

Luke P. Stearns

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EDUCATION

University of North Carolina at Chapel Hill

2004-present

- Taken Fluid Dynamics and Geophysical Fluid Dynamics, audited several other Physical Oceanography courses including Introductory Physical Oceanography and Ocean Circulation Theory

Kalamazoo College

1997-2001

- B.A., Mathematics Minor: Physics

Budapest Semesters in Mathematics (St. Olaf College)

Fall Semester: 2000

- Took courses in Abstract Mathematics, Hungarian Language and Hungarian Arts and Culture

RESEARCH EXPERIENCE

Research Technician, University of North Carolina at Chapel Hill

2001-present

- Coordinated construction of meteorological package infrastructure hardware for deployment on offshore towers and bottom mooring frame hardware for moored instrument package and tower package
- Assembled, configured, deployed, retrieved and processed mooring data from Acoustic Doppler Current Profilers (ADCPs) and Conductivity Temperature and Depth sensors (CTD) for a series of deployments
- Collaborated on work with two Long Range SeaSonde High Frequency (HF) Radars: initial installation, antenna calibrations, moving antennae, upgrading software, writing a data transfer program, troubleshooting problems, reprocessing and archiving data, analyzing and comparing to other observations, and looking at temporal variability in the location of the Gulf Stream front
- Wrote series of scripts and a data processing database for ingesting raw tower package data (data files including raw instrument output as voltages) and outputting NetCDF data files with data in scientific units and with ancillary information in a consistent format for public distribution
- Wrote scripts to generate dynamic web pages for North Carolina Coastal Ocean Observing System (NCCOOS) web site
- Training co-workers in use of Matlab, use of Instrumentation (ADCP, CTD, HF Radar), and Computer Aided Design (CAD) software

RELATED EXPERIENCE

- Involved in the Radiowave Operators Working Group (ROWG), the Radiowave Oceanography Workshop (ROW), the South East Atlantic Coastal Ocean Observing System (SEACOOS), the South Atlantic Bight Limited Area Model (SABLAM), and the North Carolina Coastal Ocean Observing System (NCCOOS)
- Attended Plone Boot Camp Training Workshop (a web-based Content Management System)
- Designed and implemented framework for ROWG website using Plone
- Attended Codar Ocean Sensors training workshop
- Participated in the project 'Scientific and Cultural Aspects of the Bicycle' dealing primarily with the Physics of Bicycles, and attended the workshop

POSTERS

- Stearns, L., M. Muglia, H. Seim, and J. Bane. "Surface Currents Off the Outer Banks of North Carolina", ASLO/TOS Ocean Research 2004 Conference, Honolulu, Hawaii

PUBLICATIONS

- Stearns, L., and H. Seim. *In prep.* Technical Report on Using Long Range SeaSonde HF Radar on the Outer Banks of North Carolina.

PRESENTATIONS

- Stearns, L., M. Muglia, H. Seim, J. Bane, and B. Blanton. 2004. "Surface Currents off the Outer Banks of North Carolina." Radiowave Oceanographic Workshop, Townsville, Australia, April 21st-23rd, 2004.
- Stearns, L., M. Muglia, and H. Seim. 2005. "Measuring Surface Currents off the Outer Banks of North Carolina" Radiowave Oceanographic Workshop, Pescadero, California, May 4th-6th, 2005.

SKILLS

- Programming: Proficiency scripting in MatlabTM and Perl.
- Software/Instruments: Proficiency using Codar Ocean Sensors (HF Radar) software suite, RD Instruments ADCP software, Sea Bird Electronics CTD software; Basic knowledge of Vectorworks Computer Aided Design (CAD) software.
- SCUBA certification: PADI Open Water Diver.