



Dirk A. Aurin

Department of Marine Sciences
University of Connecticut
1080 Shennecossett Road, Groton, Connecticut 06340
Tel: 203.671.9515
Email: daurin@comcast.net
Website: <http://colors.uconn.edu>



Education

University of Connecticut, Department of Marine Sciences, Groton, CT

2002-Present: PhD./ABD Candidate in Oceanography

Thesis: *Developing ocean color remote sensing algorithms for retrieving inherent optical properties and biogeochemical parameters in the optically complex waters of Long Island Sound.*

Advisor: Heidi M. Dierssen

University of Charleston, Department of Physics & Astronomy, Charleston, SC

1998: B.S. Physics (*Magna Cum Laude*), Astronomy Concentration

Advisor: Donald M. Drost

Additional Training

2008: Cornell University – Satellite Remote Sensing

2005: University of Connecticut – Scientific Diver Certification

2004: University of Maine – Ocean Optics / Radiative Transfer

Teaching Experience

University of Connecticut, Avery Point Campus

Supervisor: James B. Edson

2008 Fall: General Physics with Calculus Laboratory, University of Connecticut at Avery Point.

2008 Fall: General Physics Laboratory, University of Connecticut at Avery Point.

2007 Fall: General Physics with Calculus Laboratory, University of Connecticut at Avery Point.

2007 Fall: General Physics Laboratory, University of Connecticut at Avery Point.

Research and Professional Experience

University of Connecticut

2004-2007: Graduate Fellow, (National Defense Science and Engineering Graduate fellowship) - Research developing ocean color algorithms for remote sensing applications in Long Island Sound. Potential applications include synoptic retrievals of phytoplankton biomass, total suspended sediments, particle size distribution, and dissolved organic material from space (see selected publications).
Advisor: Heidi M. Dierssen

2002-2004: Research Assistant developing a ferry-based observatory for water quality and current velocity at the mouth of Long Island Sound. Provide data processing and analytical support for research into the residual (sub-tidal) circulation in Long Island Sound (see selected publications).
Advisor: Daniel L. Codiga

NOAA Center for Coastal Environmental Health and Biomolecular Research

2001-2002: Physical Scientist/Computer Specialist , Jordan & Howard Technologies contractor – Establish satellite-based communications, database archiving and near-real-time web distribution for a moored water quality platform associated with MERHAB Florida.
Supervisor: Jeffrey L. Hyland

NOAA Coastal Services Center

1998-2001: Physical Scientist/Remote Sensing Technician, TPMC/REMSA contractor – Coordination and presentation of projects for coastal remote sensing and GIS applications. Data processing and analysis associated with remote sensing applications including LIDAR beach mapping, HAB forecasting, Ocean Color algorithm evaluation, instrument development, and coastal land-use change. Web and CD-ROM development and distribution for outreach to resource managers.
Supervisor: David L. Eslinger

University of the Virgin Islands, St. Thomas, USVI

1997: One year Bilateral Undergraduate Research Exchange with University of Charleston funded by NASA Space Grant. Investigation of Rs-CVN-type variable stars and refurbishing of the Etelman Observatory.

Selected Professional Maritime Experience

Seaport 76 Foundation, Continental Sloop *Providence* (American Sail Training Association)

1993 April-September: Chief Engineer, Topman, Chief Gunner – Responsible for maintenance of all mechanical systems aboard ship as well as sail handling, standing watch, and operation of deck cannons, and training of students in boat/ship handling and marlinspike seamanship.
Captains: Casey Fasciano, Peter Bolster

Community Advocacy

North End Action Team (NEAT) of Middletown, CT

2004-2008: Active member and past Pride Committee chairman for introducing new projects such as community gardens in downtown Middletown.
2007: Advisory Board member working with other community leaders to coordinate multiple grassroots activities to improve the quality of life and develop leadership in Middletown's North End neighborhood.

Awards

Department of Defense NDSEG Fellowship, 2004 (~\$111,530 over 3 years).
Doctoral Dissertation Fellowship, University of Connecticut, 2008 (\$2,000).
Department of Marine Sciences Predoctoral funding award, 2007 (\$800).
NASA Space Grant (undergraduate), 1997 (\$2,500).

Honors and Membership

University of Charleston: Magna Cum Laude, Faculty Honors List, Highly Distinguished Scholar, Highly Distinguished Student in Major, Elected to Phi Kappa Phi (1998), Golden Key National Honor Society (1998).
Mystic Seaport (2002 – present).
American Geophysical Union (2007-present).

Selected Publications

Primary authorship (in prep):

- Aurin, D., H. Dierssen, M. Twardowski, Characterization of Optical Complexity in Long Island Sound and Implications for Radiative Closure and Ocean Color Remote Sensing, Journal of Geophysical Research.
- Aurin, D. H. Dierssen, M. Twardowski, Semi-analytical Ocean Color Algorithms for the Optically Complex Waters of Long Island Sound.
- Aurin, D. H. Dierssen, M. Twardowski, Satellite Retrievals of Optical and Bio-optical Properties in the Turbid Waters of Long Island Sound.

Co-authorship (Peer reviewed):

- Codiga, D. L., D. Aurin, Residual Circulation in Eastern Long Island Sound : Observed Transverse-vertical Structure and Exchange Transport, Continental Shelf Research, 27, p. 103-116, 2007.

Primary authorship (Proceedings):

- Aurin, D., H. Dierssen, M. Twardowski, Optical Characterization of Long Island Sound and Implications for Remote Sensing, Long Island Sound Research Conference, New London, CT, October 2008, poster.
- Aurin, D., H. Dierssen, An Ocean Color Algorithm for Retrieving Bio-optical Properties in the Turbid Waters of Long Island Sound, Ocean Sciences Meeting, Orlando, FL, March 2008, poster.
- Aurin, D., H. Dierssen, Ocean Color Algorithms for Remote Monitoring of Bio-optical Properties in Long Island Sound, Estuarine Research Federation, Providence, RI, November 2007, poster.
- Aurin, D., H. Dierssen, M. Twardowski, Absorption, Backscatter and Chlorophyll Algorithms for Ocean Color Remote Sensing in Long Island Sound, Long Island Sound Research Conference, New London, CT, October 2006, poster; also presented at Ocean Optics XVIII, Montreal, Canada, October 2006, poster and extended abstract.
- Aurin, D., Ocean Color Remote Sensing in Long Island Sound, Feng Colloquium, University of Connecticut at Avery Point, May, 2006, oral presentation.
- Aurin, D., H. Dierssen, An Ocean Color Algorithm Validation Database for Long Island Sound, NASA Ocean Color Research Team Meeting, Newport, RI, April, 2006, poster.
- Aurin, D., H. Dierssen, Validation and Optimization of Ocean Color Algorithms for Long Island Sound, Ocean Color Bio-Optical Algorithm Mini-Workshop (OCBAM), University of New Hampshire, September, 2005, oral presentation.
- Aurin, D., D. Codiga, Measuring Estuarine Exchange Flow Structure in Eastern Long Island Sound From A Ferry, Feng Colloquium, University of Connecticut at Avery Point, May, 2004, poster.
- Aurin, D., L. Balthis, C. Cooksey, Monitoring and Event Response For Harmful Algal Blooms (MERHAB) Florida Project's Automated Web Display of Near Real-Time Data and Database Access, American Society of Limnology and Oceanography 2002 Summer Meeting, Victoria, B.C., Canada, oral presentation.
- Aurin, D., D.L. Eslinger, S.J. Katzberg, K.J. Waters, Remote, Estuarine Salinity Sensing Utilizing GPS Signal Reflection, Proceedings of the Sixth International Conference: Remote Sensing for Marine and Coastal Environments, p. 303-308, 2000.
- Aurin, D., J.E. Neff, D.M. Drost, Photometric Characteristics of the Etelman Observatory in St. Thomas, US Virgin Islands, Precision Optical Photometry, ed. E. Craine, (ASP Conf. Series 189), p. 257, 1999.
- Aurin, D., B.L. Lindner, Charleston Weather Project 1995, Bulletin of the South Carolina Academy of Science, 58, p. 74, 1996, oral presentation.

Co-authorship (Annals, Bulletins, Technical Reports):

- Neff, J.E., Allen, D.K., Aurin, D.M. [sic], Boyajian, T.S., Crowther, P., Davis, K., Drost, D.M., Giblin, T.W., Hurley, A., Lucas, J., Nations, H., Smith, D., Thomas, N., Walsh, M., The Virgin Islands telescope: history and status, Astronomischer Nachrichten, 325, 6-8, 669, 2004.
- National Oceanic and Atmospheric Administration, An Evaluation of Hurricane-Induced Erosion Along the North Carolina Coast Using Airborne LIDAR Surveys, CSC Technical Report NOAA/CSC/99031-PUB, July 1999.

- Lindner, B. L., C. Duchon and D. Aurin, Correlations between cloud structure and cloud amount (abstract), *Annales Geophysicae*, 14 (Supplement 2), C568, 1996b.
- Lindner, B. L., M. Smoak, D. Aurin, D. Drost, L. Mills, D. Pelkey, J. Mirecki, P. Bertsch and K. Pickler, Nutrients and pollutants in Charleston rain (abstract), *Bulletin of the South Carolina Academy of Science*, 58, p. 117, 1996d.
- Lindner, B. L., M. Smoak, D. Aurin, D. Drost, L. Mills, D. Pelkey, J. Mirecki, P. Bertsch and K. Pickler, Wet deposition into Charleston Harbor (abstract), *Annales Geophysicae*, 14 (Supplement 2), C593, 1996a.