTAINED AMBIENT NOISE RECORDER # 7,120,089

Activities:

Vice President – Marine Technology Society/New England Section 1989 –1990
President – Marine Technology Society/New England Section: 1990-1991
Lecturer on Coastal Environment Affects of Hurricanes, Tsunamis and Florida Red Tides.
Member, Board of Directors, American National Metric Council
Member, Board of Directors, Norman Bird Sanctuary, Middletown, RI
Member, Middletown, RI Conservation Commission 1998-2002. Developed Beach Erosion Studies with URI Dept of Geology.
Conducted research at the Wood Hole Oceanographic Institution, NATO Undersea Research Centre, La Spezia, Italy, Laboratoire Oceanographique Physique, Paris, and Naval Post Graduate School, Monterey, CA

Member: Comite' pour l'Exploration de la Mer Mediterrenee', Monaco.

Member: Technical Advisory Committee, Charlotte Harbor & Estero Aquatic Preserves Program.

American Association for the Advancement of Science: Secretary – Section on Atmospheric & Hydrospheric Sciences, 2007-

Private Scientific Consulting;

- Admiralty Law Litigation: Expert witness in litigation on environmental effects, groundings, navigation, safety, and oil spill incidents.
- Design and evaluations related to beach erosion and storm damage, harbor mooring facilities, construction, and EPA Environmental Impact Statements.

Research Studies:

SURVEYS, HARBOR DESIGN, AND ENVIRONMENTAL IMPACT STUDIES:

A] Design of Gulf Stream Drift Experiments with free drifting submarine “Aluminaut” for Grumman Aircraft Corp., Beth Page, NY.

B] Design of environmental surveys for proposed Nuclear Power Coolant station off Alexandria, Egypt: ENDECO Inc., Marion, MA

C] Design of oceanographic surveys for tanker loading area on Brazilian coast, ENDECO Inc., Marion, MA.

D] Design survey of VLC oil tanker offload areas in Penobscot Bay, ME for ENDECO Inc., Marion, MA.

E] Reviewed Oceanographic Survey program for Philadelphia Electric Corp. power plant coolant sites, Cape may, NJ.: EG&G Inc, Boston, MA.

F] Designed Oceanographic EIS surveys of Block Island Sound for proposed Nuclear Power Plant. Wrote Environmental Impact Statement: Raytheon Corp. Portsmouth, RI.

G] Designed Wave Observation Program for US Coast Guard and EPA Oil Spill Skimmer T&E sites off Santa Barbara Channel, CA: Parker Inc. Leonardo, NJ.

H] Served on Research Vessel Design committees at URI, Narragansett, RI and SMU, Dartmouth, MA.

I] Designed Newport Harbor bow-stern Catalina Mooring systems. Designed float systems and prepared EIS of the effects on photosynthesis of sea grass and bottom flora/fauna.

J] Developed design criteria for effects of winds/storm tides on moorings for Newport, RI

K] RI Coastal Resources Management Council: Hearings Testimony on Moorings/Floats, permits and environmental effects.

L] Designed and tested Mini Telemetry Directional Wave Buoy with ENDECO, Marion, MA

M] Prepared draft: “Effects of the Eutrophication Problem on the Southwest Florida Coast and its Estuaries”. A proposed study to determine runoff effects on the “Red Tide” on beaches and estuaries. Work in progress in Lee County, FL

N] Reviewed/Edited: Charlotte Harbor & Estero Bay Aquatic Preserves Water Quality Status & Trends for 1998-2005, FI Dept. of Environmental Protection, Punta Gorda, FL.

O] Designed and conducted simulated oil spill studies of Sandy Hook, NJ for EPA and USCG.

MARITIME, SAILING, AND NAVIGATION EXPERIENCE:

A] Participated in over 45 research cruises in Atlantic, Pacific, and Mediterranean with: Woods Hole Oceanographic institution, University of Rhode Island, Naval Underwater Systems Center, NATO Undersea Research Centre, La Spezia, Italy. Worked on vessels of British, Belgium, and Italian Navies and served on fifteen cruises as chief scientist.

B] Several cruises involved depth and side scan sonar surveys using electronic and satellite navigation systems including the AUTECH, Bahamas and New England Continental shelf.

C] Served as crew/navigator [electronic and Sextant] on over 15 Ocean races: Newport- Bermuda, Boston - Halifax, Annapolis – Newport, and Newport – Cork, Ireland.

C- Designed Loran navigation

System for conducting Americas Cup Races in 1987, 1980, and 1983, in Newport, RI

RESEARCH CONDUCTED WITH THE US NAVY, THE UNIVERSITY OF RHODE ISLAND, THE US COAST GUARD, EPA, AND THE NATO UNDERSEA RESEARCH CENTER, LAS SPAZIA, ITALY

1] Studies of Wave Turbulence – using Instrumented Ocean Buoy Systems on New England Shelf

2] Development of Wave and temperature measuring systems and Vertical Spar Buoy Platform AESOP.

3] Research to assess effects on Oil Spill Dynamics by vertical mixing by surface waves and turbulence. Observations made with EPA and US Coast Guard off Sandy Hook, NJ. Assembled an Environmental SWAT team for readiness for national oil spill emergencies.

4] Development of Submarine Deployed surface Wave measuring system to determine surface wave spectra and estimates of wind waves and swell prior to launch of cruise missile.

5] Development of acoustic monitoring systems to register rainfall and wind speed at the sea surface.

6] Studies of heat fluxes in the upper ocean in response to wind and turbulence mixing. Observations made during the NATO - COBLAMED operations in the Gulf of Lyons, France in the Western Mediterranean Sea.

7] Studies of disposal sites “DAMOS” off Maine and Long Island Sound. Research sponsored by the US Corps of Engineers to develop Capping of Dumpsites to increase erosion stability. Computer based navigation survey systems developed to continuously map topography of sites and observe changes from storm waves.

8] Developed for the US Navy. Thermoprobe: A fast response temperature profiler for deep towed systems.

9] Developed an-situ light scattering photometer for profiling particulate scattering materials in biological surveys: Woods Hole Oceanographic Institution.

10] Developed large Ocean Buoy systems to monitor the upper ocean dynamics: NATO Undersea Research Centre, La Spezia, Italy 1969-1973.

Consulting Experience:

1] ADMIRALTY LAW – Expert witness and consultant:

A. Court Testimony NYC: Assessing navigation accuracies and piloting errors relative to freighter grounding in Brazil: Glynn/Dempsey, Boston, MA ref. to Hannegan and Brems, NYC.

B. Court Testimony: Hearings on wave damage effects on marina floats of Newport Yacht Club: City of Newport, RI

C. RI Coastal Resources Management Council [CRMC] hearing on wave protection design: Newport, RI.

1998

D. CRMC Hearing on permitting of bow-stern mooring system for Newport Harbor. 1997-8, for City of Newport, RI

E. Preparation of Summary Report for Litigation/ Trial: Marmorino VS. Jetronics, Inc: A Review of depositions, gathered information, and data to reconstructed entire scenario in Raritan Bay, NJ when a serious injury was sustained to a passenger diving into shallow water from a drifting vessel. The data of the geographic location, bottom topography, tidal and current changes were presented with analyses of the depth sounder and the navigation problems. Braff Harris & Sukoneck, Livingston, NJ 1999-2001

F. Hearings: Rhode Island Coastal Resources Management Council, Providence, RI Permit request for Brenton Cove Mooring Reconstruction. Final Hearings on New Mooring Designs. May, 2002, Preparation of final report: 2002