CONTACT INFORMATION

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RESEARCH INTERESTS

Ocean Dynamics and Climate: ocean carbon cycle, meridional overturning circulation, deep stratification, geostrophic eddies, topographic internal waves, energy dissipation and mixing

EDUCATION

Ph.D., Physical Oceanography, 2009, Massachusetts Institute of Technology and Woods Hole Oceanographic Institution, MA USA

M.S. in 2002 and **B.S.** in 2000, Applied Physics and Mathematics, Moscow Institute of Physics and Technology, Moscow, Russia

POSITIONS HELD

Physical Oceanographer, University of Tasmania, 2012-present
Associate Research Scholar, Princeton University, 2011-2012
Postdoctoral Research Associate, Princeton University, 2009-2010
Research Assistant, Massachusetts Institute of Technology, 2002-2008

TEACHING EXPERIENCE

Invited Lecturer, Princeton University, Spring 2010, 2011
Subject: AOS572 Atmospheric and Oceanic Wave Dynamics
Instructor: Prof. Sonya Legg

Teaching Assistant, Princeton University, Spring 2010
Subject: AOS573 Dynamical Oceanography
Instructor: Prof. Geoffrey Vallis

Teaching Assistant, Massachusetts Institute of Technology, Fall 2007
Subject: 12.803 Quasi-Balanced Motions in the Ocean and Atmosphere
Instructor: Prof. Raffaele Ferrari

FIELD EXPERIENCE

Drake Passage and Western Antarctic Peninsula Shelf, 2006. XBT and CTD data collection and analysis. *RV L.M. Gould*

MIT/WHOI Joint Program orientation cruise, 2002. Sea Educational Association. *SSV Corwith Cramer*

PUBLICATIONS

Nikurashin, M. and Vallis, G. A theory of the interhemispheric meridional overturning circulation and associated stratification, *J. Phys. Oceanogr.*, in press

Nikurashin, M. and Ferrari, R. Global energy conversion rate from geostrophic flows into internal lee waves in the deep ocean. *Geophys. Res. Lett.* **38**, L08610 (2011)

Nikurashin, M. and Vallis, G. A theory of deep stratification and overturning circulation in the ocean, *J. Phys. Oceanogr.*, **41**, 485-502 (2011)

Nikurashin, M. and Legg, S. A mechanism for local dissipation of internal tides generated at rough topography, *J. Phys. Oceanogr.*, **41**, 378-395 (2011)

Ferrari, R. and Nikurashin, M. Suppression of eddy diffusivity across jets in the Southern Ocean, *J. Phys. Oceanogr.*, **40**, 1501-1519 (2010)

Griffies, S. M. et al. Problems and Prospects in Large-Scale Ocean Circulation Models, *Proceedings of the OceanObs'09 Conference: Sustained Ocean Observations and Information for Society*, Venice, Italy, 21-25 September 2009, Volume 2, Eds. J. Hall, D.E. Harrison and D. Stammer, ESA Publication WPP-306 (2010) (non-refereed)

Nikurashin, M. and Ferrari, R. Radiation and dissipation of internal waves generated by geostrophic motions impinging on small-scale topography: Application to the Southern Ocean. *J. Phys. Oceanogr.*, **40**, 2025-2042 (2010)

Nikurashin, M. and Ferrari, R. Radiation and dissipation of internal waves generated by geostrophic motions impinging on small-scale topography: Theory. *J. Phys. Oceanogr.*, **40**, 1055-1074 (2010)

MANUSCRIPTS

Nikurashin, M. and Ferrari, R. Water-mass transformation by diapycnal mixing in the deep ocean, in preparation

Nikurashin, M., Vallis, G., and Adcroft, A. Routes to energy dissipation for geostrophic flows in the Southern Ocean, *Nature Geoscience*, in review