

## ISAAC GINIS

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### Education and Training

Kabardino-Balkarian State University, Nalchik, Russia	Mathematics	M.S.	1977
Institute of Experimental Meteorology, Obninsk, Russia	Geophysics	Ph.D.	1986

### Research and Professional Experience

#### *Permanent Appointments:*

2003 -	Full Professor, University of Rhode Island
1998 - 2003	Associate Professor of Oceanography, University of Rhode Island
1995 - 1998	Adjunct Professor of Oceanography, University of Rhode Island
1993 - 1998	Marine Research Scientist, University of Rhode Island
1990 - 1993	Research Scientist, Geophysical Fluid Dynamics Laboratory/NOAA Princeton University, Princeton, NJ
1977 - 1989	Research Scientist, Kabardino-Balkarian State University, Nalchik, Russia

#### *Affiliated/Visiting Appointments:*

2015 -	Affiliate Faculty, NOVA Southeastern University
2013 - Jan-Feb	Visiting Scientist, Jet Propulsion Laboratory, NASA
2013 - Mar-Apr	Visiting Professor, University of Melbourne, Swinburne University of Technology, Melbourne, Australia
2006 - Sep-Dec	Visiting Research Scholar, Princeton University/NOAA GFDL, Princeton, NJ

#### **Publications (last 3 years):**

Reichl, B. G, D. Wang, T. Hara, **I. Ginis**, , and T. Kukulka, 2016: Langmuir Turbulence Parameterization in Tropical Cyclone Conditions, *J. of Phys. Oceanogr.*, 46, 863–886.

Gao, K. and **I. Ginis**, 2016: On the equilibrium-state roll vortices and their effect in the hurricane boundary layer. *J. Atmos. Sci.*, 1205- 1222.

Yablonsky, R. M., **I. Ginis**, B. Thomas, 2015: Ocean modeling with flexible initialization for improved coupled tropical cyclone-ocean prediction, *Environmental Modelling & Software*, 67, 26-30.

Yablonsky, R. M., **I. Ginis**, B. Thomas, V. Tallapragada, D. Sheinin, and L. Bernardet, 2015: Description and analysis of the ocean component of NOAA's operational Hurricane Weather Research and Forecasting (HWRF) Model. *J. Atmos. Oceanic Technol.*, 32, 144-163.

Rabe T. J, T. Kukulka, **I. Ginis**, T. Hara, B. Reichl, E. D'Asaro, R. Harcourt, P. Sullivan, 2015: Langmuir turbulence under Hurricane Gustav (2008), *J. Phys. Oceanogr.*, 45, 657-677

Reichl, B. R., T. Hara, and **I. Ginis**, 2014: Sea state dependence of the wind stress over the ocean under hurricane winds. *J. Geophys. Res.*, **119**, 30-51.

Gao, K. and **I. Ginis**, 2014: On the generation of roll vortices due to the inflection point instability of the hurricane boundary layer flow. *J. Atmos. Sci.*, **71**, 4292-4307.

Soloviev, A. V., R. Lukas, M. A. Donelan, B. K. Haus, and **I. Ginis**, 2014: The air-sea interface and

surface stress under tropical cyclones. *Nature Scientific Reports*, 4.

- Bueti, M. R., **I. Ginis**, L. M. Rothstein, S. M. Griffies, 2014: Tropical cyclone-induced thermocline warming and its regional and global impacts. *J. Climate*, 27, 6978-6999.
- Yablonsky, R. M., and **I. Ginis**, 2013: Impact of a warm ocean eddy's circulation on hurricane-induced sea surface cooling with implications for hurricane intensity. *Mon. Wea. Rev.*, 141, 997-1021.

#### **Five other relevant publications:**

- Gall, J. S., **I. Ginis**, S.-J. Lin, T. P. Marchok, and J.-H. Chen, 2011: Experimental tropical cyclone prediction using the GFDL 25km resolution Global Atmospheric Model. *Wea. Forecasting*, 26, 1008-1019.
- Fan, Y., **I. Ginis**, and T. Hara, 2010: Momentum flux budget across air-sea interface under uniform and tropical cyclones winds. *J. Phys. Oceanogr.*, 40, 2221–2242.
- Fan, Y., **I. Ginis**, T. Hara, C. W. Wright, and E. Walsh, 2009: Numerical simulations and observations of surface wave fields under an extreme tropical cyclone. *J. Phys. Oceanogr.*, 39, 2097-2116.
- Fan Y., **I. Ginis**, T. Hara, 2009: The effect of wind-wave-current interaction on air-sea momentum fluxes and ocean response in tropical cyclones, *J. Phys. Oceanogr.*, 39, 1019-1034.
- Ginis I.**, 2002: Tropical cyclone-ocean interactions. Chapter 3. In *Atmosphere-Ocean Interactions*, Edited by W. Perrie, WIT Press, *Advances in Fluid Mechanics Series*, 33, p. 83 – 114.

#### **Synergistic Activities**

- NOAA's Hurricane Forecast Improvement Program (HFIP) and Joint Hurricane Testbed (JHT): Lead efforts toward improving the operational GFDL/GFDN and HWRF hurricane prediction models concerning ocean coupling.
- ONR Departmental Research Initiative "Unified Physical Parameterizations of Seasonal Prediction": Lead efforts toward improving boundary layer parameterizations
- Hurricanes: Science and Society website ([hurricanescience.org](http://hurricanescience.org)): Lead developer and science advisor
- LRF Global Networking to Improve Prediction of Extreme Marine Events: Scientific Steering Committee member
- Reviewer for scientific journals, book publishers, funding agencies

#### **Graduate Advisees**

Sergey Frolov (PhD 2001, WeatherPredict Consulting), Evan Robertson (MS 2002, SAIC), Minoru Kadota (MS 2003, Temple U. Japan), Yalin Fan (PhD 2007, NRL), Richard Yablonsky (PhD 2009, AIR Worldwide), Zhitao Yu (PhD 2010, NRL), Lou Licata (MS 2010), Seunghoun Lee (PhD 2011, AG Korea), Melissa Kaufman (MS 2012, Karen Clark and Co.), Colin Hughes (MS 2013, BIO Canada), Michael Bueti (PhD 2014, Parkwhiz), Kun Gao (PhD 2015, NOAA/GFDL), Brandon Reichl (PhD 2015, NOAA/GFDL), Austen Blair (MS present), Xuanyu Chen (PhD present)

#### **Postdoctoral Advisees**

Clark Rowley (NRL), Weixing Shen, Ray Richardson (WeatherPredict), Il Ju Moon (Jeju University, Korea), Yalin Fan (NRL), Jeffrey Gall (Validus), Richard Yablonsky (AIR), Biju Thomas (URI), Brandon Reichl (NOAA), Kun Gao (NOAA)