

CURRICULUM VITAE

Donglai Gong, Ph.D.

Postdoctoral Scholar
 Woods Hole Oceanographic Institution
 266 Woods Hole Rd, MS #21
 Woods Hole, MA 02543
 mobile: (609) 878-0288, office: (508) 289-3972
 email: donglai@whoi.edu

EDUCATION

Rutgers University Ph.D. Oceanography October 2010
 Doctoral Dissertation: *Mesoscale Variability on the mid/outer NJ Shelf: Effects of Environmental Forcing on Circulation, Hydrography and Transport.*
 Advisor: Scott M. Glenn

Massachusetts Institute of Technology S.M. Physics February 2004
 Thesis: *Quasar spectroscopy in UV and X-ray- probing the intergalactic medium using helium and oxygen.*
 Advisors: Scott Burles and Claude Canizares

Rutgers University B.S. / B.A. Physics / Mathematics January 2001

ACADEMIC AND RESEARCH EXPERIENCE

Postdoctoral Scholar (Research Mentor: Robert S. Pickart) 2010—2012
Woods Hole Oceanographic Institution, Department of Physical Oceanography
 - Studied the water mass transport and transformation of Pacific water entering the Arctic Ocean through the Chukchi Sea using shipboard hydrographic and current velocity data.

Graduate Research Assistant (Doctoral advisor: Scott M. Glenn) 2005—2010
Rutgers University, Department of Marine and Coastal Sciences
 - Developed a seasonal climatology for the surface wind-driven circulation over the New Jersey shelf.
 - Studied the intra-seasonal variability of the shelfbreak front during the stratified summer season in response to forcings due to winds and offshore eddies/rings using data from gliders, HF-radar network, satellite remote sensing, and mooring measurements.
 - Studied the water mass distribution, circulation, and geology of the head of the Hudson Canyon through multi-year shipboard survey.

Graduate Research Assistant 2001—2004
Massachusetts Institute of Technology, Center for Space Research, Department of Physics

NSF Research Experience for Undergraduate Intern 1999
High Altitude Observatory, National Center for Atmosphere Research

Undergraduate Research Assistant 1998
Los Alamos National Laboratory

TEACHING AND OUTREACH EXPERIENCES

Guest Assistant Scientist June 2011
Sea Education Association, WHOI/MIT Joint Program orientation cruise
 - Guided an adoptive sampling program over the New England shelfbreak front.
 - Developed and taught a observational physical oceanography seminar to incoming graduate students.

Outreach Educator July 2009
4-H, Science, Engineering and Technology Summer Camp
 - Co-developed and taught an inquiry-based oceanography course to middle school students.

Instructor (Ocean Sciences through Inquiries) Spring 2009
Rutgers University, School of Environmental and Biological Sciences
 - Developed and taught the course components on renewable energy and the global carbon cycle.

Instructor (Matlab training seminar) Spring 2008
Rutgers University, Institute of Marine and Coastal Sciences

Guest Lecturer Fall 2007
Rutgers University, Department of Human Ecology
 - Taught a component on the connection between humans and the carbon cycle.

Education and Outreach Assistant Spring 2007
COSEE and Liberty Science Center
 - Assisted with science demonstrations and public outreach at the Liberty Science Center

Graduate Teaching Assistant (Introduction to Physical Oceanography) Fall 2006
Rutgers University, Department of Marine and Coastal Sciences
 - Taught an recitation section and helped with homework and exam grading

Undergraduate Teaching Assistant (Modern Instrumentation) Spring 2001
Rutgers University, Department of Physics
 - Assisted undergraduate students in advanced physics labs

FELLOWSHIPS, HONORS, AND AWARDS

WHOI Ocean and Climate Change Institute Postdoctoral Scholar 2010—2012
 NSF Graduate Fellowship Honorable Mention 2002

Phi Beta Kappa Honors Society	2001
Richard T. Weidner Prize (Outstanding Achievement as a Physics Major)	2001
Henry Rutgers Scholar	1999—2000
Mary Wheeler Wigner Memorial Scholarship	1999
Rutgers College Merit Scholarship	1998
Golden Key National Honors Society	1998

PROFESSIONAL SERVICES & WORKSHOPS

Preparing for the Professoriate Workshop Series, Rutgers University	Fall 2009
Departmental Seminar Organizer, Marine and Coastal Sciences, Rutgers University	2008--2009
President, Oceanography Graduate Student Association, Rutgers University	2007--2008
National Ocean Science Bowl, Physical Oceanography Technical Advisory Panel, Consortium for Oceanographic Research and Education, Washington, D.C.	Fall 2007
President, Society of Physics Student, Rutgers University	1998—1999
Vice President, American Institute of Astronautics and Aeronautics, Student Chapter, Rutgers University	1997—1998

PROFESSIONAL SOCIETIES

American Geophysical Union, Member	2005—Present
American Meteorological Society, Member	2011—Present
American Physical Society, Member	1996—2004
Society of Physics Students, Member	1997—2001
American Institute of Astronautics and Aeronautics, Student Chapter Member	1997—1998

RESEARCH CRUISES & FIELD STUDIES

Project: NSF Arctic Observing Network
CGC Healy, Chukchi Sea / Beaufort Sea, October 2011
Chief Scientist: Dr. Robert S. Pickart

Project: Sea Education Association C235A, WHOI/MIT Joint Program orientation cruise
SSV Corwith Cramer, New England shelfbreak, June 2011
Chief Scientist: Dr. Jeff Schell

Project: NOAA Hudson Submarine Canyon Mapping
NOAA RV Henry B. Bigelow, Hudson Canyon, Aug. 2008, 2009 and 2011
Chief Scientists: Dr. Vince Guida and Dr. Peter Rona

Project: Mesoscale Processes and Microbial Activity in the Mona Passage
Glider Recovery/Repair/Deployment, Puerto Rico, Sep. 2007
Chief Scientist: Dr. Lee Kerkhof & Dr. Oscar Schofield

Project: NSF EDDies Dynamics, MIXing, Export, and Species composition (EDDIES)
 R/V Oceanus, Sargasso Sea, Jun. & Aug. 2005
 Chief Scientist: Dr. Dennis McGillicuddy

Project: Bistatic CODAR Buoy Recovery
 R/V Connecticut, New York Bight, Sep. 2004
 Chief Scientist: Dr. Josh Kohut

FUNDED RESEARCH GRANTS

Glenn, S. M., and **D. Gong**, 2007-2010. Characterizing Mesoscale Physical Oceanography On the New Jersey Shelf: Non-Linear Internal Wave Initiative, Office of Naval Research, \$213,265

PEER-REVIEWED PUBLICATIONS

Gong, D., Kohut, J. T., and Glenn, S. M., Seasonal climatology of wind-driven circulation on the New Jersey Shelf, *J. Geophys. Res.* (2010), 115, C04006, doi:10.1029/2009JC005520

Xu, Yi, Chant, R., **Gong, D.**, Castelao, R., Glenn, S., Schofield, O., Seasonal variability of chlorophyll a in the Mid-Atlantic Bight, *Continental Shelf Research* (2011), doi:10.1016/j.csr.2011.05.019 (in press.)

Schofield, O., Chant, R., Cahill, B., Castelao, R., **Gong, D.**, Kahl, A., Kohut, J., Montes-Hugo, M., Ramadurai, R., Ramey, P., Xu, Y., Glenn, S., The Decadal View of the Mid-Atlantic Bight from the COOLroom: Is Our Coastal System Changing? (2008), *Progress in Oceanography*, 23 (4), 108-117.

Glenn, S. M., Schofield, O., Chant, R., Kohut, J., Roarty, H., Bosch, J., Bowers, L., **Gong, D.** and Kerfoot, J., (2007), Wind-Driven Response of the Hudson River Plume and its Effect on Dissolved Oxygen Concentration, *Environmental Research, Engineering and Management*, No.1 (39)

Gershenson, M. E., **Gong, D.**, and Sato, T. (2001), Millisecond electron-phonon relaxation in ultrathin disordered metal films at millikelvin temperatures, *Appl. Phys. Lett.*, 79, 2049

Gershenson, M. E., **Gong, D.**, Sato, T., Karasik, B. S., McGrath, W. R., and Sergeev, A. V. (2000), *Proc. of 11th Int. Symp. on Space Terahertz Technology*, Ann Arbor, MI, pp. 514-523

Fan, Y. and **Gong, D.** (2000), On the Twist of Emerging Flux Loops in the Solar Convection Zone, *Solar Phys.*, 192, 141

PUBLICATIONS submitted or in prep.

Gong, D. and Pickart, R. S., The transformation and transport of Pacific water masses on the eastern Chukchi Sea, *in prep.*

Gong, D., Castelao, R., Kohut, J. T., Schofield, O., Glenn, S. M., Summertime variability of the shelf-slope front and saline intrusions on the New Jersey Shelf, *submitted.*

Gong, D. and Glenn, S. M., Rapid variability of the summertime shelf-slope front and the associated secondary circulation on the Mid-Atlantic Bight, *in revision.*

Rona, P., Guida, V., Scranton, M., **Gong, D.**, Asper, V., Diercks, A., Marcelloni, L., Hudson Submarine Canyon Head Offshore New York and New Jersey: Active circular depressions, fans, ravines, methane discharge and watermasses., *in prep.*

He, R., Chen, K., Glenn, S., **Gong, D.**, Schofield, O., Glider Observations and Model Simulations of Salty Intrusions over the Middle Atlantic Bight Shelf, *Geophys. Res. Lett.*, *submitted*

NON-REFEREED PUBLICATIONS

“Mesoscale Variability on the New Jersey Shelf: Effects of Topography, Seasons, Winds, and Offshore Forcing on Circulation, Hydrography, and Transport” **Gong, D.**, Rutgers University Library, 2010 (Ph.D. Dissertation)

“Quasar spectroscopy in UV and X-ray- probing the intergalactic medium using helium and oxygen” **Gong, D.**, MIT Archive, S.M. Thesis, 2004 (S.M. Thesis)

“Electron-Phonon Interaction in Thin Films of Hf at Ultra-Low Temperatures” **Gong, D.**, Rutgers University Library, Thesis Special Collection, 2000 (B.S. Senior Thesis)

PRESENTATIONS AND POSTERS

Transformation of Pacific water masses north of Bering Strait. **Gong, D.** and Pickart, R. S., 11th Conference on Polar Meteorology and Oceanography, May 2011, Boston, MA (talk)

Summertime evolution of the shelf-slope front and the associated secondary circulation. **Gong, D.**, and Glenn, S. M., Woods Hole Oceanographic Institution, Physical Oceanography Seminar, March 08, 2011 (talk)

Seasonal transport on the Mid-Atlantic Bight: A combined observational and modeling study. **Gong, D.**, Kohut, J. T., Wilkin, J., Glenn, S., Ocean Sciences 2010, Portland, OR (IT54C07 talk)

Freshwater flow along the Hudson Shelf Valley: Do fish in the Mid-Atlantic Bight really care?

Kohut, J. T., Manderson, J., Oliver, M., Palamara, L., **Gong, D.**, Ocean Sciences 2010, Portland OR (PO45K-08, poster)

Seasonal transport and cross-shelf exchange processes on the New Jersey Shelf. **Gong, D.** Woods Hole Oceanographic Institution, Applied Ocean Physics & Engineering Seminar, January 27, 2010 (talk)

Hudson Submarine Canyon Head Offshore New York and New Jersey: Active circular depressions, fans, ravines, methane discharge and watermasses. P. Rona, V. Guida, M. Scranton, **Gong, D.**, Haag, S., Marcelloni, L., Simonetti, A., Diercks, A., Asper, V., AGU Fall Meeting, San Francisco, 2009 (poster)

Mesoscale Physical Oceanography during SW06/NLIWI. **Gong, D.** and Glenn, S., Office of Naval Research Physical Oceanography Reviews, Chicago, IL, 2009 (talk)

Seasonal Climatology of Wind-Driven Circulation on the New Jersey Shelf. **Gong, D.**, Kohut, J. T., and Glenn, S., Mid-Atlantic Bight Physical Oceanography Meeting, Woods Hole, MA, 2008

Wind-driven Circulation and Shelf-Slope Exchange on the NJ Shelf. **Gong, D.**, Castelao, R., Kohut, J., Schofield, O., and Glenn, S., AGU/ASLO Ocean Sciences Meeting, Orlando, FL, 2008

Characterizing Summertime Shelf-slope Exchange Processes on the NJ Shelf. **Gong, D.**, Mid-Atlantic Bight Physical Oceanography Meeting, New Brunswick, NJ, 2007 (talk)

COOL Observations on the Biogeochemistry of the Mid-Atlantic Bight. Schofield, O., Cahill, B., Castelao, R., Kohut, J. T., Chant, R., **Gong, D.**, Glenn, S., Yi, X., *Eos Trans. AGU*, 88(23), 2007

NJ Turnpike - Transport Pathways on the NY Bight. **Gong, D.**, Glenn, S. M., Chant, R., Wilkin, J., Kohut, J. T., AGU/ASLO Ocean Sciences Meeting, Honolulu, Hawaii, 2006 (talk)

Coastal Plume & Shelf Circulation - LaTTE 2005 Remote Sensing Results. **Gong, D.**, Bosch, J., Chant, R., Kohut, J. T., Roarty, H., Gordon Research Conference on Coastal Ocean Circulation, New London, NH, 2005 (poster)

The time varying structure of a river plume: Observations with an autonomous glider. Chant, R. J., Glenn, S. M., **Gong, D.**, American Geophysical Union, Fall Meeting, San Francisco, 2004

Statistical Analysis of Surface Currents Off the Coast of NJ/NY – Initial Study. **Gong, D.**, Glenn, S., Chant, R., Kohut, J., Roarty, H., Bosch, J., AGU Fall Meeting, San Francisco, 2004 (poster)

LANGUAGE & CITIZENSHIP

Native English Speaker, U.S. Citizen.