

Steven E. Gaurin

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EDUCATION:

- Ph.D. ABD, Geosciences, University of Massachusetts, expected 2011
 - dissertation: *Investigating Late Holocene North Atlantic Climate Variability through Speleothem Paleoproxy and Historical Weather Data from Bermuda*
- M.Phil., Earth and Environmental Sciences, Columbia University, 2003
 - graduate project: *Simulating global tropical sea surface temperature: re-parameterization, investigation, and validation of a linear shallow water ocean model with an unconditionally stable numerical scheme*
- M.S., Environmental Science, Florida Institute of Technology, 1995
 - thesis: *A simplified, coupled hydrodynamics, floodplains processes, and dissolved oxygen river model*
- B.S., Applied Mathematics, Towson State University, 1991

AREAS OF INTEREST AND FAMILIARITY:

- Holocene paleoclimate, stable isotopes in the hydrologic cycle, North Atlantic climate variability
- oceanography, climate dynamics, ocean/climate modeling
- varied geologic field research and oceanic research cruises, large and small projects
- geochemical laboratory analysis techniques
- teaching earth science lectures and geologic/oceanographic/environmental labs
- data analysis and computer modeling of environmental systems
- applied mathematics including advanced calculus, statistics, and computer programming

CAREER EXPERIENCE:

- Ph.D. candidate (part-time), advisors Dr. Stephen Burns and Dr. Robert DeConto, University of Massachusetts, Department of Geosciences: *January 2004 – present*
- laboratory instructor and lecturer, Smith College, Department of Geology, introductory oceanography and geology courses and labs: *July 2003 – present*
- adjunct professor, Springfield College, World Regional Geography course for teacher pre-certification program: *Summer 2005*
- freelance lecturer, Five College Public School Partnership, Springfield Teachers Professional Development, *August 2005*
- freelance lecturer, Five College Public School Partnership, The Interconnected World Summer Institute – Teaching World History and Geography in the Middle Grades: *June, October 2004*
- graduate research assistant faculty fellow, advisor Dr. Mark Cane, Columbia University's Lamont Doherty Earth Observatory (LDEO), Department of Ocean and Climate Physics: *2001 – 2003*
- senior faculty research assistant for Dr. Louis Codispoti, University of Maryland's Horn Point Laboratory (HPL): *1998 – 2000*
- associate scientist (master's level research technician) for Dr. Louis Codispoti, Old Dominion University's Center for Coastal Physical Oceanography (CCPO): *1996-1998*
- programmer/analyst level III, Versar, Inc. in Columbia, MD: *1995 – 1996*
- faculty research assistant for Dr. Michael Kemp, University of Maryland's Horn Point Laboratory (HPL): *1994 – 1995*

SPECIALIZED TRAINING / WORKSHOPS:

- “Teaching the Ocean System Using New Research Techniques: Data, Models, and Visualizations,” National Association of Geoscience Teachers (NAGT), U. of Washington, August 2005
- “Introduction to ArcGIS I” Smith College Interterm course, January 2004
- “Preparing for an Academic Career: A Workshop for Graduate Students and Post-Doctoral Fellows,” NAGT *On the Cutting Edge* Professional Development Program, Stanford U., August 2003
- “International Scientific Symposium on Biogeochemistry of the Arabian Sea: Synthesis and Modeling and Training Course on Biogeochemical Modeling of the Ocean” Bangalore, India, January 1999

FIELD WORK EXPERIENCE:

- Bermuda (July 2005, March 2006, March 2007) – worked with Bermuda government, scientists, and local cave owners to arrange and perform speleothem collection; designed cave dripwater collection scheme and organized logistics with local cavers to carry it out
- Little Diomed Island, Alaska (August 2000) – helped house, install, and calibrate in-situ nitrate analyzers as part of establishment of a prolonged environmental observatory on remote island
- Arabian Sea (December 1998) – assisted in design of modified niskin bottle to perform in-situ denitrification measurement; tested modified niskin bottle aboard *R/V Sagar Kanya*
- Southern Ocean / Ross Sea (November 1997 – January 1998) – performed automated dissolved oxygen analysis; provided deck support; organized hydrographic data aboard *R/V Roger Revelle*
- Chesapeake Bay (various dates in 1994, 1995, 1999, 2000) – collected and analyzed samples for nutrients, chlorophyll, and system metabolism aboard *R/V Cape Henlopen* and *R/V Ferrell*

HONORS / APPOINTMENTS / MEMBERSHIPS:

- Elinor I. Fierman Memorial Prize, UMass Dept. of Geosciences - 2006, 2007
- Leo M. Hall Memorial Prize, UMass Dept. of Geosciences - 2005
- Sigma Xi member since 2004
- American Geophysical Union member since 1998
- Mary Hudson Scarborough Award for Excellence in Mathematics, Towson State U., 1991
- Joyce C. Neubert Award for Outstanding Junior Mathematics Major, Towson State U., 1990
- Omicron Delta Kappa National Leadership Honor Society member since 1990

PUBLICATIONS:

- Devol, A. H., A.G. Uhlenhopp, S.W.A. Naqvi, J.A. Brandes, D.A. Jayakumar, H. Naik, S. Gaurin, L.A. Codispoti, and T. Yoshinari, 2006. *Denitrification rates and excess nitrogen gas concentrations in the Arabian Sea oxygen deficient zone*. Deep-Sea Research I, 53(9): 1533-1547.
- Morrison, J.M., S. Gaurin, L.A. Codispoti, T. Takahashi, F.J. Millero, W.D. Gardner, and M.J. Richardson, 2001. *Seasonal evolution of the hydrographic properties in the Antarctic Circumpolar Current at 170° W during 1997-1998*. Deep-Sea Research II, 48: 3943-3972.
- Morrison, J.M., L.A. Codispoti, K. Wishner, C. Flagg, W.D. Gardner, S. Gaurin, S.W.A. Naqvi, V. Manghnani, L. Prosperie, and J.S. Gundersen, 1999. *The oxygen minimum zone in the Arabian Sea during 1995*. Deep-Sea Research, 46:1903-1931.
- Morrison, J.M., L.A. Codispoti, S. Gaurin, B. Jones, V. Manghnani and Z. Zheng, 1998. *Seasonal variation of hydrographic and nutrient fields during the U.S. JGOFS Arabian Sea Process Study*. Deep-Sea Research II 45(10-11): 2053-2101.
- Vølstad, J.H., W.R. Richkus, S. Gaurin, and R. Easton. 1997. *Analytical and Statistical Review of Procedures for Collection and Analysis of Commercial Data Used for Management and Assessment of Groundfish Stocks in the U.S. Exclusive Economic Zone off Alaska*. U.S. Dept. of Commerce, National Marine Fisheries Service, Alaska Fisheries Science Center, Seattle, WA. 172 pp.
- Stebel, D.E., S.P. Schreiner, and S. Gaurin, 1997. *Mixing zone modeling: feasibility analysis for interface enhancements and summary of existing thermal studies at Maryland power plants*. Versar, Inc., Technical Review Document.