

RUBAO JI

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EDUCATION

Ph.D. in *Biological Oceanography*, 2003

M.Sc. in *Computer Science*, 2002

M.Sc. in *Marine Ecology*, 1994

B.Sc. in *Marine Biology*, 1991

University of Georgia

University of Georgia

Ocean University of China

Ocean University of China

RESEARCH INTERESTS

- Coupled biological-physical numerical modeling
- Climate change and marine ecosystem response
- Zooplankton and larval fish population dynamics
- Oceanography in polar and tropical regions
- Plankton phenology and biogeography
- Food web dynamics in coastal oceans
- Quantitative fisheries oceanography
- Meta-population connectivity

EXPERIENCE

2013 – Present: Associate Scientist with Tenure, Woods Hole Oceanographic Institution
2009 – 2013: Associate Scientist, Woods Hole Oceanographic Institution
2005 – 2009: Assistant Scientist, Woods Hole Oceanographic Institution
2013 – Present: Cooperative Institute for the North Atlantic Region (CINAR) Fellow
2011 – Present: Adjunct Professor, University of Massachusetts Dartmouth
2008 – Present: Adjunct Professor, Shanghai Ocean University, Shanghai, China
2009 – Present: Board member of RARGOM (Regional Association for Research on the GoM)
2006 – Present: ICES WGPBI member (since 2006) and WGIPEM co-chair (since 2012)
2004.5- 2005.7: Costal Ocean Institute Postdoctoral scholar, Woods Hole Oceanographic Institution
2004.1- 2004.4: Research Associate, School for Marine Science and Technology, U. of Massachusetts
1999- 2003: Research Assistant, Department of Marine Sciences, University of Georgia
1994-1998: Assistant/Associate Research Scientist, First Institute of Oceanography, China
1998.3-1998.8: Visiting Scientist, University of Georgia
1997-1998: Visiting Scientist, Korean Ocean Research & Development Institute
1995-1996: Visiting Scientist, Institut francais de recherche pour l'exploitation de la mer, France

SYNOPSIS OF RESEARCH/EDUCATION ACTIVITIES

- PI or co-PI of 16 research projects over the last 6 years.
- Published 41 peer-reviewed research articles (27 in English, 14 in Chinese) as lead- or co-author on topics such as biological-physical coupled modeling, plankton dynamics and food web dynamics.
- Gave over 90 presentations in various settings, including invited talks, and international conferences/meetings; co-chair for topical sessions in 3 international conferences.
- Advised a total of 12 students, postdocs and visiting investigators; served as a committee member for 2 students from MIT-WHOI joint program and 3 students from UMass-Dartmouth.
- Reviewed over 50 papers from 20 different journals; served as panel member or proposal reviewer for NOAA, Sea Grant and other regional programs; co-chair for ICES working group; editor for ICES Journal of Marine Sciences.

SELECTED FIRST-AUTHOR PUBLICATIONS

- Ji, R., C. Ashjian, R. Campbell, C. Chen, G. Gao, C. Davis, G. Cowles, R. Beardsley, 2012. Life history and biogeography of *Calanus* copepods in the Arctic Ocean: An individual-based modeling study. *Progress in Oceanography*, 96(1): 40-56. doi:10.1016/j.pocean.2011.10.001
- Ji, R., M. Jin, Ø. Varpe, 2012. Sea ice phenology and timing of primary production pulses in the Arctic Ocean. *Global Change Biology*, 19: 734-741. DOI: 10.1111/gcb.12074
- Ji, R., C. Stegert, C. Davis, 2012. Sensitivity of copepod populations to bottom-up and top-down forcing: a modeling study in the Gulf of Maine region. *Journal of Plankton Research*, 35(1): 66-79. doi: 10.1093/plankt/fbs070
- Ji, R., 2011. *Calanus finmarchicus* diapause initiation: new view from traditional life history based model. *Marine Ecology Progress Series*. 440:105-114.
- Ji, R., M. Edwards, D.L. Mackas, J. Runge, A.C. Thomas, 2010. Marine plankton phenology and life history in a changing climate: Current research and future directions. *Journal of Plankton Research - Horizon*, 32(10): 1355-1368. doi:10.1093/plankt/fbq062.
- Ji, R., C. Davis, C. Chen, R. Beardsley, 2009. Life history traits and spatiotemporal distributional patterns of copepod populations in the Gulf of Maine-Georges Bank region. *Marine Ecology Progress Series*, 384: 187-205
- Ji, R. C. Davis, C. Chen, D. Townsend, D. Mountain, R. Beardsley, 2008a. Modeling the influence of low-salinity water inflow on winter-spring phytoplankton dynamics in the Nova Scotian Shelf – Gulf of Maine region. *Journal of Plankton Research*, 30(12): 1399-1416.
- Ji, R., C. Davis, C. Chen, and R. Beardsley, 2008b. Influence of local and external processes on the annual nitrogen cycle and primary productivity on Georges Bank: A 3-D biological-physical modeling study. *Journal of Marine Systems*, 73: 31-47.
- Ji, R. C. Davis, C. Chen, D. Townsend, D. Mountain, R. Beardsley, 2007a. Influence of ocean freshening on shelf phytoplankton dynamics. *Geophysical Research Letters*, 34, L24607, doi:10.1029/2007GL032010.
- Ji, R., P. J. S. Franks, 2007b. Vertical migration of dinoflagellates: Model analysis of strategies, growth and vertical distribution patterns. *Marine Ecology Progress Series*, 344: 49-61.
- Ji, R., C. Chen, P. J. S. Franks, D.W. Townsend, E.G. Durbin, R. C. Beardsley, R.G. Lough, and R.W. Houghton, 2006. Spring bloom and associated lower trophic level food web dynamics on Georges Bank: 1-D and 2-D model studies. *Deep-Sea Research II*, 53(23-24): 2656-2683
- Ji, R., C. Chen, P. J. S. Franks, D.W. Townsend, E.G. Durbin, R. C. Beardsley, R.G. Lough, and R.W. Houghton, 2006. The impact of Scotian Shelf Water “cross-over” on the plankton dynamics on Georges Bank: A 3-D experiment for the 1999 spring bloom. *Deep-Sea Research II*, 53(23-24), 2684-2707

SELECTED RECENT PRESENTATIONS

- Ji, R. 2012. GLOBEC and copepod modeling, ICES WGIPEM, Mar 13-16, Copenhagen, Denmark.
- Ji, R.; Jin, M.; Varpe, Ø., 2012 Phenology of sea ice and ocean algal blooms in the arctic. AGU Ocean Sciences Meeting, Salt Lake City, USA. **(Session co-convener)**
- Ji, R.; 2011. Phytoplankton phenology in the Northwest Atlantic: Observation and modeling. ICES Annual Science Conference. Gdansk, Poland. **(Session co-convener)**
- Ji, R., C. Ashjian, R. Campbell, C. Chen, G. Gao, C. Davis, G. Cowles, R. Beardsley, 2011. Life history and biogeography of *Calanus* copepods in the Arctic Ocean: An individual-based modeling study. 5th International Zooplankton Production Symposium, March 14-18, Pucon, Chile
- Ji, R. C. Davis, C. Stegert. 2010. Modeling copepod populations in the Gulf of Maine: building prediction capability through a process-oriented approach. ICES ASC, Nantes, France.
- Ji, R.; C. Davis, C. Chen, and R. Beardsley, 2009. Influence of environment forcing on plankton dynamics in the Gulf of Maine. GLOBEC OSM, Victoria, Canada. **(session chair)**