

# Curriculum Vita – Boris Galperin

## 1. PERSONAL

Work Address:

College of Marine Science, MSL 138F, University of South Florida,  
140 7<sup>th</sup>



2. *Marine Turbulence - Theories, Observations and Models. Results of the CARTUM Project, 2003.* Guest Editor for Section 7: *Large-Scale Processes*. Cambridge - New York: Cambridge University Press.
3. *Large Eddy Simulation of Complex Engineering and Geophysical Flows*, 1993, B. Galperin, and S. A. Orszag., Eds., pp. i-620. Cambridge - New York: Cambridge University Press.

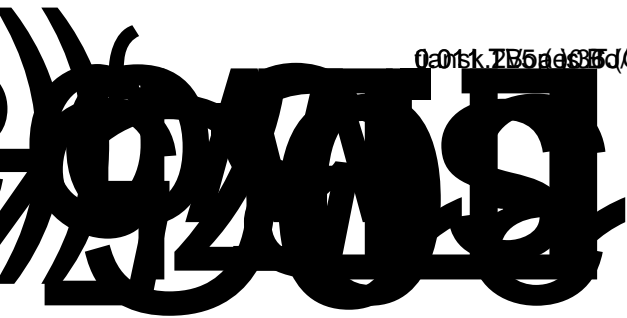
## **12. JOURNAL PUBLICATIONS**

1. Galperin, B., and Sukoriansky, S., 2021: Seasonal oceanic variability on submesoscales: A turbulence perspective. *Ocean Dynamics*, DOI: 10.1007/s10236-021-01444-1.
2. Cabanes, S., S. Esp 0 Td561 0 ,u (i)1.5 (abi)1.5.6 (E)2Rw 2.713 0 Td(B)-201444

T

- doi:10.1007/s10236-010-0278-2.
19. Sukoriansky, S., N. Dikovskaya, N., and B. Galperin, 2009: Transport of momentum and scalar in anisotropic turbulent flows with dispersive waves. *Geophysical Research Letters*, **36**, L14609, doi:10.1029/2009GL038632.
  20. Maximenko, N., P. Niiler, M.H. Rio, O. Melnichenko, L. Centurioni, D. Chambers, V. Zlotnicki and B. Galperin, 2009: Mean dynamic topography of the ocean derived from satellite and drifting buoy data using three different techniques. *Journal of Atmospheric and Oceanic Technology*, **26**, 1910-1919.
  21. Sukoriansky, S., and B. Galperin, 2009: Quasi-normal scale elimination theory of turbulence. *International Journal of Pure and Applied Mathematics*, **50**, 301-308.
  22. Sukoriansky, S., N. Dikovskaya, N., and B. Galperin, 2008: Nonlinear waves in zonostrophic turbulence. *Physical Review Letters*, **101**, 178501.
  23. Galperin, B., S. Sukoriansky, and N. Dikovskaya, 2008: Zonostrophic turbulence. *Physica Scripta*, **T132**, 014034.
  24. Sukoriansky, S., and B. Galperin, 2008: Anisotropic turbulence and internal waves in stably stratified flows (QNSE theory). *Physica Scripta*, **T132**, 014036.
  25. Sukoriansky, S., N. Dikovskaya, N., and B. Galperin, 2007: On the "arrest" of inverse energy cascade and the Rhines scale. *Journal of the Atmospheric Sciences*, **64**, 3312-3327.
  26. Galperin, B., S. Sukoriansky, and P.S. Anderson, 2007: On the critical Richardson number in stably stratified turbulence. *Atmospheric Science Letters*, **8**, 65-69, DOI: 10.1002/asl.153.
  27. Galperin, B., S. Sukoriansky, N. Dikovskaya, P.L. Read, Y. Yamazaki, and R. Wordsworth, 2006: Anisotropic turbulence and zonal jets in rotating flows with a beta-effect. *Nonlinear Processes in Geophysics*, **13**, 83-98.
  28. Sukoriansky, S., B. Galperin, and V. Perov, 2006: A quasi-normal scale elimination model of turbulence and its application to stably stratified flows. *Nonlinear Processes in Geophysics*, **13**, 9-22.
  29. Sukoriansky, S., B. Galperin, and V. Perov, 2005: Application of a new spectral theory of stably stratified turbulence to atmospheric boundary layer over sea ice. *Boundary-Layer Meteorology*, **117**, 231-257. doi:10.1007/s10546-005-0134-2

0101sk.2754d83d(G)02615051560510.5(750)ay502)08 -11 Tf0.121



near-surface, turbulent boundary layers.

Boris Galperin

9. Burwell, D., M. Vincent, M. Luther, and B. Galperin, 2000: Modeling residence times: Eulerian vs Lagrangian. In: Estuarine and Coastal Modeling, M. L. Spaulding and H. L. Butler, eds., ASCE, Reston, VA, pp 995-1009.
10. Burwell, D., M. Vincent, M. Luther, and B. Galperin, 2000: Modeling residence times: Eulerian vs Lagrangian, Estuarine and Coastal Modeling. Proceedings of the 6th International Conference, pp. 995-1009. New Orleans, La: ASCE.
11. Galperin, B., A. Squires, G. Vargo, K. Fanning, and R. Weisberg, 1995: Review and synthesis of historical Tampa Bay water quality data. Florida Scientist. Symposium on human impacts on the environment of Tampa Bay. Special publication, *Quarterly Journal of the Florida Academy of Sciences*, **58**, 228-233. Indialantic, Florida: Florida Academy of Sciences.
12. Galperin, B., S. Sukoriansky, and Lal1.5 ( )-5.5 .9 (l)--0.011 Tc (or)-1.3 (o)-5.9 (s)-2.1el(i)1.4 (s)-2(uk)-2yng, ar.-







and Lagrangian diffusion in an easterly jet - and a novel method of analyzing macroturbulence. The Dynamics of Rotating Fluids. Atmospheric, Oceanic and Planetary Physics, University of Oxford, UK, 26 September 2014.

37. Galperin, B., J. Hoemann, S. Espa, and G. Di Nitto. Anisotropic turbulence and Rossby waves in an easterly jet - an experimental study. BIT's 1<sup>st</sup> Annual World Congress of Geophysics – 2014, Taiyuan, China, 16 – 18 September, 2014.
38. Galperin, B. Waves, Turbulence, Boundary Layers, and All That... CMS Faculty Seminar Series, St. Petersburg, Florida, September 5, 2014.
39. Galperin, B., J. Hoemann, S. Espa, and G. Di Nitto. Anisotropic turbulence and Rossby waves in an easterly jet - an experimental study. Turbulent Mixing and Beyond, Fourth International Conference, The Abdus Salam International Centre for Theoretical Physics, Strada Costiera 11, Trieste, Italy, 4 - 9 August, 2014.
40. Galperin, B. Air, Water, Fire, Earth, Space. Faculty Seminar Series CMS Faculty Research: Meet and Greet. St. Petersburg, August 30, 2013.
41. Galperin, B., S. Sukoriansky, N. Dikovskaya, R.M.B. Young, P.L. Read, A.J. Lancaster, and D. Armstrong. Zonostrophic macroturbulence and flow energetics on Jupiter from Cassini d RO-3.3 (i(e)6.1 (y.34167 (



80. Galperin, B., S. Sukoriansky, and A. Grantinger, Verification of the QNSE turbulence model in WRF. WRF PBL working group meeting, June 23, 2009, NCAR, Boulder, Colorado.
81. Galperin, B., and S. Sukoriansky, Large-scale and small-scale mixing in turbulence with anisotropic dispersive waves. Physical Oceanography Review Symposium, June 9, 2009, Chicago, IL.
82. Galperin, B., and S. Sukoriansky, Transport of momentum and scalar in turbulent flows with anisotropic dispersive waves. Wave-flow intera





Ringberg, Germany: Max-Planck-Institute for Astrophysics, April 2005.

144. Galperin, B., Sukoriansky, S., Dikovskaya, N., *Zonal jets and anisotropic energy spectrum in beta-plane turbulence: computer simulations, laboratory experiments, and natural flows*. Vienna, Austria: EGU Assembly, April 2005.

145. Galperin, B., Sukoriansky, S., *A spectral closure-based model of turbulence for geophysical applications*. Vienna, Austria: EGU General Assembly, April 2005.

146. ~~Galperin, B., Sukoriansky, S., Dikovskaya, N., *Zonal jets and anisotropic energy spectrum in beta-plane turbulence: computer simulations, laboratory experiments, and natural flows*. Vienna, Austria: EGU Assembly, April 2005.~~

- stratification: Theory and a test case of atmospheric SBL*. Haifa, Israel: The 29th Israel Conference on Mechanical Engineering, 2003.
167. Sukoriansky, S., Galperin, B., Perov, V. *Application of a new spectral theory of turbulence to a stably stratified atmospheric boundary layer*. Nice, France: EGS-AGU-EUG Assembly, April 2003.
  168. Galperin, B., *Anisotropic Turbulence and Zonal Jets on Beta-Plane, Rotating Sphere and Giant Planets*. Cambridge, England: Department of Applied Mathematics and Theoretical Physics, Cambridge University, July 2002.
  169. Galperin, B., *Anisotropic Turbulence and Zonal Jets on Beta-Plane, Rotating Sphere and Giant Planets*. London, England: Department of Mechanical Engineering, University College London, July 2002.
  170. Galperin, B., *Anisotropic Turbulence and Zonal Jets on Beta-Plane, Rotating Sphere and Giant Planets*. Reading, England: University of Reading, July 2002.
  171. Galperin, B., *Anisotropic Turbulence and Zonal Jets on Beta-Plane, Rotating Sphere and Giant Planets*. Oxford, England: Atmospheric, Oceanic & Planetary Physics, Clarendon Laboratory, Oxford University, July 2002.
  172. Galperin, B., *Universal Spectrum of Two-Dimensional Turbulence on Rotating Sphere and Basic Features of Atmospheric Circulations on Giant Planets*. Nice, France: the 27th General Assembly of the European Geophysical Society, April 2002.
  173. Galperin, B., *RPT Analysis of Turbulent Flows with Stable Stratification*. Nice, France: the 27th General Assembly of the European Geophysical Society, April 2002.
  174. Galperin, B., *Zonal Flows on Beta-Plane, Rotating Sphere, and Giant Planets*. Baltimore, Maryland: Department of Earth and Planetary Sciences, The Johns Hopkins University, March 2002.
  175. Galperin, B., *Zonal Flows on Beta-Plane, Rotating Sphere, and Giant Planets*. St. Petersburg, Florida: College of Marine Science, University of South Florida, January 2002.
  176. Galperin, B., *A Closer Look at Wave-Turbulence Interactions in Stably Stratified Flows*. Brussels, Belgium: 7th CARTUM Meeting, December 2001.
  177. Galperin, B., *Spectral Characteristics of Zonal Flows on Giant Planets*. Brussels, Belgium: 7th CARTUM Meeting, December 2001.
  178. Galperin, B. (2001). *Spectral Characteristics of Zonal Flows on Giant Planets*. New Orleans, Louisiana: 33rd Annual Meeting, Division for Planetary Sciences, American Astronomical Society, November 2001.
  179. Luther, M. E., M. S. Vincent, D. C. Burwell, and B. Galperin, *Numerical modeling of proposed fresh water withdrawals and desalination concentrate discharges in Tampa Bay, Florida*. Presented at the 16<sup>th</sup> Biennial Conference of the Estuarine Research Federation, St. Petersburg Beach, FL, November 8, 2001.
  180. Galperin, B., *Initial comparison of RG-based theory of stably stratified turbulent flows with observational data*. Gregynog Hall, Wales, UK: CARTUM 3rd Summer School, July 2001.
  181. Galperin, B., *Universal  $n^{-5}$  spectrum of zonal flows on giant planets*. University College London, London, England: Department of Space and Climate Physics and Department of Mathematics, May 2001.
  182. Galperin, B., *Universal  $n^{-5}$  spectrum of zonal flows on giant planets*. Budapest, Hungary: CARTUM Workshop III, May 2001.
  183. Galperin, B., *Applications of the Boltzmann Lattice Method*. Budapest, Hungary: CARTUM Workshop III, May 2001.
  184. Galperin, B., *Universal  $n^{-5}$  spectrum of zonal flows on giant planets*. Washington, DC: the 53rd Annual Meeting of the Division of Fluid Dynamics of the American Physical Society, November 2000.
  185. Galperin, B., *New results on stably stratified flows with shear*. Bidston, England, CARTUM Summer School, August 2000.
  186. Galperin, B., *Coupled hydrodynamic-biological simulations of the oyster beds in Apalachicola Bay, Florida, in response to changes in reshwater runoff*. Marseille, France: 2nd CARTUM Workshop, 2000.
  187. Luther, M.E., Galperin, B., *A numerical modeling investigation of a proposed desalination facility at Big Bend, Tampa Bay, Florida, Phase I and II*. St. Petersburg, Florida: S & W Water LLC, January 2000.
  - 188.









