CURRICULUM VITAE

Donglai Gong

Institute of Marine and Coastal Sciences, Rutgers University
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EDUCATION

2010 Ph.D. Oceanography, Rutgers University, New Brunswick, NJ. Thesis Title: *Mesoscale Variability on the mid/outer NJ Shelf: Effects of Environmental Forcing on Circulation, Hydrography and Transport*. Thesis Advisor: Dr. Scott M. Glenn, Committee Members: Dr. Robert Chant, Dr. Glen Gawarkiewicz, Dr. Oscar Schofield, and Dr. John Wilkin

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

2001 B.S. Physics, B.A. Mathematics, with Highest Honor, Rutgers University, New Brunswick, NJ. Senior Thesis Title: *Electron-Phonon Interaction in Thin Films of Hf at Ultra-Low Temperatures*. Thesis Advisor: Dr. Michael Gershenson

RESEARCH INTERESTS

Shelf circulation, shelf-slope exchange, ocean exploration, climate change, polar oceanography, submarine canyon systems, ecosystem dynamics, nonlinear systems, ocean modeling, HF Radar, AUV/glider, ocean observing systems

RESEARCH EXPERIENCE

2005-Pres.	Research Assistant, Marine and Coastal Sciences, Rutgers University
2004-2005	Research Engineer, Coastal Ocean Observations Lab, Rutgers University
2001-2004	Research Assistant, Center for Space Research, Department of Physics, Massachusetts Institute of Technology
2001	Undergraduate Research Assistant, Department of Physics, Rutgers University
2000	NSF Vertical Integration of Research and Education Intern, Department of Mathematics, Rutgers University
1999-2000	Henry Rutgers Scholar, Undergraduate Thesis Project, Rutgers University
1999	NSF Research Experience for Undergraduate Intern, High Altitude Observatory at National Center for Atmosphere Research, Boulder, CO
1998	Undergraduate Research Assistant, Los Alamos National Laboratory

1998 Undergraduate Research Assistant, Department of Physics, Rutgers University
1997 NSF REU Intern, Department of Physics, University of Michigan

TEACHING EXPERIENCE

2009 Sum. Outreach Educator, 4-H Science, Engineering and Technology Summer Camp
2009 Spr. Lecturer, Topics in Oceanography, Marine and Coastal Sciences, Rutgers University
2008 Spr. Instructor, Matlab training course, Marine and Coastal Sciences, Rutgers University
2007 Fall Guest Lecturer, Humans and the Carbon Cycle, Human Ecology, Rutgers University
2007 Spr. Communicating Ocean Sciences to Informal Audiences (COSIA) course participant in collaboration with Liberty Science Center
2006 Fall Teaching Assistant, Physical Oceanography, Rutgers University
2000 Spr. Teaching Assistant, Department of Physics, Rutgers University

PEER-REVIEWED PUBLICATIONS

D. Gong, R. Castelao, J. Kohut, O. Schofield, S. Glenn, Characterizing summer time shelf-slope exchange processes on the New Jersey Shelf, *in revision.*

D. Gong, J. T. Kohut, S. M. Glenn, Seasonal Climatology of Wind-Driven Circulation on the New Jersey Shelf, *J. Geophys. Res.*, *in press.*

Yi Xu, R. Chant, **D. Gong**, R. Castelao, S. Glenn, O. Schofield, Inter-annual dynamics of the seasonal phytoplankton dynamics in the Mid-Atlantic Bight", *Journal of Geophysical Research*, *in review.*

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

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

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

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

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

NON-REFEREED PUBLICATIONS

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

"Electron-Phonon Interaction in Thin Films of Hf at Ultra-Low Temperatures" **D. Gong**, Rutgers University Library, Thesis Special Collection, 2000

PRESENTATIONS AND POSTERS

Seasonal transport on the Mid-Atlantic Bight: A combined observational and modeling study. **D Gong**, J. T. Kohut, J. Wilkin, S. Glenn, Ocean Sciences 2010, Portland, OR (IT54C-07, talk)

Freshwater flow along the Hudson Shelf Valley: Do fish in the Mid-Atlantic Bight really care? J. Kohut, J. Manderson, M. Oliver, L. Palamara, **D. Gong**, Ocean Sciences 2010, Portland OR (PO45K-08, poster)

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

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, **D. Gong**, S. Haag, L. Marcelloni, A. Simonetti, A. Diercks, V. Asper, AGU Fall Meeting, San Francisco, 2009 (poster)

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

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

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

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

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

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

Coastal Plume & Shelf Circulation - LaTTE 2005 Remote Sensing Results. **D. Gong**, J. Bosch, R. Chant, J. Kohut, H. Roarty, 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. R. J. Chant, S. M. Glenn, **D. Gong**, American Geophysical Union, Fall Meeting, San Francisco, 2004

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

ACADEMIC HONORS

2002 NSF Graduate Fellowship Honorable Mention
2001 Graduating with Highest Honor, Rutgers University
2001 Phi Beta Kappa Honor Society
2000 Richard T. Weidner Prize (Outstanding Achievement as a Physics Major)
1999 Henry Rutgers Scholar (Undergraduate thesis)
1999 Mary Wheeler Wigner Memorial Scholarship (Physics)
1998 Rutgers College Merit Scholarship
1998 Golden Key National Honors Society

PROFESSIONAL AFFILIATIONS

2005--Pres. American Geophysical Union
1996--2004 American Physical Society
1997--2001 Society of Physics Students
1997--1998 American Institute of Astronautics and Aeronautics

RESEARCH CRUISES & FIELD STUDIES

Project: NOAA Hudson Submarine Canyon Mapping
Henry B. Bigelow, Hudson Canyon, Aug. 2008 & 2009 (2 cruises)
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: EDdies Dynamics, MIxing, Export, and Species composition (EDDIES)
R/V Oceanus, Sargasso Sea, Jun. & Aug. 2005 (2 cruises)
Chief Scientist: Dr. Dennis McGillicuddy

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

RESEARCH GRANT

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

RESEARCH COLLABORATORS

Dr. Robert Chant (Rutgers) - Hudson River outflow, shelf transport
Dr. Glen Gawarkiewicz (WHOI) - Shelf-slope interactions, salinity intrusions
Dr. Josh Kohut (Rutgers) - Shelf transport, shelf-slope interactions, gliders, HF Radar
Dr. Peter Rona (Rutgers) - Hudson Canyon hydrography/circulation
Dr. Oscar Schofield & Xu Yi (Rutgers) - Physical forcing and shelf primary productivity
Dr. John Wilkin (Rutgers) - Numerical modeling, shelf transport processes
Dr. Gordon Zhang (WHOI) - Numerical modeling, shelf transport processes

PROFESSIONAL SERVICES & WORKSHOPS

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

TECHNICAL & PROGRAMMING SKILLS

Multi-dimensional data visualization/analysis; hydrographic/biogeochemical sampling (CTD, ADCP, O2, HPLC, chlorophyll, nutrients); Glider/AUV mission planning/preparation/ deployment/rescue/recovery/repair; skipper (sailing vessel up to 16 meters); GPS navigation; Marine Radio and Radar operations; PADI Advanced Open Water Scuba Certification; science/ marine photography; Class 100 Clean Room operations; photolithography; ultra-high vacuum systems; Kelvinox Dilution Refrigerator; metal ion thin-film deposition; high speed electronics and laboratory lasers; Matlab; IDL; Java; C; FORTRAN; Ruby; Mathematica; LabView; HTML