

Benjamin Jaimes de la Cruz

Curriculum Vitae

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EDUCATION

- 2009 Ph.D. in Meteorology and Physical Oceanography, University of Miami, Rosenstiel School of Marine and Atmospheric Science (RSMAS), Miami, FL.
- 2005 M.S. in Meteorology and Physical Oceanography, University of Miami, RSMAS, Miami, FL.
- 1995 M.S. in Computer Science (Specialization in Numerical Modeling), Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), Cuernavaca, Mexico.
- 1992 B.S. in Oceanology (major in Physical Oceanography), Universidad Autónoma de Baja California (UABC), Facultad de Ciencias Marinas, Ensenada, Mexico.

PROFESSIONAL APPOINTMENTS

- 2019–Pres. Associate Scientist, University of Miami, RSMAS, Miami, FL.
- 2013–2018 Assistant Scientist, University of Miami, RSMAS, Miami, FL.
- 2009–2013 Postdoctoral Associate, University of Miami, RSMAS, Miami, FL.
- 1997–2008 Research Assistant, Instituto Politécnico Nacional (IPN), Mexico.
- 1995–1997 Research Specialist, Servicio Meteorológico Nacional (SMN/CNA), Mexico.

AWARDS AND HONORS

- 2016 **National Investigator Level I Distinction**, for original research, National System of Investigators, National Council of Science and Technology (CONACYT), Mexico.

- 2008 Selected participant for **Physical Oceanography Dissertation Symposium V (PODS V)**, sponsored by ONR, NASA, NOAA, and NSF. Honolulu, HI.
- 2001–2004 **Fulbright Grantee** at the University of Miami, RSMAS, Miami, FL.
- 1995 Special Mention for Excellent Quality and Defense of M.S. Thesis, Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), Cuernavaca, Mexico.
- 1992 **The Best Students of Mexico Award**, *Diario de Mexico* newspaper and CONACYT, Mexico.
- 1992 **Scholar Merit Award** (highest academic achievement for top student in class), Universidad Autónoma de Baja California (UABC), Facultad de Ciencias Marinas, Ensenada, Mexico.

FUNDED PROPOSALS (Total: \$3,245,899.00; \$2,815,899.00 since PhD)

- 2020–2022 *On the Influence of Oceanic Variability on Air-Sea Heat Fluxes and Boundary Layer Recovery in Hurricanes*. Sponsored by NSF Physical and Dynamic Meteorology/Physical Oceanography (Award Number/FAIN 1941498), \$858,495.00, Co-PI, lead proposal author.
- 2016–2019 Three-Dimensional Gulf Circulation and Biogeochemical Processes Unveiled by State-of-Art Profiling Float Technology and Data Assimilative Ocean Models. Sponsored by the Consortium for Ocean Leadership (Grant Number 2015-V-487), \$1,375,000.00 (University of Miami portion), Co-PI.
- 2015–2019 *Wind-Driven Upwelling and Vertical Mixing in Mesoscale Eddies from a Global Perspective*. Sponsored by NASA Physical Oceanography (Grant Number NNX15AG43G), \$582,404.00, Co-I, lead proposal author.
- 2000–2001 *Investigation of Wind Effects on Dune Stability Along the Altamira Coastline*. Sponsored by the Highway Authority of the State of Tamaulipas (Mexico), \$30,000.00, Co-PI.
- 1997–2001 Characterization of the Dynamical Oceanography and Climatology of the Gulf of Mexico's Mexican Oil Region: Elements to Improve the PEMEX Normative Criteria to Design, Construct, and Operate Marine Platforms and Pipelines. Sponsored by the Mexican Institute of Petroleum (Grant Number FIES-97-05-IV), \$400,000.00, Co-PI, Project Scientist, lead proposal author.

LEADING AND CRITICAL POSTS

- 2018 Member of NASA Panel Review, Ocean Vector Winds Science Team 2017.
- 2005–Pres. Lead ocean scientist in 33 NOAA WP-3D hurricane hunter aircraft research flights, as part of air-sea interaction experiments in hurricanes (23 flights), the Deepwater Horizon oil spill of 2010 (9 flights), and the Caribbean Sea mesoscale eddy field (1 flight).

SCIENTIFIC PUBLICATIONS

PEER-REVIEWED JOURNAL PUBLICATIONS (17)

- Jaimes de la Cruz, B.**, L. K. Shay, J. B. Wadler, and J. E. Rudzin, 2021: On the hyperbolicity of the bulk air-sea heat flux functions: insights into the efficiency of air-sea moisture disequilibrium for tropical cyclone intensification. *Mon. Wea. Rev.* In Press.
- Wadler, J. B., J. A. Zhang, R. F. Rogers, **B. Jaimes**, and L. K. Shay, 2021: The rapid intensification of Hurricane Michael (2018): storm structure and the relationship to environmental and air-sea interactions. *Mon. Wea. Rev.*, **149**, 245-267.
- Hiron, L., **B. Jaimes de la Cruz**, and L. K. Shay, 2020: Evidence of Loop Current frontal eddy intensification through linear and nonlinear interactions with the Loop Current. *J. Geophys. Res. Oceans*, **125**, e2019JC015533. <https://doi.org/10.1029/2019JC015533>
- Rudzin, J. E., L. K. Shay, and **B. Jaimes de la Cruz**, 2019: The impact of the Amazon-Orinoco River plume on enthalpy flux and air-sea interaction within Caribbean Sea tropical cyclones. *Mon. Wea. Rev.*, **147**, 931-950.
- Wadler, J. B., J. A. Zhang, **B. Jaimes**, and L. K. Shay, 2018: Downdrafts and the evolution of boundary layer thermodynamics in Hurricane Earl (2010) before and during rapid intensification. *Mon. Wea. Rev.*, 3545-3565.
- Rudzin, J. E., L. K. Shay, **B. Jaimes**, and J. K. Brewster, 2017: Upper ocean observations in Eastern Caribbean Sea reveal barrier layer within a warm core eddy. *J. Geophys. Res. Oceans*, **122**.
- Jaimes, B.**, L. K. Shay, and J. K. Brewster, 2016: Observed air-sea interactions in tropical cyclone Isaac over Loop Current mesoscale eddy features. *Dyn. Atmos. Oceans.*, **76**, 306-324.
- Meyers, P. C., L. K. Shay, J. K. Brewster, and **B. Jaimes**, 2016: Observed ocean thermal response to Hurricanes Gustav and Ike. *J. Geophys. Res. Oceans*, **121**, 162-179.

Archer, M. R., L. K. Shay, **B. Jaimes**, and J. Martinez-Pedraja, 2015: Observing frontal instabilities of the Florida Current using high frequency radar, in *Coastal Ocean Observing Systems*, edited by Y. Liu et al., Academic Press, Boston, pp. 179-208, ISBN 9780128020227.

Jaimes, B., and L. K. Shay, 2015: Enhanced wind-driven downwelling flow in warm oceanic eddy features during the intensification of tropical cyclone Isaac (2012): Observations and theory. *J. Phys. Oceanogr.*, **45**,1667-1689.

Jaimes, B., L. K. Shay, and E. W. Uhlhorn, 2015: Enthalpy and momentum fluxes during Hurricane Earl relative to underlying ocean features. *Mon. Wea. Rev.*, **143**, 111-131.

Shay, L. K., **B. Jaimes**, J. K. Brewster, P. Meyers, E. C. McCaskill, E. Uhlhorn, F. Marks, G. R. Halliwell Jr., O. M. Smedstad, and P. Hogan, 2011: Airborne ocean surveys of the Loop Current complex from NOAA WP-3D in support of the Deepwater Horizon oil spill, in *Monitoring and Modeling the Deepwater Horizon Oil Spill: A Record-Breaking Enterprise*, Geophys. Monogr. Ser., vol. 195, edited by Y. Liu et al., pp. 131-151, AGU, Washington, D.C.

Jaimes, B., L. K. Shay, and G. R. Halliwell, 2011: The response of quasigeostrophic oceanic vortices to tropical cyclone forcing. *J. Phys. Oceanogr.*, **41**, 1965-1985.

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 IN PREPARATION

Jaimes de la Cruz, B., and L. K. Shay, 2021: Satellite-based estimates of wind-driven upwelling and vertical mixing over mesoscale oceanic eddies from a global perspective.

Jaimes de la Cruz, B., and L. K. Shay, 2021: Direct observations of hurricane-induced dipole upwelling structure over mesoscale oceanic eddies.

INVITED TALKS

- 2019 Air-sea interaction in tropical cyclones over mesoscale oceanic eddies, International Workshop on Tropical Cyclone-Ocean Interaction in the Northwest Pacific, Jeju, South Korea, 19 June.
- 2015 Enhanced wind-driven downwelling flow in warm oceanic eddy features during the intensification of tropical cyclone Isaac (2012): Observations and theory, NOAA/AOML/Hurricane Research Division, Miami, FL, 16 July.
- 2013 Impact of ocean eddies on major hurricane intensity, CICESE, Ensenada, Mexico, 7 August.
- 2013 Detecting sources of oceanic thermal energy for rapid intensification of hurricanes, 1st Meeting on Databases and Extreme Hydrometeorological and Climatic Events in Mexico, REDESClim, Manzanillo, Mexico, 6 March.
- 2010 Oceanography from NOAA's hurricane-hunter aircraft: Recent major hurricanes in the Gulf of Mexico and the Deepwater Horizon oil spill, **Keynote Speech**, 16th National Congress of Oceanology, Mexican Association of Oceanologists, Ensenada, Mexico, 11 November.
- 2010 Tropical cyclone-induced upwelling, near-inertial oscillations, and vertical mixing in a quasi-geostrophic oceanic vortex, Special Session on Physical Oceanography (in occasion of the 50th anniversary of the University of Baja California's School of Marine Science), 16th National Congress of Oceanology, Mexican Association of Oceanologists, Ensenada, Mexico, 9 November.
- 2009 Ocean response to hurricanes Katrina and Rita in the Gulf of Mexico: implications for predicting storm intensity, Florida Institute of Technology, Melbourne, Florida, 4 February.
- 2008 Mixed layer entrainment in mesoscale oceanic eddies during hurricane passage, Physical Oceanography Dissertation Symposium V, Honolulu, Hawaii, 6 October.

RESEARCH EXPERIENCE

- 2020–Pres. Project: *On the Influence of Oceanic Variability on Air-Sea Heat Fluxes and Boundary Layer Recovery in Hurricanes*. Sponsored by NSF Physical and Dynamic Meteorology/Physical Oceanography (Award Number/FAIN 1941498). Co-PI, lead proposal author.
- 2016–2019 Project: *Three-Dimensional Gulf Circulation and Biogeochemical Processes Unveiled by State-of-Art Profiling Float Technology and Data Assimilative Ocean Models*. Sponsored by the Consortium for Ocean Leadership (Grant Number 2015-V-487). Co-PI.

- 2015–2019 Project: *Wind-Driven Upwelling and Vertical Mixing in Mesoscale Eddies from a Global Perspective*. Sponsored by NASA (Grant Number NNX15AG43G). Co-PI, lead proposal author.
- 2014–2015 Project: *The Impact of Emerging Observing Technologies on Future Predictions of Hurricane Structure and Intensity Change*. Sponsored by NOAA OAR (Grant Number NA14OAR4830103).
- 2012–2014 Project: *Deep Sea To Coast Connectivity in the Eastern Gulf of Mexico (Deep-C Consortium)*. Sponsored by the Consortium for Ocean Leadership (Grant Number SA1212GoMRI008).
- 2012 Project: *Airborne Ocean Surveys over The Loop Current During Tropical Cyclones*. Sponsored by US DOI Mineral Management Service (Grant Number M08PC20052).
- 2010–2013 Project: *Studies in Support of NOAA's Operational Oceanography*. Sponsored by NOAA (Grant Numbers NA08OAR4320892 and NA10OAR4320143).
- 2010–2013 Project: *Improving the Satellite Derived Ocean Heat Content Index for Tropical Cyclones*. Sponsored by NASA (Grant Number NNX09AC47G).

TEACHING EXPERIENCE

- 2014 Instructor in *Air-Sea Interaction*, 6th Short Course on Tropical Cyclones, sponsored by UNAM and Inter-American Institute for Global Change Research, San José del Cabo, Mexico.
- 2013 Instructor in *Using Ferret in Analysis of the Ocean Response to Hurricanes*, 1st Workshop on Monitoring and Forecasting Tropical Cyclones and their Effects over Coastal Zones, sponsored by REDESClim (Mexican Network for Disasters Related to Hydrological and Climate Phenomena) and CONACYT (Mexican National Council of Science and Technology), Ensenada, Mexico.
- 2013 Instructor in *Ocean Response to Tropical Cyclones*, 1st Workshop on Monitoring and Forecasting Tropical Cyclones and their Effects over Coastal Zones, sponsored by REDESClim and CONACYT, Ensenada, Mexico.
- 2013 Instructor in *Air-Sea Interaction*, 5th Short Course on Tropical Cyclones, sponsored by UNAM and Inter-American Institute for Global Change Research, La Paz, Mexico.
- 2009 Teaching Assistant to Prof. Donald B. Olson, Physical Oceanography, University of Miami.
- 2007 Teaching Assistant to Prof. John C. Van Leer, Survey of Oceanography, University of Miami.

MENTORING

- 2017–Pres. Ph.D. Committee Member for Luna Hiron (University of Miami).
- 2015–2018 Ph.D. Committee Member for Johna E. Rudzin (University of Miami); currently at the Naval Research Laboratory (NRL).
- 2014–2016 Ph.D. Committee Member for Matthew R. Archer (University of Miami); currently at Jet Propulsion Laboratory (JPL).

SERVICE TO PROFESSION

- 2018 Panelist in the Tropical Cyclone Operations and Research Forum (TCORF), Panel 3: Ocean Model Impact on Hurricane Forecasting. 13 March 2018, Miami, FL.
- 2015–2018 Member of NOAA’s Ocean Model Impact Tiger Team to evaluate the impact of the complexity of ocean models on hurricane forecasts at the National Centers for Environmental Predictions.
- 2013 Co-organizer of the 1st Workshop on Monitoring and Forecasting Tropical Cyclones and their Effects over Coastal Zones, sponsored by REDESClim and CONACYT, Ensenada, Mexico
- 2010 Evaluating Judge for the National Prize of Oceanography, Mexico.
- 2010–Pres. Reviewer for 26 Journals: *Atmósfera*, *Biogeosciences*, *Bulletin of Marine Science*, *Climate Dynamics*, *Deep-Sea Research*, *Dynamics of Atmospheres and Oceans*, *Geophysical Research Letters*, *International Journal of Climatology*, *Journal of Advances in Modeling Earth Systems*, *Journal of Applied Meteorology and Climatology*, *Journal of Climate*, *Journal of Geophysical Research-Atmospheres*, *Journal of Geophysical Research-Oceans*, *Journal of Marine Research*, *Journal of Marine Systems*, *Journal of Physical Oceanography*, *Journal of the Atmospheric Sciences*, *Marine Technology Society Journal*, *Monthly Weather Review*, *Nature Communications*, *Nature Special Reports*, *Ocean Dynamics*, *Ocean Modelling*, *Progress in Oceanography*, *Quarterly Journal of the Royal Meteorological Society*, *Weather and Forecasting*.

FIELD EXPERIMENTS

AIRBORNE EXPERIMENTS

- 2018 Hurricane Michael (Gulf of Mexico): 7 airborne surveys, NOAA WP-3D hurricane hunter aircraft, lead ocean scientist.

- 2017 Hurricane Nate (Western Caribbean Sea and Gulf of Mexico): 3 airborne surveys, NOAA WP-3D hurricane hunter aircraft, lead ocean scientist.
- 2014 Survey of warm eddy features in the Caribbean Sea: 1 airborne oceanographic survey, NOAA WP-3D hurricane hunter aircraft, lead ocean scientist.
- 2014 Hurricane Edouard (North Atlantic Ocean): 4 airborne surveys, NOAA WP-3D hurricane hunter aircraft, lead ocean scientist.
- 2012 Hurricane Isaac (Gulf of Mexico): 3 airborne surveys, NOAA WP-3D hurricane hunter aircraft, lead ocean scientist.
- 2010 Deepwater Horizon oil spill (Loop Current and associated eddy field): 9 airborne oceanographic surveys, NOAA WP-3D hurricane hunter aircraft, lead ocean scientist.
- 2008 Hurricanes Gustav and Ike (Gulf of Mexico): 6 airborne surveys, NOAA WP-3D hurricane hunter aircraft, lead ocean scientist.
- 2005 Hurricane Rita (Gulf of Mexico): 1 airborne oceanographic survey, NOAA WP-3D hurricane hunter aircraft, deploy expendable oceanographic profilers.

OCEANOGRAPHIC CRUISES

- 2017 Northern Gulf of Mexico: deployment of 10 state-of-the-art APEX-EM profiling floats, R/V Walton Smith, Co-PI.
- 2004 Windward Passage Experiment RB-04-03: Caribbean Sea and Windward Passage and vicinity, NOAA Ship Ronald H. Brown, responsible of CTD measurements.
- 2003 Dolcevita-II Experiment: Adriatic Sea, R/V G. Dallaporta, responsible of microprofiler and CTD measurements.

ESPECIAL TRAINING AND COURSES

- 2013 Aviation Safety Training, NOAA Aviation Safety Program: Water Ditching Safety and Survival, Cold Weather Land Survival.
- 2008 Aviation Safety Training, NOAA Aviation Safety Program: Water Ditching Safety and Survival, Cold Weather Land Survival.
- 2006 Modern Mathematical Methods in Physical Oceanography, summer school sponsored by NSF, Breckenridge, CO.

THESIS AND DISSERTATION

- Jaimes, B.**, 2009: On the response to tropical cyclones in mesoscale oceanic eddies. Ph.D. dissertation, University of Miami, 145 pp.
- Jaimes, B.**, 2005: Energetics of the wind and Loop Current-driven circulation in the Gulf of Mexico. M.S. thesis, University of Miami, 128 pp.
- Jaimes, B.**, 1995: Quasi-3D numerical model for beach sand transport. M.S. thesis, Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM, Mexico), 139 pp.

CONFERENCE ABSTRACTS AND PROCEEDINGS (29)

- Shay, L. K., J. K. Brewster, **B. Jaimes**, C. Gordon, K. Fennel, P. Furze, H. Fargher, and R. He: 2019: Physical and Biochemical Structure Measured by APEX-EM Floats, *IEEE/OES Twelfth Current, Waves and Turbulence Measurement (CWTM)*, San Diego, CA, USA, 2019, pp. 1-6.
- Jaimes, B.**, J. Rudzin, and L. K. Shay, 2018: Hyperbolicity of bulk air-sea enthalpy fluxes in major hurricanes, In *33rd AMS Conference on Hurricanes and Tropical Meteorology*, Paper 15C.5, AMS, 15–20 April 2018, Ponte Vedra, FL.
- Jaimes, B.**, L. K. Shay, and J. K. Brewster, 2016: A positive feedback mechanism for tropical cyclone intensification over warm oceanic mesoscale features, In *32nd AMS Conference on Hurricanes and Tropical Meteorology*, Paper 3B.6, AMS, 17–22 April 2016, San Juan, PR.
- Shay, L. K., **B. Jaimes**, E. Uhlhorn, 2016: Thermal and momentum Loop Current response to hurricanes. In *32nd AMS Conference on Hurricanes and Tropical Meteorology*, Paper 3B.5, AMS, 17–22 April 2016, San Juan, PR.
- Steffen, J., S. Chen, L. K. Shay, and **B. Jaimes**, 2016: Observations of a self-induced barrier layer. In *32nd AMS Conference on Hurricanes and Tropical Meteorology*, Poster 86, AMS, 17–22 April 2016, San Juan, PR.
- Shay, L. K., **B. Jaimes**, and E. W. Uhlhorn, 2016: Upper ocean momentum response to hurricane forcing. *2016 Ocean Sciences Meeting*, Paper A54C-2726, AGU/ASLO/TOS, 21-26 February 2016, New Orleans, LA.
- Jaimes, B.**, and L. K. Shay, 2015: Observed downwelling in a warm core eddy during hurricane Isaac's intensification. In *Gulf of Mexico Oil Spill & Ecosystem Science Conference 2015*. Houston, TX : 02/16/15-02/19/15: Poster.
- Jaimes, B.**, L. K. Shay, and J. Brewster, 2014: Upwelling and mixing processes induced by Hurricane Isaac over geostrophic oceanic vortices. *2014 Ocean Sciences Meeting*, Paper 17830, AGU/ASLO/TOS, 23-28 February 2014, Honolulu, Hawaii.

- Shay, L. K., **B. Jaimes**, J. Brewster, C. McCaskill, E. Uhlhorn, and G. Halliwell, 2014: Progress on ocean measurement sampling strategies in hurricanes: AXCP and AXCTD profiling. In *Interdepartmental Hurricane Conference 2014*. Miami, FL : 03/01/14-03/06/14.
- Jaimes, B.**, L. K. Shay, J. Brewster, and R. Schuster, 2013: Upwelling Response to Hurricane Isaac in Geostrophic Oceanic Vortices. *2013 Meeting of the Americas*, Paper U24A-03, AGU, 14-17 May 2013, Cancun, Mexico.
- Jaimes, B.**, L. K. Shay, J. Brewster, R. Schuster, and M. D. Powell, 2013: Upper ocean observations of upwelling processes induced by tropical storm/hurricane Isaac. In *Interdepartmental Hurricane Conference 2013*. College Park, MD : 03/04/13-03/07/13.
- Schuster, R., L. K. Shay, **B. Jaimes**, and W. Teague, 2013: Deep ocean response to hurricane Ivan along the northern rim of the DeSoto Canyon. In *Gulf of Mexico Oil Spill & Ecosystem Science Conference 2013*. New Orleans, LA: 01/21/2013-01/23/2013: Poster.
- Shay, L. K., **B. Jaimes**, J. Brewster, C. McCaskill, E. Uhlhorn, and G. Halliwell, 2013: Progress on upper ocean strategies during Hurricanes: AXCP and AXCTD profiling. In *Interdepartmental Hurricane Conference 2013*. College Park, MD : 03/04/13-03/07/13.
- Shay, L. K., **B. Jaimes**, R. Schuster, and J. K. Brewster, 2013: Impact of ocean eddies on the upwelling response to Isaac. In *Asian Oceanographic and GeoSciences Meeting*. Brisbane, Australia, June 22-28, 2013.
- Shay, L. K., **B. Jaimes**, R. Schuster, and J. K. Brewster, 2013: Upwelling response to hurricane Isaac. In *Gulf of Mexico Oil Spill & Ecosystem Science Conference 2013*. New Orleans, LA: 01/21/2013-01/23/2013.
- Jaimes, B.**, L. K. Shay, and G. R. Halliwell, 2012: The response of quasi-geostrophic oceanic vortices to tropical cyclone forcing, *30th AMS Conference on Hurricanes and Tropical Meteorology*, Paper 6D.2, AMS, 15–20 April 2012, Ponte Vedra Beach, FL.
- Shay, L. K., **B. Jaimes**, J. K. Brewster, P. Meyers, C. McCaskill, E. W. Uhlhorn, et al., 2012: Resolving eddy shedding processes from the Loop Current during Deepwater Horizon (2010): Implications for coupled forecast intensity models. In *American Meteorological Society Annual Meeting*. Ponte Verde Beach, FL, April 16-20, 2012.
- Shay, L. K., **B. Jaimes**, J. Brewster, C. McCaskill, P. Myers, S. Paul, and T. Richards, 2012: Ocean Data Acquisition System on NOAAWP-3Ds in support of HFIP. *66th Interdepartmental Hurricane Conference*, Office of the Federal Coordinator for Meteorological Services and Supporting Research, 5-8 March 2012, Charleston, SC, 4B.5.
- Jaimes, B.**, and L. K. Shay, 2010: Upwelling and mixed layer deepening in mesoscale oceanic eddies during the passage of tropical cyclones, *29th AMS 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.
- Halliwell, Jr., G. R., D. Willey, J. Brewster, **B. Jaimes**, L. K. Shay, and R. Atlas, 2010: The potential role of Ocean Observing System Simulation Experiments for improving ocean model initialization in coupled hurricane forecast models. *64th Interdepartmental Hurricane Conference*, Office of the Federal Coordinator, 1-4 March 2010, Savannah, GA, (Poster Session, page 4).
- Shay, L. K., G. R. Halliwell, Jr., J. K. Brewster, **B. Jaimes**, and W. J. Teague, 2010: Parameterizations for NCEP operations. *64th Interdepartmental Hurricane Conference*, Office of the Federal Coordinator, 1-4 March 2010, Savannah, GA, (Session 7, page 4).
- Shay, L. K., **B. Jaimes**, J. Brewster, P. Meyers, C. McCaskill, E. Uhlhorn, F. Marks, and G. R. Halliwell, Jr., 2010: Airborne ocean surveys of the Loop Current complex from NOAA WP-3D in support of Deep Water Horizon oil spill, *American Geophysical Union Fall Meeting 2010*, 13-17 Dec. 2010, San Francisco, CA.
- 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.

Vidal, V. V. M., Vidal, V. F., Portilla, J., Zambrano, L., and **Jaimes, B.**, 1999: Formation and evolution of the western boundary current in the Gulf of Mexico. In: *Geophysical Research Abstracts*, European Geophysical Society, **1(2)**, 24th General Assembly, The Hague, pp. 386.