BENJAMIN JAIMES
University of Miami, Rosenstiel School of Marine and Atmospheric Science
Division of Meteorology and Physical Oceanography
4600 Rickenbacker Causeway
Miami, FL, 33149-1098

Phone: 305-421-4109
Fax: 305-421-4696
Email: bjaimes@rsmas.miami.edu
http: www.rsmas.miami.edu/personal/bjaimes/index.html

EDUCATION

- **Ph.D. (2009)**: University of Miami Rosenstiel School of Marine and Atmospheric Science, Meteorology and Physical Oceanography. Dissertation: *On the Response to Tropical Cyclones in Mesoscale Oceanic Eddies* (currently nominated to the F. G. Walton Smith Prize). Mentor: Prof. Lynn K. Shay.
- **M.S. (2005)**: University of Miami Rosenstiel School of Marine and Atmospheric Science, Meteorology and Physical Oceanography. Thesis*: Energetics of the wind and Loop Current-driven circulation in the Gulf of Mexico.* Mentor: Prof. Eric P. Chassignet.
- **M.S. (1995)**: Instituto Tecnologico y de Estudios Superiores de Monterrey (Mexico), Computer Science with specialization in numerical modeling. Thesis*: Quasi-3D numerical model for beach sand transport* (Honor Mention).
- **B.S. (1992)**: Facultad de Ciencias Marinas, Universidad Autonoma de Baja California (UABC, Mexico), Oceanology with specialization in physics (Scholastic Merit).

RESEARCH EXPERIENCE

- Postdoctoral Associate, RSMAS/MPO, University of Miami (Dec/2009-present).
- Graduate Research Assistant, RSMAS/MPO, University of Miami (Aug/2001-Nov/2009).
- Research Assistant, CICATA Altamira, Instituto Politecnico Nacional, Mexico, (Aug/1997-Jan/2008).
- Research Assistant, CNA/SMN, Mexican National Weather Service, (Jul/1995-Jul/1997).

TEACHING EXPERIENCE

- Teaching Assistant to Dr. Donald B. Olson, Physical Oceanography, University of Miami (Spring 2009).
- Teaching Assistant to Dr. John C. Van Leer, Survey of Oceanography, University of Miami (Fall 2007).
- Teaching Assistant, Zoology of Marine Invertebrates, UABC, Ensenada, Mexico (Aug/1988-Dec/1988).

SELECTED ACADEMIC HONORS AND AWARDS

- **Fulbright Grantee** at the University of Miami (Aug/2001- Jun/2004).
- **The Best Students of Mexico Award**, *Diario de Mexico* and Consejo Nacional de Ciencia y Tecnologia, Mexico (Nov/1992).
- **Scholastic Merit Award** (Top student in Oceanology, Class of 1991b), Universidad Autonoma de Baja California, Ensenada, Mexico, (Jun/1992).

PROFESSIONAL AFFILIATIONS

- Member of AGU, AMS, TOS, and the American Association for the Advancement of Science (Excellence in Science award).

PEER-REVIEWED JOURNAL PUBLICATIONS

Jaimes, B., L. K. Shay, and G. R. Halliwell, 2011: The response of quasi-geostrophic oceanic vortices to tropical cyclone forcing. *J. Phys. Oceanogr.*, doi: 10.1175/JPO-D-11-06.1 (in press).

Jaimes, B., and L. K. Shay, 2010: Near-inertial wave wake of hurricanes Katrina and Rita over mesoscale oceanic eddies. *J. Phys. Oceanogr*., **40**, 1320-1337.

Jaimes, B., and L. K. Shay, 2009: Mixed layer cooling in mesoscale oceanic eddies during hurricanes Katrina and Rita. *Mon. Wea. Rev*., **137**, 4188-4207.

Vidal, V. V. M., F. V. Vidal, E. Meza, J. Portilla, L. Zambrano, and B. Jaimes, 1999: Ring-slope interactions and the formation of the western boundary current in the Gulf of Mexico. *J. Geophys. Res.*, **104**(C9), 20523-20550.

Vidal, F. V., V. M. V. Vidal, P. F. Rodriguez, L. Zambrano, J. Portilla, R. J. Rendon, and B. Jaimes, 1999: Circulación del Golfo de México. *Rev. Soc. Mex. Hist. Nat.*, **49**, 1-15.

JOURNAL PUBLICATIONS CURRENTLY UNDERGOING PEER-REVIEW

Jaimes, B., and L. K. Shay, 2011: Broadening of the near-inertial passband by Doppler shift in quasi-geostrophic vortices. *J. Phys. Oceanogr.*: In review.

Shay, L. K., B. Jaimes, J. Brewster, P. Meyers, C. McCaskill, E. Uhlhorn, F. Marks, G. R. Halliwell, O. M. Smedstad, and P. Hogan, 2011: Airborne ocean surveys of the Loop Current complex from NOAA WP-3D in support of the Deep Water Horizon oil spill. Geophysical Monograph Series, eds. Y. Liu, American Geophysical Union: In review.

TECHNICAL REPORTS

Jaimes, B., Vidal, V. F., and Vidal, V. V. M., 1999b: Characterization of the dynamical oceanography and climatology of the Gulf of Mexico' Mexican oil region: elements to improve the PEMEX normative criteria to design, construct, and operate marine platforms and pipelines. *Project FIES-97-05-IV Technical Report No. 3*, 38 pp., IPN/CICATA Grupo de Estudios Oceanográficos, Cuernavaca, México. (In Spanish.)

Jaimes, B., Vidal, V. F., and Vidal, V. V. M., 1999a: Characterization of the dynamical oceanography and climatology of the Gulf of Mexico' Mexican oil region: elements to improve the PEMEX normative criteria to design, construct, and operate marine platforms and pipelines. *Project FIES-97-05-IV Technical Report No. 2*, 49 pp., IPN/CICATA Grupo de Estudios Oceanográficos, Cuernavaca, México. (In Spanish.)

Jaimes, B., Vidal, V. F., and Vidal, V. V. M., 1998: Characterization of the dynamical oceanography and climatology of the Gulf of Mexico's Mexican oil oegion: elements to improve the PEMEX normative criteria to design, construct, and operate marine platforms and pipelines. *Project FIES-97-05-IV Technical Report No. 1*, 89 pp., IPN/CICATA Grupo de Estudios Oceanográficos, Cuernavaca, México. (In Spanish.)

CONFERENCE ABSTRACTS AND PROCEEDINGS

Jaimes, B., and L. K. Shay (2010), Upwelling and mixed layer deepening in mesoscale oceanic eddies during the passage of tropical cyclones, *29th Conference on Hurricanes and Tropical Meteorology*, Paper 12A.3, AMS, 10–14 May 2010, Tucson, AZ.

Jaimes, B., and L. K. Shay (2010), Upper ocean cooling in the Loop Current System during hurricanes Katrina and Rita, *Eos Trans. AGU*, **91**(26), Ocean Sci. Meet. Suppl., Abstract PO51B-05.

Jaimes, B., and L. K. Shay, (2008), Hurricane-induced differential mixed layer cooling over strong oceanic background flows, *28th Conference on Hurricanes and Tropical Meteorology*, Paper 2D.4, AMS, 28 Apr–May 2 2008, Orlando, FL.

Jaimes, B., and L. K. Shay (2008), Modulation of hurricane-induced mixed layer cooling in Gulf of Mexico's mesoscale oceanic eddies, Ocean Sci. Meet., Abstract 2386, 2-7 March 2008, Orlando, FL.

Jaimes, B., L. K. Shay, E. Uhlhorn, T. M. Cook, J. Brewster, G. Halliwell, and P. G. Black (2006), Influence of Loop Current ocean heat content on hurricanes Katrina, Rita, and Wilma, *27th Conference on Hurricanes and Tropical Meteorology*, Paper C3.4, AMS 24-28 April 2006, Monterey, CA.

Jaimes, B., E. P. Chassignet, and L. M. Chérubin (2006), Influence of Loop Current rings on the western boundary current in the Gulf of Mexico, *Eos Trans. AGU, **87(36),*** Ocean Sci. Meet. Suppl., Abstract OS250-07.

Jaimes, B., F. V. Vidal, and V. M. V. Vidal, 2000: An oceanographic and meteorological meta database for the southern Gulf of Mexico. In: *Proceedings of the Second International Conference on Management Information Systems*. C. A. Brebbia and P. Pascolo eds., Wessex Institute of Technology Press, 425-434.

Jaimes, B., F. V. Vidal, and V. M. V. Vidal, 2000: Tropical cyclones activity analysis system. In: *Proceedings of the Eighth International Conference on Hydraulic Engineering Software*. W. R. Blain and C. A. Brebbia eds., Wessex Institute of Technology Press, 415-422.

INTERNATIONAL SUMMER SCHOOLS AND SYMPOSIUM

- Physical Oceanography Dissertation Symposium V (invited speaker): sponsored by NSF, ONR, NOAA, and NASA; October 5-10, 2008, Honolulu, Hawaii.

- Modern Mathematical Methods in Physical Oceanography (selected student): sponsored by NSF; August 13-22, 2006, Breckenridge, CO. Organized by Dr. H. Dijkstra, Dr. W. Dewar, and Dr. R. Kleeman. Topics: large-scale ocean circulation, ocean modeling, geostrophic turbulence, dynamical systems theory, stochastic differential equations, information theory.
- Hydrodynamic Loading on Cylindrical Structures in Offshore Engineering (selected participant): sponsored by the Technical University of Denmark; August 2-6, 1999, Lyngby, Denmark. Organized by Dr. M. Sumer.
- MM5 Tutorial: June 15-18, 1999, Boulder, CO. Organized by the NCAR Mesoscale and Microscale Meteorology Division.

AIRBORNE OCEANOGRAPHIC EXPERIMENTS

- Deepwater Horizon oil spill 2010: designe and execution of 9 airborne experiments from NOAA WP-3D aircraft, to sample ocean condition over the Loop Current System during the Deepwater Horizon oil spill in the Gulf of Mexico, under supervision of Dr. Lynn K. Shay (Univ. of Miami).
- Tropica cyclones (2005-2010): designe and execution of 11 airborne experiments from NOAA WP-3D aircraft, to sample ocean condition before, during, and after the passage of tropical cyclones over the Loop Current System in the Gulf of Mexico, under supervision of Dr. Lynn K. Shay (Univ. of Miami).

OCEANOGRAPHIC CRUISES

- Windward Passage Experiment RB-04-03 (Mar/29/2004-Apr/13/2004): NOAA ship Ronald H. Brown; Atlantic Ocean, Caribbean Sea, and Windward Passage and vicinity; responsible of CTD measurements, under supervision of Dr. Elizabeth Johns (NOAA/AOML).
- Dolcevita-II (May/2003): R/V G. Dallaporta; Adriatic Sea; responsible of microprofiler and CTD measurements, under supervision of Dr. Harmut Peters (Univ. of Miami).