



## Dr. James J. Bisagni

### Professor

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### Research Interests

Remote sensing of sea surface temperature and ocean pigments; remote sensing of dynamic ocean topography and surface waves; biological oceanographic applications of remotely-sensed data; dynamics/kinematics of coastal fronts; air-sea interaction; atmospheric propagation and attenuation of electromagnetic radiation; image processing; computer/video data visualization; distributed data systems.

### Current Research

- 2004-2007, Climate-Related Interannual Variability of Potential New Production Over the Western North Atlantic Ocean (Principal Investigator; A. Gangopadhyay and J. Goes, Co-Investigators), NASA, \$662,000.
- 2007-2008, Climate-Related Interannual Variability of Potential New Production, (Principal Investigator), NASA Center for Computational Sciences, Award of 750,000 Processor hours using the NASA/NCCS supercomputers “Columbia” and “Palm,” \$0.
- 2008-2011, Collaborative Research: GLOBEC Pan-Regional Synthesis: End-to-End Energy Budgets in US-GLOBEC Regions (Principal Investigator), NSF, \$155,185.
- 2008-2010, Collaborative Research: GLOBEC Pan-Regional Synthesis: The Effect of Varying Freshwater Inputs on Regional Ecosystems in the North Atlantic (Co-investigator; A. Gangopadhyay, Principal Investigator), NSF, \$259,556.

### Recent Publications

- Bisagni, J. J.**, H-S. Kim, and A. Chaudhuri, 2008 (in press). Interannual variability of the shelf slope front position between 75° and 50° W. *J. Marine Syst.*
- Chaudhuri, A., **J. J. Bisagni**, and A. Gangopadhyay, 2008 (accepted). Shelf water entrainment by Gulf Stream warm-core rings between 75° and 50°W from 1978-1999. *Cont. Shelf Res.*
- Mesias, J. M., **J. J. Bisagni** and A.-M. E. G. Brunner, 2007. A high-resolution satellite-derived sea surface temperature climatology for the western North Atlantic Ocean. *Cont. Shelf Res.* 27, 191-207.
- Steele, J. H., J. S. Collie, **J. J. Bisagni**, D. J. Gifford, M. J. Fogarty, J. S. Link, B. K. Sullivan, M. E. Sieracki, A. R. Beet, D. G. Mountain, E. G. Durbin, D. Palka, and W. T. Stockhausen, 2007. Balancing end-to-end budgets of the Georges Bank ecosystem. *Prog. Oceanogr.* 74, 423-448.
- Bisagni, J.J.**, H.-S. Kim, and K.F. Drinkwater, 2006. Observations and modeling of shelf-slope front seasonal variability between 75° and 50° W. *Deep-Sea Res. II*, 53(23-24):2477-2500.
- Bisagni, J.J.**, 2003. The seasonal cycles of nitrate supply and potential new production in the Gulf of Maine and Georges Bank regions. *J. Geophys. Res.*, 108(C11), 8015, doi:10.1029/2001JC001136.
- Gangopadhyay, A., A.R. Robinson, P.J. Haley, W.J. Leslie, C.J. Lozano, **J.J. Bisagni** and Z. Yu, 2003. Feature-oriented regional modeling and simulations (FORMS) in the Gulf of Maine and Georges Bank. *Cont. Shelf Res.*, 23:317-353.
- Wishner, K.F., D.J. Gifford, B.K. Sullivan, **J.J. Bisagni**, D.M. Outram, and D.D. Van Keuren, 2003. The biological signature of Scotian Shelf Water crossovers on Georges Bank during spring 1997. *J. Geophys. Res.*, 108(C11), 8014, doi:10.1029/2001JC001266.
- Bisagni, J.J.**, K.W. Seemann, and T.P. Mavor, 2001. High-resolution satellite-derived sea surface temperature variability over the Gulf of Maine and Georges Bank region, 1993-1996. *Deep-Sea Res. II*, 48:71-94.
- Mavor, T. P. and **J. J. Bisagni**, 2001. Seasonal variability of sea surface temperature fronts on Georges Bank. *Deep-Sea Res. II*, 48:215-244.
- Bisagni, J.J.**, 2000. Estimates of vertical heat flux and stratification from southern Georges Bank, interannual variability, 1985-1995. *Cont. Shelf Res.*, 20:211-231.